

Indirectness in a Maltese School Setting

Żaneta Camilleri-Szatowska

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## **Abstract**

This dissertation investigates the role of indirectness in a Maltese educational setting, focusing on its use among female and male educators to determine who is more indirect. The study also explores how indirectness is perceived by both educators and learners: as a sign of power or weakness? Additionally, it categorises the types of indirect speech acts used in the classroom, identifying the most common uses according to gender.

The research was conducted in an independent school in Malta where students follow the International Baccalaureate Diploma Programme (IB DP). A mixed-methods approach was employed, involving a self-administered questionnaire completed by participants, followed by lesson observations. In the final stage, a focus group with educators was conducted. Both the lesson observations and the focus group were recorded and transcribed to identify the direct and indirect linguistic strategies used by both genders.

Contrary to many previous studies positing that women's language is more characterised by indirect forms, this study found that female educators were generally more direct than their male counterparts. However, the findings also indicated that gender is just one of many factors that contribute to the choice of indirect strategies in the classroom.

*Keywords:* indirectness, directness, speech acts, power, gender, classroom discourse

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## CHAPTER 1 – Introduction

This dissertation addresses the concept of indirectness, “a key concept in pragmatic research for over four decades” (Livnat et al., 2020, p. 1), within a Maltese school setting. The main focus of this study is to determine whether male or female educators employ more indirect speech acts in educational settings. To achieve this aim, a case study was conducted in an independent school in Malta. Fourteen educators (seven females and seven males) and thirty-one learners (sixteen females and fifteen males) participated in the study. Both educators and learners completed a self-administered questionnaire to verify the use of indirectness. This was followed by lesson observations and a focus group conducted among the educators.

When learning or speaking a language, it is not enough to have a vast knowledge of grammar, vocabulary, phonology, syntax, etc. One must be able to produce language which is “socially and culturally appropriate” (Onalan & Cakir, 2018, p. 239). This ability is known as pragmatic competence, and it is a fundamental aspect of successful communication. The importance of socio-cultural contexts in communication has sparked a lot of interest among researchers who began exploring various speech acts – both direct and indirect.

**Indirectness (or indirect speech acts)**, the focus of this research, is a term closely related to the field of pragmatics. It has been described as the distinction between the intended and literal meaning of an utterance. Srinarawat (2005) explains that indirectness encompasses speech acts where the speaker’s intended meaning does not correspond with the literal words spoken. Therefore, it requires the hearer to infer the meaning based on shared knowledge or background between the speaker and the hearer. Indirectness is used in everyday speech to perform a variety of functions, such as joking, giving hints, or being polite by saving the hearer’s face.

Grainger & Mills (2016) distinguish between **conventional** and **nonconventional indirectness**. The first one refers to speech acts which have been regularly used in a given language in particular contexts, and thus have become conventionalised. As Lempert (2012) further states, such acts (e.g., *Can you help me? Would you like some help?*) have two layers of meaning, the first one being an inquiry into “**preparatory conditions**” (whether the person is willing or able to help), and the second one – an actual request to perform an act. These indirect speech acts, referred to as **query preparatories**, are often linked to the notion of politeness in English and many other languages.

On the other hand, **nonconventional** indirectness includes **off record strategies**, which are further divided into **mild** and **strong hints**. They have been defined as communicative acts in which the attribution of one communicative intention is impossible, creating, as a result, acts that are ambiguous and vague, and therefore, open to interpretation (Grainger & Mills, 2016).

**Directness and direct speech acts** occur when there is “a direct match between a sentence type and an illocutionary force” (Huang, 2006, p. 1005), meaning that the structure of such a speech act must correspond directly to its communicative function. This can be illustrated when examining the main sentence types: declarative, interrogative, and imperative:

1. **Declarative** sentences are used to make statements – e.g., *You do your homework.*
2. **Imperative** sentences are used to make commands – e.g., *Do your homework.*
3. **Interrogative** sentences are used to ask questions – e.g., *Do you do your homework?*

In the above examples, there is no need for the hearer to infer the meaning, as the intention is clear and direct.

### 1.1 Rationale for the Present Study

Being a key concept in pragmatics, indirectness has been extensively researched and studied from many angles, including in educational contexts. Despite this, studies conducted so far, particularly in Maltese educational settings, have not yet analysed classroom discourse in relation to gender. While research on classroom discourse confirms that both direct and indirect speech acts are employed, it does not specify which acts are typical of which gender. This dissertation aims to bridge this gap in the literature.

Moreover, a significant shift in power relations between educators and students can be observed, emphasising the importance of building rapport with learners. As a result, this creates further opportunities to explore the concept of indirectness, which is considered beneficial for building bonds due to its non-imposing nature. Therefore, its use in the classroom may be influenced by the aforementioned changes, requiring educators to foster solidarity and strengthen relationships with their learners. In addition, given that the richness of input is a key factor in students’ learning success, the use of indirectness should be prevalent in the classroom, as it mirrors natural, everyday speech.

It is also noteworthy that the studies on indirectness have yet to consider learners’ perspectives on educators’ use of indirect speech acts, as directness is more commonly associated with classroom discourse. Therefore, one of the goals of this research is to address this gap.

Finally, the existing dichotomy between directness and indirectness, discussed in more detail in the literature view, remains unresolved and inconclusive. Additionally, it is evident that the language we use reflects societal expectations and norms, frequently associating women's language with powerlessness. However, there is no definitive link between specific speech acts and one gender, leaving considerable room for speculation. Therefore, the relationship between gender and speech act usage remains an intriguing area for further exploration.

Based on the above, the aim of this research is to address existing gaps in the literature and determine whether female or male educators are more indirect in educational settings. It is possible that female educators may employ indirect speech acts more frequently, either due to societal norms imposed on women or as a strategy for bonding with their learners. On the other hand, they may also exhibit directness, as the demands of the job may require them to maintain professionalism and manage learners effectively. As for male educators, it would not be surprising if they used indirectness to build rapport with students and adapt to shifting power dynamics in the classroom. While the connection between gender and indirectness can be hypothesised, learners' views and reactions to both linguistic strategies remain unexplored.

## **1.2 Research Questions**

Considering the above, the current research aims to answer the following research questions:

- 1. Who is more indirect in the classroom: female or male educators?** This question seeks to determine whether one gender has a greater tendency to use indirect speech acts in the classroom setting and explore factors that might contribute to this tendency.
- 2. How is indirectness viewed by educators and learners: as a sign of power or weakness?** This question aims to explore perceptions of indirectness among both educators and learners, with the main goal of determining whether the use of indirect speech acts reflects power – authority and control, or weakness – a lack of both.
- 3. What types of indirectness are used in the classroom?** This question delves deeper into the strategies that are employed by educators in the classroom when using indirect speech acts, aiming to categorise them into specific linguistic strategies such as hedges, suggestions, hints, and others.

### **1.3 Country Setting**

Malta is a small island in the Mediterranean Sea, situated between Sicily and Libya in North Africa. The Maltese Archipelago consists of three main islands – Malta, Gozo, and Comino – covering a total area of 316 square kilometres.

The country has been influenced by numerous nations, including the Phoenicians, Arabs, Knights of St John, French, and British. In 1964, Malta gained its independence, and in 1974, attained the status of a republic. In 2004, Malta joined the European Union.

The national language of Malta is Maltese; however, both English and Maltese are recognised as the official languages of the island, as stated in Article 5 of the Constitution of Malta (1964) (Bonanno, 2007).

### **1.4 Educational Setting in Malta**

Schooling in Malta became compulsory for children aged 6 to 14 after the Second World War. The Education Act of 1974 obligated students up to 16 years old to attend school, and three years later, pre-primary education for four-year-olds was also introduced, which was extended to three-year-olds in 1988 (Cutajar, 1999).

The organisation responsible for the education system in Malta is the Ministry for Education, Sport, Youth, Research and Innovation (MEYR). Equity and quality are the two main principles on which the entire system is built, promoting inclusivity and providing free education from early years to tertiary education. Students have the option to attend three different types of schools: state, church, and independent schools, with the latter primarily using English as the language of instruction. No tuition fees apply for the first two schools, and the government offers tax rebates to those attending independent schools (Eurydice, 2023). Additionally, under the new agreement between the government and the Independent Schools Association signed in September 2024, the government will provide €27 million, to be paid between this year and 2029, to support the private sector. Apart from an increase in salaries for educators, the funds are intended to help parents cope with the dramatic rise in fees (Zammit, 2024).

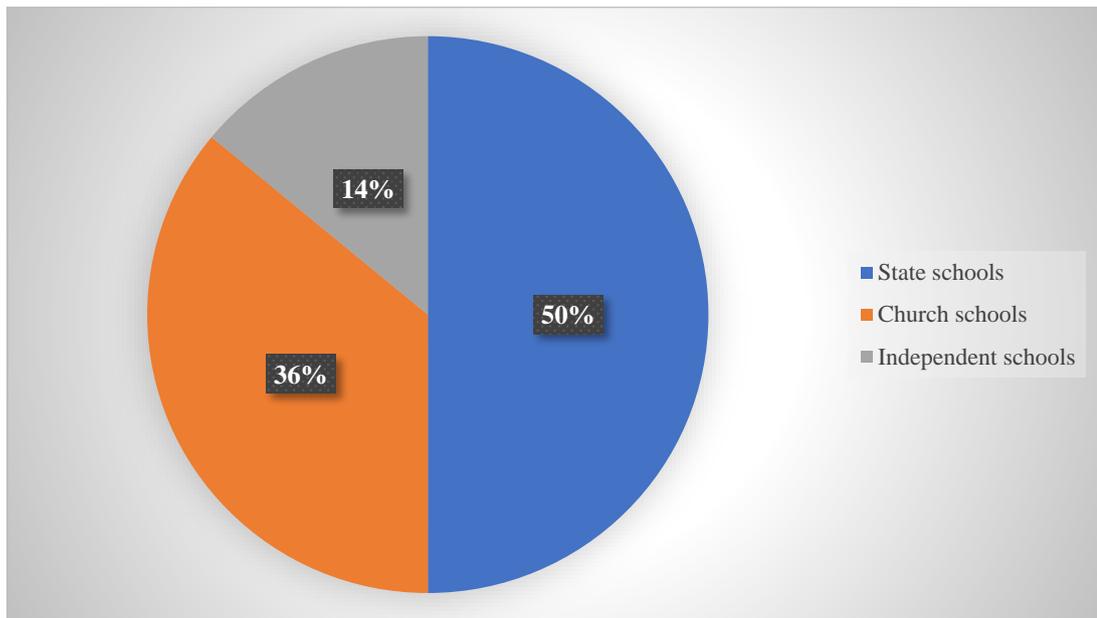
Early childhood education is provided for free for children from 3 months to 2 years and 9 months of age and is available in both state and private institutions, provided that both parents are employed. After that, children attend kindergarten until they are 5 years old; the parents can choose from state, church, or independent schools.

From 5 to 16 years, education is compulsory and is divided into two cycles: primary (5-11 years old) and secondary (11 to 16 years old), with the latter one consisting of Middle School

(11-13 years old) and Secondary School (13-16 years old). Figure 1 below shows the percentage of students attending different types of schools on the island (Eurydice, 2023).

**Figure 1**

*Distribution of Students by School Type in Malta*



#### **1.4.1 Private Education in Malta**

Private education in Malta is offered by church and independent schools, with the former being single-sex and grant-aided, and the latter being mostly co-educational with applicable tuition fees. The lower secondary level includes middle and senior school. Post-secondary education, which is not compulsory, is provided by two privately-run schools and two church schools, all of which are co-educational (Murdoch, 2023). Learners attending these schools are between 16 and 18 years of age and are admitted based on specific entry requirements. The main objective of this educational stage is to prepare learners for tertiary education (Eurydice, 2023).

#### **1.5 International Baccalaureate Diploma Programme**

The International Baccalaureate offers continuous international education to students between 3 to 19 years of age. The main goal of the IB programmes is both personal and academic development, fostering critical thinking, diversity, curiosity, and promoting lifelong learning. Schools must obtain authorisation to teach IB programmes.

The Diploma Programme was first offered in 1968 and caters to learners aged 16-19. The curriculum comprises six subject groups along with the DP core, which includes Theory of Knowledge (ToK), Creativity, Action, Service (CAS), and the Extended Essay, as shown in Figure 2 (International Baccalaureate Organisation, 2005-2024).

**Figure 2**

*IB Diploma Programme Curriculum*



From (<https://www.ibo.org/globalassets/new-structure/recognition/pdfs/rec4122recognitioncurriculumbrief-5web.pdf>)

There are numerous benefits for students who attend the programme. According to existing research, DP alumni exhibit more 21<sup>st</sup>-century skills than students following non-DP programmes. Additionally, they report high satisfaction with their overall experience and feel well-prepared for tertiary education (International Baccalaureate Organisation, 2021).

Successful completion of the IB Diploma results in a qualification which is widely recognised by world’s prominent universities. Currently, only two schools in Malta are IB schools: St Edward’s College in Vittoriosa, and Verdala International School in Pembroke (International Baccalaureate Organisation, 2005-2024). However, QSI International School of Malta in Attard additionally offer IB programme courses on-site or via distance learning to prepare their students for studies in the United States (QSI International School of Malta, n.d).

## CHAPTER 2 – Literature Review

### 2.1 Pragmatics and Discourse Analysis

Pragmatics and discourse analysis look at the language from the perspective of context. Context refers to all external conditions, including words, their speakers, and their situations. As far as words are concerned, they are analysed not as separate units but in close relation to the time and place they are used. Additionally, socio-psychological factors are taken into consideration in the analysis of discourse. Communication involves a speaker and a hearer, whereby the former utters words that can be understood literally or with implied meaning. The task of the hearer is then to deduce the meaning. Moreover, speakers are said to follow certain maxims of conversation that help ensure cooperation among them. Relevance is another crucial notion in both discourse analysis and pragmatics, as both fields are concerned with the meaningfulness of language. Finally, the focus on the functions of spoken utterances is central to this linguistic field, as language is a tool used to perform a variety of speech acts, such as promising, threatening, apologising, and more (Cutting, 2002; McCarthy, 1991).

There are several approaches to spoken discourse analysis, which is the focus of this research, including sociological, sociolinguistic, philosophical, linguistic, and critical linguistic approaches. The sociological approach mainly focuses on conversational analysis, which is the detailed study of everyday interactions. Hymes's ethnography, which involves the analysis of spoken communication in its social and cultural context, and Labov's Variation Theory that examines the structure of spoken interactions, are both part of sociolinguistic approaches. Among linguistic approaches, the Birmingham School must be noted, where Sinclair and Coulthard created the traditional IRF model of classroom discourse, including three main moves – initiation, response, and follow-up (McCarthy et al., 2010). Finally, the relationship between social life, text, and language is the primary concern of Systemic Functional Linguistics, according to which language is perceived as a social construct, with language and context influencing each other (Rogers et al., 2005).

All the above theories are relevant to the current study which aims to analyse spoken discourse in educational context. The purpose of this study is also to examine how the use and perception of indirect speech acts vary across two different social groups – educators and learners, and genders – females and males – which closely relates to both Labov's Variation Theory and Hymes's ethnography. Furthermore, the exploration of power versus weakness in relation to indirectness directly links with the aforementioned pragmatics and Critical Discourse Analysis discussed below.

## 2.2 Critical Discourse Analysis

Among critical linguistic approaches mentioned in the previous section, Critical Discourse Analysis (CDA) is particularly significant. According to Van Dijk (2001), CDA looks at the ways “social power abuse, dominance and inequality” (p. 353) are reflected in written and spoken forms. It is particularly interested in the social power of groups and defined as control, meaning that a given group can be said to have power if they control the speech acts of others. Van Dijk distinguishes between various types of power: the coercive power of people in the military, the power of the rich, as well as the power of knowledge and authority such as that held by parents, teachers or journalists. However, Van Dijk emphasises that possessing power does not always involve its abuse by dominant social groups, as certain power relations are accepted in daily life (Van Dijk, 1993). McCarthy et al. (2010) add that in CDA, analysts study texts from the perspective of such crucial aspects as gender, class, or ethnic bias, in an attempt to reflect specific societal practices.

The aspect of gender and power are both the focus of this study. Specifically, the study explores how indirectness and directness in the classroom setting are perceived by female and male learners and educators – whether they are interpreted as signs of power or weakness.

## 2.3 Speech Acts

A **speech act** is defined as the basic unit of a linguistic exchange (Griffiths, 2006). The acts are classified into five types (Degand, 2006; Witczak-Plisiecka, 2013):

1. **Representatives** – they are typically statements that assert, describe, or express something. E.g., *Her house is old but impressive.*
2. **Directives** – they are the speaker’s attempts to make the hearer do something. They include such functions as commands, orders, requests, suggestions. E.g., *Can I borrow your pen?*
3. **Commissives** – they commit the speaker to a future action and include such functions as promises, refusals, threats, etc. E.g., *I promise to love you forever.*
4. **Expressives** – they express the speaker’s psychological and emotional state. Their function is to express feelings, to thank, apologise, welcome, etc. E.g., *I am so sorry for you.*
5. **Declarations** – they create a change or cause something to happen, including for instance declaring war, firing someone, marrying, etc. E.g., *I pronounce you husband and wife.*

Moving on to the linguistic aspect of discourse analysis, Speech Act Theory is crucial for this research. Owing to Austin's definition of speech acts, they can be understood as "actions performed in saying something" (Cutting, 2002, p. 16). Their analysis involves three levels. Firstly, locutionary acts concern the literal meaning of uttered words. The next level – the illocutionary act – deals with the functions of words such as promising, apologising, inviting, etc. It is closely related to the speaker's purpose of the conveyed message(s). The final level – the perlocutionary act – refers to the effect that the uttered words have on the hearer: his/her reactions to them (Darong et al., 2020, Kissine, 2013).

Austin's student, Searle, is another essential scholar in the subject of Speech Act Theory. As pointed out by Wong (2016), his theory has become the foundation for contemporary researchers interested in the field. Searle created a comprehensive list of various speech acts, emphasising that many of them relate to our daily-life activities, such as greeting, thanking or, advising others, which links with Austin's level of illocutionary acts. In addition, whilst some of the speech acts are fairly easy and straightforward to decipher, others require far more effort to be understood – another connection to Austin's perlocutionary force. Furthermore, Searle proposed a taxonomy of speech acts, classifying them into the following groups: directives, representatives, declarations, expressives, and commissives. The content of declarative speech acts corresponds with reality; representatives reflect the speaker's beliefs, and commissives commit the speaker to future action. The purpose of directives is to make the hearer do something, and finally, expressives are used to express the speaker's feelings. For all the above acts to be successful, so-called felicity conditions must be fulfilled (Culpeper & Terkourafi, 2017; Fotion, 2000; Geis and Harlow, 1996). According to both Austin and Searle, for felicity conditions to be met, the intentions of the speakers must be pure, and actions must be completed fully. In addition, Searle claimed that in the case of declarations and directives, the speaker's belief in the possibility of carrying them out is crucial to success. On the other hand, as pointed out by contemporary theorists, it is not only the speaker who can fulfil felicity conditions; the hearer's role in the process is equally significant. They must not only be able to hear but also understand the message and act upon it. The equal importance of both the speaker and the hearer is also highlighted by Culpeper (2016) who states that "communication is a social activity requiring the coordinated efforts of two or more individuals" (p. 424). All this links back to the definition of pragmatics being a discipline that "studies the use of language in human communications as determined by the conditions of society" (Mey 2016, p. 31).

Another, essential for this research, division of speech acts distinguishes between direct and indirect acts. According to Searle, the words uttered in the form of a direct speech act mean exactly what the words themselves convey. However, this is not the case for indirect speech acts, as the relationship between the words and their meanings is not one and the same, and the meaning must therefore be implied. Furthermore, indirect speech acts are closely related to the notion of politeness and are, thus, an indispensable aspect of our daily lives. It has been additionally underlined that indirect speech acts are far more common than direct acts; they are also employed automatically and widely understood (Reiter et al., 2005).

Referring back to the notion of context in pragmatics, knowledge of context can facilitate the understanding of a given indirect speech act. Undoubtedly, however, indirect speech acts can be highly complex and ambiguous, which is confirmed by the fact that their nature has been approached by researchers from many different perspectives. What needs to be emphasised is that the understanding of indirect speech acts is also culture-bound, meaning that it can be perceived differently by different people. Finally, speech acts need to be formulated in harmony with societal norms, customs, and rules of interaction in a given social group (Lwanga-Lumu, 1998; Stoian, 2020).

Clearly, Speech Act Theory is crucial to answer the research questions of this study. Searle's division of acts into direct and indirect ones directly connects with the first research question which seeks to explore who is more indirect in the classroom setting: female or male educators. A more detailed classification of indirect speech acts, discussed further on, will allow the researcher to answer the third question about types of indirectness used in the classroom. Finally, the notion of Austin's perlocutionary acts will help determine how both acts are perceived by learners and educators. Nevertheless, it must be highlighted that Searle's theory does not consider such aspects as age, gender, profession, social class, or education and how they contribute to the choice of acts (Almadani, 2021).

### **2.3.1 Directives in the English Language**

Based on Searle's taxonomy of speech acts, directives are "attempts to get the interlocutor to do something" (Pablos-Ortega, 2020, p. 108). Among these acts, commanding, ordering, asking, and requesting can be listed. The first two are direct speech acts, whereas the other two are considered indirect. To deduce the meaning of indirect speech acts, interlocutors have to share a common background, be familiar with the theory of speech acts, and understand Grice's maxims. Additionally, according to Searle, rationality and ability to make inferences are necessary in the process of deciphering meaning.

Among many scholars and researchers. Wong (2016) has criticised Searle's Speech Act Theory, specifically the claim of universality of speech acts, positing that each language is governed by different rules. Thus, the interpretation of acts may vary across languages and across cultures. Wong further contradicted Searle's claims by arguing that understanding indirect speech acts in English is not necessarily related to logic or rationality but rather to understanding the respect values that English speakers cultivate. Therefore, the preference for using a question instead of an imperative when making a request in English is based on the accepted system of values among English speakers. The avoidance of imperatives is a way of expressing deference, respecting others' autonomy, and acknowledging their right not to be imposed upon.

To further support his argument against Searle's claim of the universality of speech acts, Wong refers to other languages in which, contrary to English, imperatives are frequently used to make requests without being perceived as rude or disrespectful. For example, in Chinese and Polish, imperatives are often employed to make requests. This correlates with the previously mentioned notion that language usage is culture-bound (Liu & Hong, 2009; Rahardi et al., 2023).

The aspect of culture is not directly related to this study; however, considering the prevalent multiculturalism in Malta, exhibited in both groups of participants who are not only Maltese or English, this factor might turn out to play an essential role in the participants' responses in the questionnaire and their use of speech acts in the classroom.

### **2.3.2 Speech Acts in the Classroom Environment**

Sinclair and Coulthard's study on speech acts in the classroom environment provides a theoretical framework for the current research. The scholars concluded that classroom language typically follows a rigid pattern (Cutting, 2002; Heller, 2001; Hermanto, 2015; McCarthy, 1991). They observed that school exchanges generally follow a set pattern: the teacher initiates, the student responds, and the teacher provides follow-up (IRF). Collectively, these moves constitute the classroom transaction (Molinari et al., 2013). However, it is important to note that this rigid interaction pattern has evolved over time and is no longer as rigorous as it used to be. Despite these changes, classroom discourse remains atypical and unique due to the significant control that teachers, as figures of authority, have over the discourse compared to students (Mey, 2016). Waugh et al. (2016) emphasise that many issues in the world of education arise from power dynamics and inequality, making this a focal area

of interest among scholars. Additionally, Liu & Hong (2009) posit that classroom discourse is difficult to analyse due to its features, which often lend themselves to small-sample studies.

Adger (2001) and Kia (2020) further explain that initial research on classroom language focused on the analysis of isolated language chunks; however, it has since shifted to viewing communication as a holistic process. To date, the primary focus of classroom speech acts has been on their distinct features, along with factors related to learners' abilities as indicators of success when producing speech acts. Liu & Hong (2009) also highlight that research on classroom discourse has mainly dealt with instructional discourse which relates to subject knowledge.

Given that students are often asked to perform tasks in class, it is not surprising that the most frequently studied speech acts in the school setting are directives, which will be the focus of the current research. These include declarative statements, bald imperatives, embedded imperatives (interrogative forms and modals), permission directives, question directives, and hint directives (declarative statements that require the meaning to be implied). Widya's (2017) research, conducted among lecturers of English at a university in Indonesia, found that directives constituted 53% of all speech acts employed by lecturers. Additional research on the use of direct forms in the classroom setting revealed that they are perceived as easier to understand (Bahing et al., 2018; Goatly, 1995). They are also highly effective when giving advice in small group work, as they help avoid disruptions, reduce teacher talking time, and increase the pace of the lesson.

In his study of the classroom language of three teacher trainees, Goatly observed notable differences. Teacher trainee A frequently used indirect speech acts, imperatives softened by the word 'please', 'please' in query preparatories, as well as declarative forms such as 'I want you to' or 'I'd like you to'. This suggested that teacher trainee A's use of these speech acts indicated shyness and a lack of confidence in the teacher's role. Teacher trainee B mainly used imperatives with no modifiers, hedged performatives such as 'you're going to...', and query preparatories, resulting in clear and concise requests that significantly reduced teacher talking time. Teacher trainee C's classroom language included suggestions ('wouldn't it be better if...?'), imperatives, questions like 'do you want to' or 'if you want to', 'it would be nice if you could', the inclusive pronoun 'we', and frequent internal or external modifiers. This indicated the trainee's uncertainty about their role in the classroom. The study also concluded that imperatives were not perceived as impolite due to the fact that their use benefited the learners. Moreover, it was noted that demonstrating authority in the classroom is recommended in this particular setting and can be achieved through the use of direct speech

acts, which facilitates students' understanding of expectations. Additionally, the lesson pace is faster, and teacher talking time is minimised.

It was also observed that imperatives can be used in social situations provided that the distance between speakers is not significant and, as their use signals solidarity and closeness. In contrast, indirectness is advantageous in educational settings when it benefits the teacher or society, when there is significant social distance between the groups, or when making non-standard requests related to the teacher's responsibilities (e.g. asking someone to wipe the board). The above findings may contribute to answering the research questions, especially the second and the third one which relate to educators' and learners' perceptions of indirectness as a sign of power or weakness, along with the classification of directives.

However, not all scholars agree with these findings. For instance, Mey (1984) shared his teaching and parental experience, concluding that "in education and teaching, the direct way is never the most successful one" (p. 87). Darong et al. (2020) also explored the use of politeness markers in the classroom environment and noted that few studies focused on their use. In their study of four English teachers at an Indonesian university, they found that consultative devices were the most frequently used politeness markers, indicating a cooperative relationship between teachers and learners. Moreover, teachers employed external modifiers such as 'please' and 'if you don't mind' to minimise imposition. However, their data did not present the students' response to these politeness markers, which this study hopes to partially achieve.

Finally, Senowarsito (2013) conducted research on politeness strategies used by teachers and students in English lessons, finding that these strategies were mainly employed to avoid face-threatening acts. Overall, teachers used positive, negative politeness, and bald-on record strategies. They also felt a responsibility to establish an emotional connection with their learners to facilitate communication. Interestingly, neither students nor teachers perceived a significant power difference between them. However, this does not mean that students viewed their teachers as equals; on the contrary, they showed high respect for them. An interesting finding in Senowarsito's study was that teachers used humour as a positive politeness marker which helped create a sense of solidarity and comfort among students. Providing opportunities for learners to express their viewpoints and feelings was another way teachers reduced power imbalances and engaged students in the learning process. Among other positive politeness markers, teachers used mitigated direct speech acts such as 'I want you to do'..., the word 'please', and internal modifiers to build rapport with students. With regard to negative politeness, teachers used imperatives mitigated by the word 'please' or affirmatives when

making requests to give a sense of optionality. Senowarsito also reported the use of bald-on-record speech acts which were not softened in any way and explained that their use was acceptable due to asymmetrical power relationships in the classroom. However, this study did not consider gender differences among educators, which this research does.

Dalton-Puffer & Nikula (2006) argue that directives are commonly used in classroom language due to several factors: the earlier mentioned asymmetrical power relationships, social distance, imposition, specific classroom registers, and the goals to be achieved in this unique environment. In their study of Austrian and Finnish teachers, they concluded that directness was commonly used in instructional registers where imposition was minimal or non-existent. Furthermore, their study revealed that direct speech acts were only mitigated when teachers anticipated that students might struggle to answer a question in order to avoid face-threatening situations. In terms of students' perceptions, directives were generally accepted due to the specific nature of the educational context. When it comes to the regulative register, which involves maintaining order in the classroom and providing lesson aims and directions in class, indirectness was observed to a greater degree. Common indirect forms included the use of the inclusive 'we', the word 'please', hedges, downtoners, questions, and modal verbs. It was also observed that age was an essential factor in determining whether direct or indirect acts were used: the older the students, the more indirect the language could be. Interestingly, a study by Liu & Hong (2009) on regulative discourse in Singaporean primary English classrooms found that despite the assumption that teachers would mitigate their impositions for better classroom relations, 62.69% of teacher discourse included imperatives. This suggests that teachers exerted their power and dominance, resulting in a teacher-centred environment.

A possible explanation for the discrepancies among various findings may be linked to the shift in power dynamics in modern classrooms which has required educators to adapt and assume new roles that guarantee more success for their learners. As emphasised by Felix-Bradsfer & Mugford (2017), educators need to develop a pedagogical framework that supports students' future social interactions when communicating in English. However, it is a challenging goal due to the unpredictable nature of social interactions. Nevertheless, it is essential for students to be exposed to a wide array of various speech acts in the classroom, both direct and indirect.

All the aspects discussed are crucial for this research, as they highlight the importance of studying classroom discourse, given the varied conclusions about its characteristics. Unlike other studies, this research will not be limited to any specific register, potentially offering a broader scope for analysis despite the small sample size. While the factors mentioned above

do not directly relate to gender, they throw light on other possible influences that might affect a teacher's choice of speech acts, as well as the way these choices are perceived.

## **2.4 Grice's Cooperative Principle**

Building on the previous discussion of speech acts in classroom discourse, it is also essential to understand the role of Grice's maxims in facilitating clear and efficient communication. According to Grice, to ensure successful communication, speakers must adhere to four maxims: quantity, quality, relation, and manner. The maxim of quantity obliges speakers to provide the exact amount of information necessary for a successful exchange. The maxim of quality requires speakers to be honest and genuine when communicating with others. Providing relevant information fulfils the maxim of relation, while being concise and avoiding ambiguity is entailed in the maxim of manner.

Nevertheless, Grice's maxims can be flouted or violated for various reasons, ranging from a desire to avoid hurting a person's feelings to an intention to mislead or lie. The maxims might also be disobeyed by speakers with possible impairment or poor linguistic knowledge (Cutting, 2002; Drew, 2018; Katriel, 2016). It must also be emphasised that violating or flouting the maxims might not necessarily be interpreted as a deliberate opting out of Grice's principle of cooperation. In such cases, the meaning of an utterance must be implied, which is referred to as implicature. Unfortunately, Grice's theory does not explain what motivates speakers to opt for indirect ways of communicating. Moreover, it is important to recognise that the application of these maxims cannot be considered universal as Grice posited; it is culturally bound. This limitation, similar to limitations found in Searle's Speech Act Theory, highlights the fact that Grice's maxims have been primarily based on examples taken from the English language (Kaburise, 2007; Katriel, 2016; Pfister, 2010).

In response to Grice's theoretical framework, Eemeren & Garssen (2016) have redefined his Cooperative Principle, offering more general rules for the key features of communication. In their view, successful communication should be efficient, clear, to the point, honest, and comprehensible. This does not necessarily mean that the uttered words must be perfectly clear, but they should allow the interlocutor to interpret them in a correct way. Finally, the sincerity of speech acts is also essential to ensure honesty, as speakers are obliged to take responsibility for their own commitments. Regarding communicative efficiency, a speech act can neither be superfluous nor pointless.

The relevance of Grice's maxims to the present research lies in the fact that effective communication is, or at least should be, every educator's priority. It could therefore be

assumed that educators may prefer to employ direct speech acts due to their clarity, which aligns with some of the previous studies. On the other hand, Grice's maxims can be violated for different reasons, leading to the use of more indirect speech acts. The frequency and extent to which female and male educators will flout the maxims will provide an answer to the first research question. Additionally, depending on the type of maxim being violated, further understanding of the third question regarding the different types of indirectness employed in the classroom may also be gained.

Nevertheless, it is essential to look at other theoretical frameworks that have been developed, such as Relevance Theory and Politeness Theory.

## **2.5 Relevance Theory**

According to Sperber and Wilson's Relevance Theory, meaning can be implied provided that hearers can identify the connections between uttered words, based on their general knowledge of the world. New information is only relevant when it is connected to something the hearer already knows about and takes minimal effort to understand (Wearing, 2015). More specifically, as pointed out by Wilson and Sperber (2004), Relevance Theory shares Grice's fundamental principle that expressing and recognising intentions is an indispensable element of communication. However, its creators question the idea of the Cooperative Principle and Gricean maxims, arguing that what contributes to the understanding of implicatures is a "basic feature of human cognition" (p. 608) that seeks optimal relevance, rather than adherence to the maxims. An input becomes relevant to the hearer when, as previously stated, it links with existing background information. Thanks to the combination of input and a specific context, relevant conclusions can be made, which is referred to as a positive cognitive effect. Allott (2020) further explains that the more positive cognitive effects there are for an individual, the more relevant the input is going to be. He also discusses the concept of effort, claiming that the input becomes less relevant if the effort required to decode a message is greater. However, he also emphasises how unique communication is, putting forward the fact that since speakers' main intention is to be understood, they will always try to adapt their utterances so that the audience will consider them relevant and easy to process. This is a cognitive process that Liu (2023) terms "mutual manifestness and knowledge", defined as individuals' cognitive abilities combined with common assumptions that allow them to make proper inferences.

The above sheds further light on the use of indirectness in the classroom setting. It might explain why educators, regardless of their gender, hypothetically use indirectness to a greater degree. Based on Relevance Theory, they are aware of the clarity of the context and sufficient

cognitive abilities of their learners that will allow them to process implicatures successfully. Therefore, Relevance Theory will essentially help answer the research questions by exploring whether female or male educators have more confidence in their learners' cognitive abilities and background knowledge, and thus use indirectness and its various types to a greater extent.

## **2.6 Politeness Theory**

Another theory that addresses the concept of successful communication and may help provide further insight into the research questions is Politeness Theory. According to Waugh et al. (2016), the theory is derived from Grice's Cooperative Principle and the related maxims discussed earlier. However, unlike Gricean concepts, Politeness Theory delves into the speaker's motivations behind the utterances they choose. In fact, the politeness model "suggests that social motivations can explain deviations from explicitness and directness and their social implications" (p. 89).

Goatly (1995) and Grainger & Mills (2016) add that Politeness Theory is part of pragmatics, as it focuses on intended meanings. Its use depends on the social context, specifically the distance between people, and the distribution of power among them. Moreover, contrary to previous research on speech acts, politeness is not inherent to any particular language. Instead, utterances are analysed within a given context and how they function within it. Interlocutors' reactions and views on the potential politeness of an utterance are also taken into consideration. Allan (2016) and Kingwell (1993) mention the term "intrinsic weightiness", which indicates the degree of imposition of a given speech act and is another essential element in the theory. Culture and various contexts inevitably influence the use of politeness (Reiter, 2000; Spencer-Oatey, 2005).

As pointed out by Almadani (2021), the major traditional theories of politeness include Lakoff's rules of politeness, Leech's Politeness Principle, and Brown and Levinson's Politeness Theory. According to Lakoff, who grounded her rules in Grice's maxims, speakers may choose to violate these maxims out of politeness in order to evade conflict. Al-Duleimi et al. (2016) add that Lakoff proposed two main rules – *to be polite* and *to be clear*. The first rule is further divided into the following subrules: "don't impose", "give options", and "make A feel good, be friendly". Lakoff's rules are connected to the concept of distance between speakers, as well as respect shown when communicating with others. However, the theory has been criticised for several reasons, including its claimed universality, and the lack of empirical studies to support its author's arguments.

The next theory related to politeness is Leech's Politeness Principle. Fauziati (2013) describes two rhetoric systems created by Leech: textual and interpersonal. The Politeness principle is derived from the latter, which also includes the Cooperative Principle, based on Grice, and the Irony Principle. According to Leech, the aim of politeness is to maintain friendly relations within society. Additionally, his principle compensates the shortcomings in Grice's concept, providing an interpretation of conversational exchanges. Leech's central model of politeness is based on a cost-benefit scale which emphasises minimising the cost and maximising the benefit to the speaker or hearer. Mohammed (2020) further mentions seven maxims introduced by Leech: tact, generosity, approbation, modesty, agreement, sympathy, and consideration. The tact maxim requires minimising cost and maximising benefit to the hearer, which directly relates to the concept of negative and positive politeness put forward by Brown and Levinson, which will be discussed later. The maxim of generosity involves maximising the benefit to the hearer at the cost of one's own. The maxim of approbation entails maximising praise and minimising disapprobation of the hearer, which is closely related to the maxim of modesty that concerns minimising self-praise and maximising self-disapproval. The maxim of agreement involves minimising disagreement between oneself and others, whereas the maxim of sympathy aims at minimising feelings of antipathy and promoting sympathy between the speaker and the hearer. Finally, the maxim of consideration focuses on maximising the hearer's comfort while minimising their discomfort. Referring back to the notion of positive and negative politeness, Almadani (2021) explains that the first term denotes maximising politeness in polite exchanges, whereas the second term aims to mitigate the lack of politeness in impolite exchanges by, for instance, employing indirectness to soften impoliteness. Finally, Leech considers several social factors that influence the level of politeness and might account for violations of the principle:

- The vertical distance which entails factors such as age, status, and power.
- The horizontal distance which refers to the specific relationship between the hearer and the speaker.
- Value or weight given to the imposition
- The degree of the social rights and obligation
- Degree of membership in one's own territory and the territory of others

Leech's theory was not free from criticism since it was partially based on Gricean concepts. In addition, he was criticised for the large number of maxims and the fact that his principle was mostly pertinent to Western cultures (Al-Duleimi et al., 2016).

Brown and Levinson's Politeness Theory is widely viewed as the most influential among politeness theories. It is based on Goffman's concept of face, specifically the awareness of one's face that is understood as respecting other's needs to maintain positive self-image and to avoid face-threatening acts (FTAs) (Kingwell, 1993; Mackenzie, 2020; Al-Hindawi & Alkhazaali, 2016). Brown and Levinson's model differentiates between negative and positive face. The former entails respecting the interlocutor's right to be free from imposition, while the latter stands for the hearer's need to be appreciated and accepted (Cutting, 2002; Katriel, 2016; Lwanga-Lumu, 1998). Katriel also highlights the tension between the requirement to adhere to the hearer's face wants by using indirect speech acts and the requirement to ensure clarity and interpretability of conversational exchanges. This dilemma gives rise to face-threatening acts. Directives may contribute to face-threatening acts, as they involve imposition and thus, reduce the hearer's optionality of refusal, thereby restricting their autonomy.

Yadav (2019) claims that face-threatening acts can be approached in different ways: with an off-record indirect speech act or a bald-on record direct speech act, representing opposite ends of the spectrum. Al-Hindawi & Alkhazaali (2016) further add that three factors influence an individual's decision to employ FTAs: 1) social distance which refers to the level of familiarity between interlocutors, 2) power which pertains to social status, and 3) the weight or force of imposition which is related to the rank and ability of the speakers that allow them to impose their ideas on others.

A more detailed classification of the strategies that may be employed when facing FTAs is outlined by Culpeper (2016) who lists bald-on-record, off-record, positive and negative politeness, along with the avoidance of FTA. Bald-on-record speech acts frequently include imperatives with no devices to mitigate or soften them. They are direct and unequivocal and are in effect considered the most face threatening. As pointed out by Katriel (2016), they may also be understood as intentionally expressing disregard towards the hearer. In order to adhere to negative face wants when using bald-on-record acts, speakers can employ a variety of devices such as apologising, asking a question, adding hedges etc. These strategies aim at lessening the imposition, and thus, saving the hearer's negative face. Furthermore, to attend to the hearer's positive face wants while employing bald-on-record acts, the speaker can establish common ground by referring to the interests and wants of the hearer. Off-record acts are completed in an implicit and indirect manner, while the avoidance of FTAs, as the name implies, involves avoiding such acts altogether. Positive and negative FTAs are performed unambiguously but with an effort to mitigate the imposition.

Despite Brown and Levinson's significant influence in the area of politeness, their theory has not escaped criticism. Allan (2016) and Ogiermann (2009) mention criticism of Brown and Levinson's claim that the use of linguistic strategies to minimise face-threatening acts is universal. In reality, the concept of politeness, as proposed by Brown and Levinson, is not applicable across all cultures, as "every language has at its disposal a range of culture-specific routine formulae which carry politeness default values" (p. 190). What is universal, however, is that every social group has its own hierarchy of these strategies. Duong (n.d.) additionally explains that Brown and Levinson's concept of face is rooted in a Western perception of interlocutors as individuals, making it impossible for the theory to be applicable to non-Western cultures. Similarly, Grainger & Mills (2016), Ogiermann (2009), and Sifianou & Blitvich (2017) point out that Brown and Levinson's model mainly analyses stereotypical English politeness, which is commonly associated with the use of indirectness. However, in other languages, such as Arabic, politeness does not always demand the use of indirectness and is therefore rarely used to express politeness. Al-Hindawi & Alkhazaali (2016) also emphasise "unjustifiable correlation" (p. 1542) between indirectness and politeness, citing examples of Mexican, German, and Polish speakers who opt for directness to show solidarity and closeness, not impoliteness. Moreover, there are cultures that perceive indirectness as a form of manipulation, whereas directness is equated with honesty. Additionally, as the usage of indirectness highlights the distance between the interlocutors, it can be in fact perceived as impolite. Grainger & Mills (2016) also suggest that indirectness can be considered as imposing as directness. When a request is mitigated, the refusal to accept it might be interpreted as a failure to acknowledge its politeness.

Overall, based on the above theories and their criticism, it can be concluded that neither directness nor indirectness are straightforward and simple phenomena that can be easily analysed. Indirectness, which is the focus of this study, has a complex relationship with politeness and can be viewed differently by different people, potentially influencing the results of this research. Furthermore, Politeness Theory will help explore such aspects as power relations, social context, and gender, as well as their impact on the use of directness and indirectness in educational settings. The concepts of positive and negative politeness, along with FTAs may also offer further insight into the reasons behind the use of speech acts in the classroom, particularly whether female or male educators employ more indirectness to adhere to positive or negative face wants, or to avoid imposition and conflicts. According to the second research question and the perception of indirectness, the theory will help examine learners' and educators' perspectives to determine whether indirectness is seen as polite and

considerate or manipulative, linking it to notions of power or weakness. Finally, Brown and Levinson's strategies of politeness will provide a framework for classifying the types of indirectness used in the classroom.

## **2.7 Indirectness**

This section delves further into the concept of indirectness, previously discussed in connection with politeness theories. Many scholars define indirectness as the difference between the the speaker's intended meaning and the literal meaning of an utterance. This implies that the speaker conveys the meaning beyond the literal words, relying on a shared background. This definition links with Searle's Speech Act Theory, according to which indirect speech acts are perceived as utterances with an additional meaning beyond the spoken words. These acts carry two illocutionary forces, with one act being performed indirectly through another. For instance, a request might be expressed in the form of a question (e.g., *Can you type this letter for me?*). According to Searle, the hearer's task is to infer the intended meaning using common knowledge of the context. Additionally, the hearer is expected to assume the speaker's cooperation and relevance of their utterances, in line with Grice's maxims and Relevance Theory. (Asher & Lascarides, 2001; Boux et al., 2022). This further proves that indirectness is not a simple phenomenon to study and analyse. In fact, in their study of cognitive features of indirect speech acts, Boux et al. (2022) concluded that indirectness is regarded as less coherent and predictable, which directly affects how it is interpreted. They also emphasised that decoding indirectness requires various cognitive processes for the listener to properly comprehend the intended meaning.

Due to its complexity, indirectness has garnered significant interest among scholars. The lack of transparency and the challenges in interpreting utterances attract researchers to explore the field further. Various scholars have offered different definitions of indirectness, making it a highly ambiguous concept. Almadani (2021) presents several of these definitions, noting that according to Brown and Levinson, any communicative exchange imparting more than its literal meaning falls under the category of indirectness. Similarly, Grainger & Mills (2016) define indirectness as the difference between the interlocutor's intended meaning and the literal one. Thomas, as cited in Almadani (2021), considers indirectness to be universal, involving a conflict between implied and expressed meaning. In her study of the use of directness and indirectness among British and Libyan people, Kerkam (2015) concludes that indirectness is a type of speech that is implicit and ambiguous. All these definitions further highlight the intricacies of the phenomenon.

There are numerous reasons why speakers might opt for indirect speech acts when communicating with others. They might wish to avoid unfavourable consequences for themselves or to prevent hurting someone's feelings. Moreover, indirectness is frequently chosen when discussing sensitive or forbidden topics, when speaking to someone of a higher status or rank, or when one wishes to appear witty and intelligent. In school settings, teachers might choose indirectness when giving feedback to avoid demotivating students who did not perform well. As discussed in previous sections, indirectness is also a preferred option in English, as it is closely associated with politeness (Grainger & Mills, 2016). Many scholars frequently cite Leech's claim that indirectness and politeness are closely related due to the fact that indirect speech acts give the hearer the possibility to refuse, the option to act upon the inference or to simply ignore it (Culpeper, 2016; Goatly, 1995; Grainger & Mills, 2016; Kasper, 1995; Ogiermann, 2009). This aligns with Brown and Levinson's Theory of Politeness and their claim that indirectness is tactful and characterised by a lack of imposition. In this context, directness, the polar opposite of indirectness, is often perceived as impolite. However, Kasper (1995) argues that the relationship between directness/indirectness and degrees of politeness/impoliteness are not so clear-cut. She refers to studies by Walters, House, and Blum-Kulka who found that the ambiguity in indirect speech acts is not necessarily considered polite by speakers of languages such as Hebrew, German, and Puerto Rican Spanish. Kasper adds that indirectness is often employed for its "deniability potential" (p. 8), allowing the speaker to deny any negative interpretation of their speech act. Moreover, Attricki & Akpelesi (2021) mention research conducted in Asian languages which did not confirm the link between indirectness and politeness, showing a preference for direct strategies coupled with mitigating devices. The inconsistencies shown in existing research are highly relevant to the current study. First, it could be assumed that the hypothetical use of indirectness might be interpreted as politeness since the language of instruction between educators and learners is English. On the other hand, due to multiculturalism among both groups, whose members have different native languages, the results might not align with Brown and Levinson's model of politeness.

Some scholars also view indirectness as an indication "of a higher level of thought process and awareness of others" (Grainger & Mills, 2016, p. 3), as it developed later than directness and is therefore considered a more recent phenomenon. Lakoff has identified two additional benefits of indirectness. The first is defensiveness, where the speaker refuses to go on record, allowing them the possibility of retracting what was said if there is no positive response. The second is building rapport, where speakers encourage hearers to act out of solidarity rather than out of imposition or power (Cutting, 2002; Fung, 2009; Tannen, 1993). Tannen (1993)

has expanded on the second benefit, suggesting that those in positions of power may choose not to use indirectness as a means of building rapport. Tannen (1994) also highlights the usefulness of indirect strategies in situations where both parties understand its nature and share a common background.

Fung (2009) further notes that indirectness has been studied from various perspectives. For instance, McCarthy focused on indirectness and forms of politeness; Reiter et al. were interested in conventional indirectness; Goatly examined its behaviour in speech acts; Ogiermann studied it across cultures, while Lakoff concentrated on implied meanings. In addition, most studies on indirectness have focused on the analysis of requests and commands, which means they do not capture the full scope of the phenomenon. Finally, many researchers have emphasised the necessity to go beyond Grice's maxims and Brown and Levinson's politeness model, arguing that politeness should be analysed as a phenomenon naturally evident in various communities and cultures. More importantly, these scholars define culture as "the beliefs, values and practices of *any* social group" p. 16). This understanding also applies to socioeconomic status and gender, the latter being the focus of this study. All this is pertinent to the present research, as it underscored the need for further studies to explore a broader range of indirect speech acts than just requests and commands, which this study aims to achieve. This focus will contribute to answering the third research question. Moreover, the existing inconsistencies in research on indirectness further prove the significance of the current study which seeks to shed more light on the use of indirect speech acts by female and male educators, addressing the first and second research questions.

### **2.7.1 Requests and Conventional Indirectness**

Research on indirectness has primarily focused on requests as explained by Reiter et al. (2005) and Abdolrezapour (2012). Abdolrezapour elaborates that requests are impositions, as they require the hearer to perform an action, leading the speaker to choose from a variety of strategies to soften the imposition.

A significant amount of research has been conducted to explore the subject of requests. For instance, Fukushima's study of polite request strategies in Japanese and British English revealed that different strategies were used, and various factors influenced the choices among both groups differently. Al-Shawesh & Hussin (2015) cite numerous studies on requests across cultures. For instance, Rue and Zhang's study of Chinese and Korean speakers found that both groups used conventional and nonconventional indirectness (hints), with the Chinese favouring conventional indirectness and Koreans using hints when addressing superiors. The

focus of Macaulay's study was to determine the differences between males and females when asking for information, concluding that females used indirect speech acts more frequently, primarily out of politeness. In another study by Farahat, Australian speakers chose conventional indirectness, while Palestinian Arabs preferred apologising. Reiter et al. (2005) also pointed out that conventional indirectness is the favoured strategy in many languages. Abdolrezapour (2012) further cites Blum-Kulka et al.'s definition of conventional indirectness which encompasses strategies that perform the intended action by employing already conventionalised language forms, relying on the contextual conditions necessary for the execution of the request.

Abdolrezapour also mentions previously discussed variables that affect the choice of request strategy, referring to Brown and Levinson's universal claim that the degree of indirectness increases with the degree of face-threat posed by the act. This level of threat depends on factors such as social distance between speakers, the hearer's power and status, and the extent of imposition. However, it has been demonstrated that this relationship is not straightforward and depends on a combination of many other factors, such as context, individual approaches, different perspectives of speakers and hearers, gender, age, the formality of the situation, the purpose of the request, the setting, and even the probability of compliance.

Brown and Levinson's concept of social power, which entails dominance and authority, has been the focus of numerous studies, producing inconsistent results. For instance, a study conducted by Cherry revealed that the power did not affect the choice of request strategies among American academics. However, this contrasts with research conducted by Holtgraves and Yang, as well as Baxter (Holtgraves & Yang, 1992). In their own study carried out in 1990, Holtgraves & Yang found that the influence of power aligned with Brown and Levinson's theory only among speakers who were in distant relationships, not close ones (Holtgraves & Yang, 1990). This point is particularly relevant to the current study, as the relationship between teachers and learners is complex. On the one hand, it is a distant relationship, yet on the other hand, teachers often build rapport with their students to create a positive and conducive to learning environment in the classroom. In fact, Abdolrezapour (2012) notes that the studies of the concept of familiarity have produced the most contradictory findings. Baxter's and Holtgraves and Yang's results demonstrated that more direct strategies are employed in distant relationships. However, other studies, including those by McLaughlin et al. and Abdolrezapour and Eslami-Rasekh, did not support these findings, concluding that familiarity among speakers does not impact the choice of strategies.

Delving further into conventional indirectness, Pinker (2007) explains that conventionality is derived from the fact that the hearer correctly interprets the speaker's utterances whose literal meaning is different from the intended one. The most common forms of conventional indirectness are a query preparatory (e.g., *can you... would you be able to...*) and a suggestory formula (e.g., *let's...*). These speech acts are perceived by many speakers as the politest ones; however, different forms and frequencies in their use have been noted.

Another group of strategies mentioned by Fordyce & Fukazawa (2003) includes syntactic and lexical downgraders. The first group, also referred to as internal modifiers, includes elements such as modal verbs (e.g., *Can you ...?*), the use of past tense (e.g., *I was thinking if...* ), conditional sentences (e.g., *What would you do if ...?*), and negation (e.g., *Wouldn't it be a problem to ...?*). These downgraders may also contain consultative device (e.g., *Do you think I could ...*). Regarding lexical downgraders, the use of the word 'please', understaters (e.g., 'just', 'little'), and downtoners (e.g., 'probably', 'possibly') can be listed.

Reiter et al. (2005) and Felix-Brasdefer (2005) add supportive moves and grounders which belong to the group of external modifiers, being external to the head act. Grounders are one type of supportive moves that provides a reason for a given request (e.g., *Open your books, as we need to move on with the topic*). Other supportive moves can involve justifications, apologies, compliments – anything that can be used to mitigate the force of the act. According to Darong et al. (2020), hedging is another mitigating device that softens the illocutionary force of a statement (e.g., *I might need to talk to you*). As such, it adheres to negative politeness by helping avoid imposition (Nikleva, 2018).

### **2.7.2 Nonconventional Indirectness - Going off Record**

As discussed above, conventional indirectness, which appeals to negative face wants and is frequently associated with politeness, is often employed in requests despite not being as explicit as direct speech acts. Nevertheless, due to the use of already conventionalised forms of language, the intended meaning is usually not difficult to decode. The same cannot be said regarding nonconventional indirectness, also referred to as off record strategies or hints. As defined by Ackermann (2023), their “communicative intent is not transparent” (p. 358). These strategies are further divided into strong and mild hints. Strong hints refer to requests where the proposition includes a partial reference to the requested item, or where it is mentioned through context, while mild hints do not include any relevant references to the proposition. This makes mild hints more ambiguous and unclear. Unlike conventional indirectness, which has been shown in many studies to be a sign of politeness, nonconventional indirectness has

not been perceived in the same way. This is due to a large number of possible meanings such acts might carry, possibly contributing to communication failure. As emphasised by Attricki & Akpeleasi (2021), due to the lack of pragmatic clarity, nonconventional indirectness might also imply impoliteness.

Referring back to Brown and Levinson's definition, going off record is understood as a communicative act where it is not feasible to arrive at one clear intention. However, although nonconventional hints flout Grice's maxims, they are still used to mitigate impositions, and as such, they address the hearer's negative face wants, much like conventional indirectness. Moreover, interlocutors frequently use pre-requests as a form of indirectness to save face in situations where a request might be rejected. This strategy can be face-saving for both the hearer and the speaker: the former can simply ignore the hint, and the latter can continue the conversation as if the request was never made. On the other hand, going off record may be perceived as manipulative, as it requires the hearer to take initiative to fulfil the speaker's request (Ardi et al., 2018; Fung, 2009; Ogiermann, 2015).

## **2.8 Directness and Bold-on-Record Strategies**

In line with the previous discussion on Brown and Levinson's Theory of Politeness, another crucial concept that should be mentioned is directness. Katriel (2016) refers to directness as various elements of speech, both cognitive and social, that indicate an interlocutor's "claim to the truthfulness of their utterances" (p. 745). Therefore, the degree of directness in a given utterance reflects the degree of transparency in the speaker's intention. Furthermore, the transparency of an utterance is evident when its immediate interpretation is possible. This aligns with Grice's maxims because adhering to the Cooperative Principle ensures the efficiency and transparency of exchanges, which means that utterances can be instantly interpreted by the hearer, as they are direct and do not require inferences.

According to Amalia et al. (2023), directness, which is often realised through bald-on-record strategies, functions effectively when speakers are in a close or intimate relationship, where they can share their thoughts and ideas comfortably, without fear of hurting anyone's feelings. Khoirunnisa & Hardjanto (2018) elaborate on the aspect of power as a deciding factor in the use of directness: if the speaker holds a position of power, they are more likely to resort to direct strategies rather than indirect ones. They also posit that bald-on-record strategies are used in urgent situations, or when a person is in a rush. These situations are directly linked to educational settings, where educators, holding a position of power, frequently face urgent situations and act under the pressure of time, potentially encouraging the use of more direct

strategies. Nonetheless, according to the politeness theories mentioned earlier, formulating bald-on-record utterances is on one of the most face-threatening acts and is thus considered to be impolite. Finally, directness is associated with young people, lower social classes, and a lack of education (Culpeper & Hardaker, 2017; Koohzad et al., 2019; Mills, 2017; Sapitri et al. 2019; Spencer-Oatey & Zegarac, 2017; Tracy, 2011). These factors might additionally contribute to a more frequent use of directness in the classroom, particularly given that this study focuses on young IB learners, whose status and education are inferior to those of their educators. This also links to the power aspect and the potential use of direct speech acts to assert one's authority.

There are, however, many studies which prove that directness is positively viewed by certain social and cultural groups. For example, in Arabic, several African languages, as well as in Polish, directness is the norm when making requests, as it reflects the closeness between interlocutors. (Koohzad et al., 2019; Mills, 2017; Spencer-Oatey & Zegarac, 2017). Attricki & Akpeleasi (2021) cite a few other studies. For instance, a study of politeness in Korean requests demonstrated that direct speech acts are preferred over conventional indirectness. They are, however, accompanied by so called honorifics – respectful titles used when addressing others (e.g., Mr, Mrs, Sir etc.). In another study of Mandarin Chinese, bald-on-record requests were favoured due to the sincerity and honesty they convey. Finally, Vu's research on Vietnamese speakers showed that they preferred directness coupled with supportive moves and other mitigating devices.

Clearly, such inconclusive findings in the case of both indirectness and directness confirm the existing gap in literature, underscoring why the present research is worth pursuing. In addition, to the best of the present research's knowledge, there is limited data regarding the use of indirect and direct speech acts by Maltese speakers of English, or within the Maltese educational setting. One study conducted by Tanti (2010) as part of her BA thesis aimed to investigate the use of request strategies among 120 Maltese children from all over Malta, aged 5 to 12 years of age. The study revealed that the majority of children, especially girls, were fully aware of linguistic features to convey politeness. It was noted that more girls used nonconventional indirectness, as well as downgraders, and mitigators. Interestingly, the use of politeness strategies was more frequent among older girls, suggesting an increase with age, whereas the opposite was observed for boys. Another study was carried out by Cremona (2017) on politeness in Maltese English, aiming to investigate whether expressing politeness in Maltese was influenced by British English or Maltese. According to the findings, the most frequently used strategy in all varieties was negative politeness redress (mitigating impositions

to adhere to negative face wants); however, bald-on-record strategies were solely used in Maltese English in formal situations. One off-record strategy was employed, also in Maltese English. Regarding informal situations, bald-on-record strategies were used in Maltese, and occasionally in Maltese English, while off-record instances were noted twice in Maltese. The study also revealed that more hedges and mitigating devices were employed in Maltese than in British English. These findings further highlight the significance of the current study.

## **2.9 Request Strategies Taxonomy**

According to Blum-Kulka & Olshtain's (1984) cross-cultural study of speech act realisation patterns (CCSARP), the present research will use their taxonomy of request strategies in order to answer the third research question. The study focused on the speech acts of requesting and apologising and was conducted in the following eight languages: British English, American English, Australian English, Canadian French, Danish, German, Russian, and Hebrew. The aims of the study were to identify patterns of realisation of these speech acts among native speakers, to examine the similarities and differences in those patterns across languages, and to discover similarities and differences in the realisation patterns between native and non-native speakers.

According to the theoretical framework employed in Blum-Kulka and Olshtain's study, there are three levels of directness (all of them have been already discussed):

- ⇒ the most direct level which encompasses strategies such as mood derivables, explicit performatives, hedged performatives, locution derivables, and scope stating;
- ⇒ the conventionally indirect level which includes suggestory formulae and query preparatories;
- ⇒ the nonconventional indirect level which includes hints, both strong and mild

A more detailed division and explanation of each strategy is presented in Table 1 below:

**Table 1***Request Strategy Types*

<b>Level of directness</b>	<b>Types</b>	<b>Examples</b>
Direct	<b>Mood derivable</b> – the grammatical mood of the verb in the utterance marks its illocutionary force as a request	<ul style="list-style-type: none"> <li>○ Leave me alone.</li> <li>○ Clean up this mess.</li> </ul>
	<b>Explicit performative</b> – the illocutionary force of the utterance is explicitly named by the speaker.	○ I'm asking you not to park the car here.
	<b>Hedged performative</b> – utterances embedding the naming of the illocutionary force.	○ I would like you to give your lecture a week earlier.
	<b>Locution derivable</b> – the illocutionary point is directly derivable from the semantic meaning of the locution.	○ Madam, you'll have to move your car.
	<b>Scope stating</b> – the utterance expresses the speaker's intentions, desire or feeling vis a vis the fact that the hearer do X.	○ I really wish you'd stop bothering me.
Conventionally indirect	<b>Suggestory formula</b> – the sentence contains a suggestion to X.	<ul style="list-style-type: none"> <li>○ Why don't you get lost?</li> <li>○ How about cleaning up?</li> </ul>
	<b>Query preparatory</b> – utterance contains reference to preparatory conditions (e.g. ability or willingness, the possibility of the act being performed) as conventionalised in any specific language.	<ul style="list-style-type: none"> <li>○ Could you clear up the kitchen, please?</li> <li>○ Would you mind moving your car, please?</li> </ul>

Nonconventionally indirect	<b>Strong hints</b> – utterance contains partial reference to object or to elements needed for the implementation of the act.	○ You’ve left this kitchen in a right mess
	<b>Mild hints</b> – utterances that make no references to the request proper (or any of its elements) but are interpretable through the context as requests	○ It’s hot in here

Note. Data taken from “Requests and apologies: A cross-cultural study of speech act realization patterns,” by S. Blum-Kulka & E. Olshtain, 1984, *Applied Linguistics*, 5(3), p. 202 (<https://doi.org/10.1093/applin/5.3.196>).

Table 2 below is an overview of internal and external modification which, as explained earlier, can be used to soften direct speech acts.

**Table 2**

*Types of Modifications*

<b>Internal modifications</b>	
<b>Syntactic downgraders</b>	
<b>Type</b>	<b>Example</b>
<b>Interrogative</b>	○ Could you do the cleaning up?
<b>Negation</b>	○ I wonder if you wouldn’t mind dropping me home?
<b>Past tense</b>	○ I wanted to ask for help
<b>Embedded ‘if’ clause</b>	○ I would appreciate it if you left me alone.
<b>Other downgraders, including lexical downgraders</b>	
<b>Type</b>	<b>Example</b>
<b>Consultative devices</b> – elements by means of which the speaker seeks to	○ <i>Do you think</i> I could borrow your lecture notes from yesterday?

involve the hearer and bids for their cooperation.	
<b>Understaters</b> – elements by means of which speaker minimises parts of the proposition.	○ Could you tidy <i>a bit</i> before I start?
<b>Hedges</b> – elements by means of which the speaker avoids specification in making a commitment to the illocutionary point of the utterance.	○ I would really help if <i>you did something</i> about the kitchen.
<b>Downtoner</b> – elements by means of which the speaker modulates the impact their utterance is likely to have on the hearers, achieving the modulation via devices signalling the possibility of non-compliance.	○ Will you be able <i>perhaps</i> to drive me?
<b>External modifications</b>	
<b>Checking on availability</b>	○ <i>Are you going in the direction of town?</i> And if so, is it possible to join you?
<b>Getting a precommitment</b>	○ <i>Will you do me a favour?</i> Could you perhaps lend me your notes for a few days?
<b>Grounder</b> – indicating the reasons for the request	○ <i>Judith, I missed class yesterday,</i> could I borrow your notes?
<b>Sweetener</b> – expressing exaggerated appreciation of the hearer’s ability to comply with the request.	○ <i>You have beautiful handwriting,</i> would it be possible to borrow your notes for a few days?
<b>Disarmer</b> – the speaker indicates their awareness of a potential offense, thereby attempting to anticipate a possible refusal.	○ Excuse me, <i>I hope you don’t think I’m being forward,</i> but is there any chance of a lift home?
<b>Cost minimiser</b> – the speaker indicates consideration of the ‘cost’ to the hearer involved in compliance with the request.	○ Pardon me, but could you give me a lift, <i>if you’re going my way,</i> as I just missed the bus and there isn’t another one for an hour.

Note. Data taken from “Requests and apologies: A cross-cultural study of speech act realization patterns,” by S. Blum-Kulka & E. Olshtain, 1984, *Applied Linguistics*, 5(3), p. 202 (<https://doi.org/10.1093/applin/5.3.196>).

## **2.10 Discourse and Gender**

The necessity of conducting research in the field of discourse and gender arises from the fact that many studies have traditionally looked at gender as a biological sex, leading to hasty and vague conclusions. The study of gender commenced during the second wave of feminism in the 1970s when researchers began to challenge the division between biological gender and its social constructs. They advocated for the notion that gender should be considered a social identity. Therefore, gender is closely related to aspects such as “sexuality, ethnicity, social position” (Tannen et al., 2001, p. 111), geography, and more (Waugh et al., 2016). This underscores the importance of the present study, emphasising the fact that certain speech acts cannot be definitively linked to biological gender.

Contrary to the common belief that linguistic features directly correspond to a particular gender, Grainger & Mills (2016) argue that there is nothing inherently linking a given speech act to biological gender. Nevertheless, the associations between linguistic forms and gender that have developed over time have significantly affected the perception of speech acts and their connection to a given sex. This has led to a focus on phonology and conversational styles between men and women in discourse analysis related to gender.

As previously mentioned, the way language is used reflects social interactions and hierarchies. It mirrors the societal norms and, in effect, places men as a privileged social group, in contrast to women who are often disempowered. Furthermore, as Tannen et al. (2001) emphasise, men and women make certain linguistic choices in order to fulfil their social roles. Kendall and Tannen (2001) confirm this view, elaborating that men’s and women’s conversational styles depend on their “understanding of social relationships” (p. 553). Lakoff (1983) further explains that women encounter linguistic discrimination on two levels: “in the way they are taught to use language, and in the way general language use treats them” (p. 46). Both levels depict women as inferior and subservient. Lakoff also posits that women are taught to be nonforceful, as this is what is socially expected of them.

Building on these observations, Lakoff formulated the concept of women’s language, which she argues reflects women’s unequal access to power, restricting their ability to express themselves strongly. Women are expected to talk about trivial things in ways that make them

sound uncertain. This portrays them as supposedly unable to hold power and thus denies them access to it. Delving further into Lakoff's concept of women's language, it is demonstrated through grammatical and lexical items, syntax, and intonation. Lakoff identifies the following ten features that characterise women's language:

- Expletives (e.g., *oh dear*),
- Empty adjectives (e.g., *fabulous, divine*),
- Tag questions (e.g., *It's such a lovely painting, isn't it?*),
- Hedges (e.g., *Perhaps you could help me.*),
- Super polite forms,
- Emphatic use of 'so' and 'very',
- Highly correct grammar and pronunciation,
- Seriousness,
- Direct questions and special vocabulary (such as various names for colours),
- Mitigated requests (Coates, 1999).

As for intonational patterns, women tend to use rising intonation characteristic of questions, which depicts them as hesitant and uncertain. Coates adds that women's speech is more "tentative" (p. 116) due to the use of hedges, such as 'I think', 'I'm sure', 'you know', 'sort of' etc., which again stems from societal expectations towards women who are expected to behave in a ladylike manner.

On the other hand, in her recount of Holmes' corpus analysis of female and male speech, Coates reveals that hedges used by women express certainty rather than a lack of it. Another reason for using hedges is that women often discuss more sensitive topics compared to men, which requires this strategy to avoid face threats. Furthermore, based on a lack of empirical evidence, Coates disproves Lakoff's claim that the use of tag questions by women exposes them as less assertive, which Lakoff further explains as a sign of a lack of knowledge. Despite existing studies that support Lakoff's argument, it has been argued that question tags can serve either a modal or affective purpose. The former relates to certainty and is speaker-oriented, while the latter is aimed at supporting the hearer. Interestingly, Coates cites Holmes's findings which demonstrate that women use tags to support and facilitate communication, whereas 61% of men use question tags to express uncertainty. These findings are further confirmed by Cameron who found that women use more tag questions, as they frequently assume roles of facilitators. A similar viewpoint is presented by Chalupnik et al. (2017) and Kienpointner & Stopfner (2017) who additionally posit that powerless people choose the 'female' speech style,

which is considered “cooperative, empathetic, and polite” (p. 77). On the other hand, Chalupnik et al. (2017) claim that facilitative features of women’s speech are also seen in the speech of powerful leaders whose goal is to deliver a successful message.

Apart from questions tags, interrogative sentence structures seem to dominate female discourse, which, as discussed in the context of question tags, might reflect uncertainty. However, Coates (1999) challenges this claim by mentioning asymmetrical power relationships, such as those between a student and a teacher or a patient and a doctor, where asking questions is a sign of power because it requires an answer from the hearer. This observation underscores the earlier conclusion about the significance of context. Furthermore, Holtgraves & Bonnefon (2017) question Lakoff’s concept of women’s language, highlighting an extensive amount of research on powerless language which revealed that the features described by Lakoff are not typical of women’s language but are instead related to a lower status. Regarding commands and directives used by both gender groups, women are said to mitigate both speech acts to a greater extent than men. This is related to societal norms, according to which men’s behaviour is characterised by a hierarchical pattern, while women prefer to treat others equally.

Gender differences can also be discussed through the framework of Brown and Levinson’s politeness theory, and the concepts of directness and indirectness. Many researchers have argued that Brown and Levinson’s model is stereotypically associated with white, middle-class females (Kienpointner & Stopfner, 2017; Mills, 2017). Grainger & Mills (2016) also refer to the commonly held view that women are more polite than men due to already mentioned societal expectations based on “powerful gendered ideologies” (p. 57) that enforce following the same patterns.

Another interesting point made by researchers is that the choice of a speech act depends on one’s profession, which indirectly links with gender. For instance, female police officers are expected to employ direct utterances, as these are perceived as an indicator of their professionalism and thus are seen in a positive light. However, it must be emphasised that due to the specificity of the profession, directness used by policewomen is associated with masculinity, not femininity. It has also been noted that women are fully capable of adopting male conversational styles in institutional settings, as this is necessary to perform their jobs professionally. The criticism paradox provides another interesting take on female discourse in business settings. On the one hand, their mitigated, indirect forms of criticism towards employees are seen as unprofessional and feminine even though women’s choices are dictated by their awareness of face-threatening acts and are attempts to save face of their subordinates

when requesting or criticising (Tannen, 1994). Paradoxically, when the same women choose directness to assert their power and show professionalism, they are criticised for being too masculine.

Pizziconi & Christie (2017) also criticise Lakoff's claims about women's language, arguing that language is as an indication of personhood which does not necessarily reflect a person's gender. Instead, they refer to concepts such as friendliness, authoritativeness, and sensitivity, which they argue might indicate a specific social role or an aspect of social identity, such as being a female. They further explain that the sensitivity stance might be indexed as feminine; however, they highlight that such associations are culturally bound. To support their claim, they mention Ochs' study conducted in the Malagasy community in Madagascar which concluded that the sensitivity stance is a typical feature of male speech, not female. In this context, women's way of talking was characterised as very direct and impolite and was thus looked down upon.

Overall, the discrepancies in various studies on gender, along with the ones discussed above, have led scholars to question the notion of attributing speech acts to a particular gender. Despite data from other studies confirming Lakoff's findings about women's language, it is clear that there are men and women who do not follow the patterns assigned to their genders. Therefore, it seems appropriate to conclude that gender cannot be considered a deciding factor in determining the most typical features of language used by both genders are, as these may be easily challenged and subverted despite societal norms.

Finally, it can be argued that the notions of both indirectness and directness in relation to gender are highly ambiguous and complex. Although Lakoff's idea of women's language does represent the standards that women are expected to follow when speaking, these standards cannot be unambiguously ascribed to every single woman (Schiffrin et al., 2001).

All the above considerations are relevant to the present study, as they highlight the complexities related to gender and language, particularly the need to examine gender from a different perspective that does not assign powerless or powerful language to any specific gender, directly addressing the first research question. Moreover, different perceptions of directness and indirectness in relation to power, influenced by social norms, link to the second research question and the way indirectness and directness can be viewed by both educators and learners.

## 2.11 Critical Discourse Analysis and Power

Building on the previous discussion, it has to be noted that more recent gender theories do not solely focus on the binary nature of gender but also consider such factors as education, race, class, ethnicity, and power. being. As far as the last variable is concerned, which is directly related to the present study and the second research question, Black and Cowands propose that power is exerted through ideology and discourse. Conservative religious beliefs in Saudi Arabia illustrate this theory, showing how power is attributed to male members of society. This occurs because the ideology and discourse within Saudi Arabian institutions promote a narrative that empowers men, making them more powerful than women. However, in many places around the world today, women actively participate in the public realm, hence more power can be attributed to them. This links with O'Barr and Atkins's viewpoint according to which the linguistic features used by males are associated with power and are employed by powerful men and women, whereas linguistic features traditionally associated with women indicate a lack of power and are used by both powerless women and men, often from working-class backgrounds (Almadani, 2021).

Fairclough's (2001) viewpoint connects the idea of power with this study's focus on indirectness and directness. Fairclough argues that people are not free to experiment with language as they desire, as their choices are constrained by unequal distributions of power. This inequality frequently necessitates the use of indirect speech acts. Waugh et al. (2016) further add that discourse reflects various social situations such as discrimination, domination, and dehumanisation. Similarly, Spencer-Oatey & Zegarac (2017) claim that the distribution of power between interlocutors can either facilitate or restrict cooperation in communication. A widely held view among scholars is that those who are inferior behave and speak according to social norms placed upon them, exhibiting politeness to a greater degree. In contrast, those in power tend to use directness with their subordinates and indirectness with their equals. Those without power might be direct only with their equals to establish a sense of solidarity, while in other situations, they use indirect speech acts to respect the distance created by unequal power relationship. These considerations imply that the power aspect largely contributes to the choice of speech acts, enabling the present researcher to explore how male and female educators might use indirectness depending on their degree of authority, ultimately helping to answer the first research question.

However, Wolfson's Bulge Theory challenges the idea that politeness increases with distance. Instead, it suggests that people are least polite with those who they either know very well or not at all and are most polite with those who fall in between. This viewpoint contrasts

with the previously mentioned studies by Holtgraves and Yang, as well as Baxter, which show that the influence of power, and thus the use of indirectness, is more evident in distant relationships. These inconsistencies additionally underscore the complexity of the power aspect and its potential influence on the results of this study.

Since the current research explores the concept of indirectness in educational settings, it is crucial to look more closely at the school context. Goatly (1995) states that being direct when in a position of power is acceptable depending on the degree of authority a person or institution holds. He also emphasises social distance between interlocutors and underlines that a “lack of shared territoriality” (p. 270) might be closely related to the use of indirectness in educational settings. Fairclough (2001) adds that time and changing relationships of power in various social institutions, such as schools, influence the social order – a term to denote the way discourses are structured. He also highlights the close relationship between power and requests, claiming that the right and freedom to make requests are closely tied to possessing power. This way, discourse is said to reflect social struggles between power holders and subordinates, which is clearly evident in educational settings. Fairclough also notes that there are two ways in which those in power can exercise it: either through coercion or consent. He explains that in the school context, there is a set of specific social roles which determine what each participant is allowed or required to say. On the other hand, recent increases in power among the working classes have led those who hold power to use “less direct ways of exercising and reproducing” it (p. 60) Darong, et al. (2020) confirm that classrooms are no longer based on power relations but on equality and solidarity. This might throw additional light on the differences in use of indirectness among male and female educators.

Tannen (1993) also discussed the paradoxical relationship between power and solidarity, arguing that one does not exclude the other. She posits that any attempt to express solidarity inherently involves power, as it limits one’s freedom; conversely, any display of power creates an opportunity for relationships, hinting at solidarity. Tannen further explains that the interpretation of utterances may change depending on the situation, context, and people involved, making linguistic strategies inherently ambiguous. Based on this observation and various studies, she emphasises that neither directness nor indirectness can be definitively considered a sign of power or powerlessness. Neither can they be unambiguously assigned to a particular social group, as context is everything. These claims directly relate to the second research question, emphasising once more the complexity and ambiguity of the power aspect, which will potentially contribute to various learners’ and educators’ perceptions.

## 2.12 Teacher Talk

Another aspect that should be discussed in relation to the study is teacher talk and its characteristics. Hermanto (2015) and Cullen (1998) define teacher talk as a unique variety of the English language characterised by its own features. It is aimed at communicating with learners and developing their proficiency. Teacher talk involves aspects of the classroom process such as asking questions, giving instructions, managing the classroom, providing feedback, etc. The analysis of teacher talk has been of much interest to a number of researchers, especially since the idea of a teaching method as the predominant factor in successful learning was disproved. This has given scholars the opportunity to examine classroom language more closely. Two important hypotheses related to this field are the Interaction Hypothesis and the Input Hypothesis. According to the former, interaction plays a crucial role in language acquisition, as the quality of classroom interaction depends on the quality of classroom language used. This further connects with the significance of comprehensible input, as advocated by Krashen in his Input Hypothesis. Krashen argued that when learning languages, people follow a specific, natural order by understanding structures that go beyond their current level. Along with interaction, comprehensible input is considered key to successful acquisition. Of course, the importance of educators' role in the learning process cannot be ignored. It has been proved that learners excel due to effective interactions with their teachers who are responsible for the type of language employed in their classrooms and ensuring it is conducive to learning (Krashen, 1985; Swain and Suzuki, 2008, Bahing et al., 2018; Fitriyah, 2021).

Senowarsito (2013) and Widya (2017) point out that learners' communicative competence involves both linguistic and pragmatic competence, as classroom language is not only a linguistic environment but also socio-cultural and interactional where students' success depends on teacher-learner interaction. Therefore, learners need to be able to communicate effectively, not only in terms of using proper grammar and vocabulary but also in terms of using language which is appropriate in each situation and context. This emphasises the necessity of making learners familiar with all types of speech acts and their functions – direct and indirect, as both are in frequent use. It is similarly emphasised by Felix-Brasdefer and Mugford (2017) who claim that various aspects of pragmatics should be taught from the early stages of education, especially the notion of polite behaviour.

Delving further into the specificity of educational settings, Goatly (1995) distinguishes three attitudes towards students' and educators' roles in the learning process. The first involves doing things *to* students, the second *with* students, and the third *for* students. Doing things *to*

students is referred to as reconstructionism, and it aims to bring about social change through education while treating learners equally. In this approach, students are not primary beneficiaries; society is. In reconstructionism, the teacher's role is one of an undisputed authority. Doing things *for* students is termed progressivism, focusing on developing learner responsibility, teaching learners how to learn, and nurturing the learner as a whole person. This system is learner-centred, with students as the main beneficiaries. The last attitude, not named by Goatly, involves doing things *with* students and implies equality between students and teachers, as well as their closeness and solidarity.

Referring back to the previous discussion of speech acts used in the classroom and the shift in classroom talk towards creating a positive atmosphere (Putri, 2015), it is expected that these factors may have an impact on the results of this study, potentially explaining the use of more indirect and polite utterances. However, this will depend on the philosophy and attitudes employed in the classroom, as emphasised by Goatly, suggesting yet another factor that might potentially influence this study – teachers' beliefs, attitudes, and their own teaching style.

### **2.13 Conclusions**

As highlighted in the literature review, the concepts of power and solidarity, as well as directness and indirectness create intriguing dichotomies which remain unresolved and inconclusive. While language usage reflects societal expectations and norms, it does not definitively assign certain speech acts to one gender only. Consequently, the relationship between and speech act usage remains an interesting area to explore.

The shift in power relations between educators and students further opens up opportunities for research this area. The use of indirectness in educational settings might be dictated by these changes, as they require teachers to build rapport and foster solidarity in the classroom. In other words, educators might use indirectness regardless of their gender. In addition, since the richness of input is a crucial factor in students' learning success, employing indirectness in the classroom is essential, as it is a natural aspect of our everyday speech.

Furthermore, to the best of the present researcher's knowledge, existing studies on educational settings have not thoroughly examined classroom language in relation to gender, particularly in Malta. Both direct and indirect speech acts are certainly used, but there is no indication of which types more typical of each gender. Moreover, no research has yet taken into consideration students' perspective on the language used by their teachers.

Given this context, the aim of this research is to address gaps in the literature and investigate whether female or male educators are more inclined to employ indirect speech acts in

educational settings in Malta. It is hypothesised that female educators may employ indirect speech acts more frequently due to societal norms imposed on them or the benefits of bonding with their learners. On the other hand, it is possible that women will be more direct, reflecting their need to maintain professionalism and manage their classrooms effectively. As for male educators, it would not be surprising if they also used indirectness, perhaps to build rapport with students and adapt to shifts in power dynamics. While the use of indirectness in relation to gender can be hypothesised, the learners' views and reactions to those linguistic phenomena remain unanswered.

## **Chapter 3 – Methodology**

### **3.1 Introduction**

This chapter outlines the methodological approach undertaken in the current dissertation, beginning with the justification of the chosen methodology. It includes the description and recruitment of participants, along with data collection tools and procedures. This is followed by a brief explanation of ethical considerations and methodological limitations.

### **3.2 Research Paradigm**

In terms of the philosophical framework, pragmatism was employed in this study. This particular paradigm was created in response to positivism and interpretivism, both of which advocated for a single scientific approach to determining the truth. Contrary to these schools of thought, pragmatism allows for a combination of methods that can efficiently inform the researcher about “the actual behaviour of participants, the beliefs that stand behind those behaviours and the consequences that are likely to follow” (Kivunja & Kuyini, 2017, p. 35). Creswell & Creswell (2018) additionally highlight that this research paradigm enables the researcher to make use of both quantitative and qualitative methods to arrive at the truth and achieve the aims of research, which makes it applicable to the mixed-methods design that was used in this study. Furthermore, the above paradigm, along with the mixed-methods approach, ensures a detailed and valid interpretation of results and explanation of social phenomena (Fuyane, 2021): in this case, the perception of educators with regard to the use of indirectness as a sign of power or weakness.

### **3.3 Methodological Approach**

As stated above, to carry out this research, the mixed-methods design was applied. The main purpose of the study was to determine whether male or female educators use indirectness more frequently in a Maltese school setting. Additionally, the research was carried out in order to verify how educators, as well as learners, perceive indirectness and its effectiveness – as a sign of power or weakness. For this reason, a quantitative method was chosen, as it allows to “establish the overall tendency of responses from individuals and to note how this tendency varies among people” (Creswell, 2012, p. 13). The application of both the questionnaire and lesson observations yielded numerical data and helped analyse the trends among male and female educators and verify obtained results against literature and existing gaps. Furthermore, quantitative methodology was deemed appropriate due to the fact that it permits to answer

“specific, narrow questions” (Creswell, 2012, p. 14). In addition, due to its numerical nature, it is not very difficult or time-consuming to interpret the results in order to answer research questions. Such a method is also objective as it “adopts structured procedures and formal instruments for data collection” (Queiros et al., 2017, p. 370).

Since the qualitative research is useful to gain a deeper understanding of the research problem (Watkins, 2017), its elements were also implemented and combined with the quantitative ones to delve into participants’ views on how they perceive the effectiveness of indirectness in a school environment. As pointed out by Schoonenboom & Johnson (2017), the use of the mixed-methods approach contributes to a stronger conclusion, consequently increasing the study’s validity. Furthermore, the effectiveness of the research is ensured owing to the fact that the methodology draws “from the strengths and minimises the weaknesses of (...) single research studies” (Johnson & Onwuegbuzie, 2004, p. 15). Finally, this type of research utilises the pragmatic philosophical framework, ensuring focus on human experiences, as well as knowledge that is both constructed and based on human experience.

One of the essential characteristics of mixed-methods design is the combination and integration of the findings, which can be done in several ways. In this study, an explanatory sequential design was employed to fulfil this goal. In this two-phase data collection process, quantitative data were collected first, using a self-administered questionnaire. The data were thoroughly analysed and used to plan the qualitative stage, specifically types of questions to be asked in a focus group. The main advantage of the chosen approach, as emphasised by Creswell & Creswell (2018), is that the qualitative phase provides more detail and thus facilitates the understanding of the initial quantitative stage. In this research, the perceptions of educators regarding the use of indirectness in a school setting were further analysed and explained through the conducted focus group. Moreover, this approach additionally requires connecting the results from both stages at the level of interpretation, offering more depth and insight mentioned earlier, but also allowing to verify whether the results of both phases are convergent or divergent (Guion, 2002).

Apart from the above-mentioned approaches, this study can also be classified as a case study, as it was carried out in one independent school in Malta. This particular design was chosen because it ensures a close examination of collected data in a specific context, which further allows to explore real-life situations and provide “in-depth explanations of a social behaviour” (Zainal, 2007, p. 1). Moreover, explanatory case studies include both quantitative and qualitative stages, broadening the scope of research and allowing for close investigation at both surface and deeper levels. As additionally pointed out by Cohen et al. (2007), case

studies help to focus on individuals and their perceptions of a specific phenomenon. They provide detailed descriptions and consequently help to narrow down the focus of a given study. Their focal point is significance that provides the researcher with insight into the dynamics of specific contexts.

### **3.4 Data Collection Tools and Procedure**

Data were collected in two stages. The quantitative phase involved a self-administered questionnaire completed by both learners and educators. This was followed by lesson observations of the educators to verify the educators' responses in the questionnaire. The qualitative phase included a focus group conducted solely among the educators to explore their perspectives on both indirectness and directness.

#### **3.4.1 Self-Administered Questionnaires**

A self-administered questionnaire was chosen to collect the quantitative data from learners and educators. The final version of the questionnaire was created after a pilot study conducted among a few teachers, who did not eventually take part in the study. Its primary aim was to increase validity and reliability by verifying the clarity of questions, the time required to fill it in, as well as the options included in the multiple-choice questions. The amendments made mainly involved providing more varied possibilities in the multiple-choice answers to represent a larger variety of indirectness and directness types.

A self-administered questionnaire was chosen because it requires the presence of the researcher, which has several benefits. The most crucial advantage is that it facilitates the process of the questionnaire completion, as any queries or questions can be instantly addressed. This further ensures correct completion. The presence of the researcher additionally guarantees a good response rate and allows for a lot of data to be collected simultaneously, which is timesaving. Nevertheless, it has to be highlighted that the researcher's presence might also have a negative impact on the participants, who might feel pressured to complete it or unwilling to do so (Cohen et al., 2007).

The questionnaire for educators was composed of 16 close-ended questions and split into two parts, with the first one related to personal information. The second part contained 9 classroom situations with possible replies in the form of multiple-choice options. Each option represented a different type of indirectness or directness such as query preparatory, consultative devices, grounders, hedging etc. In addition, every question included an 'other' option not to restrict educators' choices. The respondents' task was to choose the reply that

was as close as possible to what they would say in a given classroom context. Questions 14 and 15 were open-ended and aimed at obtaining a more in-depth understanding of educators' views on the use and effectiveness of indirectness and directness in the school environment. Finally, a 5-point Likert scale was employed in question 16 to facilitate the analysis of the power aspect.

The reason for conducting the questionnaire among the learners was to gain insight into their perspective on the use of indirectness versus directness, which is largely missing in existing literature. The questionnaire for learners was constructed in the same way as the educators', containing the same questions and classroom situations; however, the learners were asked to choose the replies that they would most likely want to hear from their teachers in a given situation.

The questionnaire was conducted over the span of two weeks and distributed to 14 educators – 7 males and 7 females, along with 31 International Baccalaureate learners – 16 females and 15 males. Copies of both questionnaires, along with the completed ones, are included in the appendix.

### **3.4.2 Lesson Observations**

Due to the fact that “questionnaires are best employed in combination with other types of data” (Codo, 2008, p. 171), lesson observations were implemented in the current research, with the aim of verifying teachers' choices in the self-administered questionnaire. As emphasised by Kawulich (2005), observation is a tool of quantitative data collection that allows researchers to investigate their participants in natural settings. Furthermore, their implementation increases the validity of a study, providing the researcher with more insight into a particular phenomenon and its context. Validity may be additionally increased if other quantitative tools are used together with observations, which is the case for this research.

The lesson observations employed in the study were highly structured, with observation categories created beforehand based on literature review. Such observations help yield numerical data, which in effect facilitates the observation of patterns and trends. The observer is not a participant and does not interact with the participants; instead, they note down the occurrences of a given phenomenon. This form of non-participant observation allows the researcher to pick out the salient features that they are looking for (Cohen et al., 2007).

In the current research, two lessons of each educator over the span of four weeks were observed and audio recorded. In total, 13 educators were observed, including 6 males and 7 females; one male educator did not agree to being recorded. The recordings were transcribed

using an online speech-to-text transcription application called Otter.ai. Observation sheets featuring different types of indirectness and directness, as discussed in literature review, were completed accordingly to note down different uses of both phenomena such as query preparatory, consultative devices, the use of the word ‘please’, grounders, hedging, going off record, bold-on record, joking and question tags. This enabled the researcher to verify the results of previously administered questionnaires and, in effect, to make final conclusions about the research questions.

Both copies of the observation sheet together with the transcribed ones are included in the appendix; the discussion of the results can be found in the following chapter.

### **3.4.3 Focus Group**

To collect the qualitative data and explore the educators’ perceptions of indirectness, a focus group was conducted with the same group of teachers who had completed the questionnaire and whose lessons had been observed. This tool was chosen for its several crucial benefits, the primary one being the focus on the interaction among participants. This naturally yields a large amount of data that is collected rapidly in one session. Moreover, it allows for gaining more insight into a given matter than individual interviews. Finally, focus groups can easily be combined with other quantitative or qualitative tools, ensuring triangulation and thus increasing validity (Cohen et al., 2007). Simultaneously, it helps to build on quantitative data (Breen, 2006).

Due to timetabling issues, which made it impossible for all educators to participate, the focus group employed in this study was carried out among 3 male and 5 female educators. This reduced number of participants must be highlighted as one of the limitations of the study. As pointed out by Breen (2006), focus groups that are composed of a small number of people may not provide as much data as would be otherwise gathered through interviews.

To collect the data from the focus group, it was audio-recorded and transcribed using the earlier-mentioned software called Otter.ai, which allows quick and efficient speech-to-text transcription. The data gathered in this way were then thoroughly read and analysed by the researcher using a thematic analysis strategy, chosen for its ability to provide rich data and flexibility. As underlined by Braun & Clarke (2006), this strategy facilitates the process of identifying, analysing, and reporting patterns and trends. To speed up the process of identifying themes, another qualitative data analysis tool called Delve was used, which helped the researcher to identify codes and transform them into relevant themes. The final step was to create the summary based on the analysis. This was done according to Lichtman’s 3 Cs,

whereby the results of the focus group were divided into codes, categories, and concepts (themes). Additionally, the results were presented as a combination of text and visuals, with the use of tables and quotes from the educators' discussion.

### **3.5 Validity, reliability, and generalisability**

In both quantitative and qualitative research, ensuring validity and reliability is of utmost importance. In the first type of research, one can distinguish between content and face validity. The former one refers to the extent to which all the items in an instrument measure what they are intended to measure, whereas the latter one relates to one's subjective judgement of a given's tool validity (Surucu & Maslakci, 2020). In order to guarantee the aforementioned types of validity, both the questionnaire and the observation sheets were created based on the literature review, and their final versions were consulted with the researcher's supervisor. Moreover, the fact that the researcher was not an active participant in lesson observations additionally helped to increase validity. Careful sampling is another way of ensuring validity (Cohen et al., 2007); however, it is discussed in further sections.

As for reliability, which can be defined as consistency of the results (Creswell, 2012), it was achieved by creating clear and unambiguous questions in the questionnaire. Furthermore, the researcher's presence during completion additionally increased reliability of the results. Finally, the questionnaire was conducted in the same way for all the learners and educators.

In qualitative research, validity and reliability are referred to as trustworthiness and encompass such notions as credibility, confirmability, transferability, and dependability. The first term relates to the truthfulness of findings, whereas the second one stands for lack of researcher's bias in relation to the findings, which must remain neutral. Dependability concerns the extent to which the interpretation of findings is consistent. Finally, transferability, also known as generalisability, refers to the degree to which the results of a given study can be applied to different contexts (Plummer, 2017).

One way to ensure credibility in a focus group is to make sure that participants feel comfortable to express their ideas and opinions. This was not difficult to achieve, as the participants in this study have known each other and worked together for several years. The researcher also managed to build a good rapport with them. Additionally, to enhance a positive atmosphere during the focus group, refreshments were prepared for the participants.

Methodological triangulation was also implemented in this research as another way of increasing the study's validity and reliability and mitigating researcher bias, created due to the fact that the research took place in the school where the researcher worked. As highlighted by

Fusch et al. (2018), this type of triangulation enables the researcher to look at the data from several perspectives. In addition, the results from both phases were compared and points of convergence were identified, as suggested by Guion (2002). In terms of generalisability, which is difficult to achieve in a case-study design due to its specific context, the context, participants, and data collection procedures and analysis were densely described. Moreover, the issue of low transferability was included as one of the study's limitations.

### **3.6 Methodological Limitations**

One of the main limitations of the current research derived from the fact that it was a case study, and thus all the data came from a single school in Malta. This additionally increased researcher bias. As emphasised by Zainal (2007), one of the main disadvantages of a case study is its limited scope regarding generalisability of the results, which was discussed above. Therefore, the results of this particular research cannot be treated as an ideal representation of the Maltese school setting. Despite the implementation of methodological triangulation to mitigate this problem, it would be beneficial to continue and extend the current study to other independent, church, and government schools in Malta to get a clearer picture of the use of indirectness and its perception among educators and learners.

Another limitation of a case study, as discussed by Cohen et al. (2007), is a possibility of limited occurrence of certain behaviours among participants; some behaviours might only be exhibited once or twice and consequently have to be ruled out. Nevertheless, before dismissing such occurrences, the researcher carefully analysed their possible contribution and scope to answer the research questions. Furthermore, the explanatory sequential mixed-methods design of the study may also pose difficulties due to the necessity of choosing the most essential results from the quantitative phase to be explored and built upon in the qualitative one. This, in turn, might affect the validity of the whole research (Creswell & Creswell, 2018).

In addition, the tools used for data collection might not yield perfectly reliable results. In the case of questionnaires, the options provided were limited in scope, which could possibly influence the participants' choices. That is, however, why the option 'other' was added to each question to help alleviate this particular limitation. Furthermore, choosing an answer written down on a piece of paper might not be a true representation of reality, as it is sometimes difficult to predict one's own behaviour in a given situation. For this reason, the questionnaires were supported with lesson observations to verify educators' answers. Finally, despite its beneficial non-participant nature, the presence of the researcher during observations might have also influenced the teacher-student interactions, as educators might have been more

aware of the formality of the situation and might not have behaved as naturally as they would without an observer (Cohen et al., 2007).

To mitigate the aforementioned limitations, the researcher engaged in reflexivity through constant critical reflection of potential biases, personal perceptions of research area, relationships with the participants, as well as methods employed in the data analysis process (Breen, 2006).

### **3.7 Sampling Framework**

The target population for this study was a group of 68 International Baccalaureate learners and 20 educators in one co-educational school in Malta, where the researcher worked. Specifically, the learners were from two year groups and attended subjects that were conducted entirely in English, excluding foreign languages where the language of instruction was different. The same criterion applied to the educators.

Both groups of participants were drawn from this population through non-probability convenience sampling, which allows to conduct small-scale research in a specific context. Another advantage of this sampling framework related to having an easy access to the learners and educators in the school where the researcher worked, which could positively affect non-response sampling bias. Nonetheless, this also depended on the number of returned informed consent and assent forms, as the participation in the study must be entirely voluntary (Lewis-Beck et al., 2004).

Both groups of participants are discussed in detail below.

#### **3.7.1 Learners**

A group of learner participants was chosen from the aforementioned independent school in Malta where the researcher was employed as a teacher of English. The participants were students of various nationalities within the age range of 17 to 19. They all followed the International Baccalaureate programme and attended a variety of lessons, all of which were conducted in English, with the exception of foreign languages. Their level of English varied; however, it was gauged as not lower than B2, as per school requirements. The final group consisted of 31 students who returned consent and assent forms, including 16 females and 15 males. They were members of 4 classes of the IB programme. Apart from being chosen via convenience sampling, the researcher's availability and timetabling possibilities also played an important role in conducting the questionnaire and observing their lessons.

### **3.7.2 Educators**

Similarly to the previous group, educators were chosen from the school where the researcher was employed. Due to timetabling possibilities and the necessity to ensure gender balance, 7 female and 7 male educators were selected for the questionnaire participation, lesson observations, and the focus group. The educator participants taught different subjects in the IB programme, except foreign languages. They were of various nationalities; however, the majority were Maltese. They were all fluent and proficient speakers of English within the age range of 25 to over 60. Their teaching experience ranged from a few to over 20 years. Some of them also occupied additional positions such as head of department or section. Differences in working experience and position were an additional asset which helped ensure varying power statuses. This, in turn, shed more light on educators' choices in relation to indirectness versus directness.

### **3.8 Ethical Considerations**

Before conducting the study, the researcher applied for approval from the University Research Ethics Committee. This was followed by obtaining permission of the head of the school where the research was carried out. As suggested by Adler et al. (2019), the next step involved providing participants with informed consent forms. These included crucial information related to the research, such as its aims, duration, procedures involved, details of data collection, their management and disposal, along with potential risks and benefits of participating in the study. Moreover, as highlighted by Abed (2014), it was essential to inform the participants about the entirely voluntary nature of the study and the possibility of withdrawing at any point in time.

Apart from consent forms, assent forms were also compulsory since several IB students were minors, and thus, it was necessary to obtain their guardians'/parents' permission to participate. It must be emphasised that parental control over participants' decision may have resulted in a lower number of the sample, further creating bias and influencing validity (Abed, 2014).

Ensuring anonymity and confidentiality was equally significant due to the high probability of identifying schools in Malta, given the island's small size. Therefore, all the forms additionally included a section, informing the participants that their identities would not be identifiable at any point during the research, as per GDPR regulations. Neither the school's name nor the names of the participants were revealed in the study. Instead, the researcher referred to the respondents as Teacher 1/2/3 or Student 1/2/3 respectively. In addition, as

suggested by Plummer (2017), at the beginning of the focus group ground rules were shared with the participants, emphasising the importance of not divulging any information discussed during the group.

Finally, the forms included information about confidential treatment of data and the method of their storage in a locked cupboard with the sole access restricted to the researcher and her supervisor. The final clause informed the participants that data would be securely destroyed upon the completion of the research.

## **Chapter 4 – Results**

### **4.1 Introduction**

In this chapter, the results of both the quantitative and the qualitative research are presented. The first part is devoted to the quantitative phase which explores the respondents' answers to the questionnaire completed by both educators and learners. Furthermore, the data collected during lesson observations are additionally presented in this chapter. The educators' perspectives on indirectness and directness are discussed first, followed by the results from the lesson observations. The data collected from the learners' questionnaires are outlined separately.

The second part of the chapter involves the presentation of the qualitative stage which includes the results of the focus group conducted solely among the educators.

### **4.2 Quantitative Research Results**

The quantitative stage consisted of a self-administered questionnaire completed by educators and learners. Both groups were presented with several typical school situations and were required to select their preferred responses. This allowed the researcher to verify the use of directness and indirectness in the classroom among educators by gender, and thus answer the first research question. Additionally, the learners' perspectives on the use of various speech acts were possible to be determined, along with the power aspect related to directness and indirectness in both groups, both of which relate to the second research question.

The questionnaire (see Appendix 1) consisted of 16 close-ended questions and was split into two parts, with the first part related to personal information. The second part contained nine classroom situations with possible replies in the form of multiple-choice options. Each option represented a different type of indirectness or directness, such as query preparatory, consultative devices, grounders, hedging, etc. Questions 14 and 15 were open-ended and aimed at obtaining a more in-depth understanding of both groups' views on the use and effectiveness of indirectness and directness in the school environment. Finally, a 5-point Likert scale was employed in question 16 to facilitate the analysis of the power aspect.

The questionnaire was conducted among 14 educators – 7 females and 7 males, and 31 International Baccalaureate students – 16 females and 15 males. The results in the educators' group are discussed first.

### 4.2.1 Educators' Demographics

In the first section of the questionnaire, the participants were required to answer four questions related to their gender, age, role in the school, and teaching experience. Tables 1 and 2 below contain the results of this section.

**Table 3**

*Demographic Characteristics of Female Educators*

Female Educators		
Demographic characteristics		Number of participants
Age	20 – 30 years old	1
	31 – 40 years old	0
	41 – 50 years old	3
	51 – 60 years old	2
	61+ years old	1
Role at school	Teacher	5
	Head of department	2
	Head of section	0
Teaching experience	0 – 5 years	2
	6 – 10 years	0
	11 – 15 years	1
	16 – 20 years	2
	Over 20 years	2

Among the seven female educators, three were within the 41-50 age bracket, followed by two in the 51-60 bracket. One teacher was in her 20s, and another one was over 61 years of age. Regarding teaching experience, it was fairly balanced, with only one teacher having 11-15 years of experience. Looking at educators' roles at the school, the majority - five of them - were regular teachers not occupying any additional positions. Two of them were teachers and heads of department at the same time.

**Table 4***Demographic Characteristics of Male Educators*

Male Educators		
Demographic characteristics		Number of participants
<b>Age</b>	20 – 30 years old	0
	31 – 40 years old	6
	41 – 50 years old	1
	51 – 60 years old	0
	61+ years old	0
<b>Role at school</b>	Teacher	5
	Head of department	1
	Head of section	1
<b>Teaching experience</b>	0 – 5 years	2
	6 – 10 years	4
	11 – 15 years	1
	16 – 20 years	0
	Over 20 years	0

Of the seven male educators, six were between 31-40 years of age, with only one in the 41-50 age bracket. Four male educators have worked in the profession for 6-10 years, two had the least experience, and one has been a teacher for 11-15 years. In terms of school roles, five educators worked as teachers; one of them occupied the position of head of section, and another one was the head of department.

#### **4.2.2 Indirect versus Direct Commands in the Classroom among Educators**

The second section of the questionnaire included nine multiple-choice questions related to typical school situations, two open-ended questions, and a Likert-scale question. Respondents could select their answers in questions 5-13 from a range of possibilities, which helped the researcher determine the differences in the use of indirectness and directness among male and female educators. The situations presented to the educators were divided into three distinct groups: classroom management, requests directly related to the learning process, and requests not related to the learning process. The open-ended questions required the educators to assess the effectiveness of directness and indirectness in the school setting, whereas the Likert-scale questions helped explore the aspect of power and the use of indirectness/directness depending on a student's gender.

### 4.2.2.1 Classroom Management

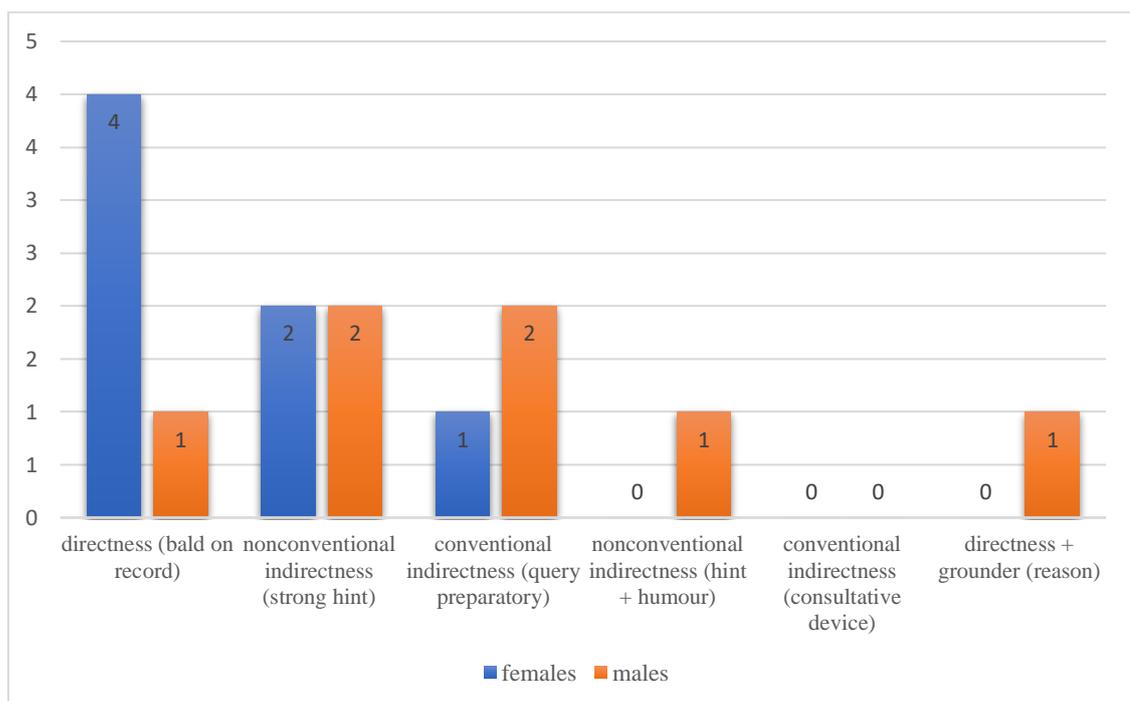
Of the nine questions in the questionnaire, questions 6, 9 and 10 were concerned with class management matters. In question 6, the participants were asked to choose a way of addressing a disruptive student to ask him/her to change seats. Similarly, in question 10, the educators were asked to react to the behaviour of a disruptive student by reprimanding him/her. Finally, question 9 presented a hypothetical situation involving a student who failed to bring his/her homework on time.

As shown in Figure 3, when responding to a disruptive student, female educators considered directness the most effective strategy, with four of them opting for a direct speech act as opposed to only one male educators. Moreover, one male educator was in favour of directness accompanied by a grounder, choosing to provide a reason for his directness (*option e*: “(name), you’re going to sit over there as you are interrupting the whole class.”).

Regarding indirectness, three female educators chose to be indirect compared to five male educators. Among the female educators, nonconventional indirectness was more common (two educators) than conventional indirectness (one educator). Among the male educators, the choices were more balanced: two opted for nonconventional indirectness, including one who would use humour, and two preferred conventional indirectness.

**Figure 3**

*Question 6 – Changing Seats of a Disruptive Student*

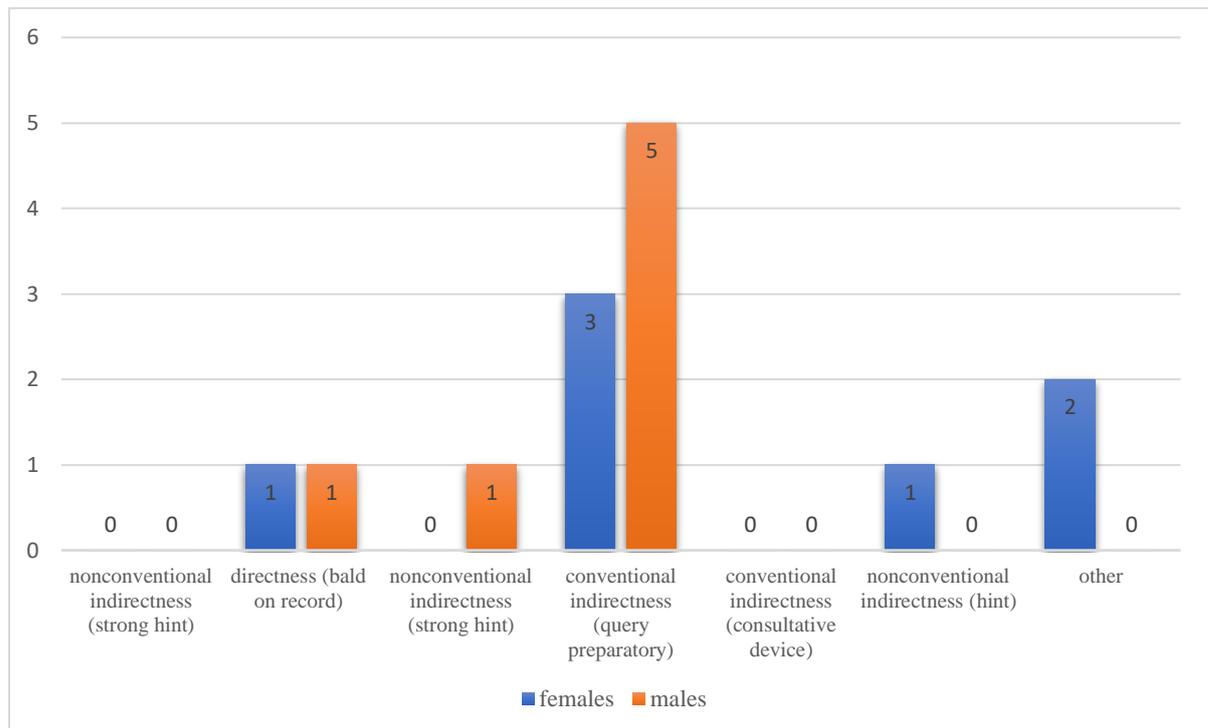


Despite its similarity to question 6, question 10 yielded significantly different responses among the participants. As seen in Figure 4 below, the same number of male and female educators opted for a bald on record strategy (one female and one male).

Regarding indirectness, it can be observed that five male teachers chose conventional indirectness (*option d*: “*Can/Could you stop talking, please?*”), along with one who preferred a nonconventional hint (*option c*: “*If I were you, I would pay more attention.*”). Among female educators, three preferred conventional indirectness, and one chose a nonconventional hint (*option f*: “*I can’t work in this noise, can you?*”). In addition, two female educators selected the *other* option and explained that they would use silence to make students realise that their behaviour was not acceptable. In this context, silence might be interpreted as an indirect speech act since it does not involve an explicit expression of intention but requires learners to make inferences.

**Figure 4**

*Question 10 – Reprimanding a Disruptive Student*



Looking more closely at the results of questions 6 and 10, it can be observed that female educators’ responses differ more between the two questions: in question 6, they opted for a more direct approach, whereas in question 10, they preferred an indirect one. Male educators’

responses remained closer to the indirectness spectrum. One possible interpretation of this occurrence might lie in the nature of the situation itself. It seems that in question 6, more concrete action is required for the disruptive student to swiftly and smoothly change seats, whereas in question 10, reprimanding is verbal, which might not seem as urgent as the other situation.

Question 9 referred to another situation of not accepting schoolwork after the deadline. Looking at Figure 5 below, it can be concluded that twice as many female educators preferred a direct speech act – four female educators compared to two male educators. However, it must be emphasised that no one opted for a bald on record strategy; the preferred choice included a grounder to provide a reason to the student who missed the deadline (option a: *“The deadline was (yesterday). I won’t accept it now.”*) Additionally, the female educator who opted for the *other* option listed the use of a direct speech act with the addition of external modification (*“I’m sorry but the deadline was yesterday. I won’t accept it late.”*), bringing the total to five female educators who preferred to be direct.

Regarding indirectness, five male educators favoured nonconventional indirectness (option b: *“I’m sorry, but do you know when it was due?”*, and option c: *“I guess you don’t use calendar too much, do you?”*), whereas it was the preferred option for only two female educators.

Overall, it might be argued that female educators were more adamant when it comes to keeping deadlines, whereas male educators seemed to have a more easy-going approach to it.

**Figure 5**

*Question 9 – Not Accepting Work after Deadline*

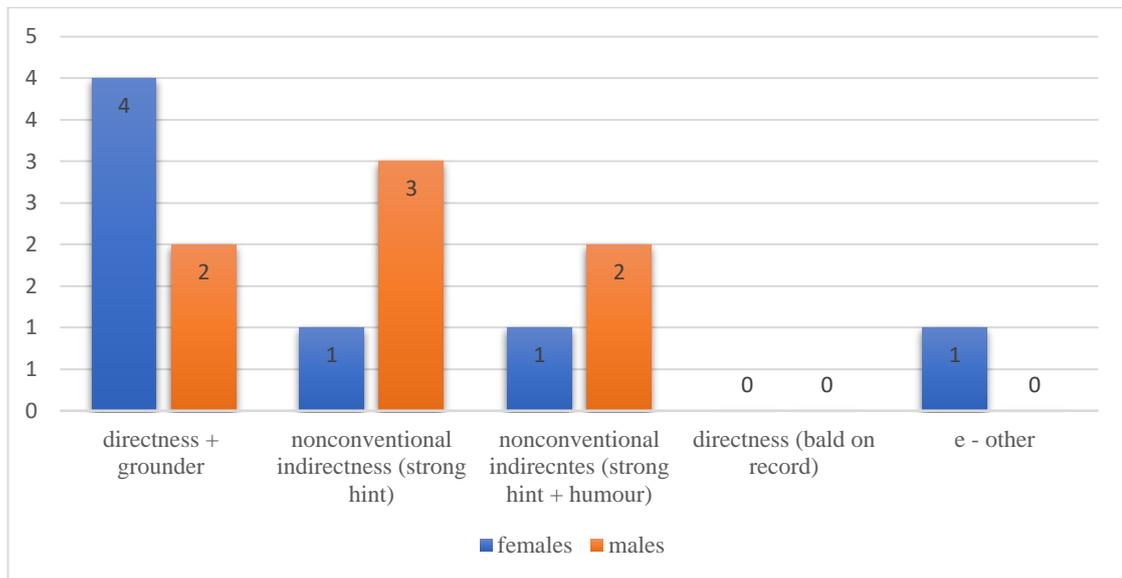
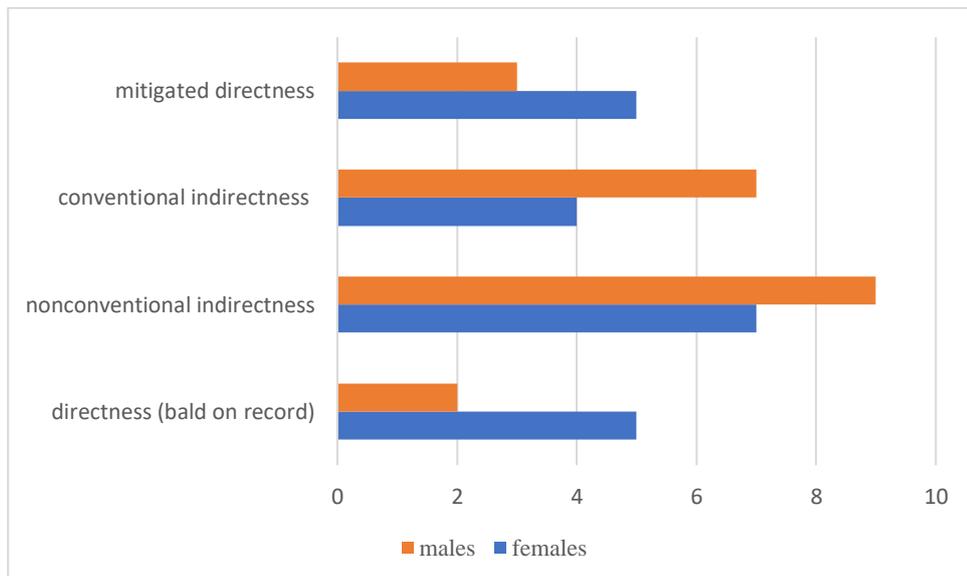


Figure 6 below summarises the use of indirectness and directness in situations related to classroom management. Overall, it can be concluded that twice as many female educators were inclined to choose direct speech acts, both bald on record and mitigated, compared to male educators (directness was chosen ten times by females and five times by males). On the other hand, indirectness was a preferred option among male educators, as it was chosen sixteen times compared to eleven times by female educators.

**Figure 6**

*Classroom Management – Male Educators vs Female Educators*



#### 4.2.2.2 Requests Directly Related to the Learning Process

Questions 5, 7, 11 and 13 in the questionnaire referred to classroom situations pertinent to the learning process: question 5 involved asking a volunteer to read, question 7 involved asking a learner to get copies from an office on another floor, question 11 involved asking learners to complete an exercise, and question 13 – asking learners about their previous knowledge.

As shown in Figure 7, when asking for a volunteer to read, both groups of educators preferred to be rather indirect. Five female educators were in favour of conventional indirectness in the form of a polite query preparatory (option e: “(name), could you start reading, please?”), and one female educator chose conventional indirectness with a grounder, providing a reason for her request (option c: “I need a volunteer to read. Would anyone be willing?”). Among male educators, three opted for the aforementioned query preparatory (option e), whereas four favoured the conventional indirectness with a grounder.

With respect to directness, no male educator opted for a direct speech act, in contrast to one female educator who selected mitigated directness, using the lexical downgrader ‘please’ to soften the imposition of the request (option a: “(name), start reading, please.”).

**Figure 7**

*Question 5 – Volunteer to Read*

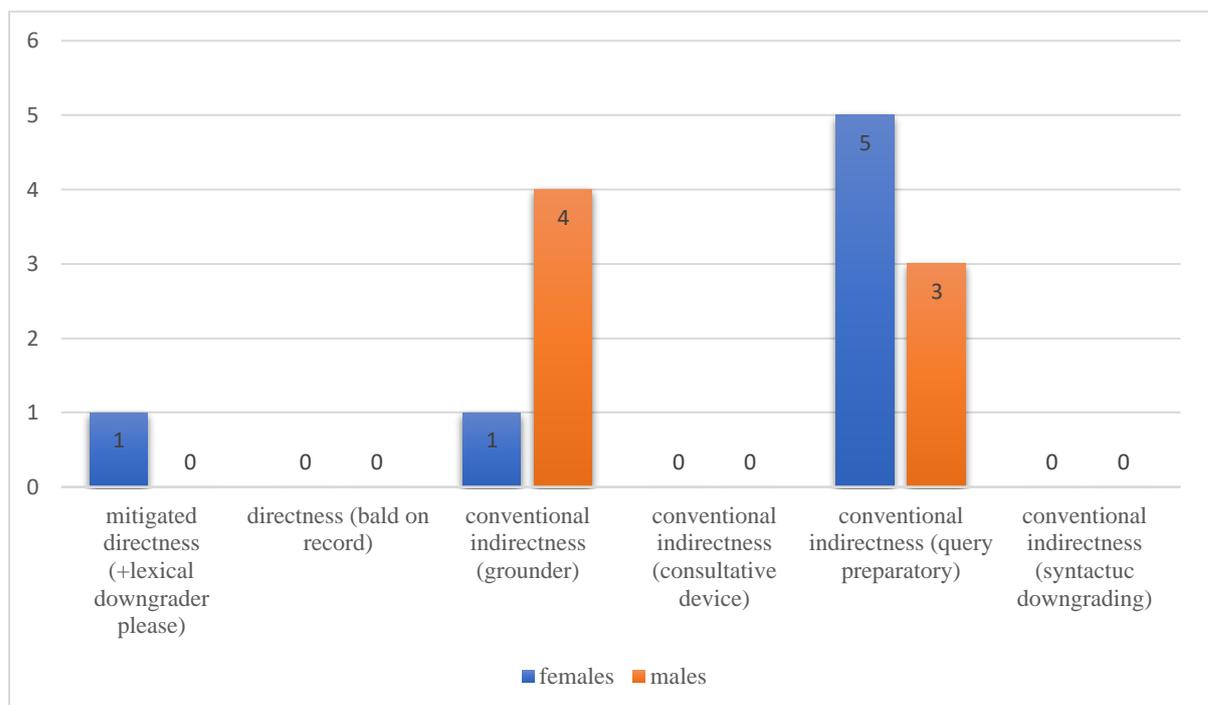
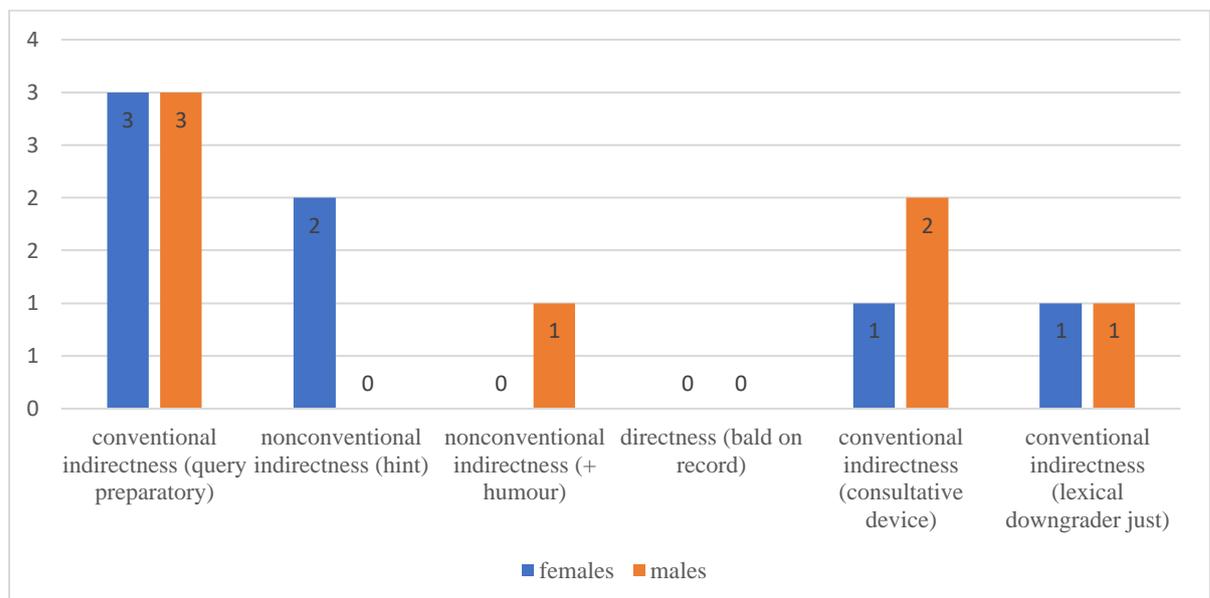


Figure 8 below illustrates the results of question 7, and it can be concluded that all educators were in favour of indirect speech acts when asking learners to bring copies from an office since no one opted for a direct form of address. Conventional indirectness in the form of a query preparatory (option a: “(name), could you go and get the copies from the office, please?”) was equally chosen by male and female educators (three female and three male educators). In addition, one male and one female educator opted for conventional indirectness with the lexical downgrader ‘just’ (option f: “(name), could you just go to the office and get the copies for us?”).

In terms of differences, it can be seen that two female educators preferred to use nonconventional indirectness (option b: “(to everyone) I printed some copies for today’s lesson, but I didn’t manage to get them from the office.”), whereas the same number of male educators favoured conventional indirectness with a consultative device (option e: “do you think you could go and get the copies from the office?”). Among male educators, only one favoured nonconventional indirectness but when used with humour (option c: “Who would like to go for a short walk and get me the copies from the office?”).

**Figure 8**

*Question 7 – Getting Copies from the Office*

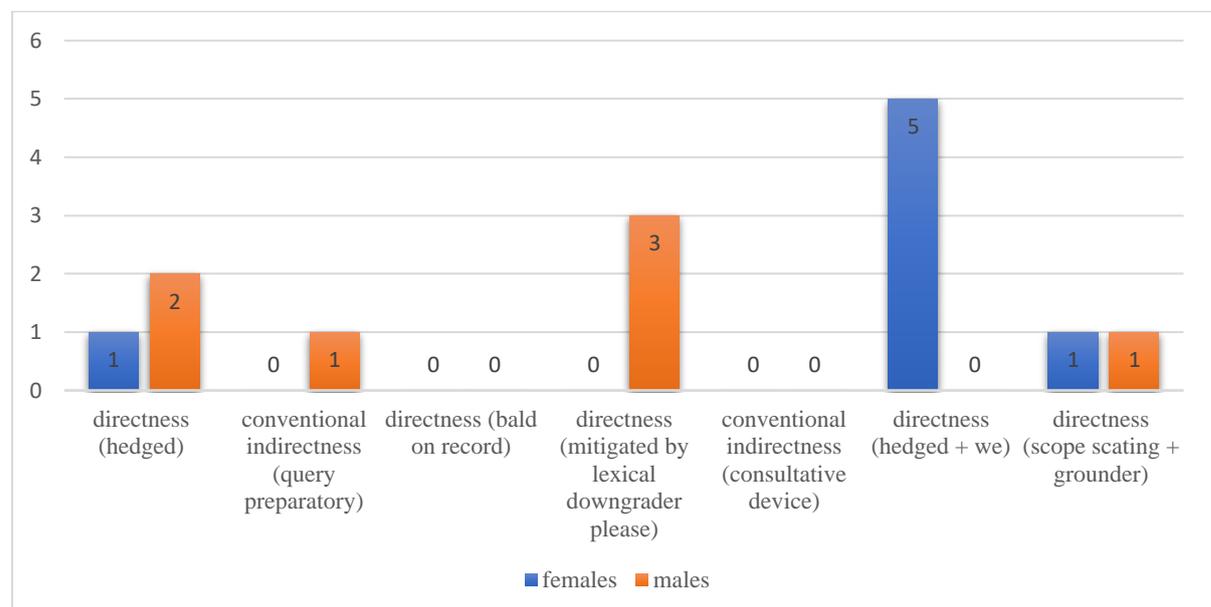


As demonstrated in Figure 9, in a hypothetical situation where educators need to ask their learners to complete a task, a bald on record strategy was not a preferred choice in either group. However, other types of directness were favoured. Five female educators chose a hedged direct speech act, which also employed an inclusive pronoun ‘we’ (option f: “*Now, we will do exercise (1).*”). One female educator selected another hedged performative (option a: “*I would like you to do exercise (1) now.*”), and another female educator opted for a scope stating strategy preceded by a reason for completing the task (option g: “*To practise this (tense), I want you to do exercise (1) now.*”). As for male educators, mitigated directness with the lexical downgrader ‘please’ was chosen three times (option d: “*Do exercise (1), please.*”). Two male educators opted for a hedged direct speech act (the aforementioned option f), and one favoured scope stating with a reason (option g).

It is interesting to observe that no female educator picked an indirect speech act compared to one male educator who selected a query preparatory (option b: “*Could you do exercise (1), please?*”).

**Figure 9**

*Question 11 – Completing a Task*



Question 13 concerned a hypothetical situation of asking learners questions related to revising material covered in previous lessons. As depicted in Figure 10 below, two male educators preferred to use directness in the form of a scope stating strategy (option d: “*Now, I want you to tell me what this poem is about.*”). In contrast, female educators did not choose any direct speech acts.

In terms of indirectness, all female educators favoured different types of conventional indirectness: three opted for a suggestory formula (option c: “*Let’s check how much you remember about the poem from the previous lessons.*”), another three chose a query preparatory (option a: “*Who can tell me what this poem is about?*”, and option b: “*(name), can you remind us what this poem is about, please?*”), and one female educator favoured conventional indirectness with a grounder (option g: “*To revise the previous lesson, can you tell me what you remember about this poem?*”). Among male educators, four picked conventional indirectness in the form of a query preparatory (the aforementioned option a and b), and one male educator preferred the same indirect act accompanied by a grounder (option g).

**Figure 10**

*Question 13 – Revising Previous Lesson*

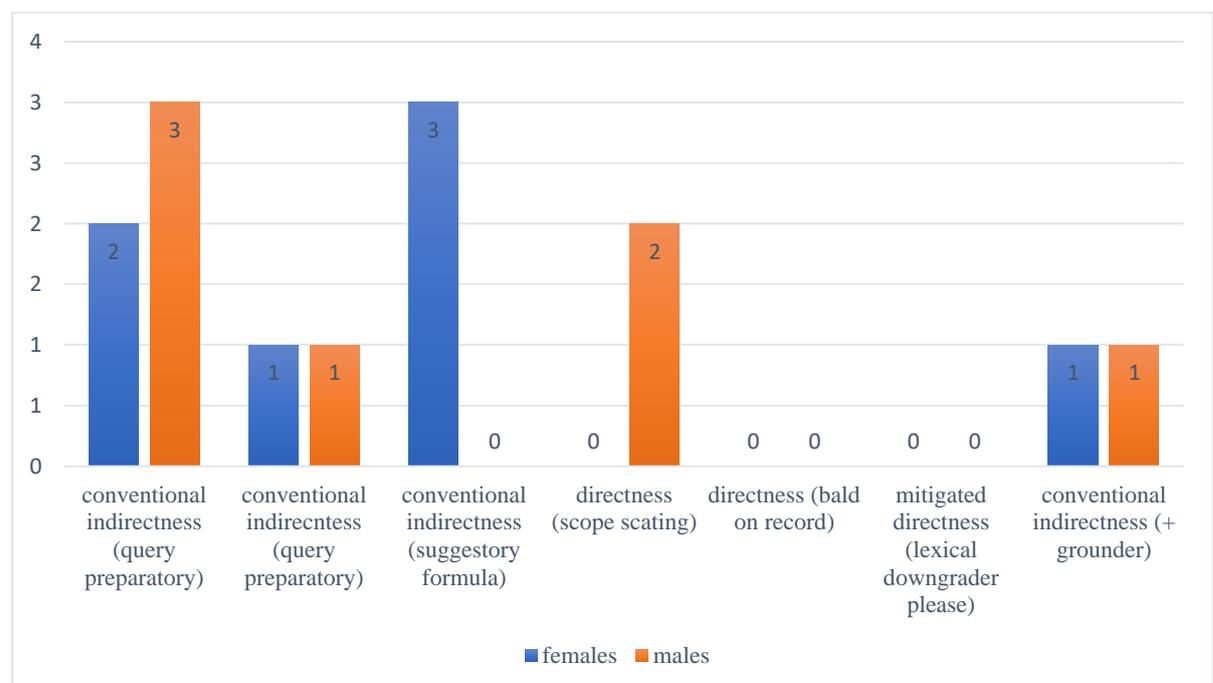


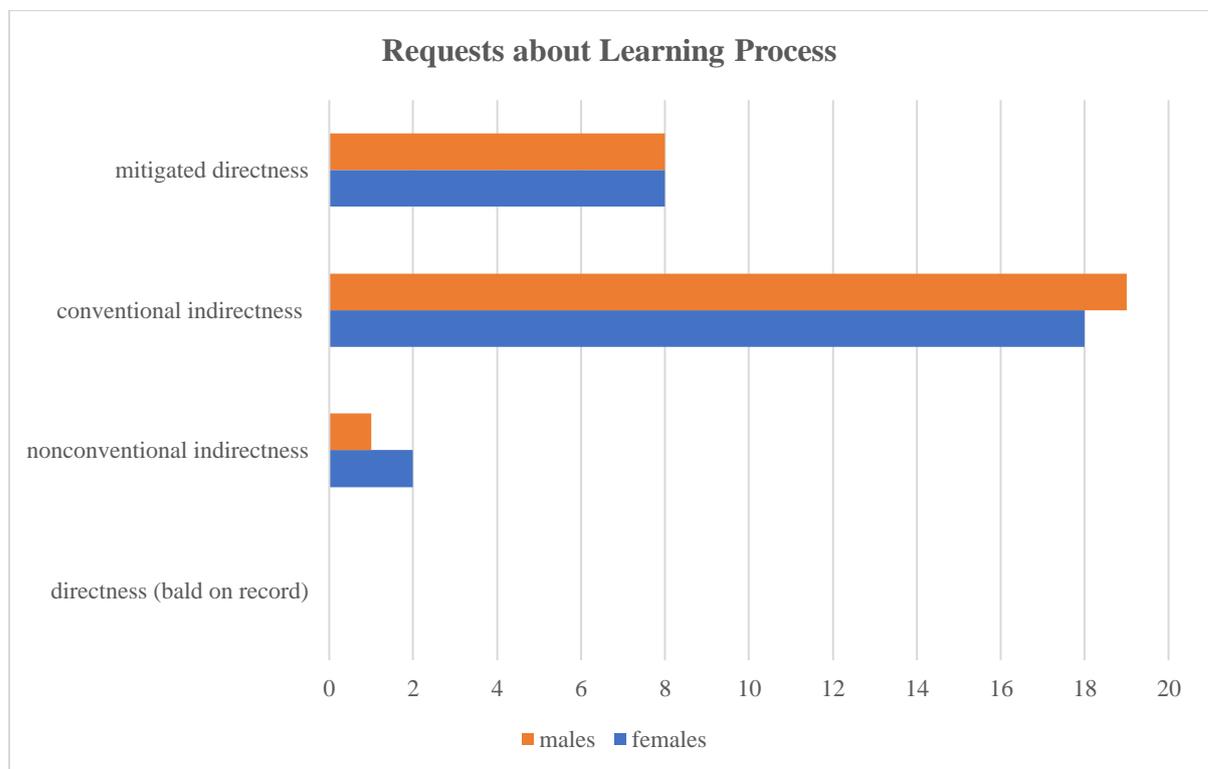
Figure 11 below sums up the use of direct and indirect speech acts by both groups of educators in situations involving requests directly related to the learning process. As can be observed, no educator used bald on record strategies, and there was an equal choice of mitigated directness in both groups.

Regarding indirectness, conventional one was chosen nineteen times by male educators and eighteen times by female educators, whereas nonconventional indirectness was selected once in the male group and twice in the female group.

These results indicate that both groups preferred conventional indirectness when making requests, which might be considered a suitable choice out of politeness. Unlike classroom management situations, which required more firm responses in order to ensure a smooth flow of the lesson, the aforementioned cases, although directly related to the learning process, were all requests. Furthermore, it can be noted that the educators' choices were almost the same, suggesting that gender is not a deciding factor when opting for one strategy or another.

**Figure 11**

*Requests about Learning Process – Male Educators vs Female Educators*



### 4.2.2.3 Requests Not Related to the Learning Process

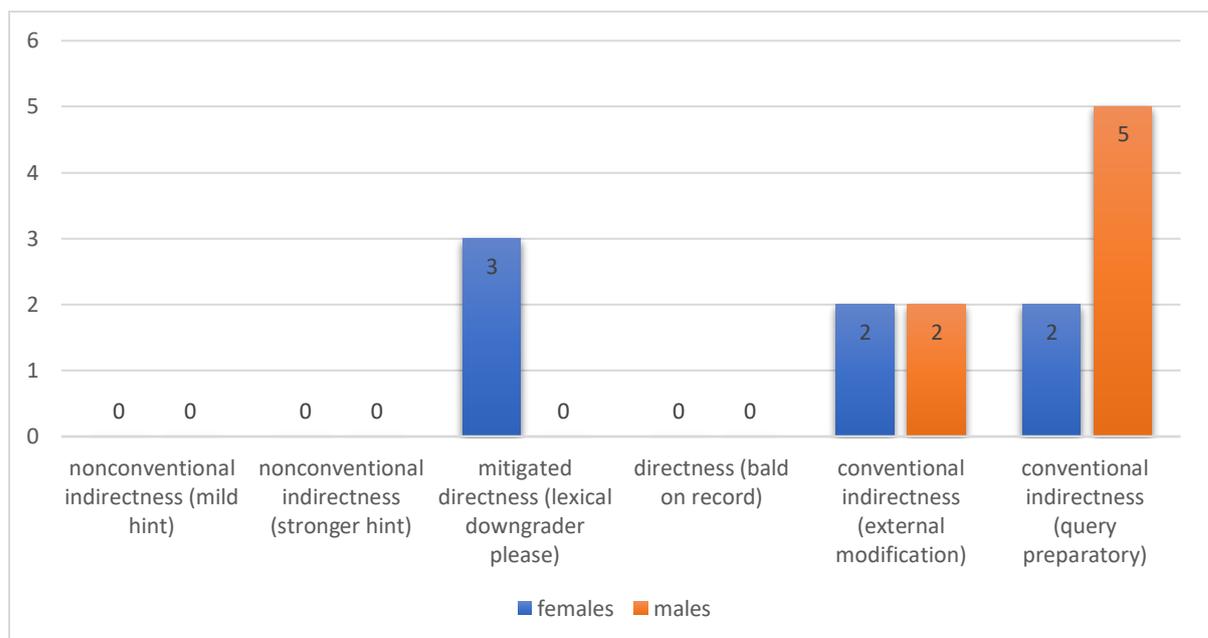
Questions 8 and 12 of the questionnaire addressed different types of requests not strictly related to the learning process. Question 8 involved a teacher’s request to open the window due to high temperatures, while question 12 was about asking learners to place the chairs on the desks after a lesson finished.

As shown in Figure 12, educators’ responses were unanimous in avoiding a bald on record strategy and both types of nonconventional indirectness, as no one chose these options. Mitigated directness, using the lexical downgrader ‘please’, was preferred by three female educators (option c: “(name), open the window, please.”), while no male educator favoured this alternative.

As for conventional indirectness, all male educators preferred this option, with five choosing a query preparatory (option f: “(name), could you open the window, please?”) and two selecting conventional indirectness with an external modification (option e: *Are you also feeling so hot? Maybe we could open the window?*). In contrast, four female educators opted for conventional indirectness: two chose a query preparatory (option f), and another two favoured option e with an external modification.

**Figure 12**

*Question 8 – Opening the Window*



As depicted in Figure 13, directness was the preferred speech act by both groups when requesting learners to place the chairs on their desks. Among female educators, all opted for different types of directness: five chose mitigated directness with the lexical downgrader ‘please’ to soften the imposition (option c: *“Put the chairs on your desks, please.”*); one female educator preferred directness with a grounder to provide a reason (option d: *“To make it easier for the cleaners, put the chairs on the desks.”*), and another one favoured a bald on record strategy (option b: *“Put the chairs on your desks.”*). Among male educators, three opted for direct speech acts, including one who selected the bald on record request (option b), and two who preferred directness mitigated by the use of the word ‘please’ (option c).

Indirect speech acts were chosen only by male educators: three were in favour of a conventional query preparatory (option a: *“Can you put your chairs on the desks, please?”*), and one chose conventional indirectness with a syntactic downgrader (option e: *“It would be great if you could leave this classroom in order.”*).

**Figure 13**

*Question 12 – Placing Chairs on the Desks*

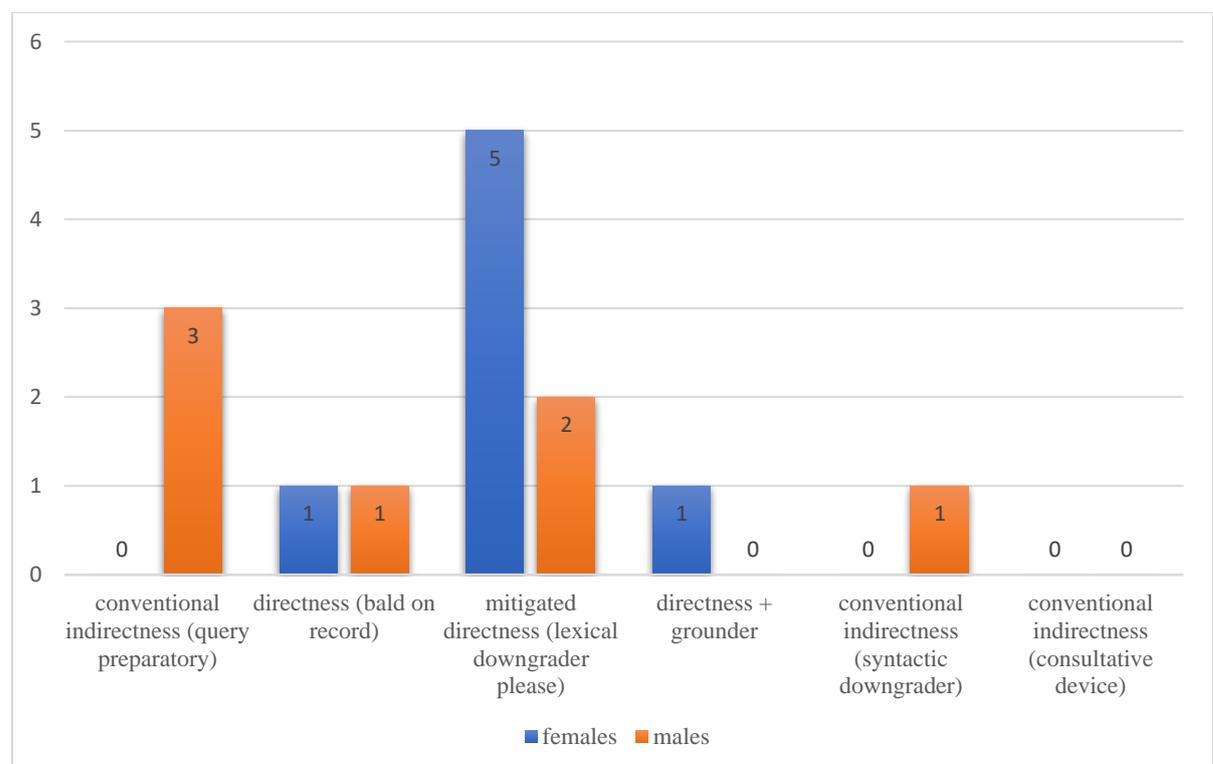


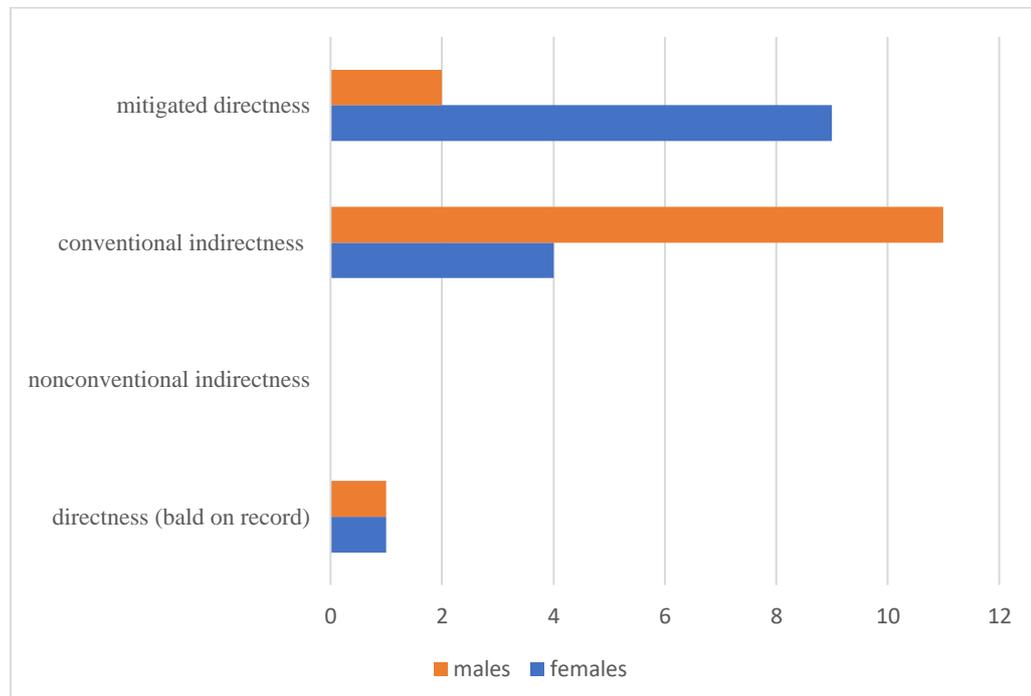
Figure 14 summarises both questions and showcases the use of directness and indirectness by both groups. It can be observed that female educators preferred direct speech acts more than male educators since it was chosen ten times compared to three times by male educators. However, it should be highlighted that the bald on record strategy was not favoured by either group, with mitigated impositions being preferred instead.

Concerning indirectness, it is interesting to observe that only conventional indirectness was selected by both female and male educators; however, it significantly prevailed among male educators.

Moreover, it is important to note a discrepancy in the educators' responses to both questions. The situation regarding the window yielded more indirect results compared to the request about the chairs, despite both being requests unrelated to the learning process. One possible interpretation might be that the second request hypothetically occurred at the end of the lesson when everyone is thinking of going home.

**Figure 14**

*Requests not Related to Learning Process – Male Educators vs Female Educators*



#### 4.2.2.4 Effectiveness of Directness in Classroom Environment

Question 14 of the questionnaire was an open-ended question asking respondents to share their opinions about the effectiveness of directness in the classroom. Figure 15 below outlines the answers of female educators regarding this question.

As demonstrated in Figure 15, directness is believed to be most effective in the case of disruptive students who frequently misbehave, and it is efficient in urgent situations where the health and safety of learners might be at stake. Both of these arguments were mentioned three times each by female educators. The remaining results, each mentioned once, involved cases such as feeling comfortable with a group of learners, one-on-one situations when providing instruction to an individual student, dealing with unfamiliar students, and situations where something has been repeated many times, but students fail to adhere to it. In addition, it was highlighted that directness is effective in all situations, as it helps avoid misunderstandings and misinterpretations.

**Figure 15**

*Effectiveness of Directness According to Female Educators*

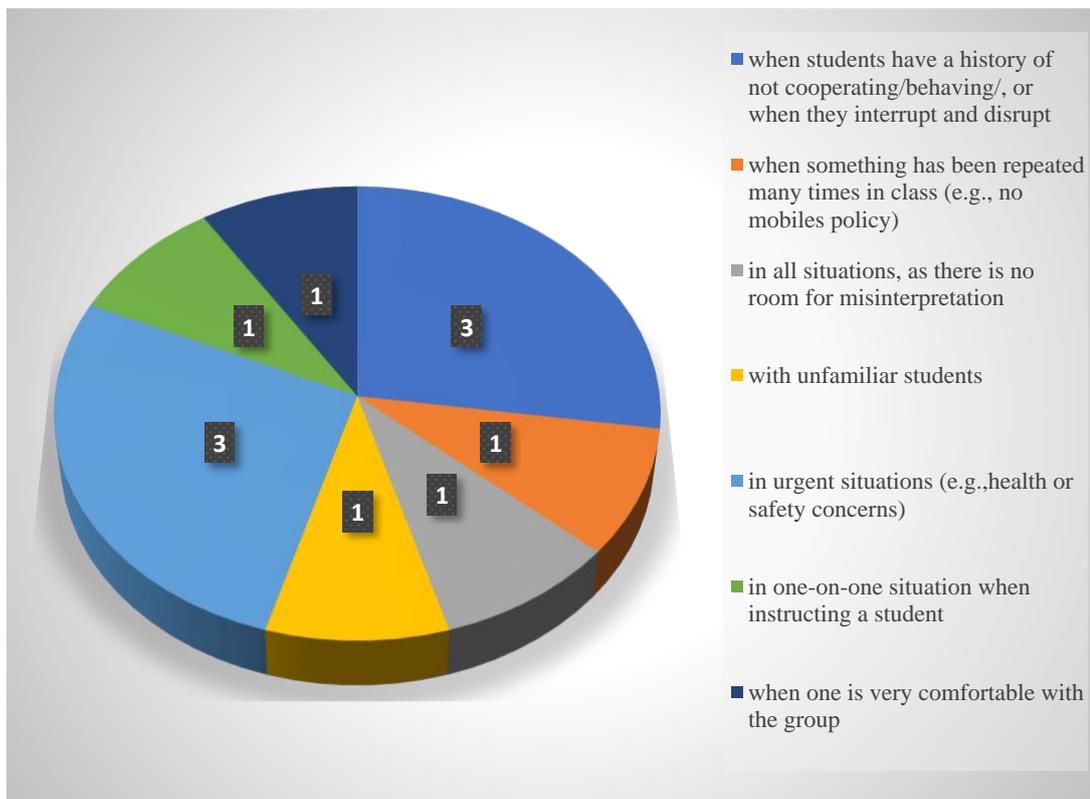
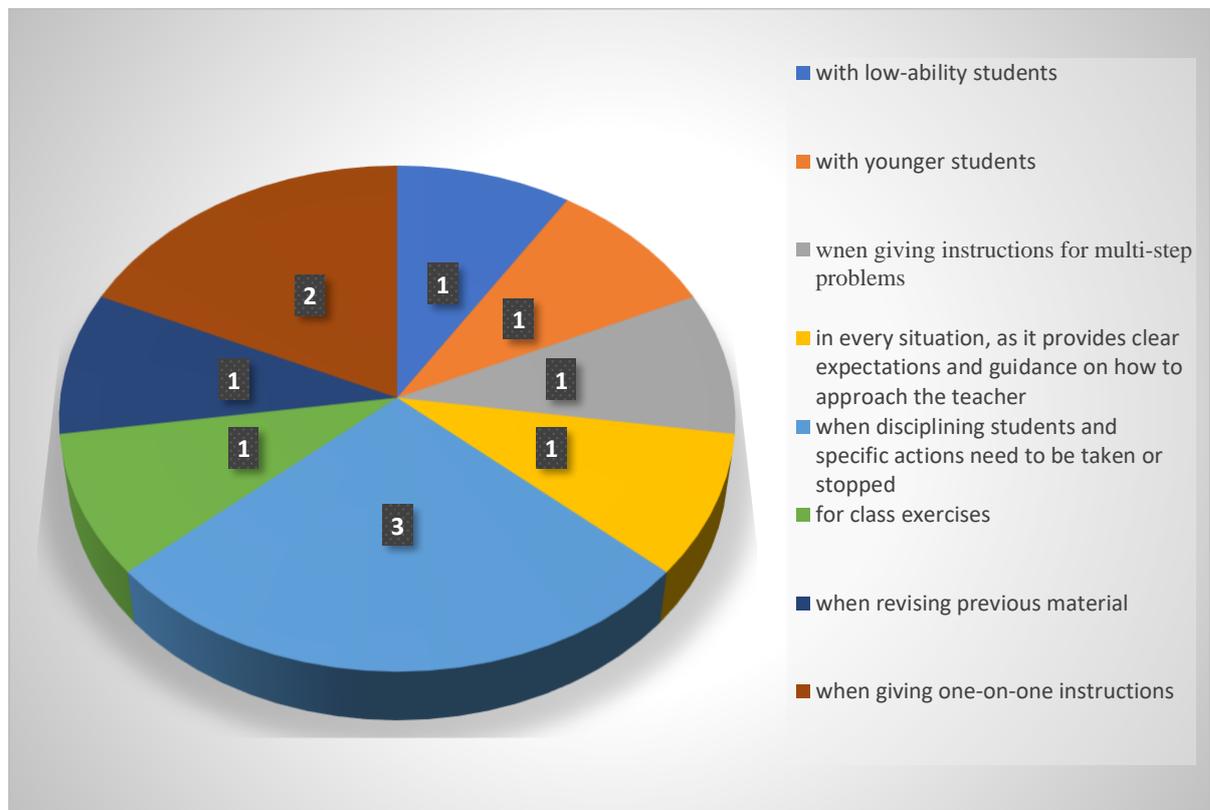


Figure 16 below displays the responses of male teachers to the same question concerning the effectiveness of directness in the classroom environment. As seen in the figure, male educators considered directness most effective in situations that require disciplining students, which was similarly indicated by female educators. Moreover, it was stated twice that directness is efficient when providing one-on-one instruction – a point also made by the female group. Other important reasons for the usefulness of directness included dealing with low-ability students or younger ones. Additionally, it was mentioned that directness works well when giving complicated instructions, when completing class exercises, and when revising material from previous lessons. Furthermore, one male educator emphasised the importance of directness in every situation since it helps learners understand what is expected of them. This ties in with a remark made by one of the female educators, who also highlighted the effectiveness of directness at all times to avoid misunderstandings.

**Figure 16**

*Effectiveness of Directness According to Male Educators*



#### 4.2.2.5 Effectiveness of Indirectness in Classroom Environment

Question 15 of the questionnaire was another open-ended question asking respondents to share their opinions on the effectiveness of indirectness in the classroom.

As demonstrated in Figure 17, female educators listed a wide range of aspects related to the effectiveness of indirectness in the classroom environment. It was stated twice that indirect speech acts are useful when introducing new material to students. Further benefits of indirectness include its efficiency when dealing with older or shy students, when students are willing to cooperate, when seeking a volunteer, during revision sessions, and when addressing the entire class. Finally, according to female educators, indirectness is useful for establishing rapport with learners and alleviating anxiety of new challenges.

**Figure 17**

*Effectiveness of Indirectness According to Female Educators*

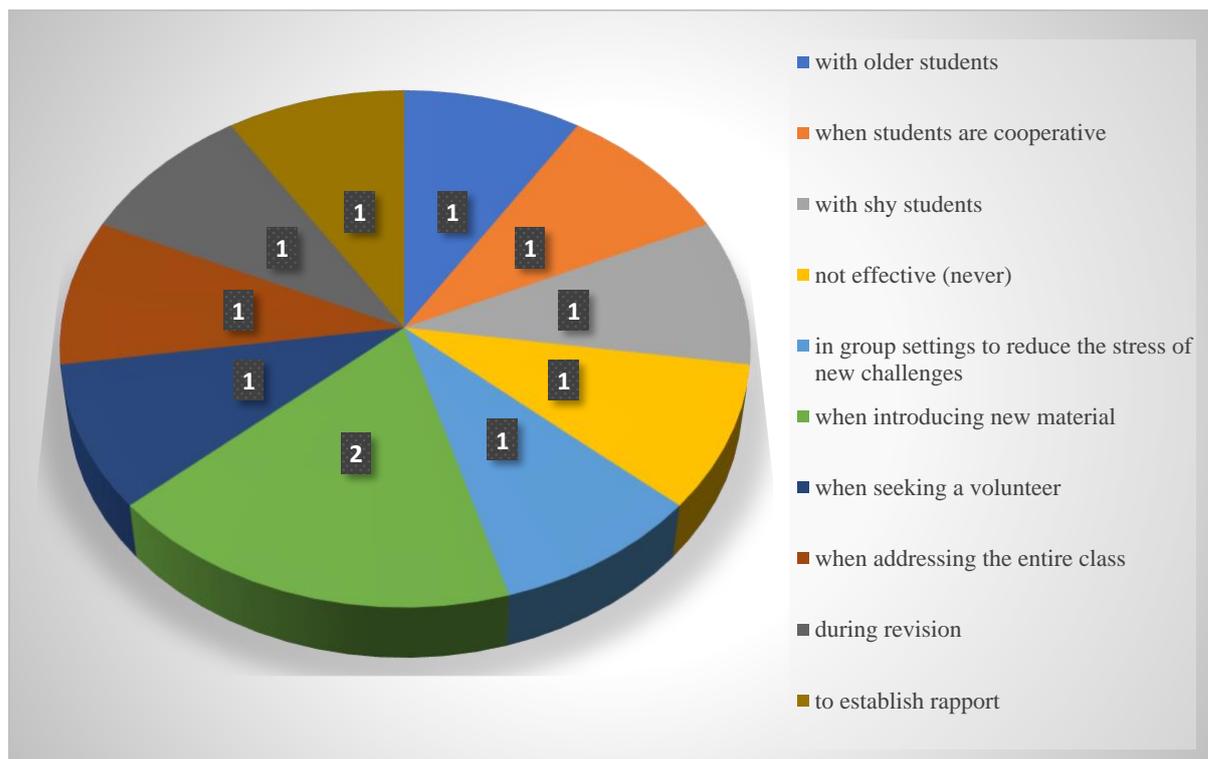
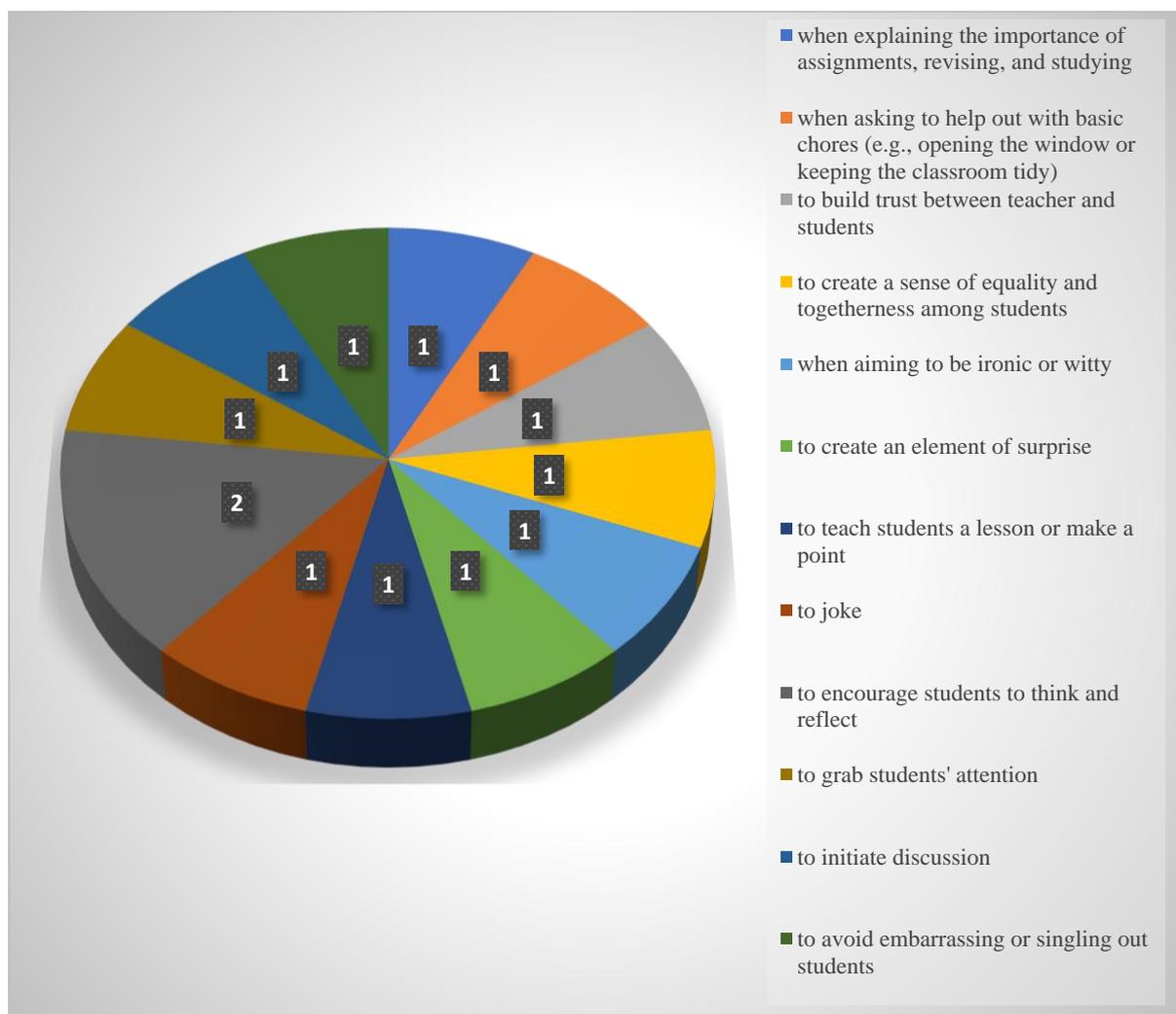


Figure 18 below is a visual representation of the responses to question 15 from the perspective of male educators. As shown in the figure, indirectness is perceived to be most useful when the teacher wants to encourage learners to think and reflect, which was mentioned twice by male educators. Other reasons for the benefits of indirect speech acts included situations such as initiating discussions, grabbing students' attention, making a point, or even

making a joke. Furthermore, male educators found indirectness efficient for creating an element of surprise or being ironic. Creating a sense of equality and togetherness, as well as building trust between students and teachers were listed as further advantages, which were also mentioned by female educators. Finally, asking students to do tasks not related to the learning process and revising and studying were additional benefits of indirect speech acts noted by male educators.

**Figure 18**

*Effectiveness of Indirectness According to Male Educators*



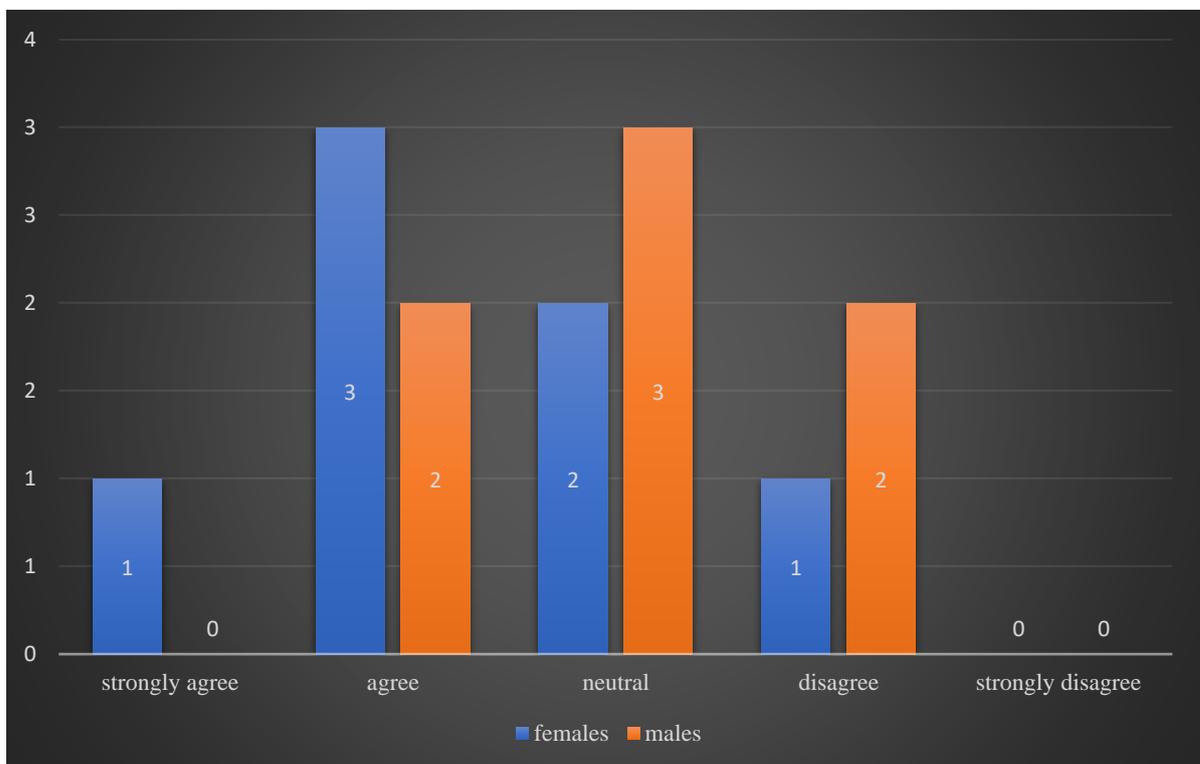
#### 4.2.2.6 Indirectness and Directness – Teacher’s Power or Weakness

The last question in the questionnaire utilised a Likert scale to explore the concept of teacher’s power in relation to the use of indirectness and directness. It additionally aimed to determine whether the choice between these two speech acts depends on the gender of the learner.

First, the power aspect is discussed in Figure 19 below, which showcases the opinions of both groups of educators on whether indirect speech acts are a sign of a teacher’s power. As demonstrated in the figure, one female educator strongly agreed that indirectness can be perceived as a sign of power, along with three other female educators who agreed with the statement. In contrast, no male educator strongly agreed with the statement about, although two agreed that indirectness is powerful. Furthermore, three male educators were neutral about the concept compared to two female educators. Finally, one female and two male educators disagreed that indirect speech acts are a sign of power. Based on these results, it can be concluded that more female educators than male ones perceive indirectness as a powerful tool in their profession.

**Figure 19**

*Indirectness as a Sign of Teacher’s Power*

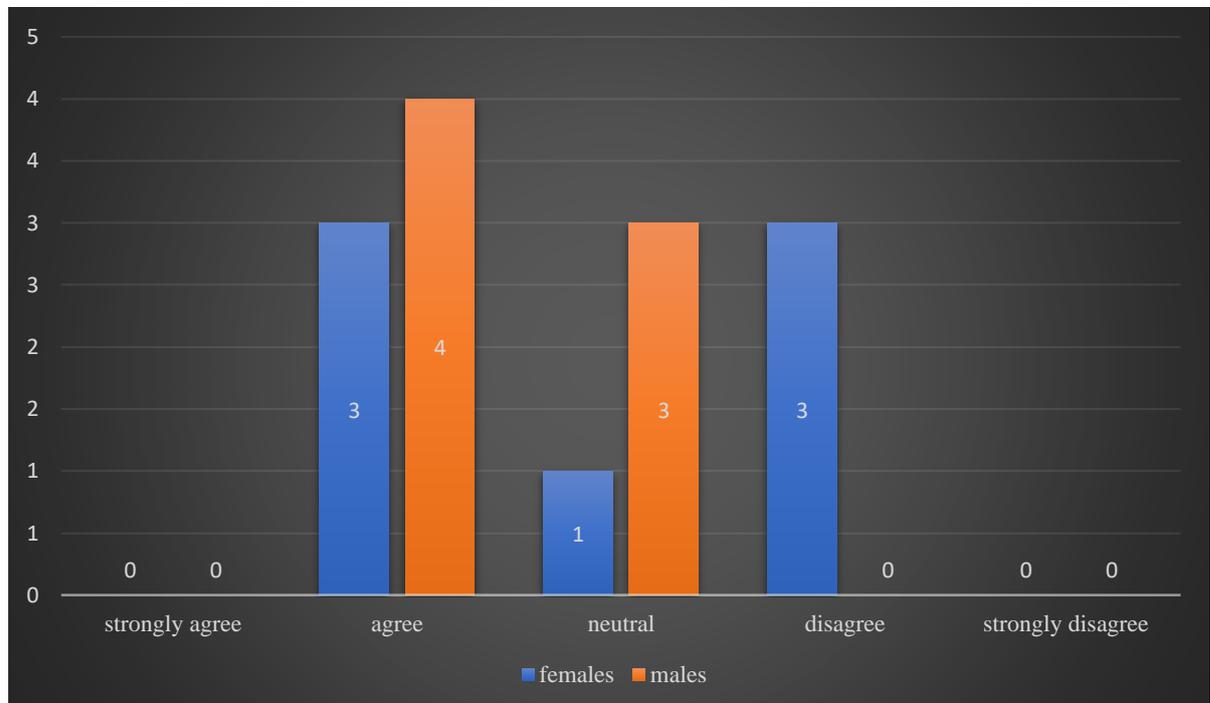


The same power aspect was explored in terms of directness among both groups of educators. As shown in Figure 20 below, no one strongly agreed or disagreed that direct speech acts are a sign of power. Four male educators agreed with this statement, compared to three female educators. Three male educators remained neutral, while only one female educator did the same. Additionally, three female educators disagreed with the statement.

Compared to the previous results in Figure 19, it is clear that more male educators perceive the use of directness as powerful rather than indirectness. Conversely, female educators consider both speech acts equally powerful (four female educators agreed with the powerfulness of each speech act). It is also interesting to note that more female educators disagreed with the concept of directness as a sign of power compared to only one who expressed the same opinion regarding indirectness. Therefore, it can be argued that the female group perceives both speech acts as having equal potential to be powerful tools in a teacher's hands, whereas the male group deems directness a more powerful tool than indirectness.

**Figure 20**

*Directness as a Sign of Teacher's Power*

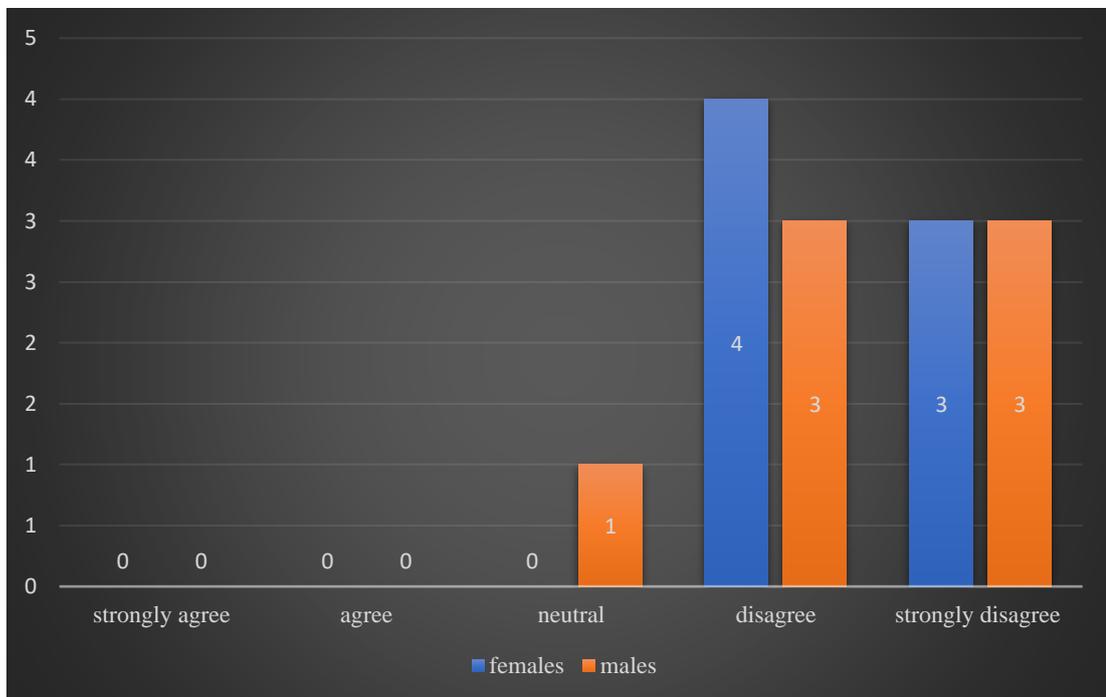


As part of the same question (Question 16), both directness and indirectness were explored from a different perspective – as a sign of weakness.

As shown in Figure 21, both groups of educators seem to share similar opinions regarding indirectness as a sign of a teacher’s weakness. Only one male educator remained neutral on this issue, while three disagreed, and another three strongly disagreed that indirectness is a sign of weakness. Concerning female educators, four disagreed and three strongly disagreed with the statement. Clearly, both groups do not perceive indirect speech acts as a weakness.

**Figure 21**

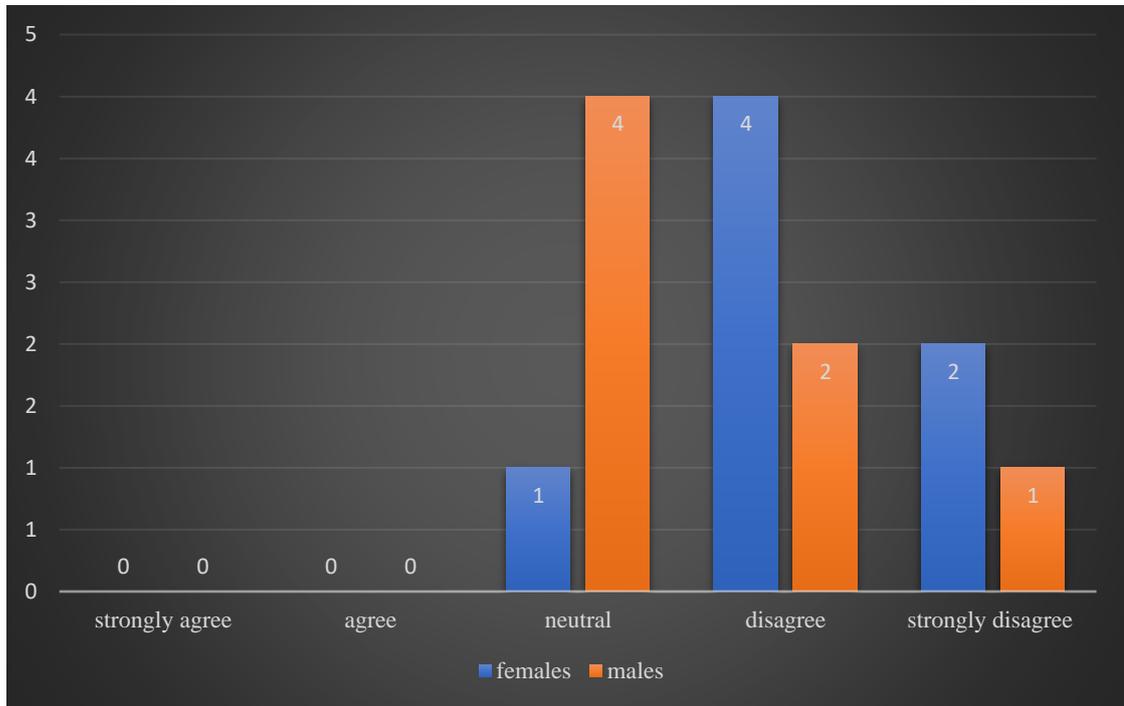
*Indirectness as a Sign of Teacher’s Weakness*



The weakness aspect was similarly explored in relation to direct speech acts. Figure 22 below clearly reveals opposing views among both groups of educators. While four male educators chose to be neutral on the issue, only one female educator felt the same. Almost unanimously, six female educators disagreed that directness is a sign of weakness, with four disagreeing and two strongly disagreeing with the statement. Conversely, only three male educators disagreed, with one who strongly disagreed with the statement. It can be concluded that more female than male educators disagreed about directness being a sign of weakness.

**Figure 22**

*Directness as a Sign of Teacher's Weakness*



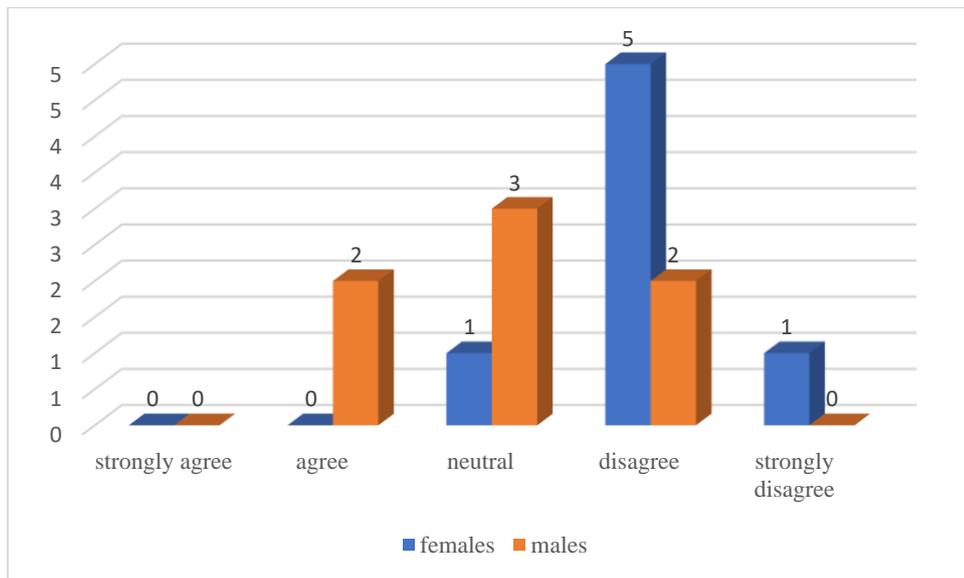
#### **4.2.2.7 Effectiveness of Directness and Indirectness and Learners' Gender**

The last part of question 16 concerned the use of both speech acts and their correlation with learners' gender. Educators were asked to express their opinions on the effectiveness of directness and indirectness with female and male learners and whether the choice of act depended on gender to any extent.

As shown in Figure 23 below, five female educators did not agree and one strongly disagreed with the idea that direct commands are effective solely with male students, while only one remained neutral on the issue. Among male educators, three chose to be neutral, two agreed, and two disagreed with the statement.

**Figure 23**

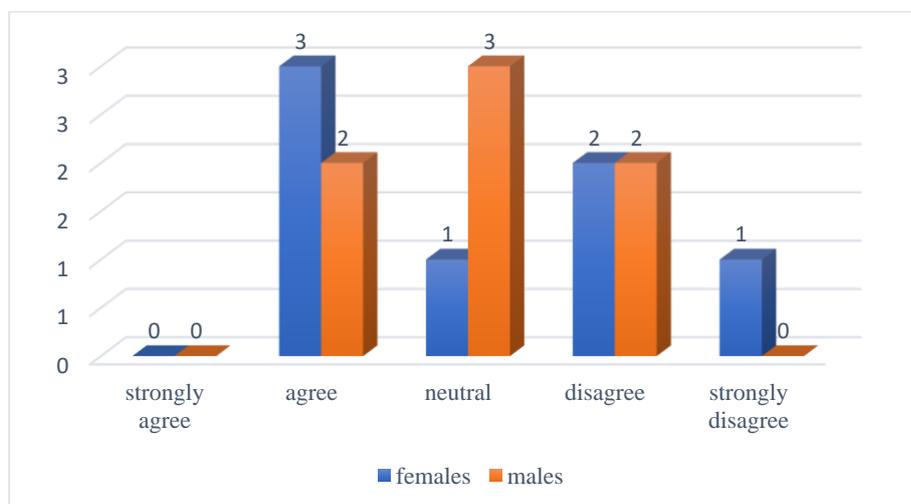
*Effectiveness of Direct Commands with Male Students*



Both groups of educators were asked to consider the effectiveness of indirect speech acts used with female students. Figure 24 below indicates that the views are rather inconclusive. While three female educators agreed that indirectness is more effective with female learners, another three disagreed with the statement, and one remained neutral. Among male educators, two agreed, two disagreed, and three were neutral on the issue. This aspect is worth analysing further to gain more insight into educators' perspectives.

**Figure 24**

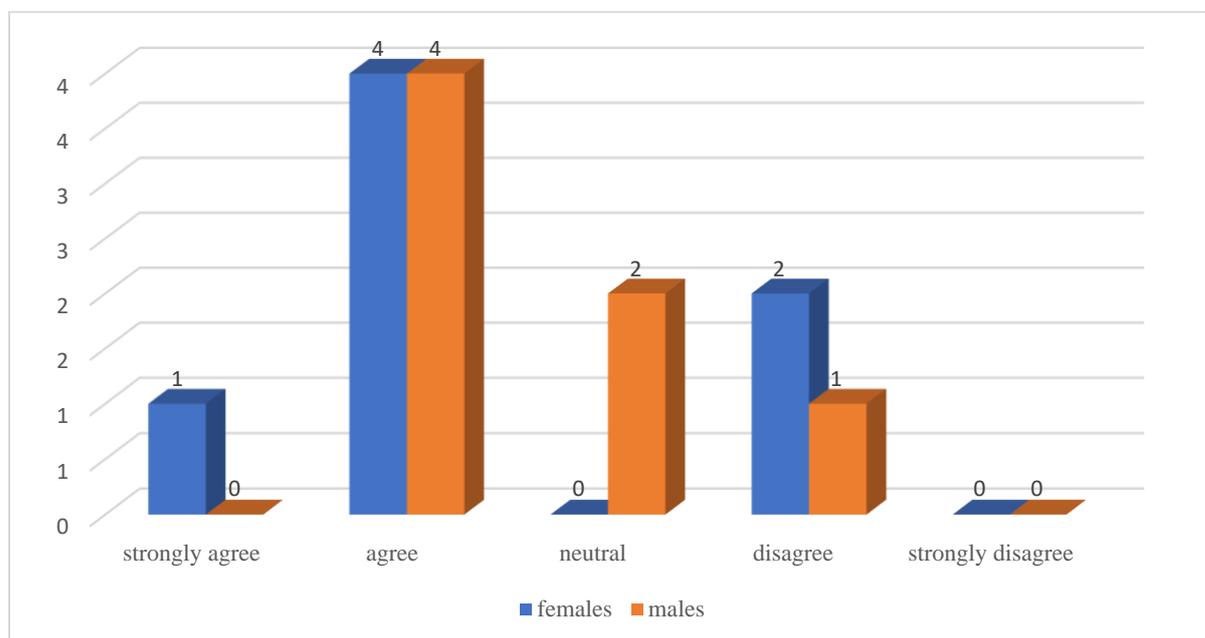
*Effectiveness of Indirect Commands with Female Learners*



Educators were finally asked to share their viewpoints on whether the choice of speech act is related to gender at all. As demonstrated in Figure 25, both female and male educators were fairly consistent in their opinions: four female and male educators agreed with the statement, and one female educator strongly agreed. In terms of disagreement, two female educators disagreed compared to one male educator. Additionally, two male educators opted to remain neutral on the issue.

**Figure 25**

*The Choice of Command is not Gender Related*



#### 4.2.2.8 Educators' Responses as per Teaching Experience and Position at Work

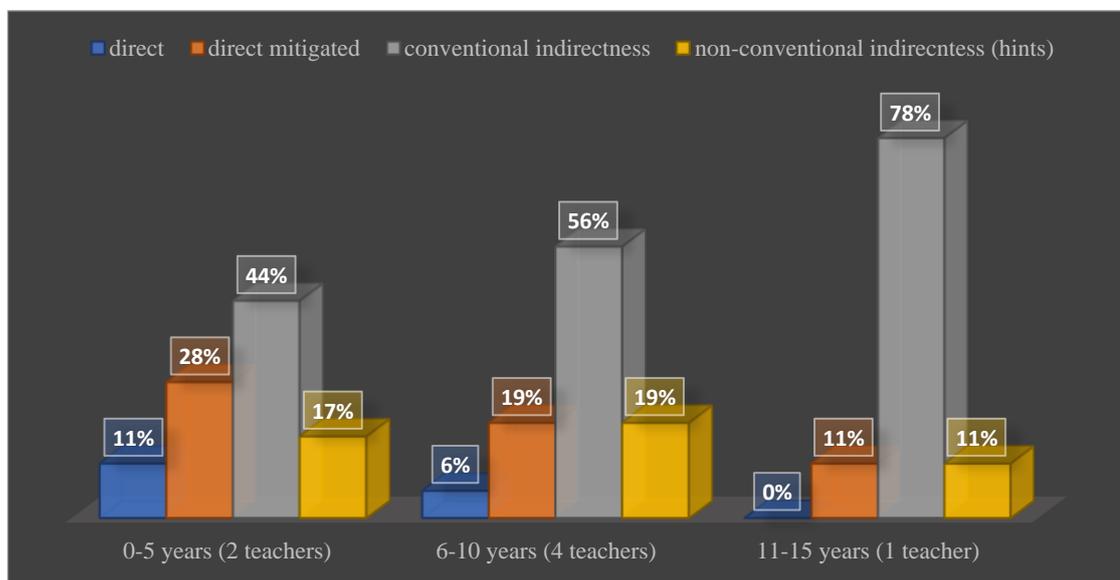
Having completed the analysis of educators' responses, the researcher was additionally interested in verifying whether there was any correlation between the educators' choices and their years of experience and position at work.

As demonstrated in Figure 26, it can be concluded that directness was chosen by less experienced male educators who have worked in the profession for up to 10 years. However, it should be noted that there was only one male educator with a longer working experience, making it difficult to draw definitive conclusions. Additionally, it can be easily observed that in each group, there was a clear preference for either conventional or non-conventional indirectness. Male educators with the least teaching experience chose directness 39% of the

time, whereas indirectness was chosen 61% of the time. Those who have worked from 6 to 10 years in the profession opted for directness 25% of the time and 75% of the time for indirectness, which is three times as often. The male educator with the most experience chose directness once (11%) and indirectness eight times (89%). The final conclusion that can be made based on Figure 26 is that conventional indirectness was by far the most selected type of a speech act among male educators, proving that teaching experience may not be considered a determining factor when it comes to the choice of a speech act.

**Figure 26**

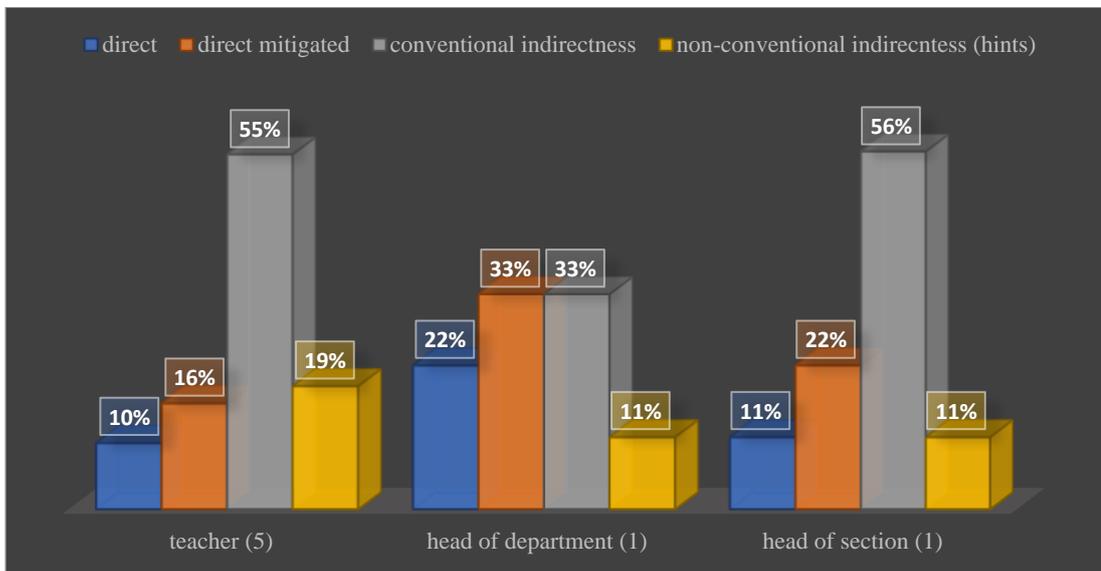
*The Use of Speech Acts and Teaching Experience – Male Educators*



As illustrated in Figure 27, the analysis of the position at work and its impact on the choice of indirectness or directness was not so clear-cut, and, therefore, no precise conclusions can be made. What can be observed is that the most direct educator turned out to be the head of department (56%), whereas the least direct were the regular educators, holding no additional positions. Moreover, the male educator who was simultaneously the head of section was less direct than the head of department, but more direct than other regular teachers. However, his use of conventional indirectness was the same as of the regular educators. Therefore, it seems that no conclusive analysis can be made based on the results displayed in Figure 27, but it can be argued that one's position at work does not necessarily influence the choice of a speech act. It must also be highlighted that it is difficult to generalise due to the small sample size.

**Figure 27**

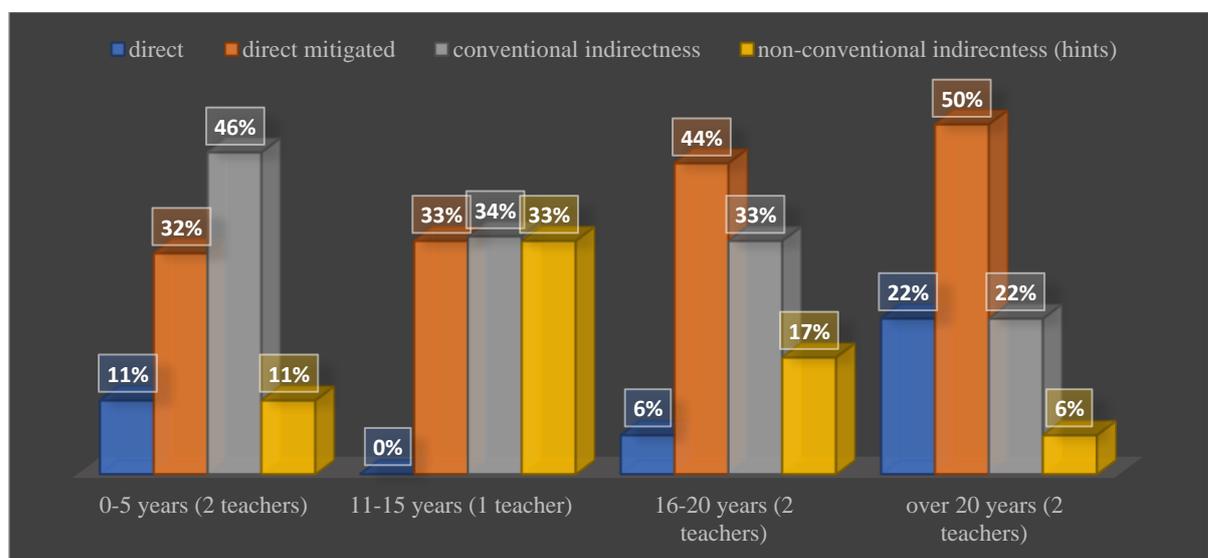
*The Use of Speech Acts and Position at Work – Male Educators*



The same analysis was carried out among female educators. According to Figure 28 below, female educators with over 20 years of experience chose directness or mitigated directness 72% of the cases, followed by those with 16-20 years of experience (50%). Conventional and non-conventional indirectness was mostly chosen by the female educators with 11-15 years of teaching experience (67%). This can further indicate that teaching experience does not correlate with the choice of a speech act.

**Figure 28**

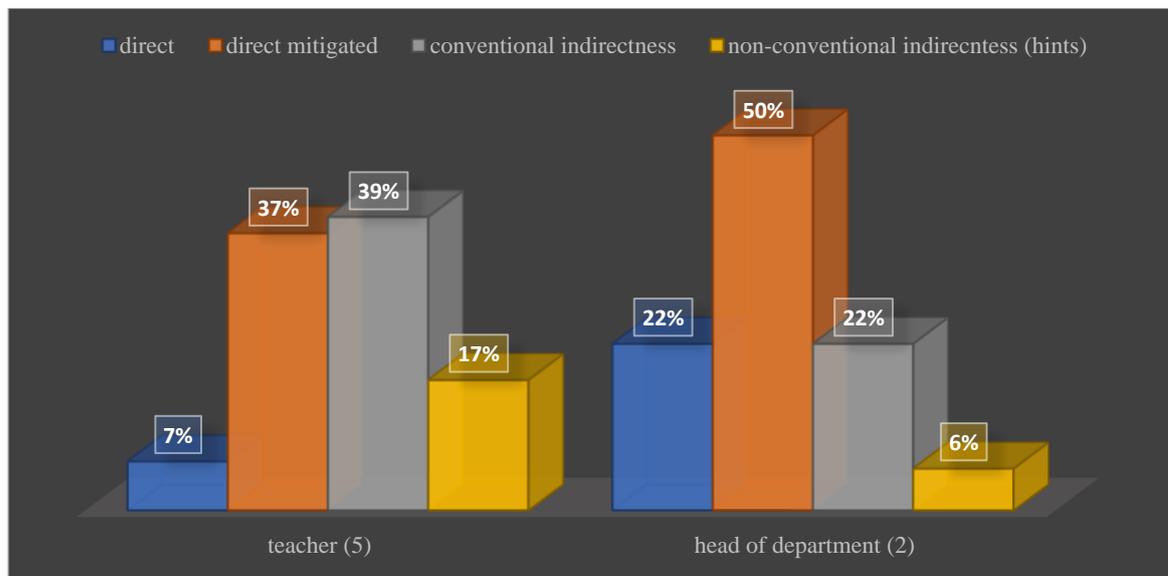
*The Use of Speech Acts and Teaching Experience – Female Educators*



Among female educators, five were regular teachers and two held an additional position of head of department. As shown in Figure 29 below, teachers who were the heads of department made more frequent use of directness: 72% of the time compared to 44% of the time among regular teachers. Nevertheless, due to a small sample size, no definitive conclusions can be made.

**Figure 29**

*The Use of Speech Acts and Position at Work – Female Educators*



Overall, it might be concluded that in both educators' groups, teaching experience did not seem to have any influence on the choice of a speech act. As for the position at work, even though it appears that among female educators, a higher position held at work indicates a more frequent use of directness in classroom environment, the results are not conclusive enough. This leads to a possible interpretation that neither teaching experience nor position at work have any impact on the choice of directness or indirectness.

#### 4.2.3 Lesson Observations

The second part of the quantitative research analysis was focused on the results of lesson observations. Six male and seven female educators who had completed the questionnaire gave their consent to be observed and recorded by the researcher. The aim of these observations was to verify the validity and reliability of the questionnaire results.

Two lessons of each educator were observed and audio recorded (see Appendix 2). The recordings were then transcribed with the use of the platform Otter.ai. The analysis of the

transcripts involved highlighting all the utterances made by educators that aimed at asking learners to do something. These utterances were further analysed to determine the type of directness or indirectness used. To do this, the researcher used request strategy types proposed by Blum-Kulka and Olshtain, as shown in the table below.

**Table 5**

*Request Strategy Types by Blum-Kulka and Olshtain*

Types	Tokens
1. <b>Mood derivable</b> – the grammatical mood of the verb in the utterance marks its illocutionary force as a request.	<ul style="list-style-type: none"> <li>• Leave me alone.</li> <li>• Clean up this mess, please.</li> </ul>
2. <b>Explicit performatives</b> – the illocutionary force of the utterance is explicitly named by the speakers.	<ul style="list-style-type: none"> <li>• I’m asking you not to park the car here.</li> </ul>
3. <b>Hedged performatives</b> – utteranced embedding the naming of the illocutionary force.	<ul style="list-style-type: none"> <li>• I would like you to give your lecture a week earlier.</li> </ul>
4. <b>Locution derivable</b> – the illocutionary point is directly derivable from the semantic meaning of the locution.	<ul style="list-style-type: none"> <li>• Madam, you’ll have to move your car.</li> </ul>
5. <b>Scope stating</b> – the utterance expresses the speaker’s intentions, desire or feeling vis a vis the fact that the hearer do X.	<ul style="list-style-type: none"> <li>• I really wish you’d stop bothering me.</li> </ul>
6. <b>Language specific suggestory formula</b> – the sentence contains a suggestion to X.	<ul style="list-style-type: none"> <li>• Why dn’t you get lost?</li> <li>• How about cleaning up?</li> <li>• So, why don’t you come and clear up the mess you made last night?!</li> </ul>
7. <b>Reference to preparatory conditions</b> – utterances contain reference to preparatory conditions (e.g. ability or willingness, the possibility of the act being performed) as conventionalised in any specific language.	<ul style="list-style-type: none"> <li>• Could you clear up the kitchen, please?</li> <li>• Would you mind moving your car, please?</li> </ul>
8. <b>Strong hints</b> – utterance contains partial reference to object or to elements needed for the implementation of the act (directly pragmatically implying the act).	<ul style="list-style-type: none"> <li>• You’ve left the kitchen in a right mess.</li> </ul>
9. <b>Mild hints</b> – utterances that make no reference to the request proper (or any of its elements) but are interpretable through the context as requests (indirectly pragmatically implying the act).	<ul style="list-style-type: none"> <li>• I’m a nun (in response to a persistent boy).</li> </ul>

Note. Data taken from “Requests and apologies: A cross-cultural study of speech act realization patterns,” by S. Blum-Kulka & E. Olshtain, 1984, *Applied Linguistics*, 5(3), p. 202 (<https://doi.org/10.1093/applin/5.3.196>).

#### 4.2.3.1 Use of Directness and Indirectness Among Educators – Lesson Observations

A close analysis of Figure 30 indicates that women employed direct speech acts more frequently than men. This is evident when looking at the first half of the scale, which gravitates towards more direct speech acts, as female educators opted for directness in 69% of the cases, whereas male educators chose it in 60% of the cases. Nevertheless, it is interesting to note that the mood derivable strategy, which is the most direct one, was employed slightly more frequently by male educators than by female ones (38% compared to 34%). For instance, male teacher 6 used it several times to give instructions to learners when completing a task: “*Plot them and find intersection points in here*”, or “*but do that on your calculator*”. Male educators also used the hedged performative strategy more often (7% compared to 5%). This strategy involves using phrases or words, such as modal verbs, to soften the force of a performative verb. Male teacher 1 used this strategy several times to inform his learners what to do during the lesson: “*I would like you to work on your portfolio*”, or “*perhaps you might want to elaborate on one (point) in particular*”.

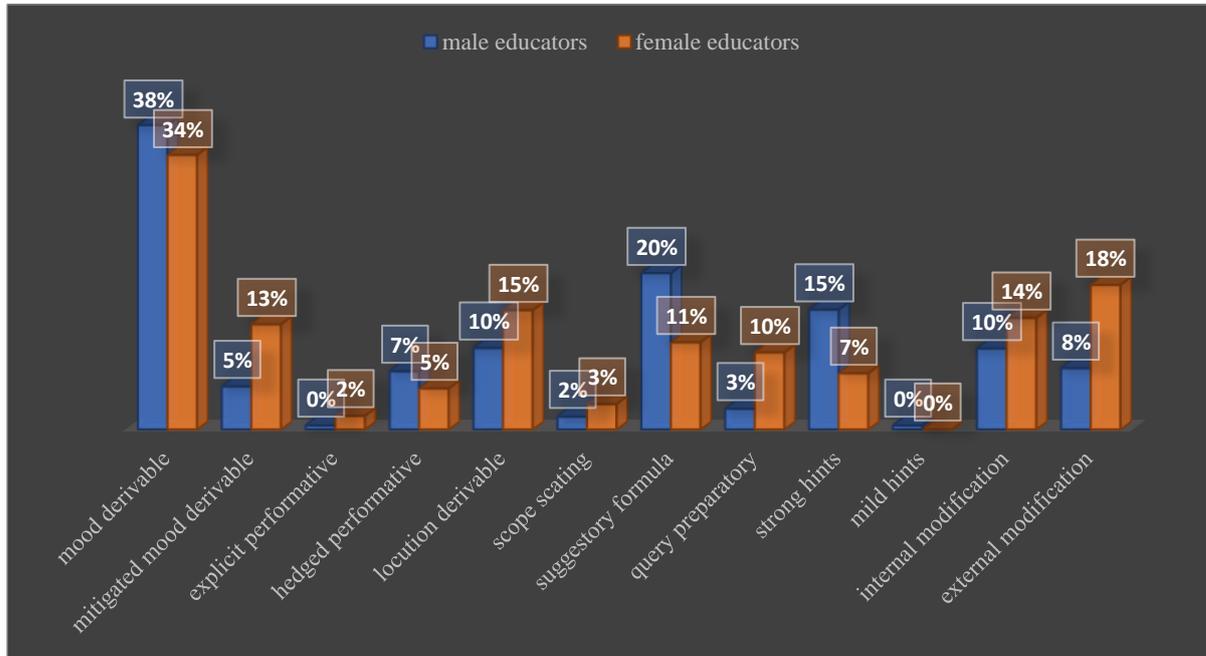
The second part of the scale entailed more indirect strategies: from scope stating, an act that expresses a speaker’s request in the form of a wish or a desire, to mild hints, which make no direct reference to the request being made, making them most indirect speech acts. Overall, it can be noticed that male educators preferred to employ suggestory formulae and strong hints. The first strategy represents requests which come in the form of suggestions (e.g., *Let’s...*, *Why don’t you...?*), and the latter is similar to mild hints but makes partial reference to the request being made. For instance, male teacher 3 asked his students to pay attention to a video by using a suggestory formula: “*Let’s watch a small video*”, and male teacher 4 used a strong hint to ask learners to open the windows: “*Do you prefer we open those for some air?*” When it comes to female educators, who overall referred to indirect acts less frequently (31% compared to 40%), they used the query preparatory strategy most often. For instance, when revising a previous lesson, female teacher 2 used this strategy to verify her learners’ knowledge: “*Can somebody explain to me what that means?*”.

Finally, it should be noted that despite being more direct in their choices, female educators used more ways to mitigate the force of their various speech acts, such as internal and external modifications. Internal modifications mainly involved lexical and syntactic downgraders such as ‘just’, ‘a bit’, ‘maybe’, ‘please’ etc., while external modifications mostly involved the use of grounders – elements outside the core speech act that provide justification for a particular speech act. For instance, female teacher 7 used a grounder when carrying out a revision quiz

with her students: *“Usually, the students have spelling mistakes in the last part of the word ventricle. So, make sure you spell it, as you see it on the board.”*

**Figure 30**

*Indirectness/Directness Scale – Use Frequency*

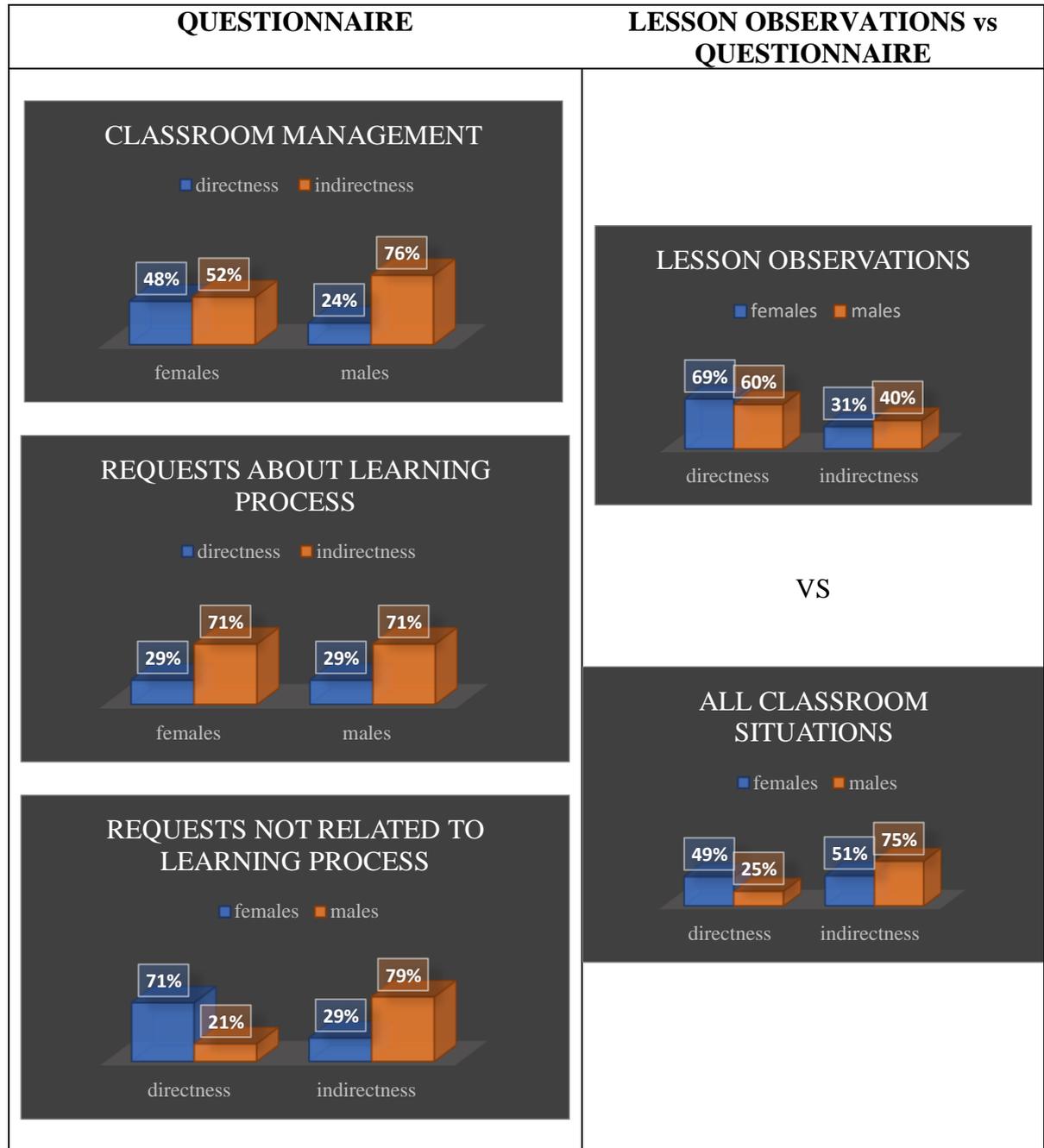


Overall, it can be concluded that the results of lesson observations confirm the results of the questionnaire, as indicated in Table 6. Both these tools helped to demonstrate that female educators resorted to direct speech acts more frequently than male educators. However, the results of the questionnaire exhibited a greater discrepancy between the two groups of educators than the lesson observations. One possible reason for this difference might be related to the variety of modes in which the recorded lessons were conducted, with some allowing for more opportunities to observe actual requests. For instance, one of the lessons carried out by a male teacher was predominantly in lecture form, which resulted in a small number of requests from the educator. He made six requests in total, three of which were direct and referred to encouraging learners to reflect on the lesson content. This, in turn, amounted to 50% of direct speech acts employed in the whole lesson. Therefore, it might have impacted the observed gap between male and female educators during lesson observations. Additionally, it is clear that hypothetical situations in the questionnaire cannot be compared with real encounters in the classroom, where educators need to consider a range of different

factors when making requests and choosing speech acts they deem appropriate in a given situation.

**Table 6**

*Questionnaire Results vs Lesson Observation Results*



#### 4.2.3.2 Further Analysis of Lesson Observation Results – Qualitising the Results

Table 7 offers a detailed overview of the most common situations in which all types of requests were used by educators during lesson observations. Its purpose is to provide additional information and further insights on questions 12 and 13 in the questionnaire, which concerned the effectiveness of directness and indirectness. The parts highlighted in blue indicate situations where both male and female educators employed a particular request type.

As observed in Table 7, the mood derivable strategy, the most direct request type mentioned earlier, was employed by both groups to give instructions, draw students' attention to something on the board, provide guidance, and review the material from previous lessons. Additionally, hedged performatives and locution derivables, representing direct speech acts (e.g. "*so we have to pay attention*" – an example of a locution derivable uttered by female teacher 3), were implemented to emphasise something new during the learning process, guide and advise learners, and provide advice about assessment. For instance, male teacher 2 offered guidance to his learners when explaining how to find internal resistance: "*all you have to do is connect it to a variable resistor and take a series of readings for the current and voltage...*". All the classroom situations listed (including those in Table 7) refer to crucial aspects of the classroom environment. Therefore, they are treated seriously by educators, which might explain their preference for direct speech acts. Furthermore, these situations align with the educators' responses in the questionnaire, where similar reasons for the effectiveness of directness were pointed out.

Regarding indirect request types, both groups of educators used suggestory formulas to indicate transition in a lesson and to help learners with more difficult tasks. For instance, female teacher 1 employed this strategy when helping her learners tackle a more challenging task: "*So one of your ideas could revolve around culture. So you can take one of these*", and to signal a transition to another task: "*So we can try another question.*" Another frequently used request strategy by both groups of educators was query preparatory. This strategy, which involves making questions or statements to determine the listener's willingness to fulfil a request, was commonly employed to ask students about their knowledge. For example, female teacher 3 used this request type when revising previous material by asking: "anyone can give me the definition of a field experiment?"

Finally, the most indirect speech acts, hints, were employed in situations where educators required students' attention or tried to encourage them to contribute to the lesson. Additionally, hints were used when learners needed to be disciplined, such as when they were using their mobile phones or eating during lessons. It is interesting to note that such situations seem rather

serious, and one would expect the use of more direct strategies, as indicated by the educators in the questionnaires. Nevertheless, it was also pointed out that direct strategies in these situations would be used only when an action had been repeatedly done and required immediate reaction. In the observed cases, the situations were not a constant nuisance, hence the use of less imposing request type to signal a warning. For instance, female teacher 1 used a strong hint to inform her learners that eating was not accepted in her class by saying: “*Food okay at the back?*” Due to its complexity, the use of hints will be further explored in the analysis of qualitative data from the focus group.

**Table 7**

*Use of Directness and Indirectness During Lesson Observations*

	<b>Female Educators</b>	<b>Male Educators</b>
Mood derivable	<ul style="list-style-type: none"> <li>○ to tackle technical issues</li> <li>○ to ask knowledge questions</li> <li>○ to introduce new material</li> <li>○ to give instructions</li> <li>○ to discipline students</li> <li>○ to take immediate action when things escalate</li> <li>○ to draw students’ attention to the board</li> <li>○ to give guidance when doing a task</li> <li>○ to remind students to revise</li> <li>○ to emphasise the importance of terminology</li> <li>○ to revise the material</li> <li>○ to ask students to put their mobiles away</li> <li>○ to inform about the end of the break</li> <li>○ to ask students to actively to participate</li> <li>○ to ask students to erase the board</li> </ul>	<ul style="list-style-type: none"> <li>○ to make students think and reflect</li> <li>○ to give instructions</li> <li>○ to give advice related to studying</li> <li>○ to draw students’ attention to something important on the board</li> <li>○ to prompt students to participate in a lesson</li> <li>○ to remind students about previous lesson material</li> </ul>
Mitigated mood derivable	<ul style="list-style-type: none"> <li>○ to ask students to learn terminology</li> <li>○ to give instructions</li> <li>○ to ask students to settle down at the beginning of the lesson</li> <li>○ to ask students to look at their notes carefully</li> <li>○ to encourage students to complete a task</li> </ul>	<ul style="list-style-type: none"> <li>○ to give homework</li> <li>○ to ask students to complete a more difficult task</li> <li>○ to remind students about their responsibilities</li> </ul>
Explicit performative	<ul style="list-style-type: none"> <li>○ to address late students</li> <li>○ to explain what students need to know</li> </ul>	<ul style="list-style-type: none"> <li>○ to give important advice related to exams</li> </ul>
Hedged performative	<ul style="list-style-type: none"> <li>○ to draw students’ attention to something new</li> <li>○ to discuss difficult terms/topics</li> <li>○ to inform students about one’s expectations</li> <li>○ to correct students</li> </ul>	<ul style="list-style-type: none"> <li>○ to encourage students to work</li> <li>○ to show students new information</li> </ul>

	<ul style="list-style-type: none"> <li>○ to give advice on how to handle a task</li> </ul>	
Locution derivable	<ul style="list-style-type: none"> <li>○ to give students advice about studying</li> <li>○ to draw students' attention to important things</li> <li>○ to guide students</li> <li>○ to give instructions</li> <li>○ to help with a more difficult task</li> <li>○ to give advice related to exams</li> <li>○ to instruct students how to complete a task</li> <li>○ to set out the rules in the lab</li> <li>○ to encourage students</li> </ul>	<ul style="list-style-type: none"> <li>○ to draw students' attention to something important on the board</li> <li>○ to give advice</li> <li>○ to give instructions</li> <li>○ to remind about homework</li> <li>○ to give advice about assessment</li> <li>○ to guide students when completing a task</li> </ul>
Scope stating	<ul style="list-style-type: none"> <li>○ to repeat instructions</li> <li>○ to ask student to put away their mobiles</li> <li>○ to ask students to participate</li> <li>○ to give advice about essay writing</li> <li>○ to give instructions</li> </ul>	<ul style="list-style-type: none"> <li>○ to advise students on how to proceed with a task completion</li> <li>○ to discipline students at the beginning of the lesson</li> <li>○ to move on to the next stage of the lesson</li> <li>○ to ask knowledge questions</li> </ul>
Suggestory formula	<ul style="list-style-type: none"> <li>○ to give advice about a task</li> <li>○ to give advice about studying</li> <li>○ to help students when completing a difficult task</li> <li>○ to move on to the next stage of the lesson</li> <li>○ to revise the previous lesson</li> <li>○ to instruct students</li> </ul>	<ul style="list-style-type: none"> <li>○ to explain the steps when completing a task</li> <li>○ to move on to the next stage of the lesson</li> <li>○ to show things on the board</li> <li>○ to encourage students to try a more difficult task</li> </ul>
Query preparatory	<ul style="list-style-type: none"> <li>○ to discipline students when chatting</li> <li>○ to ask students for help with distributing books/essays</li> <li>○ to encourage students to help one another</li> <li>○ to ask students to pair up</li> <li>○ to elicit information from students</li> <li>○ to ask knowledge questions</li> <li>○ to encourage students to expand</li> <li>○ to ask students to set a timer during a quiz</li> <li>○ to ask students to erase the board</li> </ul>	<ul style="list-style-type: none"> <li>○ to ask knowledge questions</li> <li>○ to revise the previous lesson</li> <li>○ to engage the students</li> </ul>
Strong hints	<ul style="list-style-type: none"> <li>○ to ask students to set a timer during a quiz</li> <li>○ to discipline students</li> <li>○ to encourage students to contribute</li> <li>○ to ask students to revise</li> <li>○ to ask students to do a task</li> <li>○ to ask students to put the mobiles away</li> <li>○ to ask students to make more effort</li> <li>○ to correct students</li> <li>○ to ask students to contribute</li> <li>○ to discuss assessment</li> <li>○ to ask students to pay attention</li> </ul>	<ul style="list-style-type: none"> <li>○ to discipline students</li> <li>○ to draw students' attention to important terminology</li> <li>○ to focus students' attention</li> <li>○ to ask students to open the window</li> <li>○ to encourage lower ability students to participate in a lesson</li> <li>○ to move on to the next stage</li> <li>○ to ask students to put their mobiles away</li> </ul>

#### 4.2.4 Learners' Demographics

The questionnaire that was completed by the educators was also administered to the IB learners (see Appendix 1). Its purpose was to understand the students' point of view regarding directness and indirectness in school settings. Learners were presented with the same classroom situations as educators and were asked to choose the responses they would prefer to hear from their teachers.

In the first part of the questionnaire, learners were asked about their gender and age. Table 8 below showcases the demographic characteristics of the learners who participated in the study.

**Table 8**

##### *Demographic Characteristics of Learners*

<b>Learners</b>			
<b>Demographic characteristics</b>		<b>Number of participants</b>	<b>Percentage</b>
<b>Age</b>	16 years old	6	19.35%
	17 years old	15	48.39%
	18+ years old	10	32.26%
	<b>Total</b>	31	100%
<b>Gender</b>	male	15	48.39%
	female	16	51.61%
	other	0	0%
	<b>Total</b>	31	100%

Of the 31 students who took part in the study, six were 16 years of age (19.35%), fifteen were 17 years old (48.39%), and ten were 18 or older (32.26%). For the purpose of this research, the participants were equally divided in terms of gender, with sixteen female learners and fifteen male ones.

##### **4.2.4.1 Indirect versus Direct Commands in the Classroom – Learners' Perspective**

The second section of the questionnaire included nine multiple-choice questions. As mentioned earlier, the learners were presented with the same classroom situations and a range of possible answers as the educators, and they were asked to choose the responses that they would most like to hear from their teachers. This allowed the researcher to understand learners'

preferred forms of being addressed by educators. The results, which are presented below, were similarly divided into three broader areas: classroom management, requests related to the learning process, and requests unrelated to the learning process.

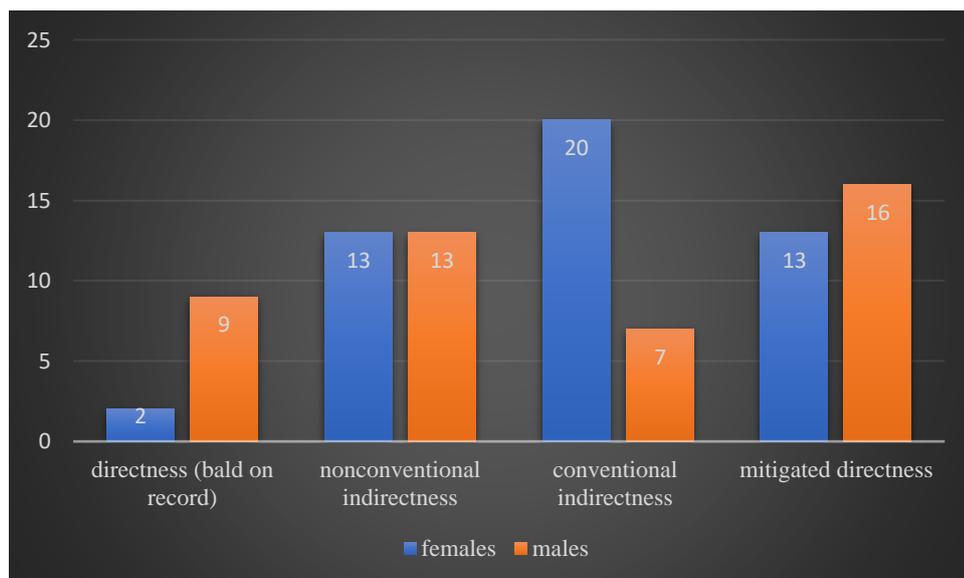
#### 4.2.4.2 Classroom Management

Of the nine questions in the questionnaire, questions 4, 7, and 8 concerned class management. In question 4, the learner participants were asked to choose how they would prefer the teacher to tell a disruptive student to change their place. In question 7, learners were required to select the teacher’s reaction to a disruptive student’s behaviour, and in question 8, to a student who failed to bring their homework on time. Figure 31 showcases the learners’ responses to all three questions, without a detailed analysis of each question separately.

As demonstrated below, among female learners, the preferred form of address was indirect: conventional indirectness was chosen twenty times (42%), and nonconventional indirectness was chosen thirteen times (27%). On the other hand, male learners’ choices were more direct: mitigated directness was opted for sixteen times (36%), and the bald on record strategy was chosen nine times (20%). Therefore, it can be concluded that male learners preferred teachers to be more direct in situations related to classroom management.

**Figure 31**

*Classroom Management – Male Learners vs Female Learners*



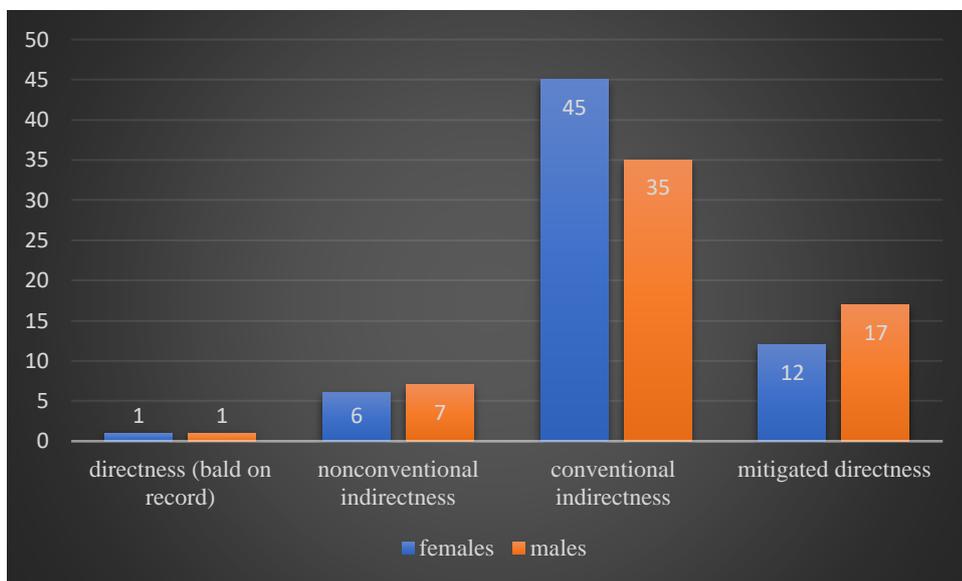
#### 4.2.4.3 Requests Directly Related to the Learning Process

Questions 3, 5, 9, and 11 in the questionnaire referred to classroom situations pertinent to the learning process. Question 3 represented a typical classroom situation in which a volunteer to read was needed. Similarly, in question 5 the teacher needed a student's help to get the copies from the office on another floor. Completing an exercise and asking learners about their previous knowledge were the content of questions 9 and 11, respectively.

As demonstrated in Figure 32 below, directness was a preferred strategy among male learners, as it was chosen eighteen times (29%) compared to thirteen times (21%) among female learners. Despite this difference, conventional indirectness was by far the favoured speech act in both groups: female learners opted for it forty-five times (70%), while male learners chose it thirty-five times (58%). Additionally, both groups selected nonconventional indirectness: six times among female learners (9%) and seven times among male learners (12%). One possible explanation for this choice is that this speech act contained humour.

**Figure 32**

*Requests Directly Related to the Learning Process – Male Learners vs Female Learners*



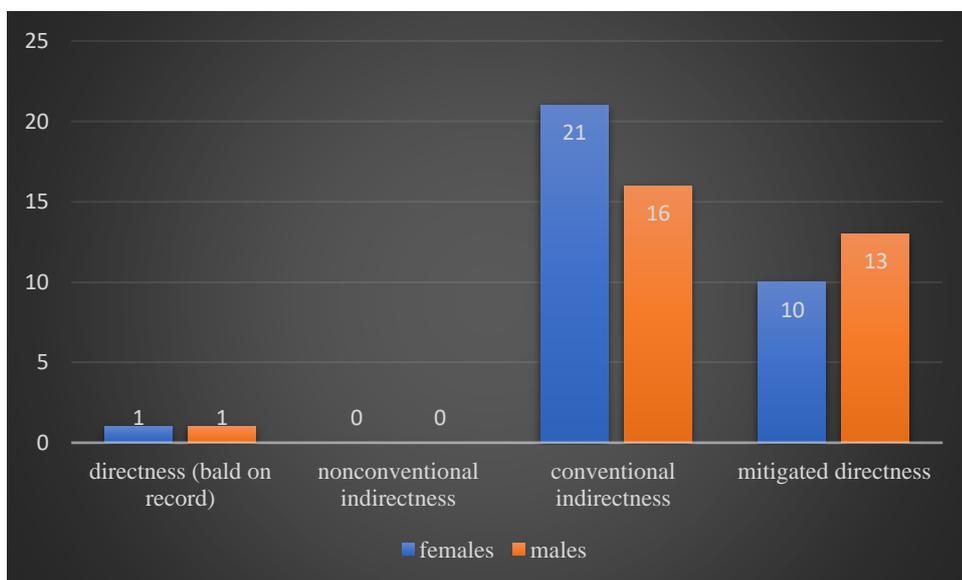
#### 4.2.4.4 Requests Not Directly Related to the Learning Process

Questions 6 and 10 of the questionnaire both concerned different types of requests not strictly related to the learning process. In question 6, a preferred response had to be chosen for a situation where a learner is asked to open the window due to hot weather. In question 10, the hypothetical situation required learners to put the chairs on their desks after a finished lesson.

As shown in Figure 33, male learners once more opted for a more direct approach, although the difference between the two groups is slight: directness and mitigated directness were chosen fourteen times (46%) by male learners and eleven times (34%) by female learners. Similarly to the previous area (requests related to the learning process), both groups had a slight preference for conventional indirectness: female learners opted for it twenty-one times (66%), whereas male learners selected it sixteen times (53%).

**Figure 33**

*Requests Not Directly Related to the Learning Process – Male Learners vs Female Learners*



#### **4.2.4.5 Effectiveness of Directness and Indirectness in Classroom Environment – Learners’ Perspective**

Questions 12 and 13 were both open-ended questions requiring learners to share their views regarding the effectiveness of direct and indirect speech acts when used by their teachers in the classroom setting. Their perspectives are outlined in Figures 34 – 37 below.

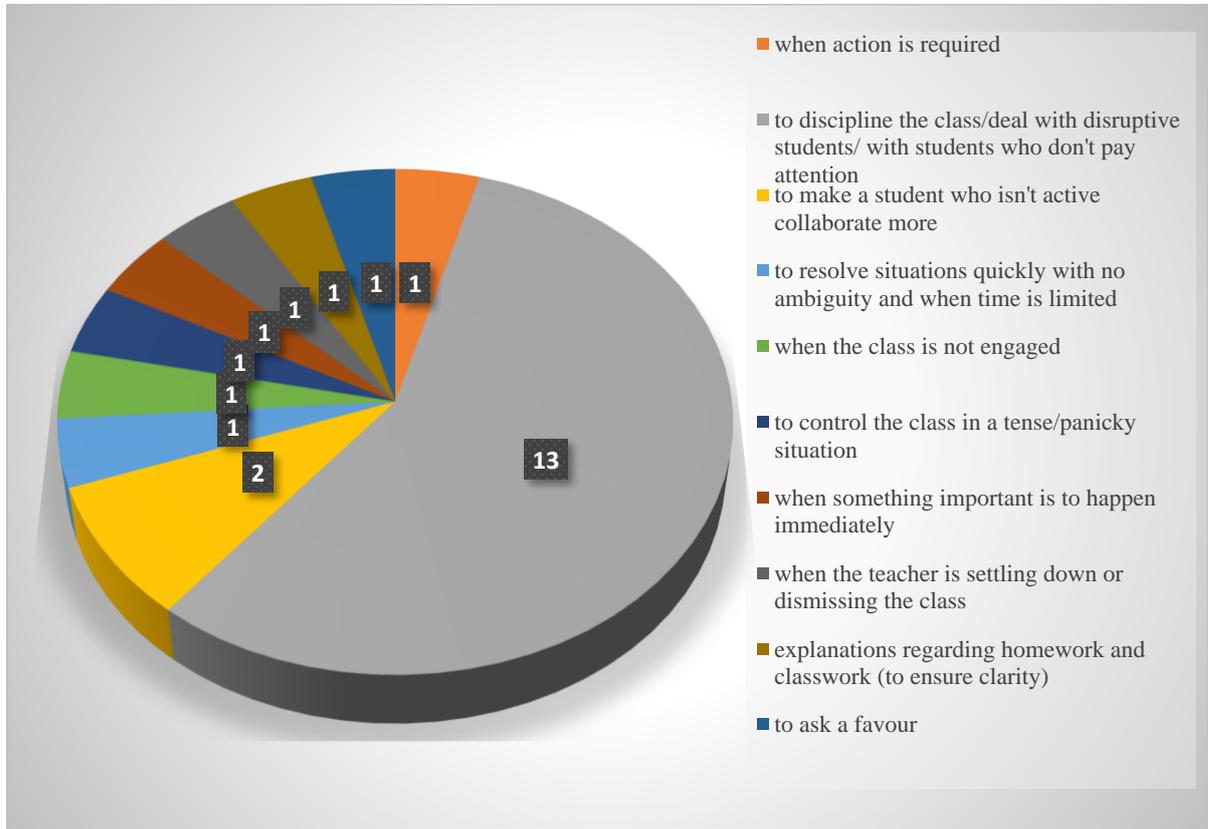
As demonstrated in Figure 34, male learners perceived direct speech acts as effective when used by their teachers to discipline disruptive students, which was noted thirteen times (57% of the time). It is also important to highlight that this particular effect was deemed the most crucial by both groups of educators. Further analysis of Figure 34 reveals that male learners additionally indicated that directness is useful when a teacher wants to encourage a less active student to collaborate (this was stated twice, 9% of the time). A similar point was made by male educators, who claimed that direct speech acts are effective with low-ability students.

Other male learners pointed out the effectiveness of directness in situations where teachers must resolve problematic situations within a limited timeframe, when the class is not engaged, when a situation is tense and the class needs to be controlled immediately, when immediate action is required, when homework is explained, and when the teacher needs to ask a favour. Both urgent situations and class exercises were also listed by male and female educators, indicating that the respondents have similar views regardless of their gender.

The final conclusion based on Figure 34 is that most of the effects of direct speech acts mentioned by male learners all relate to essential and urgent situations encountered in the classroom setting. This suggests that direct speech acts may be the most appropriate choice in such cases. Interestingly, male learners also highlighted the effectiveness of directness where the teacher asks for a favour, a scenario in which male educators favoured indirectness for similar requests (as seen in Figure 18 - “when asking to help out with basic chores”). Nonetheless, it is difficult to analyse this point further without additional information on the type of favours the learners had in mind.

**Figure 34**

*Effectiveness of Directness According to Male Learners*



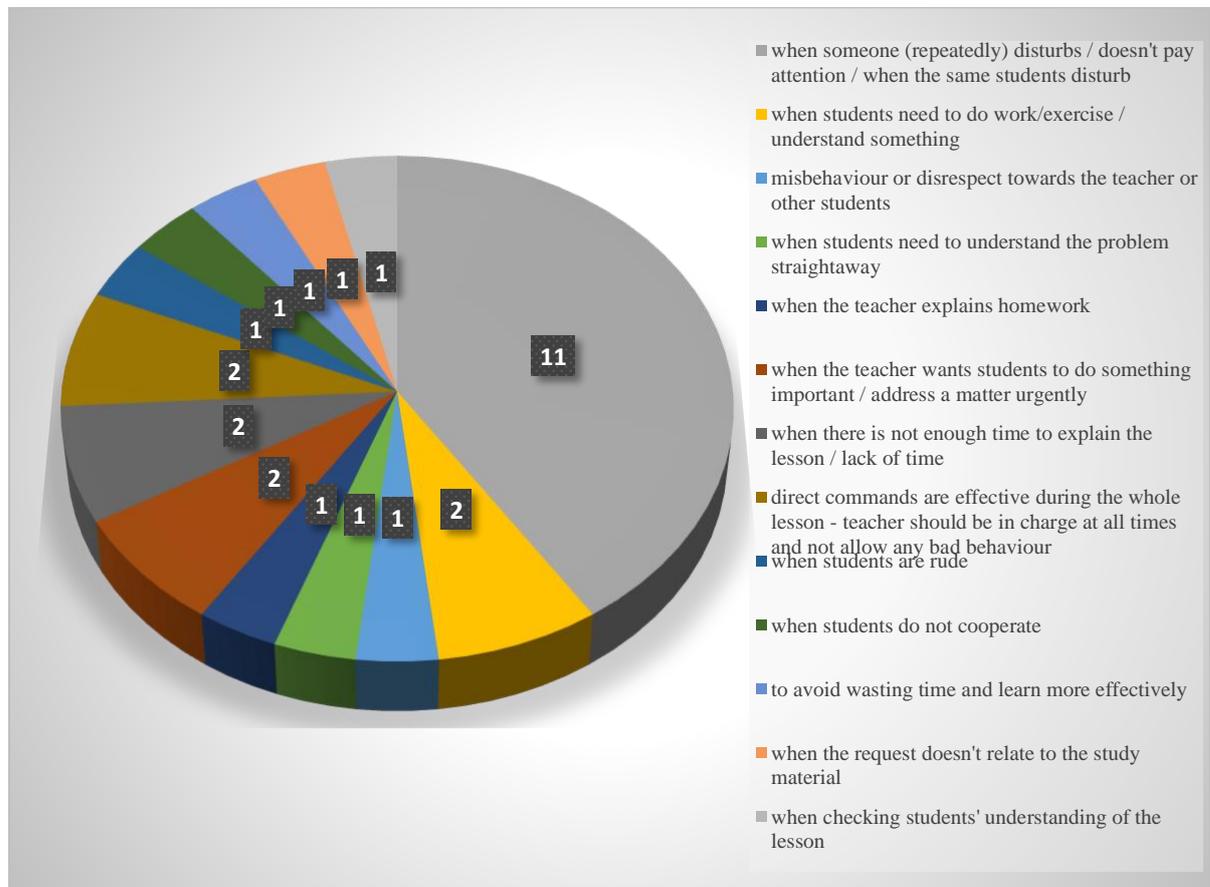
As indicated in Figure 35, the female learners shared the opinion of the male learners, pointing out that direct speech acts are most efficient when teachers deal with disruptive students (stated eleven times, 41% of the time). Furthermore, it was emphasised twice (7% of the time) that directness is efficient in situations when something needs to be addressed urgently or when time is limited – the same effect was noted by female educators. Additionally, it was mentioned twice (7% of the time) that directness is necessary throughout the whole lesson, as it shows that the teacher is in charge and helps avoid misbehaviour as a result. This effect was highlighted by both male and female educators.

Other situations listed by female learners involved completing activities and tasks, dealing with misbehaviour or disrespect, explaining homework, addressing lack of cooperation from students, making requests unrelated to the learning process, and verifying students' understanding of concepts. It was also mentioned once that direct speech acts are overall more effective, as they help learners understand better and prevent wasting time in a lesson.

To conclude, the situations indicated by female learners were similar to those listed by male learners. The majority were related to the ideas of urgency and cases requiring clarity and immediate action. Similar effects were noted by both groups of educators, leading to a possible conclusion that the perception of direct and indirect speech acts is not gender-related, but depends on a specific situation a person finds themselves in.

**Figure 35**

*Effectiveness of Directness According to Female Learners*



In question 13, the learners were asked to share their opinions regarding the effectiveness of indirect speech acts. The results are outlined in Figures 36 and 37.

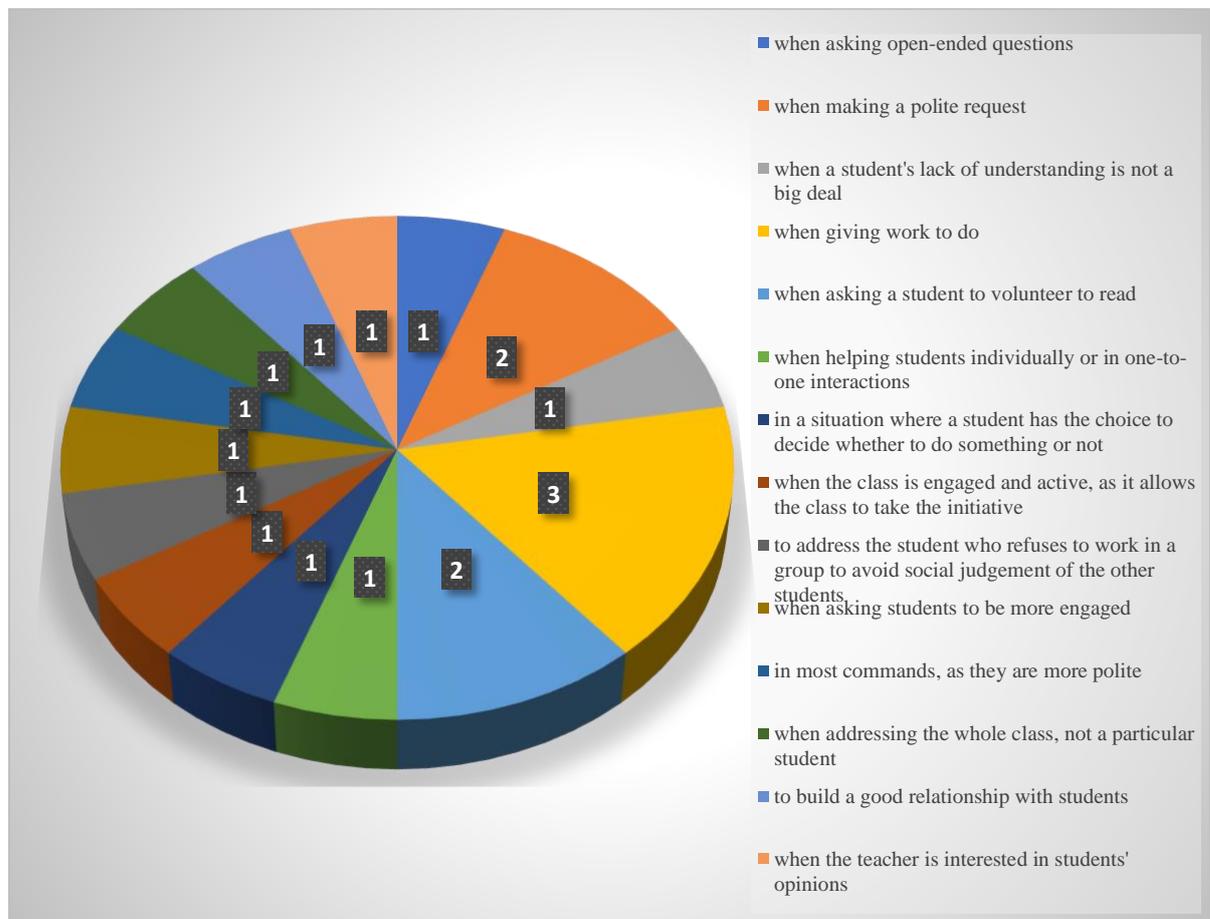
According to Figure 36, male learners emphasised the usefulness of indirectness in situations when teachers assign work to be done, which was mentioned three times (17%). Furthermore, it was noted twice (11%) that making a polite request and asking a student to read are more effective when indirect speech acts are used. Other situations highlighted by male learners involved asking open-ended questions and engaging in one-to-one interactions with learners. The first effect can be linked to a similar one mentioned by male educators – “to encourage students to think and reflect” or “to initiate discussion” (as shown in Figure 18), while interestingly, the second one was listed by both male and female educators, but in the context of directness and its effectiveness.

Additional points made by male learners included giving students a choice, allowing students to take the initiative and to express their opinions, asking students to be engaged more, addressing the whole class, and building a positive relationship with learners. Among

these effects, creating a bond with students was also emphasised by male and female educators. Additionally, female educators noted the usefulness of indirect speech acts when addressing the entire class. These results again support a previously made conclusion that both speech acts are not perceived through the lens of gender, but rather the specific situation that calls for a particular approach.

**Figure 36**

*Effectiveness of Indirectness According to Male Learners*

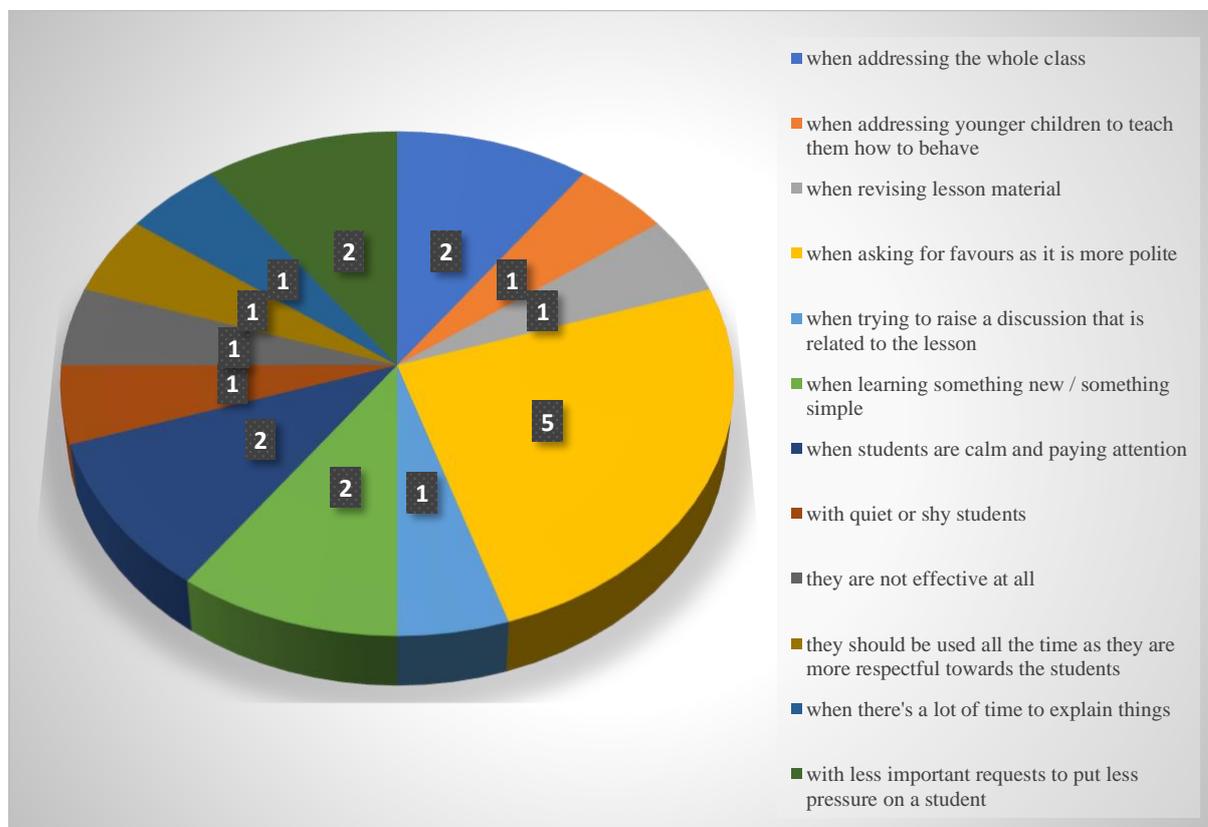


As shown in Figure 37, female learners found indirectness to be effective when teachers make polite requests (mentioned 5 times, 25%) – an effect also noted by male learners. Several effects related to indirect speech acts were listed twice (10%): when teachers address the whole class (also noted by female educators), when students learn something new that is not difficult, when they are calm and paying attention, and when teachers make less important requests to soften the imposition. Female educators also emphasised the concept of learning something new and student cooperation (as shown in Figure 17).

Other effects mentioned by female learners included situations where teachers address younger students about behavioural issues, approach shy or quiet students, initiate and conduct discussions, revise previously learnt material, and explain concepts when there is no time pressure. In comparison, male educators suggested that direct speech acts would be more effective with younger students. Similarly, female educators stressed the importance of using indirectness by teachers with older students. The case of addressing shy or quiet students was also noted by female educators. Revising material was mentioned by both male and female educators; however, their viewpoints differed: male educators believed that direct speech acts are more efficient in this situation, while female educators preferred indirectness. Additionally, the idea of initiating discussion was also highlighted by male educators. Finally, it is noteworthy that female learners expressed opposing views on the effectiveness of indirectness: one learner (5%) stated that indirectness is always effective, as it is more respectful towards students, while another claimed it is not effective at all.

**Figure 37**

*Effectiveness of Indirectness According to Female Learners*



Overall, it can be concluded that the points listed by both learners and educators were rather similar, and a pattern emerges based on the participants' responses. First, it seems that there is a tendency to use directness in several cases: when a situation requires immediate action, when there is a limited amount of time, or when dealing with something urgent and important such as disruptive behaviour, or when someone's safety or health is at stake. On the other hand, indirectness seems to be effective when there is a need for discussion, reflection, and the expression of opinions. Moreover, indirect speech acts appear useful when politeness is required and there is no time pressure.

Additionally, it is crucial to note that the same effects were frequently listed by both males and females. As a result, it can be concluded that gender cannot be considered a deciding factor when choosing a particular speech act. It seems that the choice rather depends on the given situation, regardless of a person's gender.

#### **4.2.4.6 Indirectness and Directness as a Sign of Teacher's Power or Weakness – Learners' Perspective**

The last question in the learners' questionnaire was a Likert scale question aimed at exploring learners' perceptions of both indirect and direct speech acts and their contribution to creating a specific perception of a powerful or weak teacher. Additionally, the last question aimed to determine whether the choice of either speech act depends on the learners' gender.

Figure 38 presents the opinions of both groups of learners on indirect speech acts as a sign of the teacher's power. As can be observed, there are no significant differences between the two genders: five female learners (31%) agreed or strongly agreed with the statement that indirectness is a sign of teacher's power, compared to four (27%) male learners who shared this opinion. Additionally, the same number of male learners (four, 27%) chose to remain neutral, while three (19%) female learners selected the same response. In terms of disagreement, the same number of female and male learners disagreed or strongly disagreed with the statement (seven learners in each group, 44% of female learners, and 46% of male learners). Clearly, neither group regards indirectness as a sign of teacher's power.

**Figure 38**

*Indirectness as a Sign of Teacher's Power*

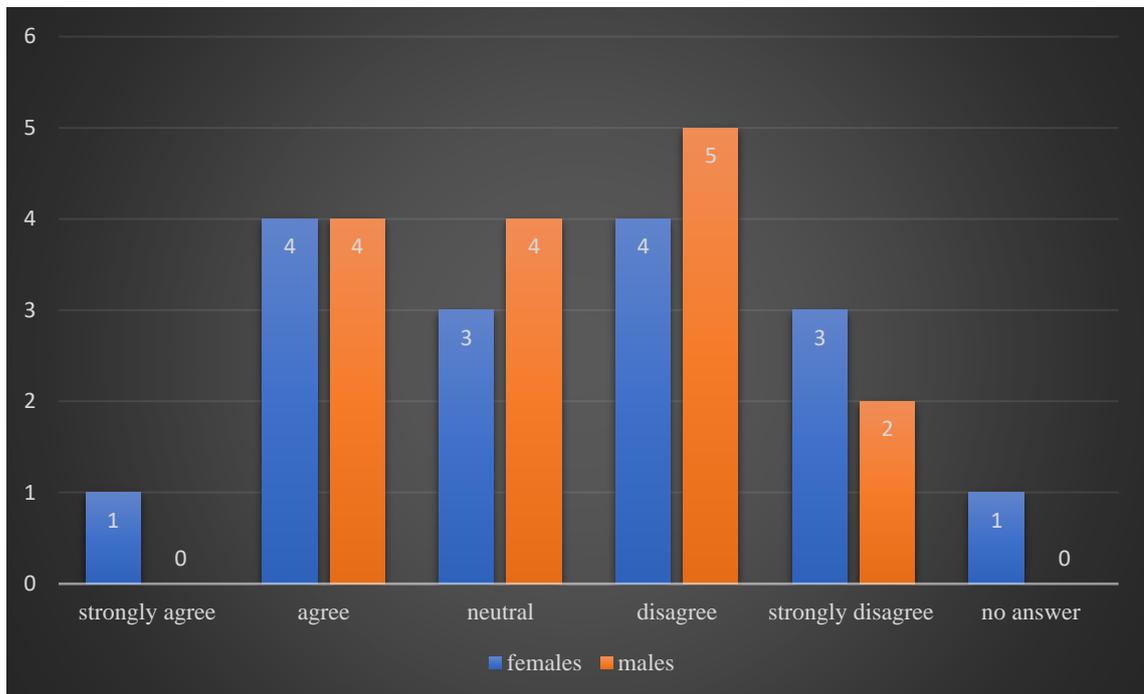
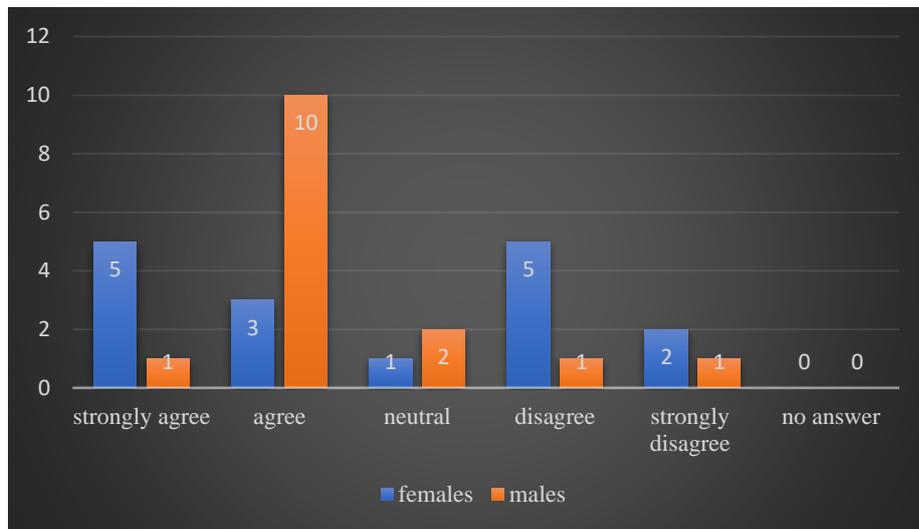


Figure 39 outlines the results regarding the perception of directness as a sign of power among female and male learners. It can be seen that the vast majority of male learners agree or strongly agree with this statement, as indicated by eleven males (73%), compared to eight female learners (50%) who expressed the same viewpoint. The difference in opinions is even more evident when it comes to disagreement, as only two male learners (14%) disagreed with the statement compared to seven female learners (44%).

Therefore, it can be argued that most learners regard directness as a sign of teacher's power. Additionally, there is a significant difference between male and female learners' perceptions, with more male learners affirming the power of direct speech acts. This explains the predominantly directness-oriented choices of male learners in the previous questions in the questionnaire. It seems that male learners perceive directness as something powerful, and therefore expect it from the teachers who, in their view, are in a position of power and authority.

**Figure 39**

*Directness as a Sign of Teacher's Power*

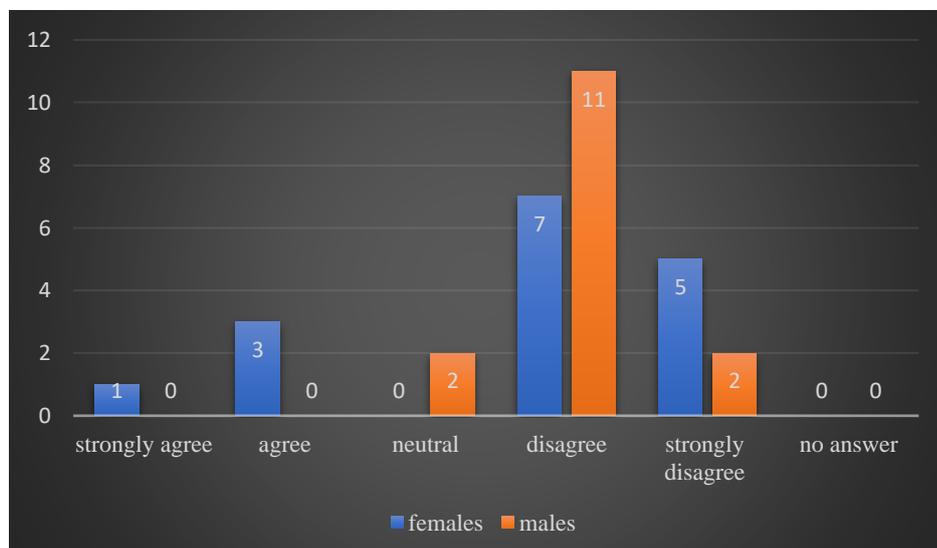


The learners were also asked to express their views on whether both acts could be perceived as a sign of weakness, as shown in Figures 40 and 41.

As demonstrated in Figure 40, only female learners agreed with the statement that indirectness can be seen as a sign of weakness, with four female learners (25% expressing this view, while none of male learners concurred. For the majority of learners, both male and female, indirect speech acts do not signify a teacher's weakness, which was indicated by twelve female learners (75%) and thirteen male learners (87%).

**Figure 40**

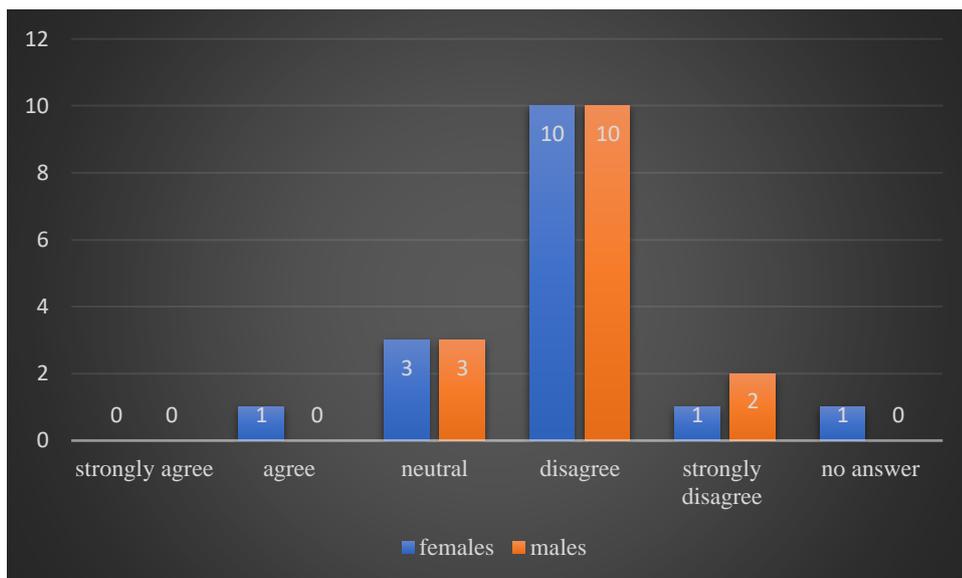
*Indirectness as a Sign of Teacher's Weakness*



Moving on to the perception of directness as weakness, Figure 41 reveals that female and male learners held similar opinions. Twelve male learners (80%) disagreed with this statement, as did eleven female learners (69%). Additionally, one female learner (6%) agreed with the concept of directness being a sign of weakness, but no male learner shared this view.

**Figure 41**

*Directness as a Sign of Teacher's Weakness*



In conclusion, while directness is undoubtedly regarded by both genders as a sign of power, indirectness is not perceived as a sign of weakness, as might have been expected.

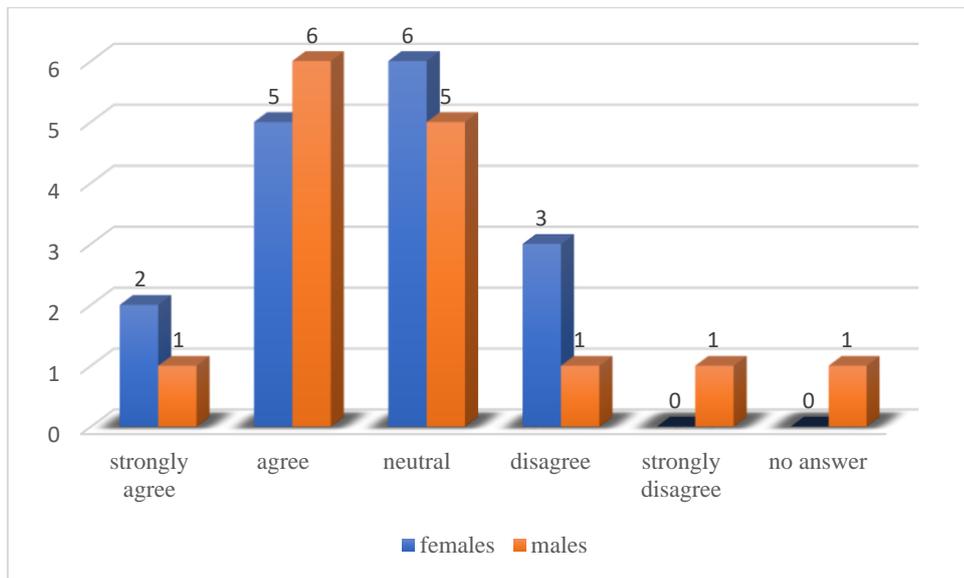
#### **4.2.4.7 Effectiveness of Directness and Indirectness and Learners' Gender – Students' Perspective**

The second part of the Likert scale question aimed to explore learners' opinions about the effectiveness of both speech acts in relation to the learner's gender.

According to Figure 42, an equal number of female and male learners (seven females - 43% and seven males – 47%) agreed with the statement that direct speech acts are more efficient when used with male students. A similar number of learners chose to remain neutral: five male learners (32%) and six female learners (38%). Not many learners disagreed with the statement: three female learners (19%) and two male learners (14%).

**Figure 42**

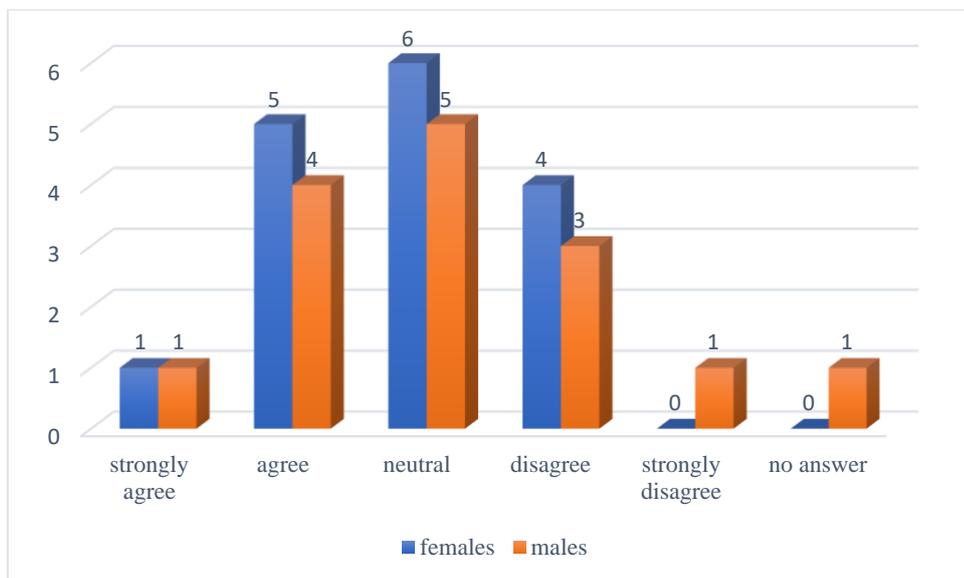
*Effectiveness of Directness with Male Learners*



As shown in Figure 43 below, six female learners (37%) agreed that indirectness is effective among their own gender, compared to five male learners (33%) who shared this opinion. An equal number of learners disagreed with the statement: four female learners (25%) and four male learners (27%). A similar number of learners remained neutral: six female learners (38%) and five male learners (33%).

**Figure 43**

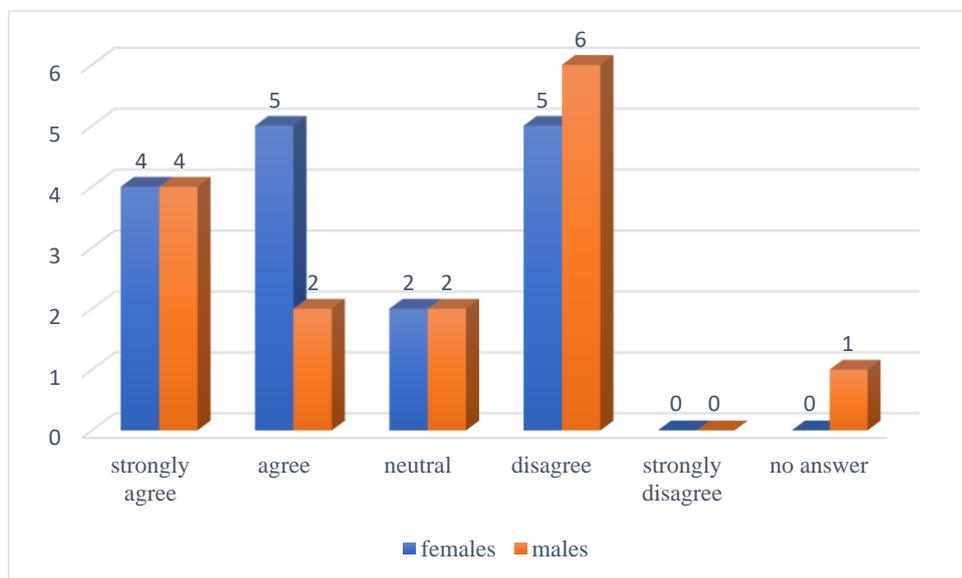
*Effectiveness of Indirectness with Female Learners*



Finally, the learners had to express their opinion on whether the choice of a speech act is related to the learners' gender. As demonstrated in Figure 44, more than half of the female learners agreed (five female learners – 31%) or strongly agreed (four female learners – 25%) with this statement, compared to two male learners (13%) who agreed and four (27%) who strongly agreed. Furthermore, an equal number of male and female learners (13%) remained neutral, while six male learners (40%) and five female learners (31%) expressed their disagreement. Additionally, one male learner (6%) expressed strong disagreement, while no learner provided no answer.

**Figure 44**

*The Choice of Command is not Gender Related*



Overall, due to the large number of neutral responses among learners, it is not possible to conclusively determine whether either speech act is more effective with a particular gender or not gender-related at all. It could be interpreted that, to a certain extent, direct commands may be considered more effective with males, whereas the effectiveness of indirectness is not so clear-cut.

### 4.3 Qualitative Research

The qualitative part of the research included a focus group (see Appendix 3) conducted among educators who had previously completed the questionnaire. Due to timetabling issues, not all educators were able to participate, and eventually, three male and five female educators took part.

The aim of the focus group was to gain additional insight into the reasons behind the use of direct and indirect speech acts in an educational setting, as an extension of the questionnaires and class observations.

The results of the focus group were analysed according to Litchman's 3 Cs and were thus divided into concepts, categories, and codes.

#### 4.3.1 Factors Influencing the Choice of a Speech Act

The first concept that was analysed involved factors influencing the choice of speech acts in the classroom setting. This analysis aimed to verify whether gender affects this choice. Consequently, two categories were identified: gender-related factors and non-gender-related factors. The results in relation to these categories are discussed below and presented at the end of this section in Table 9.

Analysing the first category, several focus group participants pointed out that while gender can influence the choice of a speech act in the classroom, it is not a deciding factor. For example, one of the male educators stated:

*I think it's one of those things where I think there's, there's, there's a combination of factors. Yes. So, gender is just one of them.*

Additionally, the gender of the learners was discussed by the participants; however, their opinions were divided. One female educator claimed that gender has nothing to do with her way of addressing students:

*I think it has nothing to do with gender. I have one girl in IB, but she gets the same treatment as the rest. She has to.*

In contrast, one of the male educators admitted that he would adjust his tone and manner of speaking based on the gender of the learner. When asked to provide further explanation, he elaborated on the male learners explaining that:

*They, they literally need someone to say, like, listen, you need to be doing this now. Whereas with what we were always, this was even at university that what we were always taught that you have to be very firm and direct with the boys, and they respond well to that and they respect that. Whereas with girls, if if you if you if you get on their bad side, they're going to keep, they're going to keep, keep that grudge forever. So, you got to be softer with them. And that's, that's that was what we were taught by by, you know, academics.*

This view was echoed by another female educator, who agreed that female learners are likely to hold a grudge and therefore must be treated in a softer manner.

The second category within the same concept concerned non-gender-related factors. Among these, cultural background was mentioned by several participants. One male educator emphasised the fact that the cultural aspect, rather than gender, has a greater impact on using a particular speech act:

*I'm not very sure about this, but I think it's more of a cultural aspect, the way you speak and the way you address people, and it has to do with a cultural background, more than a gender, I think. But I don't have any data. So, I mean, we know that British, they use a lot of 'please' and they have a polite way of addressing if you say open your book, it will be a bit offensive. I mean, so I think that no matter if it's a male or a female, a British teacher, for example, they will use please no matter what's the agenda.*

Closely related to the cultural aspect, language was another factor mentioned by some participants, both male and female. One female educator highlighted that her way of addressing learners changes according to the language she speaks. She explained that using English 'softens' her way of addressing learners, whereas in Maltese she is 'louder'.

Furthermore, age and maturity level of students were additional key factors considered by both groups of educators as affecting the use of directness and indirectness in the classroom. One female educator, who entirely disregarded gender as a key factor, explained her views on the maturity and age of the learners:

*I think the level, age makes a difference. They're IBs. There's more of that. We're on the same level sort of thing. With the younger, you know, I think there's more of that you have to do this now, you have to do this at the instruction mode. With the IB again, very often, it's more of a discussion, how are we going to tackle this question.*

Finally, the last group of factors mentioned by the participants was related to a teacher's personal style. This included aspects such as personality, teaching style, and experiences.

Clearly, it can be concluded that gender alone cannot be regarded as a determining factor in the choice of speech acts in the classroom setting. Other aspects must be considered, such as one's culture, language, personal style, along with the age and maturity of the learners. These findings are consistent with the results of the quantitative research.

**Table 9**

*Factors Influencing the Choice of a Speech Act*

<b>Concept</b>	<b>Category</b>	<b>Code</b>
Factors influencing the choice of a speech act	Gender related	Gender as one of many factors
		Gender of a learner
	Non-gender related	Language
		Cultural background
		Age and maturity of a learner
		Teacher's personal style

#### **4.3.2 The Use of Direct Speech Acts**

The use of directness was another concept discussed during the focus group. Based on the participants' responses, three categories were identified: learners' abilities and age, learners' behaviour and attitude, and other factors, all of which are outlined in at the end of this section.

Within the first category (learners' abilities and age), many participants highlighted that directness is more necessary with younger learners, as they need to be explicitly taught and guided on what to do and how to behave. In contrast, older learners are expected to exhibit

certain levels of maturity which do not necessarily require directness. Within the same category, a lack of skills and knowledge was also mentioned. However, it is important to emphasise that this does not stem from a lack of attention or motivation, but from not yet having gained necessary knowledge, as indicated by one of the female educators:

*The other thing is with I'm, I'm very direct when it comes to things like because they don't know, they don't know how to say, they don't know the terminology, they don't know the structure, the way to go about. So, we do that. And then they do it, with another text or something. So, once they've got the hang of the of the terminology, I try to hand it over to them as much as possible, and then review.*

In the next category – learners' behaviour and attitude – lack of motivation, cooperation, and attention, along with the violation of rules, were all considered essential, interrelated reasons that require the use of directness. One male educator emphasised this correlation:

*I agree with that, I think ... (teacher's name) has one IB class that students tend to be in because they have to be in as opposed to a choice. Usually, the ones he has, Maths applications, are the ones who don't like maths, but they have to do maths for the IB. So, I think their attitude in that class is all. It is they are going to have lower motivation; they're going to less want to do things. So, I think the directness, he has to have more direct approach because of that. Whereas other ones, a student who's chosen to do psychology and wants to learn psychology, it's a very, very different, you don't have to be as direct with them, because they have that intrinsic motivation.*

This was further affirmed by a female educator who explained that the lack of cooperation from learners, along with misbehaviour, instigate a more direct approach, which seems to be the only possible solution in such cases.

Within the same category, addressing neurodivergent learners was also identified as significant. One male educator underlined the importance of being direct with such students because “*direct is clear for them*” and “*interpreting emotion and tone is more difficult*”.

Among other reasons for using direct speech acts, ensuring safety was mentioned by two female educators who teach biology and physics. They pointed out that directness is a must in their subjects, as otherwise, students' safety would be at stake.

Another female educator referred to specific things that she cannot personally accept and indicated that she tends to be:

*direct on certain things that I do not accept, or for just for example, I don't know, the windows, the room is usually stuffy. So I insist that the window is at least partly open and if they want to close it, I don't compromise.*

Another male educator, who is the head of section, stated that directness should be used as a last resort, when indirectness is ineffective. He also highlighted that despite his 'power' as section head, he always starts with indirectness and only switches to directness when the first approach fails. Additionally, he put forward the idea of a false sense of power by providing an example of teachers who are:

*in industry where they have to put the kind of, they're nervous, they want to put their authority and dominance on people and don't feel confident with the power that they have, they use kind of more what they deem to be more powerful means.*

This sheds an interesting light on the aspect of power. It can be argued that, when used properly, directness is not employed by educators to exercise their power. On the contrary, it is rather a necessary approach that appears to be forced on teachers only when the red line is crossed. Only in the case of inexperienced or incapable educators can directness become a tool of power in the hands of those who do not know how to establish authority in the classroom. In such cases, direct speech acts are their only means of gaining respect from learners.

**Table 10***Use of Directness*

<b>Concept</b>	<b>Category</b>	<b>Code</b>
Use of Directness	Learners' abilities and age	Lack of knowledge/skills
		Younger learners
	Learners' behaviour and attitude	Lack of motivation
		Lack of cooperation
		Lack of attention
		Violation of rules
		Neurodivergent learners
	Other factors	When indirectness fails
		Ensuring safety
		Teachers' unacceptable issues
		False sense of power

**4.3.3 The Use of Indirect Speech Acts**

Based on the focus group discussions, the third concept – the use of indirectness – was identified and further analysed. Participants' responses, which are displayed in Table 11, were grouped into the following three categories: classroom atmosphere, advantages for the learners, and other factors.

Within the first category – classroom atmosphere – two conclusions can be drawn. First, indirect speech acts are beneficial in the classroom setting as they are far less threatening, which helps create a bond with learners. One of the female educators pointed out:

*Yeah, I think we're, I mentioned that with the idea of it being less threatening, like, yes, even if they're going to be working a problem, which I know that there are difficult set of problems. If I'm saying, let's do this together, let's work in the group. It's easier for, they relax. As opposed to 'now you're going to work it, and then I will collect it and see what you've done'.*

Furthermore, a less threatening environment lends itself well to creating a bond between the teacher and the students. The current school setting no longer mirrors an old-fashioned classroom with teacher-centred approach. As stated by one female educator, these days teachers are “*the facilitators of knowledge*”. A similar opinion was shared by another female educator who emphasised that indirectness is:

*a sign of connectedness to the students. The relations. When I'm connected with the classroom, I realise that I soften. When at the beginning when I'm not so connected, because I don't know the students, I realise I have to be more direct.*

The next category withing the concept of indirectness includes several advantages for the learners, such as learner-centred approach, learners' expectations, and older learners. First, the use of indirectness contributes to a more beneficial learner-centred approach in the classroom, allowing learners to become “*more independent to take more responsibility. (...) which would lead them to share the ownership of the problem.*”

Next, the age factor was once more mentioned, as the educators highlighted that IB students are old enough to be treated on a similar level to teachers or other adults. Finally, according to the educators, indirectness is an approach expected by the learners themselves, as one educator indicated: “*they expect us to be more indirect than we may think*”.

The third category – other reasons – includes aspects such as humour and tone when disciplining learners, intrinsic motivation, shy teachers, and established authority and reputation. Humour, along with tone, were mentioned by one male educator who explained that despite using a humorous approach, the strength of the message lies in the tone employed. Arguably, this links with the earlier-mentioned concept of using directness only when the line is crossed and indirectness fails, leading to an escalated approach from the teacher.

Moreover, learners' intrinsic motivation is another factor that makes indirectness a desirable approach to be used in the classroom. Learners who are internally motivated to

succeed in the subject are willing to cooperate and therefore do not need direct approach, unlike those who lack motivation and skills and refuse to cooperate.

Finally, the aspect of power was once again mentioned in the focus group when discussing indirectness. It was noted that, on the one hand, it is related to the teacher’s reputation and authority, as pointed out by one female educator:

*Once you’ve got the authority in the class, and also if you’ve gotten to know the kids, sometimes you don’t even have to say anything, you just go (teacher showing a ‘threatening’ facial expression).*

However, on the other hand, indirectness may be a preferred strategy among those educators who are “*shy and timid*” and do not want “*to impose with direct language*”. In this case, indirect speech acts may be interpreted as a sign of weakness.

**Table 11**

*Use of Indirectness*

<b>Concept</b>	<b>Category</b>	<b>Code</b>
Use of Indirectness	Classroom atmosphere	Less threatening
		Creating a bond
	Advantages for learners	Learner-centred approach
		Learners’ expectations
		Older learners
	Other factors	Humour and tone to discipline learners
		Intrinsic motivation
		Shy educators
		Established authority and reputation

Overall, the main conclusion that can be drawn from the focus group data is that the educators' gender itself is not the only factor that determines the choice of a speech act in the classroom setting. While it definitely has an impact, it is rather the interplay of many other factors that contribute to the teacher's decision on which approach to employ. Among these factors, learners' gender, cultural background and the language used by the educator, along with the age and maturity level of the learners, and the teacher's personal style and experiences can be listed.

Another conclusion based on the focus group discussion is that the use of speech acts depends on the specific classroom situation as well as group dynamics. Overall, directness appears to be beneficial in cases where clarity and safety are the priority. Additionally, it is often used to discipline the learners, but usually when an indirect approach proves unsuccessful. Finally, direct speech acts are required in situations where learners are reluctant to cooperate and lack skills and/or motivation.

As far as indirectness is concerned, it is clear that its use brings about a positive classroom atmosphere, helping establish rapport between the teacher and learners, fostering a learner-centred approach, which is far more beneficial for learners than a teacher-centred one.

The last crucial point that emerged from the discussion is the power/weakness aspect in relation to both speech acts. Clearly, no conclusive statement can be made about either speech act due to their complexity and many factors at play. It cannot be unambiguously stated that either act signifies power or weakness, as it depends on how they are used. Indirectness can be a sign of the educator's established authority and respect, and so can directness. Nevertheless, it is essential to underline that directness can also provide a false sense of power in cases where educators are inexperienced or unable to gain authority in other ways, which can therefore become the educator's weakness. Similarly, indirectness can be perceived as a weakness when used by shy and uncertain educators.

Finally, it is worth noting that the results from the quantitative stage and the qualitative one show consistency and complement one another, with qualitative data providing insight into the educators' perspectives on directness and indirectness.

## CHAPTER 5 – Discussion

### 5.1 Introduction

In this chapter, the findings from the previous chapter will be discussed in order to answer the research questions posed at the beginning of the study. Therefore, the discussion will be organised according to the following research questions:

1. Who is more indirect in the classroom: female or male educators?
2. How is indirectness perceived by educators and learners: as a sign of power or weakness?
3. What types of indirectness are used in the classroom?

Additionally, the discussion will include any other valuable findings that may go beyond the scope of these research questions.

#### 5.1.1 Who Is More Indirect in the Classroom: Female or Male Educators

The findings related to the first research question were derived from the quantitative data, specifically from the class observations and the questionnaire carried out among educators.

##### *Questionnaire results*

The questionnaire results were divided into three separate sections according to the classroom situations: classroom management, requests directly related to the learning process, and requests not related to the learning process.

Overall, as shown in Figure 45, in situations related to classroom management, male educators were found to be more indirect than female educators. In terms of requests directly related to the learning process, both groups of educators used indirectness to the same extent, while in terms of requests unrelated to the learning process, male educators were again more indirect, leading to the final conclusion that indirectness was used more frequently by male educators. This result contradicts most traditional studies on language and gender, particularly Lakoff's concept of women's language and the idea that women are generally more polite due to societal expectations imposed upon them (Grainger & Mills, 2016). These findings also contrast with more contemporary studies such as that of Macaulay (2001) who concluded that women are more frequently indirect, mainly out of politeness.

On the other hand, it can be observed that female educators did not use bald-on-record strategies to a large degree but preferred mitigated directness. This aligns with previous findings that commands and directives are employed by both males and females; however,

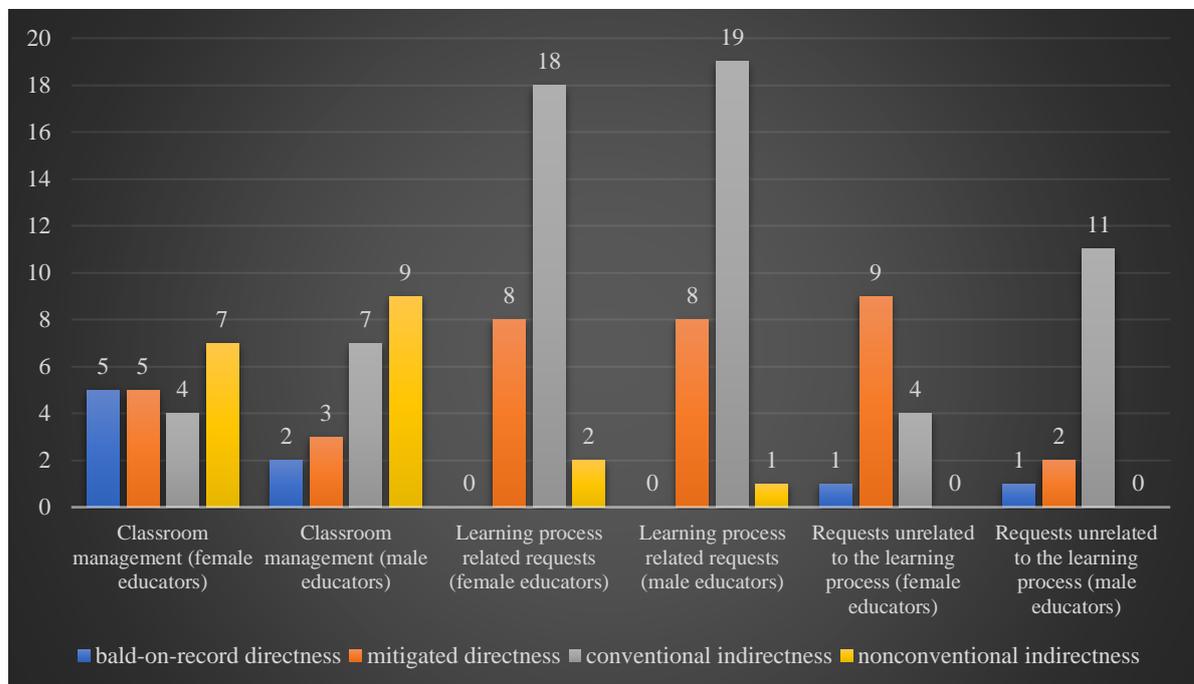
women mitigate them more frequently, which stems from their desire to treat others without necessarily highlighting hierarchical differences, as is the case for men.

It is however important to note that despite male educators being more indirect than female ones, indirectness was the preferred strategy in all classroom situations among male educators, and in the case of classroom management and requests directly related to the learning process among female educators as well. Regarding requests unrelated to the learning process, female educators preferred direct strategies. This result in the female group is in contrast with Goatly’s study (1995) who concluded that indirectness is beneficial in educational settings when non-standard requests are made.

Overall, given the small sample size, no definitive conclusions can be drawn. However, it can be argued that these findings reflect more contemporary beliefs, such as those of Grainger & Mills (2016) who claim that speech acts cannot be ascribed to any biological gender, and those of Pizziconi & Christi (2017) who argue that language is simply a reflection of one’s personality. Therefore, other factors are vital to be considered.

**Figure 45**

*Findings from the Questionnaire - Educators*



*Lesson observations results*

The data gathered from the lesson observations generally confirmed the results of the questionnaire, as demonstrated in Table 12. Specifically, it can be observed that male

educators were more indirect than female educators, although the difference is less prominent compared to the questionnaire findings. On the other hand, contrary to the results of the questionnaire, the preferred strategy among both gender groups was directness, not indirectness. This is in line with research on teacher talk, such as Widya’s study (2017) of English lecturers in an Indonesian university, where the predominant speech acts used were directives (53%).

A closer analysis of the use of directness by educators reveals that it was employed in different types of register. In the instructional register, directness was used to give instructions and advice, prompt learners to participate, draw their attention to important aspects of the lesson or material, and ask knowledge questions. In the regulative register, educators used directness to manage classroom behaviour and set out the rules in a lab. This partially corroborates Dalton-Puffer & Nikula’s (2006) findings regarding directness which was concluded to be primarily used in instructional registers due to its minimal imposition. Nevertheless, male educators also employed indirectness in the instructional register, when asking knowledge questions – they primarily used query preparatories. This can be further linked to Dalton-Puffer & Nikula’s study, although to some extent, which revealed that teachers mitigated their direct speech acts in situations where they anticipated learners to struggle. Finally, the prevailing use of directness among educators aligns with Tannen’s (1994) view that the choice of speech acts is often based on one’s profession, and the fact that in certain occupations, such as that of a teacher, women are expected to be direct to be viewed as professionals. However, this conclusion must equally be applied to male educators, leading to the conclusion that gender is not a decisive factor in the choice of speech acts.

**Table 12**

*Findings from Lesson Observations vs Questionnaire*

	Lesson observations		Questionnaire	
	Directness	Indirectness	Directness	Indirectness
<b>Female educators</b>	69%	31%	49%	51%
<b>Male educators</b>	60%	40%	25%	75%

### *Further insights from the focus group*

To further analyse the use of directness and indirectness in relation to gender, it is necessary to examine the qualitative results gathered from the focus group with educators. These findings confirm the earlier conclusion that gender is just one of many factors influencing the choice of speech acts. Among these factors are the gender of learners, the language spoken in class, the cultural background of speakers, the age and maturity of learners, and the teacher's personal style. This corroborates other studies in the field, particularly the notion that the choice of speech acts is influenced by cultural and linguistic contexts (Liu & Hong, 2009; Rahardi et al., 2023; Reiter et al., 2005; Wong, 2016).

As far as indirectness is concerned, educators pointed out that it is beneficial in classroom settings, as it is less threatening and helps create a bond with learners. This correlates with Brown and Levinson's concept of using indirectness when face-threat is increased, as well as with the concept of building rapport (Cutting, 2002; Fung, 2009; Tannen, 1993). Furthermore, educators stated that indirectness ensures a learner-centred approach in class, can be used with older learners, and is often expected by them. These findings are consistent with Dalton-Puffer & Nikula's (2006) assertion that indirectness is suitable for older students. However, they also observed that learners generally perceive directives as acceptable due to the specific nature of the educational context, which contradicts the educators' perceptions of their learners' expectations towards more indirect strategies. It could be argued that while learners might prefer indirect speech acts from their teachers, they simultaneously accept directness as an inherent aspect of the school environment.

The concept of a learner-centred approach, highlighted by educators, was also emphasised by Goatly (1995) and Darong et al. (2020) who both noted that classrooms are founded on principles of solidarity and equality rather than power relations, which fosters a learner-centred approach. To support this view further, a study conducted by Liu & Hong (2009) correlated the prevalent use of direct speech acts with a teacher-centred environment.

Other factors mentioned by educators in relation to indirectness included learners' intrinsic motivation, the personality of shy educators, established authority and reputation, along with preferences for using humour with an appropriate tone. The role of humour as a positive politeness marker, employed to build rapport with learners, was also mentioned in Senowarsito's study (2013).

Among the factors contributing to the choice of directness were a lack of knowledge/skills, motivation, cooperation, and attention, as well as rule violations, young age, neurodivergent learners, safety concerns, teacher's unacceptable issues, a false sense of power, and situations

where indirectness fails. This ties in with existing research that emphasises the clarity and unambiguous nature of directness, making it easier to understand and thus preventing disruption (Bahing et al., 2018; Goatly, 1995). Boux et al. (2022) also highlighted that understanding indirectness requires a variety of cognitive processes, which can be challenging for neurodivergent learners who might not possess such cognitive abilities. Moreover, ensuring safety aligns with the findings of Khoirunnisa & Hardjanto (2018) who concluded that bald-on-record strategies are employed when someone is in a rush or encounters an urgent situation. Additionally, their mention of a lack of education could be linked to the previously mentioned lack of skills or knowledge as contributors to the choice of direct speech acts. Overall, educators appear to adjust their use of directness/indirectness according to the knowledge level of their learners, whereby less knowledge necessitates more directness for clarity.

Another valuable observation refers to the regulative register. As emphasised by Dalton-Puffer & Nikula (2006) in their study of Austrian and Finnish teachers, indirectness is frequently used in regulative registers. This contrast with the educators' viewpoint shared in the focus group and questionnaire but aligns with the findings from class observations. As demonstrated in Table 7 in Chapter 4, female educators did use direct, bald-on-record strategies to discipline learners; however, in both gender groups, indirect strategies were more frequently employed to manage learners' behaviour in class. These discrepancies might be explained by the questionnaire results, as both female and male educators noted that directness is useful with learners who have a history of disruptive behaviour, or when a given action must be immediately stopped (Figures 15 and 16, Chapter 4). Other situations can be solved with the use of indirectness.

Overall, this discussion points to an ongoing tension between directness and indirectness (Katriel, 2016) and underscores the significance of context and the combination of such factors as one's individuality, perspectives, purpose of requests, the setting, etc. (Tannen, 1993; Abdolrezapour, 2012).

#### **5.1.1.1 Learners' Perspectives**

This section delves further into learners' perspectives based on their gender, as it is one of the factors mentioned by the educators that contributes to the choice of indirectness.

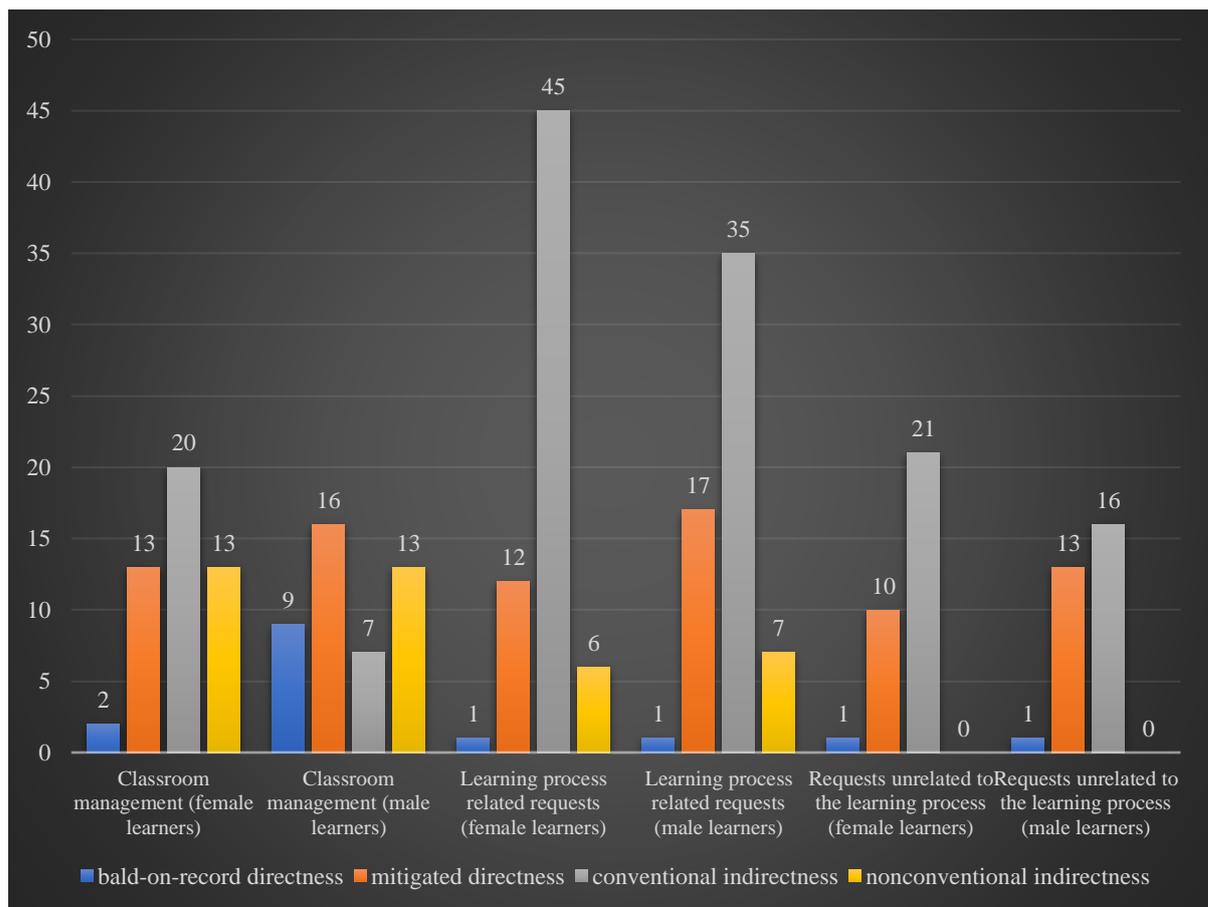
As demonstrated in Figure 46, the findings indicate that male learners opted for directness more frequently than female ones, leading to the conclusion that gender played an essential role in this case. This finding supports research related to language and gender, such as Tannen

et al.'s (2001) study about women's linguistic choices which are dictated by the necessity to fulfil their social roles. It is also consistent with Tanti's (2010) study of Maltese children, which concluded that young girls are already aware of politeness rules, and that adherence to those rules increases with age among girls but decreases with age among boys.

Despite the differences between both gender groups, similarly to the educators, female and male learners favoured indirectness in every classroom situation. This supports the educators' viewpoint about learners' expectations of the ways teachers should address them in class. This, in turn, aligns with studies by Fairclough (2001) and Felix-Bradsdefer & Mugford (2017) concerning the changing power dynamics and the necessity to adjust one's pedagogical approach towards learners in contemporary educational systems.

**Figure 46**

*Findings from the Questionnaire – Learners*



To conclude, the above analysis of discourse and gender in educational settings challenges traditional beliefs of women's language being more indirect, as the findings indicate that male

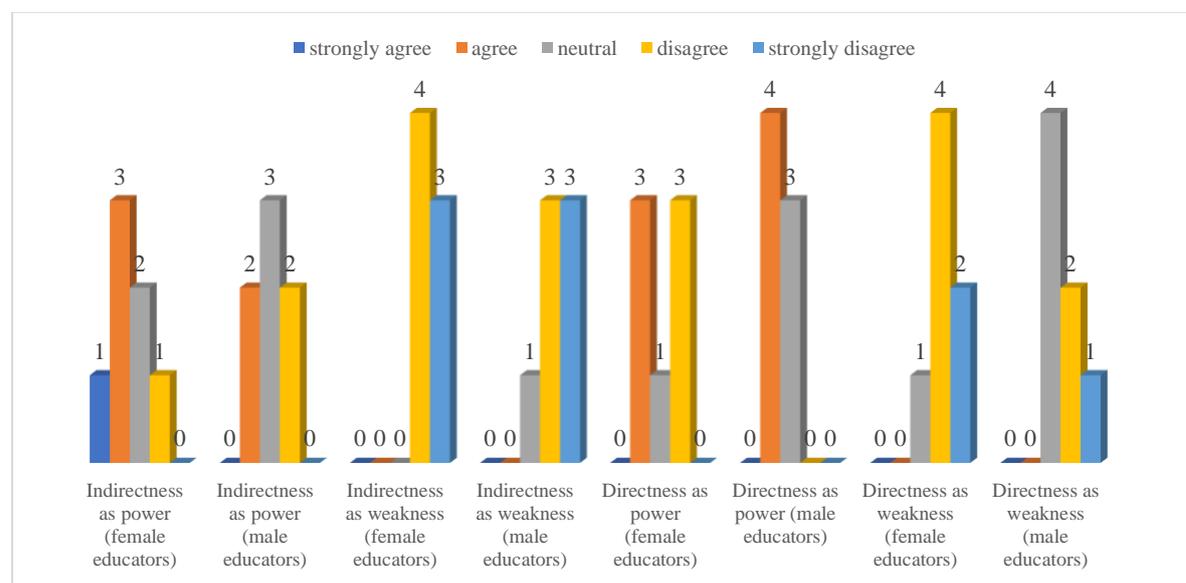
educators resorted to indirect strategies more often. This corroborates more recent research, suggesting a shift in power dynamics within institutions such as school, while also indicating that gender is just one of numerous factors contributing to the choice of speech acts. Moreover, changing power relations affect the perspectives of both educators and learners, encouraging the use of indirectness in the classroom, as expected by learners. Although the results of lesson observations demonstrate a greater tendency to use directness among educators, it is important to emphasise that context is crucial. Additionally, given the small sample size, these findings cannot be generalised, but they do prove that gender is not the sole indicator of differences in educators' speech acts use.

### 5.1.2 How Is Indirectness Perceived by Educators and Learners: as a Sign of Power or Weakness?

The findings related to the second research question were gathered primarily from the questionnaire conducted among educators and learners, and to some extent from the focus group. As shown in Figure 47, both groups of educators do not generally view indirectness as a sign of weakness. However, opinions on indirectness as a sign of power differ, with more female educators who agreed with the statement than male ones. As for the perception of directness, while it was mutually agreed that it is not a sign of weakness, more male educators considered it to be powerful.

**Figure 47**

*Indirectness and Directness as a Sign of Power or Weakness – Educators' Views*



### *Focus group findings*

To further examine the power aspect, it is essential to consider the qualitative findings from the focus group. One male educator, who also holds a position of the head of a section, stated that he does not use directness to assert his power but treats it as a last resort, when indirectness fails. Therefore, it can be argued that directness has the potential to be a tool of power, as it is more straightforward and makes one's expectations clearer, but it does not have to be necessarily used from the start. This observation aligns with several studies which revealed that a person's power does not necessarily affect their choice of a speech act, and that power does not signify its abuse (Cherry, 1988; Van Dijk, 1993). It is also consistent with Fairclough's (2001) view that those in authority have the power to freely decide which speech acts to employ. Additionally, according to Fairclough's theory, there are two ways of using power: through consent and coercion. The second concept may be linked to the same male educator's statement about a false sense of power, reflected in the use of directness by those teachers who are unable to establish their authority in other ways. Once again, this highlights the potential power of directness; however, it must be noted that it cannot be perceived as "real" power and may thus be seen as a weakness instead.

The dichotomy of indirectness was also discussed by the educators. One female educator pointed out that it can be powerful and indicate that the teacher's authority has been established and thus does not require any imposition. However, if used by shy teachers who do not feel comfortable to "impose", it may be interpreted as a weakness.

To further support these findings, the results of the questionnaire revealed that neither teaching experience nor one's position at work contributed to the use of more or less imposing speech acts (Figures 26 – 29, Chapter 4), which contradicts Goatly's (1995) view that the use of power depends on one's degree of authority.

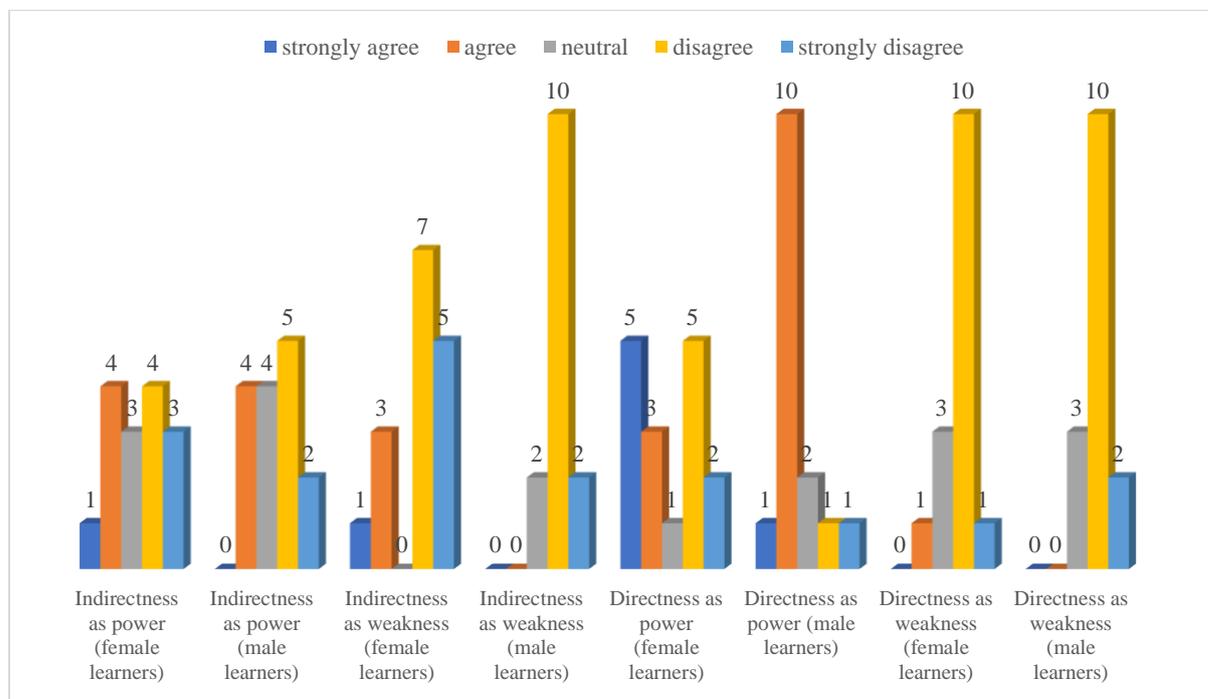
### *Learners' perspectives*

To gain further insight into the aspect of power and reach a final conclusion, it is worth examining learners' perspectives as well. As indicated in Figure 48, while indirectness is not seen as a sign of power by the majority of female and male learners, it is not perceived as a weakness either. In comparison, directness is viewed more as a powerful tool, particularly by male learners, and it is not seen as a sign of weakness by either group. These results differ slightly from those of the educators; however, the dichotomy of indirectness remains similar – it is neither perceived as powerful nor as weak.

Overall, considering the beliefs of both educators and learners, it cannot be unambiguously stated whether indirectness is a sign of power or weakness, as it can clearly be either, depending on how it is employed in a particular context. These findings support Tannen’s (1993) view that neither directness nor indirectness can be inherently classified as weak or powerful, nor can they be ascribed to any social group, as their impact is largely context dependent. This conclusion also aligns with O’Barr and Atkins’s theory that powerful language, traditionally associated with male speech, can equally be used by powerful men and women (Almadani, 2021).

**Figure 48**

*Indirectness and Directness as a Sign of Power or Weakness – Learners’ Views*



### 5.1.3 What Types of Indirectness Are Used in the Classroom?

To answer the last research question, it is necessary to look at the results of the quantitative stage, including both the questionnaire and lesson observations. The data collected with both tools are juxtaposed in Table 10 to determine similarities and differences. It must be emphasised once again that the strategies chosen by educators in the questionnaire were based on hypothetical situations, whereas the strategies observed during lessons were the actual ones, employed by both groups of educators. This explains the discrepancy in the results and further

highlights the significance of context and the interplay of various factors which contribute to the choice of speech acts.

As demonstrated in Table 13, according to the questionnaire findings, the most frequently chosen indirect speech act among female educators was the query preparatory (conventional indirectness), followed by strong and mild hints (nonconventional indirectness), with the suggestory formula at the end (conventional indirectness). The results for male educators are the same, but with different frequencies of usage. The most frequent use of conventional indirectness is supported by other studies. For instance, Reiter et al. (2005) pointed out that it is a strategy favoured by speakers in many languages. In addition, Grainger & Mills (2016) underscored the frequent use of conventional indirectness in English due to its association with politeness. As for nonconventional indirectness, its use contrasts with other studies, according to which neither strong nor mild hints are perceived positively due to their ambiguity. Attricki & Akpeleasi (2021) highlight that for this reason, they might be considered impolite. In addition, they can also be a sign of manipulation, “forcing” the hearer to fulfil the request (Ardi et al., 2018; Fung, 2009; Ogiermann, 2015). On the other hand, upon closer examination of educators’ choices, it could be argued that they were inclined to choose nonconventional indirectness because many of the hints included humour. This aligns with Senowarsito’s (2013) study mentioned earlier which suggests that humour may be used by educators to build rapport and show unity.

Interestingly, the findings from lesson observations do not entirely support the results of the questionnaire, as the most frequent speech acts that educators opted for were direct ones. However, to answer the third research question, the focus should be on indirectness. Therefore, similarly to the questionnaire results, lesson observations revealed that the most popular type of indirectness was the conventional one, particularly the suggestory formula, followed by the query preparatory among female educators and strong hints by male educators. The choices made by female educators can be explained by the commonly held view that women are expected to be more polite (Grainger & Mills, 2016). However, regarding the male educators, the findings are rather surprising and contradict the studies about hints discussed earlier. The previous possible conclusion about humour cannot be confirmed either, as male educators usually employed strong hints to discipline students, draw their attention to something important or more difficult, engage them in a lesson, and even to discipline them, but they did not include humour (Table 7, Chapter 4). Perhaps, it could be argued that male educators opted for nonconventional politeness because of its potential to deny any negative interpretations, as pointed out by Kasper (1995). Another possible explanation relates to the earlier mentioned

age factor. Both groups of educators employed strong hints (female ones opted for them in the third place) which might be because they knew their learners would not have any problems interpreting them, and their choice was dictated by the need to avoid face-threatening acts. This ties in with Retier et al.'s (2005) view that in life, indirect speech acts are employed automatically and are commonly understood. Nevertheless, it would be necessary to conduct more studies in this area to draw stronger conclusions. Finally, mild hints were not used at all, which supports the research about their lack of clarity discussed earlier.

Moving on to modifications employed by educators, the questionnaire results show extensive use of both internal and external modifications among female educators, who favoured lexical downgraders, such as 'please', 'just', or 'maybe', as well as grounders to indicate the reason for a particular request. Consultative device (e.g., do you think you could...) were opted for less frequently, and no syntactic downgraders were employed. The results for male educators are very similar; however, they chose grounders more frequently than female educators and also opted for several syntactic downgraders.

The findings from lesson observations demonstrate that both female and male educators used a variety of external and internal modifications; however, female educators employed them more frequently, which contradicts the findings of the questionnaire.

The above results support previous studies on teacher discourse, particularly the use of the word 'please' and internal modifiers by teachers in order to build rapport with students (Dalton-Puffer & Nikula's, 2006; Darong et al., 2020; Senowarsito's, 2013).

To conclude, the research findings confirm the results of other studies, showing a preference for conventional indirectness and the absence of mild hints among both groups of educators. What is surprising is the use of strong hints (nonconventional indirectness) by the male group, employed without humour. Moreover, despite the prevalent use of direct speech acts, it is important to note that both groups employed internal and external modifications to mitigate these acts, with more female educators opting for them. This can be interpreted as an attempt to create a positive atmosphere in the classroom, which is in contrast with Liu & Hong's (2009) study according to which teachers' use of bald-on-record strategies meant they asserted their power and thus created a teacher-centred environment. It is also crucial to highlight the importance of context and the nature of the profession again. Many situations in the observed lessons involved drawing learners' attention to crucial information, terminology, or tips for final assessment. Considering their significance, it is not surprising that directness was the favoured strategy.

**Table 13**

*Findings from Lesson Observations vs Questionnaire*

		Questionnaire		Lesson observations	
		Female educators	Male educators	Female educators	Male educators
<b>Speech acts</b>					
<b>Direct</b>	Mood derivable (e.g., Clean up this mess.)	17% (11)	8% (5)	34%	38%
	Mitigated mood derivable (e.g., Clean up this mess, please.)	16% (10)	8% (5)	13%	5%
	Explicit performative (e.g., I'm asking you not to park here.)	0% (0)	0% (0)	2%	0%
	Hedged performative (e.g., I would like you to give your lecture a week earlier.)	2% (1)	3% (2)	5%	7%
	Locution derivable (e.g., Madam, you'll have to move your car.)	8% (5)	2% (1)	15%	10%
	Scope stating (e.g., I really wish you'd stop bothering me.)	2% (1)	5% (3)	3%	2%
<b>Conventionally indirect</b>	Suggestory formula (e.g., How about cleaning up?)	5% (3)	0% (0)	11%	20%
	Query preparatory (e.g., Could you clear up the kitchen, please?)	36% (23)	58% (37)	10%	3%
<b>Nonconventionally indirect</b>	Strong hints (e.g., You've left this kitchen in a right mess.)	8% (5)	13% (8)	7%	15%
	Mild hints (e.g., It's hot in here.)	6% (4)	3% (2)	0%	0%

		Questionnaire		Lesson observations	
		Female educators	Male educators	Female educators	Male educators
<b>Modifications</b>					
<b>Internal modifications</b>	Syntactic downgraders	0% (0)	4% (1)	14%	10%
	Lexical downgraders	36% (10)	29% (7)		
	Consultative devices	3% (1)	8% (2)		
<b>External modifications</b>	Grounder	36% (10)	51% (12)	18%	8%

## CHAPTER 6 – Conclusion

### 6.1 Summary of the research findings

The focus of this research was to examine the use of indirectness in a Maltese school setting to determine whether indirectness was more frequently used by female or male educators. Additionally, the study aimed to verify both educators' and learners' perceptions of indirectness as a potential sign of power or weakness. The final goal was to identify the types of indirectness used in the school setting.

While the prevailing number of speech acts employed by educators, regardless of gender, were direct, it was male educators who opted for indirectness more frequently than female educators, disproving the findings of traditional studies that supported the notion of women using more powerless language and more politeness due to societal expectations. However, these findings support more recent studies that go beyond the understanding of gender as a social construct, highlighting the interplay of factors contributing to the choice of speech acts. Among them, culture, language, learners' gender and age, teacher's personal style, and context can be mentioned.

On the other hand, the analysis of learners' perspective confirmed traditional studies, as female learners preferred indirectness in all classroom situations, compared to male learners who opted for directness more frequently. This intriguing finding may be linked to the asymmetrical power relationships between learners and teachers mentioned in several studies (Coates, 1999; Dalton-Puffer & Nikula, 2006; Senowarsito, 2013). To some extent, it may explain male learners' expectations and acceptance of directness from their teachers, who hold more power, as part of their profession. As for female learners and their preference of a supposedly more "female" speech style, it can be interpreted as seeking cooperation, politeness, and empathy (Cahlupnik et al., 2017, Kienpointner & Stopfner, 2017), especially due to their "inferior" position. This preference may also be influenced by the changing power dynamics in the school environment, discussed in the previous chapter.

While indirectness was not perceived as a sign of weakness by any group, more female educators recognised its potential to be a powerful tool, indicating, for instance, one's already established power and authority. Learners' perspectives were somewhat similar, as they did not view indirectness as either powerful or weak. However, learners believed, male ones in particular, that direct speech acts were a reflection of one's power and authority, linking back to the previous conclusion of asymmetrical power relationships in the classroom. This finding further underscores the significance of context and the specific nature of the profession.

Regarding the types of indirectness employed in the classroom, it is not surprising that conventional indirectness was the favoured strategy among both groups of educators. This could be related to the idea of politeness given the use of the English language which is characterised by the frequent use of politeness strategies. Perhaps, the most surprising finding was the preference for strong hints among male educators.

## **6.2 Implications of the research**

The results of the research challenged traditional views of women being more indirect than men, which calls for a reevaluation of studies on gender and discourse, particularly in school settings. It is also essential to examine other factors closely related to the educational context, such as learners' expectations, age, and gender, as well as teachers' personal styles and experiences to verify how these aspects contribute to the choice of speech acts. Such insights could further inform educators and increase their awareness of the influence of these speech acts on classroom dynamics, enabling them to make the right choices in the classroom.

Despite its ambiguous and vague nature, indirectness, which was the focus of this study, was viewed by both educators and learners as beneficial and conducive to learning, particularly in creating a positive classroom atmosphere. It is therefore important for educators to be fully aware of the advantages and disadvantages of indirect strategies to be able to use them effectively in the classroom. Additionally, it is essential to understand their impact on neurodivergent learners, as such knowledge could potentially facilitate their learning process. As pointed out by Felix-Bradsdefer and Mugford (2017), it is educators' responsibility to develop appropriate, facilitative pedagogical frameworks to support their learners' progress. This could be achieved by providing training to educators and enhancing their awareness of how their discourse impacts learners' development and well-being.

It is equally important to understand the changing power dynamics in the classroom and how learners themselves perceive the use of both directness and indirectness. The awareness of learners' viewpoints will allow for a more individualised and personalised approach, fostering healthier and more positive relations between teachers and students. In turn, these improved relationships will contribute to students' success.

## **6.3 Limitations of the research**

There are several limitations of this study which might have affected its results, primarily concerning the sample size and the tools used in the quantitative and qualitative phases.

As far as the sample size is concerned, this case study was conducted in only one school in Malta which cannot be considered representative of broader educational settings. In fact, the number of participants was lower than expected. Many learners did not return consent forms despite several reminders, both written and oral. As a result, instead of the expected 60 learner participants, only 31 took part in the research. In addition, the type of school must also be considered, as the research took place in an independent school among learners following a specific IB programme that differs from other local courses in terms of requirements and workload. This means that the results may be biased and not possible to be generalised to the broader Maltese context.

Regarding the tools used in the quantitative phase, the main drawback of the questionnaire was that it did not include all possible classroom situations or types of speech acts in the multiple-choice options. Despite the inclusion of the “other” option, it was barely used by educators (twice only) and not at all by learners. This could have led to a false representation of speech act choices in both groups. To mitigate this, lesson observations were carried out in order to verify the data from the questionnaire. Nevertheless, it should be noted that each educator was observed twice, due to timetabling limitations, which may not have yielded enough valuable data. Furthermore, the educators’ use of speech acts might have been influenced by the researcher’s presence in the classroom, potentially affecting the authenticity of their behaviour.

In the qualitative stage, not all educators were able to participate in the focus groups which further limited the amount of data collected. Moreover, certain educators dominated the discussion which may have discouraged others from contributing fully, potentially limiting the diversity of viewpoints expressed.

#### **6.4 Recommendations for further research**

Due to the limitations of this case study being conducted in only one school in Malta, it is necessary to include more schools to draw stronger and less biased conclusions. It is equally essential to extend this research to other types of schools – government, church, and other independent ones to obtain more reliable and generalisable results.

Since gender was not perceived as a determining factor in the choice of speech acts, it would be advisable to examine other factors to see how they influence this choice. It would be interesting, for instance, to compare the use of speech acts among educators teaching older versus younger learners or to conduct this research in different groups of students based on their skills and abilities. Considering the importance of culture and language, it would also be

beneficial to carry out a study in international groups compared to solely Maltese ones. A similar comparative study could be conducted among teachers, focusing on Maltese versus foreign educators to observe any similarities or differences in the use of speech acts.

This investigation did include learners' perspective, but it was limited to one tool – the questionnaire. To gain more insight into their perceptions and to explain the differences between male and female learners, it would be beneficial to explore this area further. For instance, lesson observations could focus on learners' reactions to educators' speech acts to verify their effectiveness. Additionally, to shed more light on their questionnaire choices, learners could participate in a focus group, allowing for the gathering of more comprehensive data and a greater understanding of learners' needs in the classroom as far as forms of address are concerned.

Lastly, considering the intriguing preference among male educators for nonconventional indirectness, despite its general lack of popularity, linguistic research would benefit from a study with the sole focus on nonconventional indirectness and its advantages and disadvantages in the classroom.

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## Appendix 1

### QUESTIONNAIRE FOR EDUCATORS

#### Indirectness in a Maltese school setting.

#### **WHO ARE YOU**

1. What's your gender?
  - a. male
  - b. female
  - c. other
  - d. prefer not to say
2. How old are you?
  - a. 20 – 30
  - b. 31 – 40
  - c. 41 – 50
  - d. 51 – 60
  - e. 61 +
3. What's your role at school? (**you may choose more than one answer**)
  - a. teacher
  - b. head of department
  - c. head of section
4. How long is your teaching experience?
  - a. 0 – 5 years
  - b. 6 – 10 years
  - c. 11 – 15 years
  - d. 16 – 20 years
  - e. over 20 years

#### **INDIRECT vs DIRECT COMMANDS in the classroom**

*Choose the answer which is the closest to what you might say in each situation.*

5. You need a volunteer to read a text in class. How are you going to ask? Do you say:
  - a. “(name), start reading, please”.
  - b. “(name), start reading.

c. "I need a volunteer to read. Would anyone be willing?"

d. "(name), do you think you could read?"

e. "(name), could you start reading, (please?)"

f. "It would be great if someone could start reading."

g. Other:

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.....

6. A student is very disruptive during your lesson. You want him/her to change his/her place.

What are you going to say:

a. "(name), get up and go to sit over there."

b. "(name), I don't think it's a good idea for you to sit here."

c. "(name), can/could you take your things and move over there, (please?)"

d. "Hey, chatterbox! I think you'd be better at the desk over there."

e. "(name), do you think you could take your bag and sit over there?"

f. "(name), you're going to sit over there as you are interrupting the whole class."

g. Other:

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.....

7. You want a student to get you the copies from the office on another floor. How are you going to ask? Do you say:

a. "(name), could you go and get the copies from the office, please?"

b. "(to everyone) I printed some copies for today's lesson, but I didn't manage to get them from the office."

c. "Who would like to go for a short walk and get me the copies from the office?"

d. "(name), go and get the copies from the office."

e. "(name), do you think you could go and get the copies from the office?"

f. "(name), could you just go to the office and get the copies for us?"

g. Other:

.....  
.....

8. It's hot in the classroom. You want a student to open the window. Do you say:

a. "It's hot in here."

b. "Don't you think it's hot in here?"

c. "(name) open the window, please."

- d. "(name) open the window.
- e. "Are you also feeling so hot? Maybe we could open the window?"
- f. "(name), could you open the window, please?"
- g. Other:

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9. A student brings you his/her work after the deadline. You are not going to accept it. Do you say:

- a. "The deadline was (yesterday). I won't accept it now."
- b. "I'm sorry but do you know when it was due?"
- c. "I guess you don't use calendar too much, do you?"
- d. "I won't accept it."
- e. Other:

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10. The students are misbehaving and not paying attention during your lesson. How are you going to reprimand them? Do you say:

- a. "Excuse me, am I interrupting you in any way?"
- b. "(name) stop talking immediately!"
- c. "If I were you, I would pay more attention."
- d. "Can/Could you stop talking, please?"
- e. "Do you think you could start paying attention?"
- f. "I can't work in this noise, can you?"
- g. Other:

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11. You want your students to do an exercise. How are you going to ask them to do it? Do you say:

- a. "I would like you to do exercise (1) now."
- b. "Could you do exercise (1) now, please?"
- c. "Do exercise (1)."
- d. "Do exercise (1), please."
- e. "Do you think you could do exercise (1) now?"
- f. "Now, we will do exercise (1)."

g. "To practise this (tense), I want you to do exercise (1) now."

h. Other:

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12. You want your students to put the chairs on the desks after the lesson has finished. Do you say:

a. "Can you put your chairs on the desks, please?"

b. "Put the chairs on your desks."

c. "Put the chairs on your desks, please."

d. "To make it easier for the cleaners, put the chairs on the desk."

e. "It would be great if you could leave this classroom in order."

f. "Do you think you could put the chairs on the desks?"

g. Other:

.....  
.....

13. You are revising the previous lessons and asking questions about students' knowledge. How are you going to ask them questions? Do you say:

a. "Who can tell me what this poem is about?"

b. "(name), can you remind us what this poem is about, please?"

c. "Let's check how much you remember about the poem from the previous lesson."

d. "Now, I want you to tell me what this poem is about."

e. "(name), say what this poem is about."

f. "(name), say what this poem is about, please."

g. "To revise the previous lesson, can you tell me what you remember about this poem?"

h. Other:

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14. In which situations do you think direct commands are most effective when communicating with students?

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15. In which situations do you think indirect commands are most effective when communicating with students?

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16. How strongly do you agree with the following statements? **Tick your choice for each one.**

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Indirect commands are a sign of teacher's power.					
Direct commands are a sign of teacher's power.					
Indirect commands are used by weak people.					
Direct commands are used by weak people.					
Direct commands are more effective with male students.					

Indirect commands are more effective with female students.					
The choice of command is not gender related.					

QUESTIONNAIRE FOR LEARNERS

**Indirectness in a Maltese school setting.**

**WHO ARE YOU**

1. What's your gender?
  - a. male
  - b. female
  - c. other
  - d. prefer not to say
2. How old are you?
  - a. 16
  - b. 17
  - c. 18+

**INDIRECT vs DIRECT COMMANDS in the classroom**

*Choose the answer which is the closest to what you would like the teacher to say in the situations below.*

3. The teacher needs a volunteer to read a text in class. In your opinion, which is the best way to address a student in this situation?
  - a. "(name), start reading, please".
  - b. "(name), start reading.
  - c. "I need a volunteer to read. Would anyone be willing?"
  - d. "(name), do you think you could read?"
  - e. "(name), could you start reading, (please?)"
  - f. "It would be great if someone could start reading."
  - g. Other:  
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4. A student is very disruptive during the lesson. The teacher wants him/her to change his/her place. In your opinion, which is the best way to address the student in this situation?
  - a. "(name), get up and go to sit over there."
  - b. "(name), I don't think it's a good idea for you to sit here."

- c. "(name), can/could you take your things and move over there, (please)?"
- d. "Hey, chatterbox! I think you'd be better at the desk over there."
- e. "(name), do you think you could take your bag and sit over there?"
- f. "(name), you're going to sit over there as you are interrupting the whole class."
- g. Other:

.....  
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5. The teacher wants a student to get copies from the office on another floor. In your opinion, which is the best way to address the student in this situation, please?

- a. "(name), could you go and get the copies from the office, please?"
- b. "(to everyone) I printed some copies for today's lesson, but I didn't manage to get them from the office."
- c. "Who would like to go for a short walk and get me the copies from the office?"
- d. "(name), go and get the copies from the office."
- e. "(name), do you think you could go and get the copies from the office?"
- f. "(name), could you just go to the office and get the copies for us?"
- g. Other:

.....  
 .....

6. It's hot in the classroom. The teacher wants a student to open the window. In your opinion, which is the best way to address the student in this situation?

- a. "It's hot in here."
- b. "Don't you think it's hot in here?"
- c. "(name) open the window, please."
- d. "(name) open the window."
- e. "Are you also feeling so hot? Maybe we could open the window?"
- f. "(name), could you open the window, please?"
- g. Other:

.....  
 .....

7. A student brings the teacher his/her work after the deadline. The teacher is not going to accept it. In your opinion, which is the best way to address the student in this situation?

- a. "The deadline was (yesterday). I won't accept it now."
- b. "I'm sorry but do you know when it was due?"

c. "I guess you don't use calendar too much, do you?"

d. "I won't accept it."

e. Other:

.....  
.....

8. The students are misbehaving and not paying attention during a lesson. In your opinion, which is the best way to reprimand the students in this situation?

a. "Excuse me, am I interrupting you in any way?"

b. "(name) stop talking immediately!"

c. "If I were you, I would pay more attention."

d. "Can/Could you stop talking, please?"

e. "Do you think you could start paying attention?"

f. "I can't work in this noise, can you?"

g. Other:

.....  
.....

9. The teacher wants the students to do an exercise. In your opinion, which is the best way to communicate it to the students?

a. "I would like you to do exercise (1) now."

b. "Could you do exercise (1) now, please?"

c. "Do exercise (1)."

d. "Do exercise (1), please."

e. "Do you think you could do exercise (1) now?"

f. "Now, we will do exercise (1)."

g. "To practise this (tense), I want you to do exercise (1) now."

h. Other:

.....  
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10. The teacher wants the students to put the chairs on the desks after the lesson has finished. In your opinion, which is the best way to ask students to do it?

a. "Can you put your chairs on the desks, please?"

b. "Put the chairs on your desks."

c. "Put the chairs on your desks, please."

d. "To make it easier for the cleaners, put the chairs on the desk."

e. "It would be great if you could leave this classroom in order."

f. "Do you think you could put the chairs on the desks?"

g. Other:

.....  
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11. The teacher is revising the previous lesson and is asking questions about students' knowledge. In your opinion, what is the best way to ask such questions?

a. "Who can tell me what this poem is about?"

b. "(name), can you remind us what this poem is about, please?"

c. "Let's check how much you remember about the poem from the previous lesson."

d. "Now, I want you to tell me what this poem is about."

e. "(name), say what this poem is about."

f. "(name), say what this poem is about, please."

g. "To revise the previous lesson, can you tell me what you remember about this poem?"

h. Other:

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12. In which situations do you think direct commands are most effective during a lesson?

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13. In which situations do you think indirect commands are most effective during a lesson?

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 14. How strongly do you agree with the following statements? **Tick your choice for each one.**

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Indirect commands are a sign of teacher's power.					
Direct commands are a sign of teacher's power.					
Indirect commands are used by weak people.					
Direct commands are used by weak people.					
Direct commands are more effective with male students.					
Indirect commands are more effective with female students.					
The choice of command is not gender related.					

## Appendix 2

### MT1

MT 1 (Male Teacher 1)

Sat, Dec 07, 2024 3:38PM • 1:14:34

### SPEAKERS

Speaker 7, Speaker 1, Speaker 3, Speaker 4, Speaker 2, Speaker 5, Speaker 6, MT 1

**Speaker 1 00:00**

People, there's about (the rest is unclear)

**MT 1 00:07**

Anything. I'll just put it... Okay. And I might say things sometimes, yeah. Okay. Oh, you made it. That's good. We have to, yeah. How was the Identity Malta? Okay, how long did it take you to get the ID? How long did you wait?

You mean the whole process, or just today?

Yeah, like from when you submitted. Because I— **[students' utterances are unclear]**

**Speaker 1 01:22**

I think two months, but from November. (the rest is not clear)

**MT 1 01:38**

All right, guys, yes, I release, yes, please (the rest is not clear).

**Speaker 2 02:04**

For the English IO, the non-literature has to be something we go over in class. Yes? It should be, yes? The extract, I found something really cool.

**MT 1 02:15**

Okay, show it to me, show it to me, and then we can talk more.

**Speaker 2 02:22**

But I just use this to figure out where (the rest is not clear). Because I was pretty sure, but now I realize (the rest is not clear)

**MT 1 02:41 [students' utterances inaudible]**

Ok, quickly, guys, I want to begin. Crap—I'm talking—I want to begin. Okay? All right, a few important updates. Okay, so the assignment. Quickly, guys—you ladies—sit down, okay? Right. Just an update about the Shakespeare, non-lit, global assignment issue—assignments, right?

If you have not—those of you who *did* submit, I think it was the Sonnets 116 exercise—I just gave you some feedback, and it's been returned on Teams. For the other assignment, right? I think only a few of you have submitted. Okay, it's fine, just—just hear me out—and then please send it in. Understand, if it's not submitted by Friday, that's zero. Some of you received a zero for the previous graded assignment because you didn't do it, right? You didn't do it, okay?

So, note that if there is a second assignment like that, it's going to heavily influence the reporting, and it's going to heavily influence your grade, right? So, in short, you need to do the work, okay? It's in your best interest.

Next—okay, the next assignment is different. We're going to do at least one kind of analysis of Ted Hughes, but I thought to vary things. I'd like you to work on your portfolio. Some of you have been working on your portfolio; others have not.

Now, the main function of the portfolio is to prepare for your presentation. What I've done on Teams is, I've uploaded a sample presentation. This is the one I actually played to you before—we had an interesting discussion about it. Of course, I'll give you other examples, kind of—I'll give you other examples from my own thinking, right? But I think this one is particularly good.

Now that we've gone through the assessment criteria for the presentation—you should have looked at it independently—but at the very least, we went through the format together. For Friday's session, I want you to listen to the presentation again, and in your portfolio, begin to reflect on it.

Here are some questions. Now, you don't need to follow all of these questions. The portfolio, by its nature, is about your free-flowing, natural reflections on the work we do in class. Nevertheless, I thought it would be helpful to give you some guidelines.

For instance: How exactly is terminology used throughout the presentation? As you should know, terminology is obviously critically important. How are the extracts linked to the GI—Global Issue—throughout the presentation? You don't just want to talk about your global issue at the start; you want to link both the literature and the non-literature to the global issue throughout. As you listen to this sample presentation, how exactly is that done?

Go through some of these points. I leave it to your discretion—your best judgment. Perhaps you want to elaborate on one in particular. I'm not giving you a word limit; as with the presentation itself, the grade you get is contingent on how much effort you put in. It's really up to you. Of course, I'm here to support, to encourage, and so on.

So, next week, Wednesday, create a PowerPoint. Let's forget about the online sharing for now. Just create a PowerPoint, and I'll come around and take a quick look at it. If you want, you can share it with me on Teams, but it's probably sufficient for me just to take a quick look and get a sense of how much you've done.

Now, for next week, Wednesday—but I'm not seeing you on Friday, so yes, good point—we could look at some of your contributions and incorporate them into our discussion of the presentation.

Today, I'm going to push hard to get through as much of Ted Hughes's poetry as possible. Next week, hopefully, we can look at some of the non-literature and the accompanying bodies of work. Once we've gone through that, we'll spend more time incorporating reflections on those into the portfolio.

For homework, you were to read two more of Ted Hughes's poems: *Horses* and *Eggheads*. Did anyone read them? Any thoughts? No? Nobody did it. Okay—not a surprise. What I'm going to do is give you five minutes to read through them because we need to move quickly. Take five minutes, then just share a few impressions, and I'll discuss my analysis.

I haven't shared my annotations with you yet—I'll possibly do that next week. For now, you're working independently.

Okay, right, just read through this. This is one of Ted Hughes's best-known poems. Take a minute or two to read it. You can all access it, yes? This is from *The Hawk in the Rain*, Ted Hughes's first collection, which was published in 1957.

Has anyone finished yet? Just a show of hands. Nobody? Again, particularly for those of you who feel your vocabulary is somewhat limited: with poems, you should go through them again and translate difficult parts independently.

Okay, thoughts on *Horses*? Or are you just chatting about your morning? No? Okay, sorry—it's a little quick, but we need to move.

Who wants to tell me what happens in the poem? It's straightforward. In a sentence or two, what's it describing? William, you looked like you wanted to say something. Well?

**Speaker 1 16:49**

There's no imagery of ... (the rest is not clear)

**MT 1 16:52**

Nature—and what is happening? What is he describing? What is he doing? I mean, it's really simple. You can just say it in a sentence or two. Is he, like, walking?

Yeah, so going for a walk. He's going for a stroll in the early morning and sees the horse. I think one thing that's particularly important is the sunrise too, right? So there's this transition from darkness.

Any thoughts about why someone would think this is a typical Ted Hughes poem? Even though you've only studied two, I think you've seen enough to make some kind of comment on this.

These themes are very connected with nature. Okay, so again, we have a focus on the natural world. Yes? Anything else? Anything more substantial you can pick up on?

**Speaker 4 17:51**

it's extremely descriptive of the environment. That really creates an atmosphere. Yeah ...

**MT 1 17:56 [students' utterances are not clear]**

It's very—the language is vivid, good, and that deepens and strengthens the atmosphere.

What kind of atmosphere is created through the imagery?

Yeah, you can almost imagine grayness.

Yes, yes, there is that grayness. But, of course, it's contrasted—*note contrast*, a very important term—with that rising sun. Then the sun: orange, red, red erupted. That's nice repetition there, with the repetition of "red" and "red." What would that also be symbolically associated with? "Red, red erupted"?

Blood, right? Blood, violence. So again—and that's quite a... Who can get the irony now?

It's a very interesting irony. How is the rising sun described? You've just said it. Why, and why does that suggest an irony? I mean, do you typically associate a rising sun with violent events? What is the sun usually associated with?

Yes, yeah. But, I mean, I'm trying to reach for an irony here. What do we usually associate the sun with? Yeah, like, what did the ancient Egyptians think about the sun?

Yeah, something—but also something which is life-giving, right? And here, it's rising, and there's something almost bloody and violent about it. That's a very interesting irony, right?

Something which is the source of life is also, somehow symbolically—if you look at the language—represented in terms of violence, right?

And again, if you think about Hughes's natural world, this *fiercely living* world is also a fiercely competitive and violent world, right? Think about "The Jaguar," for instance.

Okay, so again, I've said it before, I'll say it again: if you can start mining—think of irony as literally like a mineral, right? If you can start scratching away at the surface of the text and accessing the irony, that's when you really start to say perceptive things. Just think about that, right?

So, I'm just gonna walk you through a few things I picked up on.

Now, what about the function of these short stanzas? Remember—even, again, I've said it before, I'll say it again—you don't have to conjure up, like a magician pulling a rabbit out of a hat, all of this ultra-sophisticated terminology. You just need to focus on something quite simple and say something perceptive about it. You don't need to throw a lot of jargon into your essay.

So, if you think about the short stanzas here—why, Joshua? Why did he choose this form? What is he doing? What is the action? You need to look into the text, into the specific elements of the text. "*I climbed through woods in the hour before dawn, dark.*" What could the short stanzas relate to? In a sense, what could they echo?

The pace of the walking? Right? The sense—yes, the pace of the walking—that could have something to do with it. Maybe little moments, little glimmers of consciousness. You know, as you're walking, you kind of take things in. You move from the breathing of your body to observing the world.

And what about the pathetic fallacy? "*The evil air.*" Now, again, this is something we saw in Shakespeare, right? This notion of projecting moral judgments onto animate or inanimate objects that aren't moral, right? They aren't conscious beings capable of moral action.

Why—why this use of pathetic fallacy?

Yeah, I think that's a very good response, right? I think ambience, atmosphere—a sense of foreboding, perhaps. A sense of what is inside the poet. But instead of the language going inward and being introspective, it continues to focus outward on the world.

So definitely atmosphere. There are often questions about atmosphere in exam papers, so it's important—contrast, atmosphere, things like that.

Any other thoughts on these short stanzas and what function they have? Don't they help to concentrate the imagery? Instead of this kind of flow, where things lead into each other, it's very crystalline, distinct, sharp. Almost like consciousness itself: you have these moments of clarity, and then they slip away. And then you have another moment of clarity, where you take in the world.

So, I think there's, again, tremendous naturalism. It's not just that he's talking about horses, or nature—it's that the process of *being in the world* is captured by the choices he makes. *Embodiment*. That's a great word to throw into an essay—embodiment. Okay? Instead of describing it from a third...

#### **Speaker 4** 24:32

person perspective, it kind of puts the audience and (the rest is not clear)

**MT 1 24:40**

Yeah, I think that. I think that is true. It kind of draws you into the thick of what's happening. And by atmosphere, I want—yeah, I once, uh, when I was in South Africa, I met a poet, and he said this was one of his favorites. Uh, phrases—this notion of *megalith still*. Do you know what a megalith is? Who would?

It's like an ancient, primordial structure, like you get a lot of them here. And also, they're kind of megalithic structures, but it's a wonderful *anthimeria*, which is the use of a noun as an adjective. In this case, right? Very, very nice use of *anthimeria*. You would normally not use *megalith* in this way to describe stillness.

So, is it an adverb? I don't know. *Still* is being still, I don't know. Anyway, whatever it is, it's—yeah, yeah. I guess it's just—still. A megalith is still. It's like, *joined still*, describing horses. So, it's usually a megalith is used as a noun, but here, it's an adjective.

How does this particular phrase—I think it's critically important—how does it reveal some of his deep views about the natural world? Why would he describe the horses in this kind of way? *Megalith*. Why would he connect them to ancient culture, ancient structures, primordial things?

Let's hear from Bendit, and then from Caitlin. Any thoughts on that?

Now, Caitlin, any thoughts? Why would you connect the horses to—?

**Speaker 5 26:41**

I mean, regular structures... have been volatile. It's been here for ages. It has food... (the rest is unclear) ... as it is, like not much as shame.

**Speaker 2 26:51**

(unclear) is in dense grades, just a big board (unclear)

**MT 1 26:56**

But I think the observations you made about changelessness and time, I think that's very important, very salient. Yeah, like, but also the sense in which animals connect to ancient truths and evolution itself, and violence and competition—better of evolution, that too is an ancient truth, perhaps the most ancient truth when it comes to the biological world. So, that's quite interesting if you think about it like that.

And he was also very interested in mythology. So, it also draws the horses into this kind of mythological space, which I think is very important. And don't forget, these were places of worship too. All of these structures, they weren't—it's not like today's capitalist world in which we just do whatever the hell we want. But back then, they built things, and there was usually fear. There was usually a profound social and religious function. So that, again, there's a sense of reverence, but it's not a reverence that is directed at the Christian world or the monotheistic world. It's deep, right? Deeply connected with mythology.

I think there's a very interesting connection between the natural world and the mythological world. These are both worlds in which instincts, feelings, consciousness are very important. It's not just about rationality and ethics and all of these kinds of things.

What about the anaphora here, the repetition: "Gray, silent fragments of a gray, silent world"? Just absolutely incredible imagery. I mean, Cormac McCarthy could not have done it better. The repetition: gray side and fragments of a gray, silent world. Again, I mean, you

could, again, one hero, one good strategy—always fall back on those generic things like atmosphere, mood, tone. I mean, what kind of effect does this have?

Kind of...for the reader, how does this make us see this world of the horses?

Gloomy, yeah, but no, no. Guys, again, remember, remember? Play the game of thematic alignment. Whenever you make some kind of observation about the language, try to connect it with a concept or an idea that animates the whole poem, right? So, like gloomy, yes, but show me how that connects with the ideas and the concepts. Because none of these choices are arbitrary. They're not just aesthetic choices to make it sound nice. There are some deep ideas here.

**Speaker 6 30:29**

Yes, now that I think about it, I feel like the forces I was (unclear)

**Speaker 4 30:33**

thinking about, the contrast between the Sun and the horses, (unclear)

**Speaker 7 30:38**

remind me of death, (unclear)

**Speaker 4 30:41**

and I was going to link this to the interview with the philosopher that you've shown us when bringing life could be cool, and then that I could probably link to the 17 and show like another aspect of death. Yeah.

**MT 1 30:53**

I mean, I think you're creating wonderful connections there. But just be careful: when writing an essay, you should try to confine it to that. But certainly, the contrast between the horses and the erupting sun—though the sun erupts later—is interesting. It could be associated with the subconscious, with a sense of mystery. And also note the motionless gray-sided fragments of a gray-sided book. There's a sense of unity here. The world and the horses are almost of the same substance, right? There isn't this harsh distinction between creature and environment. The German philosopher Heidegger spoke, for instance, about being in the world. Being in the world—you can't separate being from the world. They're joined together. It's a nice concept you could perhaps use here.

And note here, I don't think it's just the imagery of the sunrise; I don't think it's just violence. It also seems almost apocalyptic, and we kind of discussed this, right? Why that would be ironic. And again, if you think back to *The Jaguar*, the jaguar's violence and its wisdom are fused together. And here, too, life and death are fused together. If you need some kind of framework to make sense of that, just think about it—Dimitri, you with me? Just think about the evolutionary process. Think about natural selection, right? All of these adaptations. And by the way, according to some, you're just a collection of evolutionary adaptations. All of these adaptations, which are life-giving and life-preserving, are also connected with...what else? What else are they connected with? Is evolution just about life? No. What else is it about? Death. I mean, think about the act of eating itself. You have life and death fused together. I think that's incredibly important for understanding Ted Hughes.

Okay, I won't move on here. Now, we have a very nice intertextual reference to Wordsworth, right? Wordsworth's famous poem *I Wandered Lonely as a Cloud*. It's very similar. If you read the original, he says, "Here in the din of crowded streets, going among the years, the faces may I still meet my memory in so lonely a place." So, the significance of the horses is not just connected with the present experience, but how he remembers it later. What themes or ideas can we derive from this? What is it saying about the significance of this experience?

And notice his use of synesthesia here when he thinks about hearing the horizons endure, right? You can't hear the horizons; you can see them. So this is an excellent example of synesthesia. Again, an incredible image: the horses. And this is the complexity of the way in which he associates images. Sometimes, I think, almost like those totem poles you get among Native American Indians—you have all of these different creatures fused together. There's a totemic quality to the poetry, where all of these different things are fused: the horses with the megalith, with the horizon enduring. And I think it's because the horses represent some kind of ancient, profound truth—hearing the horizon endure. That's what he associates with the horses: something ancient and true, almost like an anecdote.

And this is where the romanticism comes in—for all the mess, superficiality, and noise of civilization, which is a standard romantic ideal. Again, as I said, if you read, not that any of you will, but if you want to take it further and read Wordsworth, you'll see an excellent paradigm. And again, synesthesia—great terminology. Other poems have synesthesia too, right?

Let's have one closing observation from Olympia before we end. Any thoughts? Your thoughts on the horses? Do you agree? Dimitri, your thoughts on the poem? We haven't heard from you much. Maybe take the chance.

Okay, so I just want your thoughts on the poem before we move to the next one, yeah? Anything you want to say about the theme or your feelings about it? Nothing? But you'll need to write an essay, right? If it's difficult, just say it. I mean, you wrote some tremendously insightful things. This shouldn't be that difficult for you. Who's next? Magnus, we haven't heard from you in ages. Your thoughts on it?

**Speaker 1 38:20**

very long, and they, they include very much information, whereas this is a whole story.

**MT 1 38:27 [students' utterances are inaudible]**

Yeah, I mean, one big difference is that Hughes writes in blank verse—it's not rhymed. There might be some repetition in it, as you saw, but it's very naturalistic. Whereas Shakespeare's sonnets, by their very nature, have the iambic pentameter, the rhyme scheme, the quatrains, and the rhyming couplets. So, it's very artificial compared to Hughes. A better term for Hughes would be naturalism. And that naturalism isn't just in the imagery; it's in the very language itself.

Okay, take a minute to read through *Egghead*. I'll give you a guiding clue: this poem would form an excellent comparison with *Nausea*. If the right question arises, this would be a great one to compare. So, read through it and try to get a sense of why I think that. That's your task—why would I think of *Nausea* in relation to this one? Okay, this one is a bit difficult.

I'm going to give you six minutes, and then we'll talk some more. Just remember, if anyone doesn't understand *The Horses*, come talk to me.

And another thing: when you're analyzing a poem like *The Horses*, you can always say, "What is the theme?" But maybe there isn't one. Maybe it's artificial to project some kind of meaning onto it, especially considering its naturalism. It's concerned more with how the world presents itself to the speaker's consciousness, rather than conveying a fixed theme. So, you can play that game of asking, "What is the theme?" and consider that there may not be one.

Okay, as you're reading through *Egghead* and thinking about Sartre, try to think about why I would make that connection with him. Again, as with Shakespeare, the more you read, the more you'll see recurring images and ideas. Some of them reflect how he avoids competition and the complexities that arise. Alright, one minute left. Don't worry if you're not able to read all of it—I'll guide you through it and help you understand what's going on.

Okay, now that we've reached our limits, who thinks they can get one or two of the big ideas from this poem? What is he basically talking about here? Right, yes, that's something. Let's listen to that. Yes, right, and how would that connect to the symbolism of the egg, the empty shell? But there's also an irony here. There's fragility too—like Humpty Dumpty, who falls off the wall. What happens?

So, we've got a sense of shutting off reality. Why and how is reality described? What's emphasized in Hughes's description of the world? Look at the first line. What's the key word? Yes, "alienating." The world is alienating—even something as common as a leaf. And again, you should see why this connects to Sartre's existentialism: even something as seemingly ordinary as a leaf feels foreign or strange. So, think about what I said about totem poles, where all these different things are fused together. You have the leaf and the whale at the bottom of the sea—all part of the world's strangeness.

There's another important point: on the one hand, Hughes is peering through his fingers at the extremities of the world. So, there's a sense of not being able to fully take in reality. And the next few stanzas talk about ways we protect ourselves—ways to shut out reality. There are "deft opacities," meaning things that obscure or cloud the truth. We can make clever ways to screen off reality. Walls, translucencies—things that allow us to see but only within a limited frame, like being trapped in a prison cell. We can't see beyond the walls.

The egg shell, in this sense, is a protective mechanism. And again, the imagery is fantastic, like receiving the flash of the sun or the bolt of the earth. All these ways of avoiding confrontation with reality. But does confronting the world allow us to create? What is *Egghead* really about? What does Humpty Dumpty—or *Egghead*—have? What concept does he possess?

Well, the construction of the self is an act of... what? Keeping reality out. This reminds us of the existential concept of "bad faith." We create our ego, our sense of self, by blocking out the alienness of the world. The idea that the ego can feel proud and in control, but only because it's ignoring the otherness of existence.

This ties into Sartre's notion that there's an interesting relationship between alienation and an almost spiritual encounter with the strange world we inhabit. So, let's take a quick check: do you get the main ideas? Yes? Some of the language is complicated, but just take it slowly. This is a poem worth thinking about, because it can form a great partner to *Nausea*.

**Speaker 4 52:27**

easy way to go about it would be to focus on the insect imagery,

**MT 1 52:33**

the insect imagery, because there was like, the answer, I feel like (unclear)

**Speaker 4 52:39**

kind of like more material so you're not really good. And like the ... (unclear), I believe, at the very end, like, it just shows, kind of, like, the insignificance of your own existence in this, like, big world.

**MT 1 52:53**

Yeah, I mean, that's all there. So, provided you can start big and then focus on the small details, you can absolutely do that. Yes, that's an excellent point. With your analysis, you can begin with the overarching idea and then zoom in on a small detail, like you mentioned with the ant's head. Or, you could do it the other way around, starting with a small detail and working your way out. It just depends on your approach.

Now, a few things to consider: if you look closely at the imagery, you'll notice this contrast. Does it evoke a sense of alienation, wonder, fear? Is there a sense of sublimity or incomprehensibility, or perhaps horror? Throw in some terminology here. Can we resolve the ambiguity in these images? Do we know exactly what they suggest? How is the world being characterized in this context?

For instance, look at the contrast between the leaf and the whale-dominated sea bottom. On one hand, you have something very small and fragile, and on the other, something huge and alive. But somehow, both of these elements are unified. They both seem to capture reality.

Also, think about the image of peering through the world with your fingers. What does this suggest about the way we usually see the world? Are we fully engaging with reality, or are we merely denying or limiting it? There's perhaps an element of fear here, a limitation in how we confront the world, which aligns with Sartre's existential concepts.

Bad faith is key for understanding *Egghead*—think about forgetfulness or madness as ways to escape facing reality. Look at how Hughes uses synesthesia. The phrase “wide-eyed deafness” is such an effective way of conveying that you might have your eyes wide open, but you're not truly seeing anything. It's a great term to use in an essay.

And then there's the symbolism of the eggshell. It's a construct—it exists, but it can also be shattered easily. It's fragile, which speaks to the precariousness of the self and our protections against confronting harsh truths.

**Speaker 4 56:04**

(unclear) but also interpreted in a way that, like, a lot of animals are born in eggs and like egg shows kind of like the beginning of life. So, so this is not something you choose to do, but this is kind of like the life you're supposed to live. Yeah, in a way.

**MT 1 56:22**

I think it's crucial to connect this with birth, as well as the starting point of human existence, and perhaps its definitive nature. We are, after all, human beings. The connection between the ego and ignorance is significant here. Think about Sartre's ideas—don't worry, I'll share

an annotated version with you so you can see it clearly. But we're getting to the core ideas, and I think we understand why this could be a strong comparison.

Now, I want to give you some advice: I know you might be tempted to focus only on two works of literature, but that would be a mistake. Make sure you're familiar with all four texts. If the wrong question comes up, it could seriously disadvantage you. I suggest prioritizing two texts, but also make sure you know enough about the other two so that, if the right question appears, you can confidently answer it. If you choose a question that you can easily answer, you'll have a huge advantage—you'll be able to write more effectively and make your points more coherently.

Alright, let's move on to the next text. I've shared a list with you, and the next one is *Hawk Roosting*. This one comes from the collection we've been discussing. It connects nicely with the themes in *The Hunters* by James Salter, especially the image of the hawk. Flight, in this case, represents a powerful, almost irresistible force. We've touched on this before, but it's emphasized here in the heavy use of anthropomorphism. The hawk seems to be a conscious, almost human-like figure, reflecting on its actions. It's a clear example of anthropomorphism in literature.

On page 60 of the PDF, you'll see a passage where the hawk declares, "It took the whole of creation to produce my foot, my each feather. Now I hold creation in my foot." This moment exemplifies the hawk's sense of power and control over the world.

This poem is more straightforward compared to others we've looked at. *Egghead*, for example, is much more abstract and complex. So, *Hawk Roosting* should be easier to analyze, with its more transparent themes and imagery.

And just to wrap this up, as I said earlier, you might feel like your breakthroughs and ideas are profound, but it's always a good idea to remember that what we're discussing is really about your understanding and ability to communicate it. Your insights will leave an impact on others—trust in that.

### **Speaker 3** 1:02:38

Issue, yeah, strangers, understand the poetic language (unclear).

### **MT 1** 1:02:57

Alright, I don't want to rush things too much, but I do want to emphasize the importance of being selective when choosing poems for your essay. With both Shakespeare and Ted Hughes, you won't be discussing all of the poems. You'll need to focus on a few key ones. I'd suggest choosing around three or four poems to dive deep into. In fact, it's perfectly fine if you focus on just two of Shakespeare's sonnets or two of Ted Hughes's poems for a more thorough analysis. Then, in another section of your essay, you can briefly mention or paraphrase some other poems to show broader knowledge.

If any particular poem has caught your attention, don't hesitate to reach out. If you feel like we're going through them too quickly, feel free to message me for further discussion or take some time to read them more closely on your own at home. This is the best way to prepare and really understand the poems in depth.

Now, why did I mention James Salter and *The Hunters* in relation to this? That's something to think about as we continue with this work.

**Speaker 5** 1:04:19

Same. And like, Well, (unclear)

**MT 1** 1:04:26

Ted Hughes is talking about the hawk. Yes, which ...

**Speaker 5** 1:04:30

is basically saying doing the same as the fighter jets which are fighting against somebody else. So they (unclear)

**MT 1** 1:04:43

Yeah, I know you can sense where this is going, and you should be able to help finish off the idea. So, let's think about some key terms when we consider James Salter and *The Hunters*. One of the main ones is dominance, right? The dominance hierarchy, which we've discussed quite a bit. Power is another key term. These are important concepts that come up when thinking about their work.

**Speaker 4** 1:05:08

The reason why the Hawk is like, so powerful because it can kill and like enhancements, like, the way we (unclear).

**MT 1** 1:05:20

"Getting to the top," is linked with the idea of power and dominance, but they aren't necessarily the same thing. You could have someone with very powerful words who isn't trying to dominate others, right? But there is definitely a connection between power and dominance in this case. You wanted to say something? Sorry, yes. Maybe that's true, but again, the hawk is a great example of the connection between violence and the natural world. Even in its dreams, the hawk is dreaming of kills. And what does it mean when it says, "*It took the whole of creation to produce my foot*"? Yes, that's a reference to natural selection. Adaptations don't appear out of nowhere; they gradually accumulate, step by step. This is Darwin's theory of gradualism—if you could show an adaptation that couldn't evolve through small, incremental steps, it would undermine the theory of natural selection. And note how the hawk says, "*I now hold creation in my foot*"—with the capitalization of "creation," it almost evokes a religious sense, but it's really a reference to evolution.

**Speaker 6** 1:07:21

Again ... (unclear)

**MT 1** 1:07:28

I think one of the key concepts here is personification, but it's nice to introduce some variation. So, if you're writing an essay about Hughes, you could also refer to it as anthropomorphism—giving human qualities to something non-human. The question is, does this device distort the nature of the hawk, or, paradoxically, does it reveal a deeper truth through a rhetorical falsehood? In other words, are we learning something true about the natural world, or is it just the hawk's imagination? Do you think it's the real thing?

**Speaker 5** 1:08:17

I don't think hawks would think that, but the main point of that (unclear)

**MT 1 1:08:27**

Yeah, so there's this huge debate about language, right? Most people believe that animals, even primates, don't have language. But there's a sense in which, even though the hawk might not be 'thinking' in a human way, it's still guided towards certain actions. That's perhaps what Hughes captures.

This opens up a nice paradoxical quality in his poetry. You could question whether he's simply anthropomorphizing the natural world, giving human traits to animals. Or, the more interesting approach would be to say that this is actually revealing something deeper.

Paradoxically, think about literature itself. Are words reality? Take *Nausea*, for instance—no, they're just symbols. But most of us still believe that literature can reveal truths about the real world. It's like a lie that tells the truth.

Now, power and domination are central themes, and this is where toxic masculinity comes into play. Is Hughes romanticizing cruelty and power? Could this be linked to the way women were treated in his life, particularly his first wife, Sylvia Plath, and his second wife? It's as if he's obsessed with, and deeply admires, the hawk—should he? Why is there no moral perspective in this poem? He doesn't judge the hawk as good or bad, and it seems like he's completely captivated by its cruelty and power. It's almost spiritual in that sense.

**MT 1 1:10:33**

Not exactly fascinated with the hawk, but I would say that it's more about relating the hawk to freedom. When you mentioned the capitalistic approach, I think it's worth noting that, in order to be well off and free in this world, there often has to be a hierarchical structure—there are always people who are less advantaged or 'lower' than you. In this case, the hawk has to be brutal in order to be great.

**[students' utterances are inaudible]**

**MT 1 1:11:04**

Yeah, I mean, there's also a sense of necessity, right? Does it make sense to morally judge the natural world? For example, consider a parasitic insect that lays its eggs inside another organism, and then that organism is disemboweled. You've seen *Alien* or *Prometheus*, right? So, does it really make sense to apply moral categories to the natural world? Can we even connect morality to nature? It's an interesting question. Perhaps a good approach would be to simply acknowledge that this is how things are—it just *is*—and it's quite incredible, even if it's beyond our moral framework.

There's also a nice sense of irony and dark humor in the hawk's actions. It's almost as if there's a very bleak, ironic humor in the way things are described. Can you separate irony from humor? Also, consider the line 'No argument asserts my rights. The sun is behind me. Nothing has changed since I began.' This connects really well with *The Horses*, capturing that timeless aspect of the natural world. It's not that the natural world hasn't changed, but rather, the same process plays itself out again and again. Evolution operates similarly. We may live very differently from our hunter-gatherer ancestors, but in some ways, we're still doing the same things—transmitting our genes, eating, dominating—over and over.

Now, about the hawk at the end: is it deluded? It says, 'I am going to keep things like this.' Perhaps it's symbolic. The hawk might represent how violence and domination create order

in the natural world, and that all creatures are tied to ancient patterns of behavior, which connects to evolution. So, you could interpret the hawk as being deluded, but more symbolically, it's reflecting the cyclical nature of power and dominance in nature, which never ends.

## MT 2

### MT 2 (Male Teacher 2)

Sat, Dec 07, 2024 5:27PM • 1:19:15

#### SPEAKERS

Researcher, MT 2, Speaker 1, Speaker 4, Speaker 8, Speaker 5, Speaker 2, Speaker 3, Speaker 7, Speaker 6, Speaker 9

#### Researcher 00:00

So guys, what do you think about Mr. ... (surname was removed) and his teaching? I'm just joking. Okay, I'm going to leave it here because it's about my dissertation, you know. So, this is for my dissertation, and I'm interested in how, when Mr. ... wants you to do something, how he addresses you in what way is he doing it? Very direct or is it indirect? Because, basically, according to studies, women are more indirect than men. Obviously, we like to beat about the bush instead of getting straight to the point. But in education, it might be different because of specific situation, of the environment.

#### MT 2 01:02

So today, I won't be saying what I usually do. (the rest is unclear)

#### Speaker 1 01:24

If we use this experiment (unclear).

#### Speaker 2 01:28

No, by psychology students, yes, today's one yes. Why is everything today? Everything is ... (unclear)

#### MT 2 01:39

Today? Yeah, I'm expecting a surprise examiner for my UCSC as well. Alright, let's just get started with the lesson, and then we'll see what happens with the psychology students—whether they arrive or not. Of course, the lesson is mine, so we'll carry on regardless.

#### Speaker 2 02:09

I was going to look for (unclear)

#### MT 2 02:19

Alright, so last time, we discussed internal resistance, and I mentioned that it can be explored experimentally. Today, we're going to dive deeper into that and also work through a past paper question on it, as it's a topic that often comes up, especially in Paper 3.

#### Speaker 2 02:49

This one, right now?

#### Speaker 3 02:54

I do not recall.

**MT 2 02:57**

Alright, so here's an example to demonstrate internal resistance. It's actually a very simple experiment. We have a cell with internal resistance, connected to a variable resistor in a basic circuit. We also have an ammeter and a voltmeter across the battery, measuring what's called the terminal potential difference (terminal PD). However, we're interested in finding the EMF (electromotive force). So, by definition, who remembers the definition of EMF?

**Speaker 3 03:42**

Charge (unclear)

**MT 2 03:48**

but you're almost there, so here you so what you said is the work done to push the charge completely around the circuit. And so we're talking about work. We're talking about energy, Eurasian joules, unit work. There's a slight adjustment to that. It's the amount of joules per coulomb, or the work per unit charge, in that sense, amount of work per coulomb of energy. So, yeah, the amount of joules per coulombs. So work per unit charge, to move the charge completely around a circuit, all right, so that's the setup of the experiment. And we create, we have this table of data, and we have a graph which is plotted. So, how can we find the internal resistance from this graph? Let's go through these questions, and we'll see how it progresses. So, the student has plotted error bars for the potential difference. Can anyone explain why there are no error bars for the current in this case? Why aren't there error bars on the x-axis? Do you think it's because the measurements are precise? How big should our error be? Maybe plus or minus one? Okay, let's take a look at the scale of the axis. Oh, I see, it's...

**Speaker 2 05:07**

Negative. It's negative.

**MT 2 05:10**

Going to be too small to be seen. I mean, it's going to be plus or minus one, but, you know, we have, we're dealing with very, very large numbers here. So, our error bars are, axis is going to be too small to be seen, so therefore we can, we can ignore them, all right? And here, so determine, using the graph, the emf of the cell, including the uncertainty for this value, all right, so the uncertainty, we'll come to that in a bit, but let's find the emf of this value of this graph. So, this is the graph that we, that we produced. How can we find the internal resistance, or the EMF? From that graph, I'm going to redraw it out on the board here simply, and let me include the equation again. So we have the EMF is equal to  $I R$  plus  $i R$  in that sense, okay, or is equal to, basically  $I r$  plus, okay, so we have this graph. So, this current on this axis. How can we find the EMF from something like that? It actually gave you a hint here, simplifying things a bit by using the equation  $V = E - Ir$ . So, how can we find the EMF or internal resistance from this graph? I'm not looking for the exact precise values right now, but more for the method. What calculations do we need to make, and what data should we focus on from this graph? Let's think about it for a moment.

**Speaker 4 07:42**

Yeah, all right. Local residents go to (the rest is unclear)

**MT 2 07:57**

So that's why you go. Is there anyone who has any solution to this. How do we go at it? Okay, what's the shape of the graph? Straight line, straight line, what's the equation of straight line?

**Speaker 3 08:09**

And  $y$  equals  $mx$  plus  $y$  plus  $C$

**MT 2 08:13**

So we have this. Our equation is  $y$  equals  $mx$  plus  $c$ . So this line here has to obey that relationship, okay, and they've already given you this equation over here. All right, so in this case, what's on our  $Y$  axis?  $V$ , okay, what's on our  $x$  axis?  $I$ ,  $I$ , okay, so we're looking for one variable. So are you see, kind of how we're going with this. What did, what this shows,  $y$  is on our  $V$  is on our  $Y$  axis. Our current is on our  $x$  it's even showing us the negative, because it's a negative, a negative gradient, which means, what must the internal resistance be? Here? The resistance must be equal to the gradient. Our gradient our gradients are turn resistance. And how can we find our EMF. The  $y$  intercept? And that's how we do it. So  $R$  is equation.  $V$  is equal to the EMF minus  $iR$ .  $V$  is our  $y$  variable  $x$ ,  $I$  is our  $x$  variable, and it gives us this straight-line graph.

**Speaker 4 09:23**

Where you connect between the  $E$  and  $I$ . What symbol is that? Minus?

**MT 2 09:29**

What do you think the  $R$  is for? So basically, this equation comes from here. We have EMF is equal to  $IR$  plus  $IR$ . This  $IR$  together is your potential, your turn on potential.

**Speaker 5 09:43**

Difference. You took  $x$ , you got  $y$ , and then for the gradient, you took  $R$ , because it's an  $x$  to the (unclear).

**MT 2 09:50**

$I$ , yes. it's multiplied by our  $x$  variable. Okay, so just comparing it yes, because we have, we have a straight line, so it follows this, this equation, and this is the. Equation we have in theory, can they match up? Yes, they do. They match up. Makes sense. So therefore, in this grade, experimentally, that's what we need to do. In order to find the entire resistance, all you have to do is connect it to a very good resistor and take a series of readings for the current and the voltage terminal,  $v$ ,  $d$ , and what you are left with is something like this. And then graphically, you can solve it to find your circuit resistance and your  $d1$  and that's how you can find the internal resistance of the cell, the integrity of the line of respect, yes. And in fact, this question is a topic, one question. So aside from finding the answer, it also said, given what's the uncertainty in the emf of the of this value? Okay, so EMF, EMF was our  $Y$  intercept, after we find the uncertainty the...

**Speaker 6 10:57**

Error bars.

**MT 2 10:59**

The error bars, because that would be a bit more specific. Well, not wrong, but just be a bit more specific when we draw the line of best fit. So, a line of this bit would be something like this, right?

**Speaker 4 11:18**

Yeah. And we could draw a point you take the maximum, the maximum, and then.

**MT 2 11:24**

Okay, all right, so what would be a maximum point top? So, from that point where it's lowest, you go up to that point, right? I should've used a different color, but you get the idea. That's where we can determine the EMF, and from there, we can assess the uncertainty, including the maximum and minimum values. That's how we find the uncertainty.

**Speaker 4 11:55**

It's minus minus maximum minus minimum divided by max minus s

**MT 2 11:59**

Minus divide by two gives us our uncertainty so in this case, it'd be 1.6 and then would we have, like, 1.64 and 1.56 1.57 so like, plus or minus 0.4 essentially, what is what we're at. And probably, if we have a look at this, yeah, somewhere around plus or minus 0.03 is slightly, slightly more accurate than doing it on just. All right, okay. And then C was outlined without calculation. So, without the calculation, you said, how the internal resistance can be found in the graph. We said with the gradient. Is this the psychology group? Ten minutes here, that's my cue. Alright, so you'll need to do the experiment quickly. We'll pause the lesson, and you can join in once you're done. Thank you, everyone. We'll be back by April. Alright, so we're not finished yet, let's move on. There are a couple of practice questions, and then we'll dive into secondary cells. Secondary cells are fun, but they're probably the toughest part of electricity.

**(students are away)**

**Speaker 3 34:01**

Will you play against us, or will you do both?

**MT 2 34:06**

I'll be coaching you on Thursday, on Thursday as well. Most, more than likely, we're not playing with you. No, you're not playing with me. You'll be playing against my friends. I'll be able to help you out because I know their tendencies—who does what and who to watch out for.

**Speaker 3 34:30**

Are you gonna play here? (unclear)

**MT 2 34:49**

But, I don't know the teams. I wish I could, so

**Speaker 7 34:52**

just go into the (unclear)

**MT 2 34:58**

Alright, we're live streaming. Yes, okay, so let's move on. Question 31 isn't really worth it, right? Take a look at these two practice questions, 30 and 31. It's not very clear, but I'm assuming that when it mentions the 12-volt battery, it's referring to the EMF being 12 volts, not the potential difference.

**Speaker 5 35:36**

What is the formula?

**MT 2 35:41**

The formula is important here:  $EMF = I(R + r)$ , where  $R$  is the external resistance and  $r$  is the internal resistance. Essentially, it's like a series circuit. In both cases, we have a battery with internal resistance, connected to an external resistance and an ammeter. There's also a voltmeter either across the resistor or potentially across the entire circuit.

Now, an ideal ammeter has zero resistance, so it doesn't affect the current flowing through the circuit. We want the current to pass through the ammeter without any change. On the other hand, an ideal voltmeter should have infinite resistance. Why? If the voltmeter had low resistance, it would draw current and bypass the resistor, which would alter the current in the circuit. Therefore, we want the voltmeter to have infinite resistance so it only measures the potential difference without affecting the flow of current.

In terms of total resistance in a parallel setup,  $1/R_{total} = 1/R_1 + 1/R_2$ . If one of the resistances is infinite (like the voltmeter), it doesn't affect the total resistance, so the current flows as it would through the resistor alone. Essentially, the voltmeter's resistance becomes zero in the parallel calculation, and the total resistance becomes just  $R_1$ .

**Speaker 4 37:57**

Then, because then.. it's then there's nothing going through. (unclear)

**MT 2 38:01**

The other it's less than infinite. Yes, it would lower the resistance entirely, essentially in our same two simple series circuits. Any questions, let me know.

**Speaker 7 38:24**

When you're using  $R$ , as in normal and so on. Could you? Would you add the market at the moment? Right? (unclear)

**Speaker 6 38:32**

Okay, so... (unclear)

**MT 2 38:40**

The total resistance of the circuits. If you look at this equation for  $D$  and that customer, we're adding them together because they're in series with each other. But yes, but to explain why I would, of course, want to, due to my intuition,

**Speaker 4 39:11**

Because someone is so exceptionally intelligent, they are often regarded as a genius. Thanks to the ego, you're welcome—because nothing else challenges the ego, except for greatness. The value is 0.1.

**Speaker 5** 39:53

Current is 0.18 is that the. Is that the current, like, (unclear)

**MT 2** 40:03

What was yours? So, your question in 30, in 30, it says 0.5 which is 0.15.

**Speaker 5** 40:14

Yeah, 0.5.

**MT 2** 40:16

Yeah, it is the current, I would say, considering it, say a current of 0.5 ampere, I would assume that 0.5 pair is the current three.

**Speaker 5** 40:28

That's an assumption.

**MT 2** 40:32

That reminds me of my first year. I had a student in year eight doing science, and I told him, 'Don't do the questions on this page.' Then he asked, for Question three, 'Do we need to label the functions of the heart? Do we need to name them?' I said, 'What's the question?' He replied, 'Name the functions of the heart.' Typical student moment right there! So, definitely, resistance is one of the factors, hum, oh, that's what it is. Good. Alright, does anyone need more time, or are we good to move on? So, if the first question asks about an EMF of six volts, with a current of 0.5 amps, and a 1-ohm resistor, we need to find the internal resistance. So, essentially, this becomes  $12 = 11 + r$ , and therefore,  $r$  is the internal resistance.

**Speaker 7** 42:32

One minus one.

**MT 2** 42:36

All right, you can't look anywhere. You can't make the resistance. But yeah,

**Speaker 4** 42:40

Gives you more these more going through (unclear)

**MT 2** 42:47

Alright, question 31. A 12-volt battery with an internal resistance of 1 ohm is connected to a 23-ohm resistor. What's the potential difference across the 23-ohm resistor? So, yes, the EMF is 12 volts in this case. We use the formula, where the EMF (12V) is equal to the current ( $I$ ), and we don't know the current yet. The internal resistance is 1 ohm, and the external resistance is 23 ohms. So we have the total resistance as  $23 + 1$ , which gives us a total resistance of 24 ohms. Now, using Ohm's Law, we calculate the current, which is 0.5 amps.

**Speaker 4** 43:24

But that's not what they asked us. So, then we got the we got the current, and then we just calculated the current.

**MT 2 43:31**

Again, it's well, it's different, different questions. They're different questions. The first one was a six volt five. This is a 12 volt, so it's not the same setup, but coincidentally, the current is this? All right? So, we have the current, but that's not what it asks for. It asks for the potential difference across the the resistor. How can we find that  $V$  goes  $IR$ ,  $V$  equals  $IR$ . Okay. So, what  $V$  do you use? Well, we do. We need to find it. o, what do we do next? We use the current we just found, which is 0.5 amps. And what's the resistance we use? It's the 23-ohm resistor. So, the potential difference across the resistor is calculated as 11 volts.

**Speaker 4 44:09**

Point signs 2v, is the potential difference? Yes, A we V (unclear)

**MT 2 44:16**

There we go. So, the DMF for 12 volts, but effectively only 11.5 volts is what's effectively going through that resistor. Point five of the volts is being used up by the internal resistance, which is equivalent to around one in this case, everyone understood the theory behind this. The experiment is how we found it. And these questions, anyone needed to explain anything you get.

**Speaker 7 44:39**

So EMF is the total yes voltage, including the button, the internal resistance,

**MT 2 44:49**

If you're looking for the textbook definition for an exam, when asked 'What is the EMF?', you would say the EMF is the work done per unit charge in moving a charge completely around the circuit. This includes not just moving from one terminal to the other but also across the battery, where it encounters its internal resistance. In this case, the resistor is 23 ohms, and there's a 1-ohm internal resistance in the battery.

Now, if we took a reading from the voltmeter, it would show 11.5 volts, and the ammeter would show 0.5 amps. The voltage, calculated from the gradient, tells us that the battery is doing 11.5 joules per coulomb. But in reality, the battery is actually doing slightly more work than that — 12 joules per coulomb. The extra 0.5 joules is used to overcome the internal resistance of the battery.

**Speaker 4 46:22**

Basically, we just, like, it's basically saying, just calculate the external resistance.

**MT 2 46:33**

In this case, no, we're just saying that the potential difference across the external resistance is calculated by multiplying the external resistance by the current. But, like when we use the equation  $V=I \times R$ , why isn't EMF equal to  $V$ ? So, what is the reason?

**MT 2 46:58**

So, the EMF is equal to  $I \times (R+r)$ , so it's the external resistance plus the internal resistance. Now, the potential difference, which is  $V=I \times R$ , only applies across the external resistance. But when can  $V$  be equal to the EMF? It happens when there's no internal resistance. If there's no internal resistance, then the EMF is the same as the external potential difference.

Now, in terms of practical applications, batteries should be kept cool whenever possible because temperature can affect performance. Battery technology is quite complex, with various types like lithium-ion, alkaline, and acid batteries, each with different factors at play. The internal resistance in a battery causes energy loss, which leads to heating up. So, the lower the internal resistance, the better, as this makes the battery more efficient. High internal resistance means more energy is lost, leading to reduced efficiency.

Now, let's move on to secondary cells. There might be situations where you use multiple cells or batteries in a circuit. This could range from simple to slightly more complicated setups. Let's start with the simpler ones first.

In a series arrangement, when you have multiple cells, the total potential difference is the sum of the individual voltages. For example, if we have three 2-volt cells, the total potential difference of the battery would be 6 volts. This is like climbing stairs: if you climb two stairs, then another two, then another two, you've climbed a total of six stairs.

But what happens if the cells are connected in opposite directions? If you have two 2-volt cells connected in opposite directions, the potential difference is zero because they're working against each other, like climbing two stairs up and two stairs down, leaving you at the same level.

This opposite connection isn't practically used because there's no benefit to it. It's a mistake to do so because there's no real-world application for that setup.

Okay, so that's how series connections work—very simple. What about parallel connections? What happens when we connect cells in parallel? Let's start with a basic example before diving into a more complicated one.

**Speaker 7 51:40**

Work our way down pressure. That's a little confusing, too. (the rest is unclear)

**Speaker 4 51:52**

What discussion? No, yes, we just deepen the learning cup.

**MT 2 51:58**

Yeah, actually, what I'll do is, I can, I can start with this one the first time. First thing I want to do, actually, the first time I'm going to do it, I'm going to ignore the internal resistance, all right, because that makes it slightly, slightly more, more more complicated. So, the first version I'm going to do is this, okay, okay, it's that? So that's our circuit, all right. And let's say we need to find the current going through this resistor. Okay, that's what we want to find. We want to find what's the current going through that phi of resistor? Think about it. Okay? Good.

**MT 2 52:50**

So, all right, let's take a look at this. We need to find this now. It's quite complicated, and if you try to use Kirchhoff's law, it can get really complex. However, we do need Kirchhoff's laws, which we'll use here. The first law is about the current at a junction:  $I_1 + I_2 = I_3$   $I_1 + I_2 = I_3$ , meaning the sum of the currents entering the junction equals the sum of the currents leaving the junction.

Then, we have Kirchhoff's second law, the voltage law, which says that the total voltage in a loop is the sum of the voltage drops. For example, if you have a 6-volt battery and two

resistors, with  $V_1$  across the first resistor and  $V_2$  across the second, then we know that  $6 = V_1 + V_2$ . These are Kirchhoff's two laws, right? Good. Now, let's represent these two laws.

Using Kirchhoff's laws, we can turn this into a very simple set of simultaneous equations. Here's how we do it. Step one: I'll start with the largest battery, the one with the greatest potential. We know that current will leave the positive terminal of the largest battery and return to the other terminal. For this middle battery, we're unsure which direction the current flows because it could be that both batteries are pushing current in the same direction, going through the resistor. Or it could be that the larger battery is pushing current both ways—through the resistor and also across the second battery. The direction of current flow doesn't really matter because we'll assign positive values for current direction, and if we get a negative value, it'll tell us that the current flows the other way.

So, starting with the largest battery, I'll say current flows out of it, and I'll call it  $I_1$ . Then, I'll look at the second battery and assume the current flows this way, which I'll call  $I_2$ . At the junction,  $I_1$  and  $I_2$  are flowing into it, and the resulting current will be  $I_3$ . What can you tell me about the relationship between  $I_1$ ,  $I_2$ , and  $I_3$ ?

**Speaker 7** 56:21  
(unclear)

**MT 2** 56:23

Exactly. Using Kirchhoff's first law, we know that  $I_1 + I_2 = I_3$ . Good. That's our first equation. We have three variables, so we need three equations, right? Now, let's use Kirchhoff's second law. Kirchhoff's second law says that the total voltage from the batteries in a loop should be equal to the sum of the voltage drops. It's always simpler to work with a loop that consists of just one battery, although you could use two batteries, but that's a bit more complicated. So, we'll start with one battery.

I'm going to look at two loops in the circuit. The first loop is this one. Okay, that's the first loop, and I'm going to look at the second loop here. You have a third loop too, but we'll just use the two for now, to keep it simple. Looking at the green loop, the first loop, what's the voltage in? The voltage in is 9 volts. Now, for the voltage drops, we have a 5-ohm resistor. But that's not just a voltage; we have to multiply it by the current. What's the current flowing through the 5-ohm resistor? It's 3 amps. So, we have  $5 \text{ ohms} \times 3 \text{ amps} = 15 \text{ volts}$ .

So, now we have three equations and three unknowns, and we can solve for the current  $I_3$ . Essentially, what we can do is express all the equations in terms of  $I_3$  and  $I_2$ .

**Speaker 7** 59:02

And three is  $I_2$  plus  $I_1$ ?

**MT 2** 59:04

So, we subtract these two equations right away, and what we get is  $4 = -10I_2$ . Simplifying this gives  $I_2 = -0.4$ . What does this negative value mean? It means the direction we assumed for  $I_2$  is actually the opposite. In other words, this battery is stronger than the

other one, and the high resistance in the other battery is causing the current to flow back through this battery as well. So, we get this result.

But now, we don't need to focus on that. We need to find  $I_3$ . To do that, we can substitute this value for  $I_2$  into the equation. So, we have  $5 = -4 + 5I_3$ . This simplifies to  $9 = 5I_3$ , and solving for  $I_3$ , we get  $I_3 = 1.8$  amps.

**Speaker 8** 1:00:12

Not 1.8 i? How do we find out two?

**MT 2** 1:00:28

How do we find out two? I took this equation and subtracted this equation from. It was equation one, equation two, equation three. So, this is equation two minus equation three. So, three.

**Speaker 4** 1:00:55

It's just the same. You got  $I_2$ , yeah, but to find out that  $I_3$  is the same as the first equation? No, because if you input  $I_2$ , you'll subtract it, and this gives us the correct result.

**Speaker 9** 1:01:19

If you input (unclear)

**Speaker 4** 1:01:24

Just get  $9 = 5I_3$ . Again, you could just use the first, the first equation.

**MT 2** 1:01:32

Yes, you're right. That's right, yeah, if you could just use this one fair point. Okay, yeah, you're right. Actually, it's always going to be that that person, all right, so in fact, here's an example. The example now is using the example now is, let's say, let's introduce a couple more resistors. In this case here where I shared on meter, what meter removes, basically this and this. Okay. So we have exactly the same the same loops, the same labels of  $I_1$ ,  $I_2$ ,  $I_3$ . The only difference now is I have two more resistors to take into account, into account, which is the internal resistors. Okay, so in this case here, going to run the software reduces the difference slightly. So we have the same thing:  $I_1 + I_2 = I_3$ . The labels are the same, but now our loop just has a difference. Okay, so what is our green loop? What do we have? Nine volts in. What are our voltage drops? One...

**Speaker 9** 1:02:55

One times six, six,  $I_3$ , not six  $I_3$ .

**Speaker 4** 1:03:03

No, no, it's  $I_1$  and five  $I_3$ . Everyone.

**MT 2** 1:03:10

I agree with that. So, we have this current flowing through here. There's a one-ohm internal resistance, meaning we'll lose some voltage equal to  $1 \Omega \times I_1$ , as if there's a one-ohm resistor right there. Then we have  $5 = 1 \times 5 = 1 \times$ .

**Speaker 8** 1:03:48

One times  $I_2$

**Speaker 4** 1:03:52

Getting crazy here:  $I_3 + 5I_3 + 5I_3$ .

**MT 2** 1:04:02

Okay. Yeah, all right. And we need to find them. So we need to find  $I_3$ . So, let's do just to take one of them,  $I_1$ , so we have basically what  $I_1$ ,  $I_3$ ,  $I_2$  and  $I_3$ . What we need is the same two variables in the same two equations in order to be able to cancel them out. We want to keep  $I_3$ , because that's what we want to find. So what I'm going to do is I take one by two or one by one, and use it in terms of  $I$  degrading the other. So what I'm going to do is this equation. I'm going to write as nine is equal to  $I$ , one is equal to  $i$  Three minus  $i$  one, sorry,  $i$  Three minus  $i$  Two, sorry, plus five,  $I$  three so once we end up in this equation is nine is equal to six.  $I$  three minus  $i$  Two. Two. Okay. And then we have the original  $g_5$ , is equal to five,  $\pi$ , three plus  $11$ ,  $I$ , two. So now we have these two simultaneous equations, and we need to cancel them. One cancel what the variables are. So if we times this one by  $11$ , what do we get? We get  $99$  plus  $66$  so  $99$  is equal to  $66$   $i$  Three minus  $11$ ,  $i$  Two, I got the equation, which is five is equal to five.  $I$  three plus  $11$ ,

**Speaker 7** 1:05:42

Isn't it?  $5555$  times.  $55$   $i$   $355$ . Equals.  $55$   $i$  three. Yeah, no, wait, no, no no, this one not.

**MT 2** 1:05:59

No, because we want to get we want to get  $11$   $i$  two as well here. So now this is minus, this is plus. So if we add these two equations together, we get  $104$  is equal to  $71$   $I_3$ . These two cancel out. So  $104$  times  $71$  is equal to  $I_3$ .

**Speaker 4** 1:06:22

Hey, stop, stop.  $1.42465753545$   $1.4646$   $I$ . (unclear)

**MT 2** 1:07:00

So this is a completely different way, but essentially what you end up with is a difference. The same answer. This is just a word example of it. Yourselves so they are with the questions when I shift actually,

**Speaker 3** 1:07:46

One of them was A series as well. So what's only one which is

**Speaker 4** 1:08:00

What is this question? This question here, above, above, with the escalators, one of the escalators.

**MT 2** 1:08:20

Yeah, that that is explaining, essentially, when you have iron, which is got which is going backwards across that of the battery, it's a model, it's a it's an analogy of what they use. I don't like the energy, that's why I don't use it. But here's the so you have to find what's in the potential across a and b. Anyway, so a and b, so it's the potential across a and b, which essentially is the same as the potential, same thing as saying the potential across the one ohm resistor. So find the potential across the one ohm resistor there using those blocks. So start with currents. Label the currents from A to B. Then find the loops. Label the loops. And if you do that, that is the key point. If you do, if you write the right equation for your current

and you're too loops. You've done more than half the question. That is the key point. So, start off by writing what your three equations would be, and then we'll solve this, but write down what it obviously depends on what you label is what's wrong.

**Speaker 4** 1:09:39

From A to B. It's just if you. It. These three equations.(unclear) There's the first group, which is from the currents from the six volts to the six volts, then the 12 volts to the 12 volts, right?

**MT 2** 1:10:30

Is there one here loops, all right, so first of your currents, so like write an equation for me for the currents of a (unclear)

**Speaker 4** 1:10:41

Between the A is a  $I_1 + I_2$  (unclear)

**MT 2** 1:10:46

Yeah,  $I_1 + I_2 = I_3$ , yeah. Now that's assuming. I'm assuming you're using the current going through the two ohm resistor at the top, is  $I_1$ , and the current going through the six Ohm volt resistor is  $I_2$ , yeah, thinking that nothing I want because I do like,

**Speaker 4** 1:11:06

Now there was not otherwise, not if, like, if like, the top one would be  $I_2$ . (unclear)

**MT 2** 1:11:13

If you switch on,  $I_2$  would still be the same. But if you switch  $I_3$  and  $I_1$ , yeah, it wouldn't be the same. So we got,  $I_1$ . What do we have to find from A to B, which potential, potential difference?

**Speaker 4** 1:12:07

So I so the the two on.  $I_1$  What is the nine in the other equation? Again? So the equation in the equation Europe there, yeah, number two, what is nine that (unclear)

**MT 2** 1:12:35

One, yeah, nine is the voltage in so for each loop, you need to find once the voltage being pumped into the, into the loop. What's the voltage being taken out of that loop?

**Speaker 4** 1:12:45

So, I have the loop of this 12 volts battery and the loop of the six volts battery.

**MT 2** 1:12:50

You're doing the internal loop? No, all right, so you have two different loops, yeah. Should this take long? No, because I'm done. No. Two multiplications here, so let me clarify. The three equations you should have, assuming the labels are consistent, are:  $i_1 + i_2 = i_3$  (call this equation A). Assuming the current heading to the 12-volt battery is  $i_1$ , the current from the 6-volt battery is  $i_2$ , and both currents move toward point A, while the current leaving A toward B is  $i_3$ .

For the two loops, in the first loop, you have 12 volts being supplied. The voltage drops in that loop are:  $2 \times i_1 + 1 \times i_3$ , or simply  $2i_1 + i_3$ .

In the second loop, involving the 6-volt battery, you have:  $1 \times i_2 + 1 \times i_3$ , or simply  $i_2 + i_3$ . These are your three equations. Now, to determine  $i_3$ : the first loop, representing the 12-volt battery, accounts for current leaving it through the resistor (2 ohms), traveling around to the other resistor, and back. The voltage supplied (12 volts) equals the sum of voltage drops across those two resistors. For the first resistor, the drop is  $2 \times i_1$ , while for the second resistor, it's  $1 \times i_3$ .

**Speaker 7** 1:15:04

So we want to find  $I_3$ .

**MT 2** 1:15:07

We need to find  $I_3$  because it determines the voltage across AB, which will equal  $I_3 R_3$ . Since  $1 \times I_3 = I_3 \times 1 = I_3$ , that gives us the voltage at this point. Once we have that, we can move on to solving the simultaneous equations to find the values. And with that, we're done for today. Oh, wait—30 seconds left—live from philosophy, psychology... I'm not sure!

**Speaker 9** 1:15:42

Philosophy, psychology, what do you say? Is that difficult? It sounds like real easy. (unclear)

**MT 2** 1:16:07

All right, so we have these two equations. So again, we need to have one of them in terms of in terms of the other. So what we can do instead of two, I one, or instead of I two here, I two is also equal to I three minus I one, all right. So what we have this equation here could be six is equal to I three plus I three is two. I three minus I one, all right. And then we have these two equations. We multiply this one by two. What do we get? We get 12 is equal to four. I three minus two, I one. Add these two together. So this equation one and that equation there, what do we have we have 12 is equal to two. I one plus I three and 12 is equal to minus two. I one plus four, by three as them together, we get 24 is equal to five by three. So 24 on five is equal to five.

**Speaker 8** 1:17:11

Yeah, between b5.

**MT 2** 1:17:14

Okay, I will find b. So V equals IR. We need to find the voltage across that resistor between A and B, all right, V equals IO. So v is equal to 5.4 times resistance one equal to five point 4.5 sorry, 4.4 24 five is 4.4

**Speaker 9** 1:17:45

I'm quite confident. No, I got 3.6

**Speaker 7** 1:18:06

Yeah, yes. Very cool.

**Speaker 4** 1:18:15

I think. I'm up. I1. How do you get your point 618, on 518,

**MT 2 1:18:51**

Okay, okay, I think it's the six you can open. All right, okay, but you're adding, you're adding, which equation you're adding this equation  $12$  is equal to two. I one plus i three, you're adding it to this one, six is equal to two.

## MT 3

# Male Teacher 3

Sat, Dec 07, 2024 6:57PM • 1:07:13

## SUMMARY KEYWORDS

light levels, food chain, keystone species, shark behavior, marine ecosystems, overfishing, sustainable fishing, aquaculture, whaling controversy, Sea Shepherd, fish farms, pollution issues, biodiversity, food sources, environmental conservation

## SPEAKERS

MT 3, Speaker V (from the video), Speaker 4, Speaker 2, Speaker 3, Speaker 1

### MT 3 00:00

Three different levels of depth. So primarily here, there is only one which is light. Light dictates how much, how little there is life over all these three levels, which is the one which is the emptiest,

### Speaker 1 00:24

The highest one.

### MT 3 00:26 [students' utterances are inaudible]

This is the FTS today, and it's the most fit with life—the one with less light. So, you'd be surprised, the one with less light is actually richer in life than the middle one. This is simply because most of the animals that live there leave the surface. For example, starfish, sea animals, or any scavengers tend to live in zero-light conditions. So, here is life. Here is benefit with life.

And in between, this vast area of nothingness, this zone, is generally empty. That's where you find the big, big animals—whales, giant squid. If you try, for example, there's food. So, it's a beach giant—almost beach diamonds—extremely interesting.

And obviously, where there's light, there's life. So, phytoplankton start the primary food chain of marine ecosystems. Energy from the sun goes to producers, then primary consumers, secondary consumers, and quaternary consumers. In our case, we're using one classic apex species: the great white shark. The great white shark is classic, at the top of the food chain.

Here's the food chain. And here we have food webs. As you can see, it is very diverse.

Ultimately, it starts with the sun and ends with one or two primary species. If I ask you, is a shark a flagship species? Yes, it is. Sharks are flagship species. But also, is a shark a keystone species? Yes, they are as well.

So, for a flagship species, it doesn't necessarily need to be a flagship to be easily recognizable. Sharks, like Jaws—no, not the movies—but as keystone species, they control the food web directly. Sharks control the food web because they eat others. They clean the

seas, but also control populations of smaller predators. Without sharks, the populations of smaller sharks would grow, leading to more turmoil, etc., etc. They balance the ecosystem. So, in this case, sharks are both flagship species—easily recognizable—and keystone species, controlling many populations. For example, because there are fewer sharks, there are lots of hammerhead sharks, and even great white sharks, or tiger sharks, data shows this in the southeast part. And here's the thing—you cannot go there without permission from the authorities. It's quite a threat to get there.

We're talking about here—you cannot go, you cannot swim it either. You'd probably be dragged by currents. The currents between the fill flat boards are quite strong here. Quite strong.

**Speaker 1** 04:42

Here, they're (unclear).

**MT 3** 04:46 [students' utterances are inaudible]

They're quite strong. You'll get catapulted, but still, it's illegal. But yes, one of the largest—I mean, at least that's what they used to tell us during dinner in my generation. Let me check. So, with Zurich, up to that time, this was one of the largest great white sharks in red water. It took a day to get it, no more, and then took another day to hoist it, as you can see in this image. They put it on the screen. It was thought of with Zurich, and it was brought in with martial advice. So, that's the person, that's the job.

This is from '89. In fact, if you go to Zurich, there are postcards of this. Now for tools. So, here you have your pyramid of numbers. You have your trophic levels, one to five. And obviously, the higher the energy level is, the less energy is available by that formula. So, phytoplankton in our case starts with 1500 units, then goes up: 500 for herring, 50 for mackerel, 5 for tuna, and 0.5. So, in this case, the tuna is the apex predator because tuna prey on smaller fish.

In fact, I think it's now here as well. Tuna eats large squid or mackerel or lantern fish—sorry, shrimp or amphipods, etc., etc. So, here I have two other pyramids: one for pelagic species and one for freshwater species. What is the pattern? As you can see, these two pyramids overlap against something. What are they overlapping against? Terrestrial systems, in both cases. And what is the main difference from the left side to the right side for both pelagic and freshwater systems? Yes, aquatic ecosystems have more steps, more trophic levels, so they're richer in life. Terrestrial systems—not really. Grass, rice, vegetables, cattle, goats, sheep—that's it.

So, which is the most vulnerable source? It's our food chains. This shows that marine ecosystems and marine food webs are more resilient. This is why oceans can take so much overfishing—because they are more resilient. If you take from the third trophic level, the fourth and fifth trophic levels will survive. In terrestrial systems, if you take from the first trophic level, there's no food for the second trophic level. Unlike in the marine system. There's a reason why many countries turn to the sea for their main food source rather than land. On land, for example, the Irish potato famine—a single virus wiped out an entire crop of potatoes, leading to widespread famine and displacement. If their diet had included more marine fish, it might have been a different story.

So, we already talked about pelagic zones. Now we move to the epipelagic level. These are the names that describe the depth zones of the sea: epipelagic, mesopelagic, bathypelagic, abyssopelagic, and hadopelagic. Pelagic means open sea. Epipelagic is the surface, where sunlight penetrates. Mesopelagic is the middle layer. Bathypelagic is below that.

Abyssopelagic is at the very depths, and hadopelagic is below the seafloor.

May I remind you that life exists even at the bottom of the sea—not just on the seabed, but inside the ground that makes up the bottom of the sea. For example, burrows at the bottom of the sea house permanent species. Can you name some examples? For instance—oh, there was a very famous Australian TV personality who died after being pierced by one of these creatures.

Yes, stingrays. Stingrays can have a dorsal fin that pops up. The person was Steve Irwin, an extremely famous Australian. He was pierced in the heart by a stingray. He was known for handling crocodiles, grabbing their jaws and opening them like this. If you don't know him, you should check him out. His family still carries on his legacy. His son is like him—he presents wildlife shows and interacts with animals like alligators. Steve Irwin was a huge advocate for environmental conservation and awareness.

Now, we return to habitats. What do we call this type of habitat? Pelagic zones refer to the open sea, but what about habitats that open to the sea but are also partially enclosed? What's the better word for it? It starts with *D*. It's not just the deep sea, though that's related.

There's an even better word for it, starting with *E*. We only have about 6% of these habitats globally. Can you guess?

**Speaker 2 12:57**

E? Of elephant (unclear).

**MT 3 13:01 [students' utterances are unclear]**

(unclear) Actually, very good, last year. Let me show you. So, that's the difference between a delta estuary and others. They're all different, but they are all border areas where sea and fresh water meet. For example, if you think of Venice, it's in the lagoon, which is a very enclosed space with salt water, but fresh water does come in from here, primarily. Yes, at least they... this was closed off, I heard. Now, it's like there is a distinction between the people of the regular issues, not to mention that the propellers of the cruise ship do disrupt the poles on which the feathers will be, and it goes up when there's high tide, because most flooding events, first of all, are from rain, not just from the cinema. Yeah, that is, that's both sides, like on both sides, okay? Because I know about only this one. I know about this one, yeah, that doesn't sound good. Would be good. I don't want this to be... so, this is a rag. Then you have deltas. Now, deltas are, again, when you have fresh water rivers. But so, this is delta, this most famous delta line. Deltas are primarily where offshoots of the same river go and spread out, and still, they have these very lush, very controlled areas in between. So, delta land is not just the opening of the river, but an extension of the river. The river here just opens up, branches out in an umbrella form, but that's still part of the river. Instead of having one place where the river meets the sea, you have multiple places. Still the same river, still the same thing. And again, this is the most famous. And if you can see, the delta of the Nile is completely green, with these little patches being towns. You know what's being grown there? Well, what's that green? Well, they're investing in soy. Egypt is very common, very forgotten, and was once the breadbasket of Europe, at least the Mediterranean. In fact, Egypt is so reliant on Ukraine for its grain, but if things don't fix quickly, Egypt will be in trouble

because they rely on cheap grain imports from Ukraine. Ukraine currently has its own issues, including cash shortages and COVID-related setbacks, making it hard to keep up. Egypt has the fifth largest population in the region, but, unfortunately, it's also struggling. But remember, Egypt is... indicators... Egypt? So that's the delta, and then you have these things. These are ash trees. So, an ash tree is forever. It does not open up; it still remains overall a singularity, but it meets the open sea. This gives up, opens up a lot... COVID has... Why? Why does it? Well, you have a lot more life. Why? What's happening with the water? Why not? Sweet. So, yeah, delivery universe coming this way. Here, you have wetland pools. So that is fresh water. So already here, I have life that pertains only to fresh water. Then you start seeing the salt. And remember, between the pattern of salt water and fresh water, salt water and wetlands—immediately, the moment salt comes in, you have a salt flat. Here, you have what we call marshes, what we call swamps, etc. These are all salt flats. They never have an actual salt marsh. Then, you have these things we call "bedrocks." Bedrocks are fantastic for water purification and, in themselves, create new habitats for a variety of animals, including alligators. Alligators love them because they rest there. Then, you have the intertidal zone, much light, and the subtidal zone. Here, you have, for example, tides coming in now, drinking water. So in just one area, you have fresh water, murky water, salt water, and everything in between. These estuaries are very rare—there are only very few estuaries in the world. For example, there's one here in North America, at the end of the Mississippi. Do you think it's an estuary? The Mississippi River, right? Is this an estuary? It's very much an estuary. Yes, New Orleans is on an estuary. This is why it's flat. So much flooding happened during Hurricane Katrina, as the area is surrounded by water. Anyway, the river, you can think of, for example, here, the Yellow River. The Yellow River, generally speaking, is either in a delta or, for example, there in Bangladesh. This is a clear example of a delta. This is a delta because all these little lines are sub-branches of the Padma River. So, this is a delta. It's not as developed as the Asian one, but it is a true delta. The fact is here, and absolutely, first and foremost, you need to take into consideration the lands being taken with additional pigments that interfere with depth. For example, it could be sedimentation coming from the rivers. I don't want to go into this, but they suddenly went to Google, help them ask why it looks so much. For example, this continental shelf is made visible because Google changes the pigmentation. For example, there's a delta here, that's an inlet. That's a delta inside a cotton area, and according to really, the very first private goes on their feet, they start from here. So, estuaries are rare. Congo has a restorative rivers here...

**Speaker 3 22:51**  
Even Nigerian?

**MT 3 22:57 [students' utterances are unclear]**

This is an estimate, go for a (unclear). (unclear) even has an estuary, very clear. It's just one opening into the ... (unclear) This? No, this is a delta. Delta. Delta. It opens up into various branches. Again, the Nile is the most famous, because it's the most overdeveloped delta in the world, and has been developed like that since Roman times. That's why we say the delta is just nine. But this, for example, is another delta, because it opens up. So estuaries are fantastic for biodiversity. They're fantastic for conservation and they are fantastic for aquaculture because you have both saltwater and freshwater. Right? So upwelling. This is a result, or rather it helps bring productivity. The highest rates of productivity are found on coastlines and in shallow seas because of upwelling, where nutrient-rich water from the depths of the ocean rises to the surface. This occurs here, and

white fisheries are also known as capture fisheries. We primarily use wild catchments or wild fish species, but we can also use capture fisheries.

So what is an upwelling? An upwelling is when cold currents from the depths of the ocean rise along the coastline. This tends to happen, for example, on the western coast of South America, in Chile and Peru, due to upwelling. This brings vast amounts of minerals and nutrients from the sea floor, which allows surface fish and plankton to gorge on this explosion of productivity. Exactly! So plankton will thrive on these minerals, and obviously, because you're near the surface, there will be an increase in both production and consumption. This is where most fishermen go. Most fishermen seek these areas, even though they may not know exactly how, unless they have to close an entire ocean to get fish. So now you have another fishing technique called "trawling." These are fishing boats with two arms on either side. They throw a net, and this net scrapes the bottom of the sea, capturing everything in its path, including things that aren't supposed to be caught. These are called bycatch. Trawling is banned in many countries because it heavily damages ecosystems. It doesn't care if it's a coral reef or a sandy area, it just wipes out everything in its path. This is not what we want. We want to preserve as much as possible, especially the seas. Yes, in fact, trawling nets are one of the major components of marine pollution.

**[students' utterances are unclear]**

### **MT 3 26:54**

They are huge. These nets are massive, and some trawlers have wheels to make it easier for them to move along the bottom. They also have weights attached. Once the fish—or bycatch—is caught, as the net gets heavier, the trawler pulls it up with everything inside. This is another example of unsustainable fishing practices. The development of fishing equipment and changes in fishing methods have led to the depletion of fish stocks and their habitats. Unsustainable exploitation of aquatic systems can be mitigated at various levels. For example, international agreements could establish quotas for trawler fisheries on the ground. But you see, when they do exist, they fall apart with boats. There was a red one, and the red wouldn't go all the way to the bottom, but the catch would be much less because, as you said, the bottom of the sea is richer in life than the open water. Unfortunately, the problem is that we're at the top of the food chain, so policies, legislation, and changes in consumer behavior can help, if people are willing to change.

Here you have the FSW—what's your FSW? Sustainability refers to how much you can take sustainably. If your yield is on the curve up to the maximum amount, that's fine. You can do that as long as you don't exceed the maximum sustainable yield (MSY). If you go past that point, you're overfishing, or you'll deplete the resource. And once it's depleted, you can't get it back; it's not sustainable forever. So in terms of sustainability, even fish need time to recuperate their numbers.

Where do you find sushi? In Japan? No, you can find sushi everywhere. Even Bucha has sushi. It's like pasta, exactly. Sushi has exploded in the last 20 years. Before that, if you wanted sushi, you'd have to go to specialized restaurants, and there were very few. Now, sushi is everywhere. This is what we call a "fad diet" or a "fad cuisine."

Why is sushi a fad cuisine? Why is it fashionable? Apart from people taking pictures and posting them on Instagram, what else makes it interesting?

**Speaker 4 31:53**

It's raw.

**MT 3 31:54**

Okay, fair enough. Raw fish—it's exotic. But is it really exotic anymore? Why? Because it's becoming mainstream. It has become a global trend, and importantly, it's now seen as a statement. However, this is not sustainable. Eating a fantastic sushi roll means two things: either you have access to fantastic ingredients locally sourced, or you're importing them. But most of the time, these ingredients are imported.

Take, for example, rice—sushi rice is typically very small, with a distinct texture and skin. If it becomes a staple, you have to import those ingredients, which makes it unsustainable. So, sushi can be unsustainable if the ingredients aren't sourced locally. Another concern with sushi is that it can be very dangerous, especially if the fish isn't fresh. You have to be very careful about food poisoning. This is why sushi is often considered a "fad cuisine"—it's become so widespread.

Yes, we all know it's from Japan, but unless the fish is locally grown, or you go to Japan where the fish is fresh, it's less sustainable. Sushi can become unsustainable if the fish is not sourced properly, and it's worth noting that some people argue that sushi is healthy while dishes like tempura (fried fish) are unhealthy. However, this debate overlooks the fact that sustainability plays a large role in how we view these foods.

So, what type of fish do we find in pelagic areas? Essentially, everything. Pelagic zones are rich with marine life.

**[students' utterance are unclear]**

**MT 3 35:29**

It's important, and the things that are locally sourced are not always limited in price. Most of the time, the milk is particularly important because there's a shortage of it. But who is the national producer? Fixing Italian milk, for example, has changed its taste because of different sources, and that's a big problem. There isn't enough basic milk, and even eggs have become more expensive. We've talked about the eggs—egg prices have risen by 30% due to bird flu, which has resulted in the culling of thousands of chickens. Even chicken wings are going up in price.

Figure 3.7 shows global fish capture in million tons, as supported by the FAO. If you look at the chart and the amount of wild fisheries, you'll see these are all wild captures. What pattern do you notice? I see that marine fish is, by far, the largest category. What did we discuss yesterday? Oh, sorry, now it's stabilizing from the 90s because of overfishing. But what other trends do you notice? Well, the bottom category is still rising. Okay, everything is rising because of the impacts related to COVID-19. Yes, exactly. But what's happening here, especially here? No, these are all connected. Yes, sorry, I see. Freshwater has increased, and the pelagic category has exploded, too. Why is this? This category is 20 tons, and this one is 90 tons. Oh, it's easier to catch pelagic fish because their habitat is larger. Freshwater habitats are smaller, so while we are putting the same stress on both, which one will be depleted first? Freshwater will be depleted first, unless we start farming freshwater fish. The supply will shrink significantly. This still has more space, even though it's

overfished, but it has space. Rivers and lakes don't have that space. They will disappear because of their size. Why do they disappear? I'm not sure. Let me check Google. I've never researched it thoroughly.

And now, here are five sustainable fish choices. These are considered sustainable as long as they are sourced locally. What makes oysters sustainable? It's because they are personal fish—meaning they grow in their own space and help maintain the balance of the ecosystem. Exactly. So why are oysters sustainable? They help filter the water, maintaining the ecosystem's health.

**Speaker 3 40:26**

No, no, that's my voice. (unclear)

**[students' utterances are unclear]**

**MT 3 40:31**

They keep the absorbed carbon. So that's what the absorbed carbon refers to. But there's another reason why they are sustainable as a food source, even positives are these savory fish, not bad. Battery is good and sounded. Why is this the case? What do they do? Even these—why are they sustainable? Because I don't know, that's what you can just always say, very good. What's this? What else, for example, why is the planner packer? Why is it really sustainable? It's reproductive rate. Oysters can lay up to 1 billion seeds per day, per deposit—1 billion. So they are highly efficient in their reproduction strategy, production rates, and strategic reproductive strategies, yes, yes, yes. Lots and lots of deposits, the same with background.

And what happened? Sorry, sorry—for example, there is something which is he doesn't let him see, comes from seven and other things and grows as well. Not just even the salmon doesn't. Hysteria does not come here. It's...

**Speaker 2 42:45**

That's different. That's not That's right, that's .. (unclear)

**MT 3 42:52**

That's different. The egg themselves is food. You can recognize it yourself. This is why most of these species are sustainable, because large production rate and you can control them, such as having become very smooth in themselves. Literally, you see a pool of eggs, and you get the salad, and the fish have a square with it, so that's controlling to fertilize the eggs. So let's watch a small bit more. It is a part of apocalypse.

**Speaker V (from the video) 44:09**

This small mussel farm off the coast of California is a window into the future of feeding the planet. You can feed a vast majority of the world populations on Muslims. Earth's population is growing so fast that we'll need to produce more food in the next 50 years than we've raised in the last 10,000 really actively looking towards the ocean for winter, oceans cover more than two thirds the Earth's surface, but right now they produce just 2% of our food. You can't take any more fish out of the ocean. You got it brought bill is part of the new wave through the ocean. Farms can help feed the world and not destroy the environment. I'm Eric Olson. This is, course. Time for us. This is historic. It will be a first time we got a harvest in us,

weather waters in the United States. In this bill Krueger started and sold several tech businesses before deciding to farm the waters off of Los Angeles. The carrying capacity out here is just enormous. Right now, the mussels caught in the Catalina sea rent are just a tiny, 100 acre experiment. Certainly often mussels are cash crop, because they don't get disease. There's a lot less risk factors. They grow faster. Currently, almost all the food we eat comes from the land, but that's resource intensive. 29% of the Earth's surface is land, and 40% of that arable lands. That's immense amounts of space for something that we could do in a much smaller amount of space in the oceans. Growing food on land is also a dirty business worldwide, livestock accounts for about 15% of human induced greenhouse gas emissions. It's also very inefficient and expensive. It requires anywhere between six to seven pounds of feed to get out one pound of cow, right? And so that requires an immense amount of water and land and other resources. So many are looking to the sea to help feed the world, but overfishing has left much of the ocean has pushed their biological limits. We are at a point now that scientists call peak fish. So peak fish means when did we get to a point where we no longer were able to take more out of the ocean, but the amount of fish we're catching is plateauing. The oceans aren't getting even cleaner, or we have enough fishing boats out there, way too many fishing boats out there right now, most of the fish that's farmed at the moment are fin fish like salmon and carp. They're fed with a diet of fish lower in the food chain, which means more fishing is needed to feed the fish we eat. Nearly 1/3 of the global marine fish catch goes to feed farmed fish. Right now they're getting it as low as a one to one. So one pound of feed for one pound of fish, that's a lot better than land animals. But mussels can do even better. You don't have to feed them at all. They just filter their food from the water. Mussels are good to farm for a variety of reasons. First, a lot of the things you associate with bad farming of land, cramped orders, use of questionable foods, use of different chemicals. You don't need that for muscles. Muscles light, tight spaces. They don't need a lot of antibiotics, and they don't need any food. They can also clean up the water. Ryan Bigelow runs operations for seafood. Watch a Monterey Bay Aquarium program that promotes sustainable season. He says aquaculture, especially with shrimp and salmon, has had a bad reputation for pollution, spreading disease and other environmental impacts in some countries, these remain big problems, but new companies are showing it to be done well, fish farming is by no means a perfect business. There have been issues in the past with everything from escapes to pollution to destruction of mangroves, and some of those things still do happen. But the difference now between aquaculture even 1520 years ago is they're our best performers, and aquaculture has a lot of room to grow in the US. So right now, 90% of all aquaculture happens in Southeast Asia, China, 60% of that production. Norway and Chile are some of the largest thin fish producers in the world for linked with salmon. Big reason is regulations. The US hasn't allowed aquaculture in federal waters until now. Phil thinks that means there's a huge opportunity. Several companies are already planning to open aquaculture farms in California, waiting to see if he's successful. Today's harvest is small, just 1000 pounds back in the pier in Los Angeles Harbor, the mussels go directly to a seafood distributor, and then the fish markets around Southern California and do not own people's plates. But for this kind of farming to feed the world, it has to overcome another challenge. People have to want to eat mussels, and especially in the US, they don't perception. A lot of people have said, they said, What is it for bait? They don't understand the nutrition and the tastiness of muscle. So it's going to be a big branding challenge. We need Leonardo DiCaprio to eat a pizza that with mussels on it, rather than sausage, showing the sustainability. But even without Leo, tastes may be changed. At least in the last I'd say, 12 to 14 months, customer requests for muscles like these have almost tripled. Michael Nara is telling those mussels at his market, so we are now seeing a huge increase in the demand and how a locally sourced product like this is high quality, literally right off the coast,

feeding the planet's next 2 million people will mean changing where we farm and how. Important, it will require new technology and better tools and an open mind to try new food. Quartz. So are you ready to eat more muscles to save the environment? Let us know in the comments and subscribe to the quartz channel for more videos with them.

**MT 3 50:16**

So, for example, that was a piece of the video, which was very telling: the U.S. aquaphile chair is not allowed. Fish fires aren't allowed. So, to do it right? So, cultural version—what's that? Yes, here, what do you want to know about the ship? It's a ship that hugs, effectively separating ways through harpooning. They see a whale, and they literally shoot harpoon darts at it. So, it is Japanese. Japan, Norway, Iceland, and sometimes northern Canada—countries that still practice whaling. Whaling worldwide has been banned, even the UK. The UK is involved, harvesting some species of whales, which can be controversial. For example, sealing decks in Norway, then they go to Greenland. And they go to Norway itself. They go to Greenland or Spartan seats. They clutter, but they usually club to kill. They take it for a spare, for expanded use towards feet, yes.

**Speaker 4 52:16**

(unclear)

**MT 3 52:32 [students' utterances are inaudible]**

So ethical issues arise over by rights, rights of indigenous features and international conservation legislation. Obviously today, whaling is heavily, heavily proud of which gives rise to this. What's that? What's that? Those are pirates, correct for for the state. This organization is an illegal terrorist organization. This is called the Sea Shepherd organization, and this is what there's flagships. This is Steve Irwin. Sea Shepherd is the new organization. Basically, these guys get their boats and they hunt. They don't use guns, but they use waiters. Their tactic is to board and prevent the whalers from operating. They're definitely larger than their size, and they make it into the news by raising awareness through their actions. They weren't just raising their fleet; their job is to chase whalers and stop them from hunting. They disrupt them, either by forcing them to stop or getting individual whalers to stop. This is illegal, but it's all over social media because, ethically, they are seen as superheroes. They're saving whales and fighting for the planet, but they're also breaking international law. They're doing what governments don't do, which makes it a controversial issue. Some people are in favor of it, while others oppose it. Some argue that Japan should be allowed to whale as they have a cultural right, although their practices are less than ethical. Others support Sea Shepherd's efforts. So here we have another case study—whaling. What does it provide for these people? Who are these people?

**Speaker 2 55:32**

Eskimos.

**MT 3 55:34**

Eskimos, or Inuit people, have relied on whaling for thousands of years. The key difference, however, is this: they use every single part of the whale. For example, these canoes are made from whale bones, and they use the whale blubber for a variety of purposes, ensuring that nothing goes to waste.

**MT 3 56:13 [students' utterances are inaudible]**

This is the oil from the whale, which is used as fuel for boats. They chase the whales, and there was once a case where a whale was spotted with five harpoons attached to its back. It was quite dangerous, but it's gravity-driven. The process might take about five to ten minutes. Some ships are so large that they can tow the whale back, and once on board, the whale is processed inside the ship. What comes out is already packaged, ready to be sold on the market. These are factory ships, particularly the Japanese ones, not the traditional whaling ships.

In contrast, for traditional whaling communities, no part of the whale is wasted. This creates a different perspective on whaling, as it's seen as more sustainable. But it also boils down to a question of needs versus wants. Do these people need to whale? Yes, because it's integral to their way of life. Does Japan need to eat whale meat? Not really; for them, it's a luxury. Even in Japan, whales are not a staple, but a luxury item.

**Speaker 4 58:03**  
(unclear)

**MT 3 58:08 [students' utterances are inaudible]**

Aquaculture has become a significant industry, providing additional food resources and supporting economic development. It's expected to continue growing, but there are several concerns associated with it. For example, feeding large fish with smaller fish—such as tuna—is common in fish farms. These small fish are often frozen and contain fats and medicine, which leak into the surrounding water. As the fish feed on this, the excess oils and nutrients spill out into the sea. This can create a sticky, smelly residue on the beach, which can be difficult to wash off.

Aquaculture can also lead to habitat destruction. Anything beneath a fish farm will be wiped out due to the waste and feed that is released. This can increase pollution rather than reducing it, as more food is produced but at a higher environmental cost. The waste includes fish feed, medications, antibiotics, and other chemicals, which spread throughout the ecosystem. Disease can also spread quickly in these environments. If one fish becomes infected, it can spread to the rest of the population unless the diseased fish is caught and removed promptly.

Another issue is the risk of farmed fish escaping into the wild, where they may harm local ecosystems. If a fish farm breaks, wild predators may also attack the farmed fish. In addition, fish farms create a toxic sludge at the bottom of the sea, which consists of waste materials that can prevent anything from growing. This sludge must be cleared periodically for the ecosystem to regenerate. If left untreated, it continues to accumulate, making the area unsuitable for life.

So, while aquaculture provides valuable resources, its environmental impacts, including pollution, disease spread, and habitat destruction, need careful management.

**Speaker 3 1:05:20**

for the IA, yeah, I want to do something about the systems under the houses, under the house, alright, So what?

**MT 3:** Yes, which country? so Malta is a perfect place, because Malta have a shortages of water, and we do need to store more.

**MT 3** 1:05:50

My suggestion is for suppository would include rain water catchment systems. Now, where do you start researching? Check everything online. If you want a book, there's a very fantastic book called underground water by Steven Mallia, came out right now. But there is literature, because you can find, obviously need to deliver geology. So the aquifers, per se add the amount of rain that comes to water, there's a navigation process. So we have plenty to do. It's a good topic. I like it. Come up with a title. You know, slogans, water check the government websites, era, water services. The other one I forgot, basically, I tell you, why do I tell you? But there's plenty of things online.

**Speaker 3** 1:07:20

All right. Thank you, sir.

**MT 3** 1:07:22

Bye, bye, bye, bye.

**MT 4**

## Male Teacher 4

Sat, Dec 07, 2024 8:24PM • 39:29

### SUMMARY KEYWORDS

triangle base, height calculation, probability plotting, continuous data, median determination, calculus examples, trigonometry rules, product rule, chain rule, differentiation techniques, tangent function, sine derivative, cosine derivative, quotient rule, trigonometric identities

### SPEAKERS

Speaker 6, MT 4, Speaker 3, Speaker 4, Speaker 1, Speaker 9, Speaker 7, Speaker 5, Speaker 2

**MT 4 00:01**

What's the form that we're getting? The form of the triangle? (unclear)

**Speaker 1 00:10**

b minus a times

**MT 4 00:12**

No. What is the base of this diagram?

**Speaker 1 00:14**

Three times m?

**MT 4 00:15**

So it's one half times b minus m. Let's suppose the height is H, C, that's k. That is equal to one half. That's what we're assuming. That's K. Yes. Now I let's suppose this is true. This is our assumption. Now, by definition, let's take this where the C is, and let's call it. Let's call this h1 and this is h2 Okay, this one here. Okay, let's call this h2 the area of this is half. What is the base here? It's C minus a times h2 right? And this is less than what if this is one half, and there is some white space, is less than one half, right, okay, but you know that one half is this green, do a green. So instead of one half, I can write what this thing so it's one half b minus M, H, C, these two cancel c minus a, h2 is strictly less. I'm just writing what I have H C. I think it was h1 it has become h1 now we know that h2 is bigger than h1 right? So it must be for this twofold. What should happen if h2 is bigger than h1 this should be less, right? And is this less than this? Is this less than this? The midpoint is here.

**Speaker 2 03:37**

Wait, so what is...? (unclear)

**MT 4 03:39**

N? N is the place where the median occurs. So the medium in the midpoint is different. In this case, yes, yes, because the apex is moving it's not in the middle. Well, to give you a context, Mike, we're doing probabilities, and we're moving along the x axis, and at this value, my probability is something, but it's continuous random variable. So even if I move a

fraction of I don't know a hair, that I have a probability there. It's not discrete. I don't have probabilities at discrete values like the dice. It's like having an experiment with continuous data. Okay? And how do we plot the how do we represent the probabilities by a curve? And if this is my curve, the area of this triangle is one. Why? Because the total probabilities is always one and the media cares where the areas are the same, half and half, for example, the lower quartile. Quarter one happens when I have 0.25 to this side and 0.75 on this side. Quarter Three happens at the point. Where the air underneath the graph is 0.25 and 0.75 this way. Now, is this room? Well, this is bigger than the midpoint. There is a white space, and then there is that distance. Well, since this is bigger than the midpoint with this is a contradiction. So that's why the median happens from C is there. There are three like there are three points here. One, this is the initial point, a, but that's not important. A plus B on two is the midpoint of A, B, okay. It's like having from one to five, which is the midpoint. It's three, one plus five on two. Okay, then what is C? C is the point given there, like the apex

**Speaker 2** 05:58

Okay, C is directly below the apex. Given what is n, if C is n, is the median,

**MT 4** 06:06

And we want to find that the median cares. So maybe take a photo of this mess. We can discuss this. Okay, now I'm moving to a set mic. I will start testing. Okay. How long will the recording be? Should I say these things or it doesn't matter.

**Researcher** 06:26:

I'm interested in the things that you have to do, like simple stuff. Can you do this? Open this? I hope it will help with the data. Should I put the mobile phone on the...? (unclear)

**MT 4** 06:29 [students' utterances are unclear]

No, I don't like my voice. Okay, maybe you shared the book I gave you, the SL book. Okay, do you want the book topic. But if that's distracting, chapter 13, I'll make those, I guess. And if you want to follow this, you can otherwise (unclear). I told them they can do some questions from the mock as you wish. Okay. I Okay, my aim is 13 in the cell book. Yes, that's why it's called 13 of the level, yes, compute for so long. Bill, I think you know these things. It's calculus and trigonometry. Yes, in English. Okay, I will go through the examples and explain the theory behind them, and we'll see how it goes from there. Okay, this book is extra. It's quite funny how we still have no fast shortcut waiting just to add some we're just fault there. There are ways to not fault this. But it's good to know the at least, in my opinion, what's happening in order to write down. Sorry, I was just using the verb too.

**MT 4** 09:19

Okay, what do you mean by your ... write down (unclear), all right, note down, yes, it's fast. Well, I had a friend of mine who used to take notes during the lectures (unclear).

**Speaker 1** 09:31

Equations, like, but with (unclear).

**MT 4** 09:33

You know I mentioned that programme LaTeX, he used to put them, but like, button, yes, like Anirudh's, I A, N, D, E, he used LaTeX, but it's like COVID. I can show you this. Yeah, I tried to use LaTeX. I used it for about five seconds, and was like, No, I'm using the regular Word document.

[students' utterances are unclear]

**MT 4** 09:58

You can, you can use this. Latex is overpowered for IA. CE, maybe

**Speaker 3** 10:01

Well submitted by EE, no (unclear)

**MT 4** 10:08

This is an online, sort of, what's it called, downloading ... (unclear), like the Microsoft website, yes, yeah, where you directly work in its own programme.

**Speaker 6** 10:18

So you have almost complete control of the entire document. (unclear)

**Speaker 5** 10:32

(unclear)

**MT 4** 10:35

This is how, this is how it looks. So taking notes on this, everyone, uses, yeah, well, then it's okay if you know it. But for example, if you want to put the G as an equation, you put the dollar signs if you know the shortcut, it's okay for me, then it looks like something like this.

**Speaker 7** 10:56

(unclear)

**Speaker 6** 11:01

But there are UIs for this available.

**Speaker 4** 11:09

Well, scientifically, it looks better than using Word.

**MT 4** 11:12 [students' utterances are unclear]

Yeah, it looks like an actual paper. I think there's something written in Slovak. What does "uderen" mean? It looks Eastern to me. Maybe you know Slovak? Anyway, it looks interesting. Yeah, we can buy every ... (unclear). No, in the future, maybe. I don't know. You're working for someone, and they tell you to write a sign or submit something. They tell you in which format they want it. Okay, I didn't want to learn how to use this in HGV, but now I prefer it over Word. Well, yeah, but don't do it now. Do you know the story of LaTeX? One guy wanted to publish a book and, yes... What was the name? "Computation" or something? Anyway, let's focus on the modeling change. Okay, you don't make mine. This is from a cell, this last chapter they have to do. Okay, do you prefer if we open the windows for some air? Okay, let's do that. Do you have the booklets with you?

**Speaker 7** 12:52

Like last time...? (unclear)

**MT 4** 13:01

Okay, find the calculus part and find the well, you know that if we differentiate, can I raise? Yes? We know that if we differentiate sine x from the booklet, it is cosine x. If we

differentiate cosine x, do you remember, Mike, the derivative of cosine x? This is for sine. It will be negative sine x. Those are the basic rules, which you have in the booklet, so you don't need to remember these. Now, I think the book, yes, goes somewhere here. Yes, let's try this example. First one should be don't look at the solutions, please. Okay, okay. One A if you want to copy, copy. But these are the both content are the nodes. So it's best if you try and grasp what's happening. First one should be easy. I have f of x, which is two sine x minus three cosine x. Is three cosine x<sup>3</sup>, cosine x. This shouldn't be too hard, because it's linear, and I differentiate the first part and then the second part. And when I have constant outside, it doesn't really matter. So in F, prime x, you want to try, Michael, I'm not trying to put you on the recording, but we have these rules, okay, and we want to apply a team to f of x is two times, so just i Okay, so

**Speaker 7 15:52**

I'm not quite sure how you deal with with summations.

**MT 4 15:58**

Well, you can find the derivative of sine, and you can find the derivative of sine and cosine like the one you just put together, right? Yes. So, what does the derivative of sine x give? Cosine, right? So, this would be two cosine. Okay, I was just concerned about adding two and then yes, constants behave as well. All right, so then you would have negative three for you and the derivative of cosine, which is just sine x, but negative. So, negative. So, this is two cosine x plus three sine x. Okay, that was quick. Do you study? Yeah, no, whatever. How about the second derivative? You did the second derivative, right? Yes, we got the derivative of the first derivative. So, it's like having this new function. So, you derive the thing you already derived? Yes, okay. Which is minus two sine x, yes, plus cosine, yes. And you can keep on doing, finding the hundredth derivative if you want. We don't care. Let's try B, so V is  $y = \sin x * \cos x$ . Now, this is not linearly expressed, so we don't have summations, blah blah blah. We have a product. So, we use what in calculus? The product rule. Can you try it for two seconds? Do you need to remember those rules? No, they need a booklet in there. Okay, it's chapter 13, and you're being recorded, not in.

[students' utterances are unclear]

**Speaker 6 18:22**

Everything is being recorded ... (unclear)

**MT 4 18:31 [students' utterances are unclear]**

Just be quiet. No, no, it's fine. You're not being tested. This comes from your Swedish submission on the website, please. Okay, we have a product. Can you remind me of the product rule, ... (student's name)? Many times, yes. Can I have u and v, and I want to differentiate? Okay, how does this read? ... (student's name), how does this read? I'm differentiating what? Don't worry about the other thing. Just focus on it, what? Then express your thoughts. I'm differentiating uv with respect to x. How do I do that? I use the product rule from the booklet, which is u times the derivative of v with respect to x, plus v times the derivative of u with respect to x. Okay, what is u and what is v? ... (student's name), sorry, in this case, I have a product. This is the product rule given in the booklet. Okay, so if I'm given a product, I'm separating it into u and v. The differentiation of this product with respect to x is equal to the first thing in the product times the derivative of v with respect to x, plus the second thing in the product times the derivative of the first. So, in our case, it's

like having  $dy/dx =$  the first thing in the product untouched (this is  $u$ ) times the derivative of the second, plus  $v$  times the derivative of  $u$ . Okay, guys?

**Speaker 2 21:10**

It's cosine  $x$  times the derivative of sine.

**MT 4 21:22 [students' utterances are unclear]**

And then we'll just use the rules from the booklet. Well, sine  $x$  remains as sine  $x$ , the derivative of cosine  $x$  with respect to  $x$ . You see that it is negative sine  $x$  plus this remains as it is the derivative of sine  $x$  is cosine  $x$ , so this is basically negative sine squared  $x$  plus cosine squared  $x$ . Is this clear? I think there is a more presentable way how to do it. You do this, none of the books, no, the book doesn't do it that way. You do it like a computer, sort of them, we have  $y$  is equal to sine  $x$ , cosine  $x$ , and we do this, let  $u$  be equal to sine  $x$ , and let  $V$  be equal to cosine  $x$ . So I'm just saying, Okay, I label this  $u$ , I give an  $A$  and this  $V$ , and we know that  $D$  is  $u dx$ . This we find from the booklet. We label our problem, the given problem in the same way. So my product are labeled as  $u$  and  $v$ . Well, I have  $u$  and  $v$  ready, so let me use some colours. This is  $u v$ . I need to find the green part and blue part. Well, how do I find the blue part? So I have this in language it as in the Populate the blue part is  $D, u, d, x$ , so I work it out separately.  $D, dx$  is cosine,  $x$ , that was green DVD,  $x$  is what and then I put things together. I just put the blocks back together. Okay, should I leave this one out? Can you try this one out?  $C$ , which rule do you think we should use for  $C$  we don't have any products. There's the chain rule. What would you do? Yes, ... (student's name), first you turn Yes, like first you turn your score of  $t$  to  $t$  to an hour of half a one and a half, right? Okay, let's just do it. It's better if you use brackets with silent ... (unclear) The IB use it whenever they want. Sort of, I think it's best if you do it correctly, like a computer does, and then let  $u$  be okay, let  $u$  be equal to  $T$  to the one half. But remember, we need to differentiate  $y$  with respect to each other. Now,  $x, t$ , so eventually we need to find  $d, y, d, T$ , okay, but this is not in the booklet, so we turn it into this. Try and digest this part. I started with this. Mike turned it into  $t$  to the one half to avoid having serens. And then ... (student's name) said, Okay, let's put  $t$  to the one half and leave it as  $u$ , to avoid having to deal with the square roots, blah, blah, blah. So this now turns into  $y$  is equal to sine  $u$ . Now, if, now forget everything. If I give you this and tell you to find the derivative of that you would find what

**Speaker 5 26:21**

Cos of (unclear)

**MT 4 26:24**

Du, yes, you would find  $DY DU$ , but we need  $dy dt$ . So how do we turn  $DY DU$  into  $dy dt$ ? By multiplying by  $du, dt$  and that we can find from this part now. So  $D, dt$  would be what?

**Speaker 5 26:51**

It'll be, one and a half  $t$ , power ..., one and a half (unclear).

**MT 4 26:55**

Yes. Extra question, how would I turn that into third form? What form and square root form. It's called a cell that shape, okay,

**Speaker 7 27:11**

One half minus square root of  $T$ .

**MT 4 27:14 [students' utterances are unclear]**

No, what is one square root of T? Yes. So this is so du, dt, okay, so now I can start replacing. This is D and D, y, d, u is this? So this will be cos u times one on two square root of t. Now we're differentiating one with respect to t, there are no u's, so we turn this into this or square root of D. So this would be cos square root of D, basically all over two square root D, because I have like two fractions multiplied. This is like a fraction over one. Is that? Okay? Try the last one. It's cos squared X has the final form done. But this this one, so it's like differential. Differentiating cosine and what's inside the brackets? If I have cosine x, I'm still doing that. I'm differentiating cosine to minus sine x, and what's the derivative of x<sup>1</sup>, so One. Okay, try this one. Mike in the paper. I remember cos squared x means cos x squared okay, it means cosine x times cosine x. You can use the product rule there, but there is a shorter way you can use the chain rule as well. So. It's like cutting the toe with the or let's try and do something if these are easy to do, just keeping up, Can I Raise see you? You should get minus two, sine x, cos x, sorry. What this one, two, negative two, sine x, cosine x, At times, force yourselves to use the chain rule.

**Speaker 9 32:42**

So I got minus two Ps squared times X, yes. No, minus two psi x squared times x.

**MT 4 32:52**

No, this is not x. Squared cos squared x. Means this to have it as cos x squared would have been something like this, or without a bracket, okay? And trying to force yourself to use the chain rule, what would be the change of variable, the cosine of x? So let's call this y. If f of x puts you at the ... (unclear) position, just leave it as y. So I'm telling my computer to do (unclear) okay, let u be equal to cosine x. Okay, let's stop the data. How would that change y? Y would be equal to what u squared, u squared. And then I forget everything. And then differentiate y. What do you do to U? Do you remember the differentiation of x squared? For example, yeah, it's in the booklet. I think it's given as x to the n, right? It is so x to the n is putting n in front and then using 2x to the power minus two, cos x, sine x, perfect. Maybe, try, okay, try and differentiate tangent x. You will use the 10x Yes. Tangent x, OK, so it might give you y is equal to u squared would be the derivative of y. It would be two, 2y to the power of like y minus u. What is the derivative of this 2x dot, yeah. So what is the derivative of u squared?

**Speaker 7 34:54**

Oh, two. (unclear)

**MT 4 34:58**

Yeah. 2u, just a letter, just a D, yeah. Okay, so it's two times the variable, sort of so we know DY DU, but initially the question asked for dy dx, we need to find the derivative of the function given with respect to x. We know dy, D, U, so we need to turn this into dy dx by multiplying by what d u over dx, yes, and du, dx, you can find from this side from the change of variable thing, which is negative sine x. So this is dy, D, u is 2u and d u, dx is negative sine x, and u is what u is, cosine x, so this is minus two, cosine x, sine x. Can you try tangent x? Now you won't find it in the booklet, but we know two things, three things, okay, finish the sentence. Okay, the answer is sine x squared, I don't know. Right? It should. It should be this,

**Speaker 2** 36:23

Because it's cos like, yeah, I arrive to the to the cos to x, plus sine to x, all cos to x, yeah, I arrive to like this point.

**MT 4** 36:42

Differentiate. Further. Yes, this is an identity, right? Remember that? What's the numerator? Find the trigonometric identities? Cos squared x plus sine squared x is always equal to cos.

**Speaker 9** 37:08

Square x plus sine squared x is always one. Yes, ok.

**MT 4** 37:11

Ok, let's try tangent x. We know three things. We know the derivative of sine, the derivative of cosine, and we know the quotient rule. And since tangent s is equal to sine x, along our cosine x related this as u, related this as v. And what does the quotient rule say? Or there's importance here.  $\frac{1}{V}$ . So we fix V and we multiply by the derivative of the top thing. Then I think it's minus u,  $\frac{dv}{dx}$ , over V squared, we know u, which is sine x, we know v, which is cosine x. So we just need to find deal the x And the V, the X and put things together. I, sometimes. Last time, very much. Thank you so much.

## MT 5

# Male Teacher 5

Sat, Dec 07, 2024 9:29PM • 41:46

### SUMMARY KEYWORDS

American cycle, influencers, exterior identity, clinical narcissism, fake it till you make it, Athenian virtues, Platonic virtues, Greek tragedies, wisdom, natural law, moral veto, bureaucratic manager, ethical sphere, individualism, community virtues

### SPEAKERS

Speaker 2, Speaker 3, Speaker 1, MT 5

#### MT 5 00:06 [students' utterances are unclear]

Have you read or have heard of an American cycle? Let's say nothing. So it's these white men who work in an office, but they're extremely rich, and they're obsessed on the current fashion and on the current ways of thinking, going to the right restaurants. So it's all about gaining the kind of influence upon others that you are, that you have status, that you have worth. And it's very similar to what the sofas were like, reaching Oh, you it before the young peacocks were the dandies and the flairs. This is finlucia Clayton, 1880s these were people who developed their personality according to what they wore and how they moved physically. So they were performers, performers of certain acts which they showed others in order for others to believe that they are that kind of person. So they had this like aristocratic sense of of themselves, which they would show to close, would walk around aimlessly and sort of just, you know, take in the sights they wanted they depended on being seen. Yeah. But this is a whole new level of like influencers are exactly it's not who you don't express your appearance through what you are. Your appearance, okay, makes who you are. So it's an inverted order the the exterior. So it's not the interior which then is expressed in the exterior, for the flat air. It's the exterior which creates the interior. And this is seen a lot in the in these lifestyles as well. We're talking about, like fitness very often, and fashion, if pursuit to an extreme order, so identity wise, exactly, but I think it happens every day, like if I see you as much. But okay, that's a good that's a good con. Um, first impressions found, sure, you can't just, like, go around, but to what extent is the question? Because then when you when you get both the person and you do realize that there's something in the top right. But I think most people think when they are, yes, so total points, yeah, unless...

#### Speaker 2 03:08

You find a person that really opens up and everything, okay, but then most people will put, especially in school, in the workplace, everyone's (unclear)

#### MT 5 03:18

Not everyone has, everyone's acting a certain identity. It's like...(unclear)

**Speaker 1 03:22**

You choose to be messy, maybe something new (unclear). That's how you want others to choose what genders are in the ring. When you make a choice, you're consciously deciding how you want others to see you.

**MT 5 03:42**

A conscious decision is made when you wonder how you want to be seen. That's a different story from making choices based on what you actually love, right? They do something because... (unclear)

**Speaker 2 04:01**

People are scared of being judged, and I think that the person really, yeah, maybe there is like unconscious decision they're making. These external factors (the rest is unclear)

**MT 5 04:15**

You do realize that, like, clinical narcissism, is the extreme of this way of thinking when a person because they're so insecure, they recreate artificially, of course, themselves, according to how they think the ideal person would be, would be like for others to like. So then, what they do is never really what they actually, ever were emotionally inclined towards when everyone is a bit yes, yes, for sure, part of thinking (unclear).

**Speaker 1 04:49**

What others are going to think, yeah, you're never going to think of them just (unclear).

**MT 5 04:57**

You can absolutely *do* it, but who gets ready if you feel like you're a great lawyer, and everyone tells you you're not? Well, that's going to affect you. You can't live in this little bubble. Is this part of your "fake it 'til you make it" approach?

**MT 5 05:16**

I think there's more to it than just "faking it." The whole concept of "fake it 'til you make it" involves believing you are someone or something, right? And pursuing that belief, regardless of how you feel about it. Eventually, doing this can transform you into someone who not only enjoys it but also becomes quite accomplished at it. I think that does happen—it does happen, but it depends.

**Speaker 1 05:48**

How you think and what you think. Yeah, it depends on that (unclear).

**MT 5 06:00 [students' utterances are unclear]**

You have many kids whose parents turn them into their project, but sometimes they succeed. So to understand is the passion, passion or the pursuit the project of the kid really theirs because they really, they really want to accomplish themselves or their parents. So in this case, it could be like a fake it till you make it sort of thing. You fake it because your parent wants you to do that. They eventually start believing in it as well. So yeah, sometimes faking it does need to be living genuinely. I'm not sure it's the right way up. So yuppies and politicians are pretty much lifestyles or characters derived by a long stretch from sophist type of virtues, which have been distorted from Athenian virtues in order to lead to the pursuit of success. And then, of course, you have the same virtues, but again, reinterpreted in different contexts. For instance, take those virtues seen through the lens of Plato, all right? In a

platonic context, these virtues are always going to be imperfect, in contrast to the forms, the ideal virtues that the forms encapsulate, right? For Alasdair MacIntyre, certain type of representative who lives according to platonic virtues, perhaps, in this day and age, would be the typical person, let's say a Christian priests, right, living almost by themselves, very kind, very cordly, but they don't accept much out of life, and they're very humble, because they know that no matter how good their life is, it will always pale in comparison to being a truly perfect, loving Catholic person. So in a sense, Christianity is derived from Platonism, in the sense that we're born imperfect, we can never become perfect. That perfection lies in some transcendent reality, whether it's called the world of forms or God or Heaven, or whatever the final Jerusalem, right? And then you have the tragedians. So Athenian virtues are also seen in the Greek tragedies. You can see it in Oedipus Rex, right, Antigone, so on and so forth. And it's very interesting in tragedies, because in tragedies, it's very different from Platonism. In tragedies, these virtues are expressed in different characters or in the same character, but as conflicting with each other, which precisely leads to the tragedy. Right? In tragedies, you always have that age old dilemma where you have to follow one of two conflicting virtues, the virtue, for instance, of loving your family, but at the expense of betraying or going against society at large. So justice or friendship, right? And think of antibiotics. Rex, that would be, he goes for justice against like his friendship, he can say that anyway. Um, so the problem is that is that the. A conflict of virtues. Eventually it is reconciled through wisdom. But that is also always already too late, because, of course, it leads to the demise of the of the protagonist. Okay, also in tragedies, it's as if the conflict is bound to happen anyway. It is determined by faith. And no one is about faith, not even the gods. Okay, so tragedies have this sense of irreversibility, the sense of going toward a certain path which you can't escape from. In fact, the more you try to escape from it, the closer you are to it, right? It's a sense of inescapability, in fact, an irreversible destiny you are supposed to go toward, which is precisely the conflict of different virtues. So the place of Sophocles and Aeschylus about what stories about the virtues I can't see and characters displaying them, yes, what's different in their account is their recognition that the virtues do not necessarily blend in a harmonious fashion. Virtues competes and conflict even within a single person. So my virtues of courage and friendship might lead me to Acts which wisdom and justice might not approve. It is also understood that no matter how virtuous one might be, one can never escape one's destiny right death and misfortune are visited on the just as well as the unjust. This again, I would say person is, my first interpretation, is the prominence of the virtue of wisdom in tragedies. Wisdom is the acknowledgement that's your finite that ultimately the bigger scheme of things your life is absurd to always eventually lead to your demise, no matter how successful or ambitious or happy you are, it will all lead to death, and knowing this humiliates you in a positive way, makes you humble, which is in itself, also an important Virtu so wisdom very often, at least in my opinion, assumes a prominence in the tragedies, which is unprecedented, okay, compared to how the virgins were practiced by other types of ages and people, the Sophists, the Platonists, and so on and so forth. Weirdly enough, in pagan mythologies and religions and the gods are not all powerful. There's always the kind of the wheel of faith which is beyond them and which determines their their lives and actions as well, like in Norse mythology and running a rock the apocalypse of the gods, no one can I prevent that? It will happen anyway. You have the fates in Greek mythology. Think in Finnish, there's also something else. So only I think when the gods became one, you have the monotheistic religious did this idea that fate is above everyone and everything, just sort of with the role, and in a sense, given as a quality to the one God. Only when the gods became one that the idea of complete authority and power were given, were granted to that God. When the gods were many, they weren't given that kind of part. The power was given to something else, fate. Finally, these virtues also went

through Aristotle, who also adapted them to his own philosophy, and for MacIntyre, Aristotelian interpretation of such of such virtues cannot be battered. Okay, in Aristotle, they reached a certain climate which cannot be improved or hasn't been it. No one has been able to improve on them since, right? And the fact MacIntyre's virtue ethics, we call them, are directly derived from Aristotle, especially his version of practical wisdom, being able to figure out new rules on how to be virtuous depending on the specific circumstances of your situation. All right, then the next stage, the same virtues went through the medieval times, untarnished. So Christianity adopted Athenian virtues, absolutely. But to them, it added three more, okay, faith, hope and. Love and charity. We see this in saints and bros, which he called. He calls them the cardinal virtues, and he adds to them what we call the the theological virtues of faith, hope and charity or or love. Oh, but as Anscombe also said, these virtues eventually became laws, what we often call the natural law. The natural law are it's composed of certain principles, and we have to conform your actions to these principles, no matter what otherwise you are sinful. Otherwise you'll be penalized by the church, by the state, so on and so forth, to the expense of character. So these virtues were, in a sense, detachment, suffered from their dwelling in one's character, in one's personality. And this happened again. MacIntyre here agrees with Hanscom through and after the enlightenment, so spanning the 18th century and later as well, before it was common knowledge that morality was tied to the virtues. However, eventually, of course, this stopped being the case. Instead, there was, well, the virtues became laws, rules, right? In the past, perhaps there was an acceptance of a kind of natural hierarchy of things, with God on top, human angels underneath, humans, other angels. And then you have the organic life, the mineral life, and the demons and hell underneath and this express as well the virtues, right? Because the virtues were perfected through the angels and humans, of course, always had the issues of balancing these virtues in such a way that they would be able to act properly morally through this balancing. But since this order was eventually disbelieved, because of the rise of science and reason and the enlightenment, and afterwards, this order was, you know, people stopped believing in it, and it eventually grew obsolete. Yeah, of course. Do it so instead of morality, or the new interpretation of morality, was now based on reason. How can we find rational justifications for moral principles? Why should we be kind to each other? Why should we respect each other? Why should we be honest? Why should we obey the law right before it had to do with your character and the telos, the goal that character should be developing and aspiring towards right but now through to the rise of science, a lot of thinkers were trying to find rational explanations as to why we should love and be honest, and so on towards one and another. Among these thinkers, you have David Hume, who proposes the fact that we have certain passions, certain natural desires which make us ethical people. But more radically still, you have the manual count as we discussed, who sought to understand the roots of ethics through strict rationality. In fact, he assumes that nothing in ethics should be taken for granted, and he builds ethics from the ground up through strict logic. We mentioned the categorical imperatives, right? The three types, but they all add up to one. And finally, we haven't mentioned, I would like to mention this guy at some point. He's amazing. So rank Kierkegaard, who says that, sorry, you mentioned spheres of existence, the esthetic sphere, the ethical it was just like one slide, please. Slide, yeah, he's not been in the syllabus life. He's amazing. I mean, I would like to he can always use him for the exams as well. He claims that we arrive toward ethics. Is based on our completely unconditionally free decisions, because the alternative basically sucks, because might as well talk about this so in brief spheres of existence, if existence. He says, We passes. We pass for three stages in our life. Not necessarily might be stuck in one of them forever, but there is three phases. He calls the first one the esthetic sphere of existence. This is the more narcissistic phase which you're supposed to be going through in your teenage years, unless you are, you know, wise beyond

your ears, where you obsess on enjoying life, but also obsess on your appearances, on looking good, one, attracting others. So it's all about sensory gratification, where there is this through the admiration of other people, whether it is through partying, through traveling, enjoying life, enjoying the sensory aspect of life. So it's very mentalistic. I mean, it's fun, it's important, but at some point you realize that it will get empty or empty. You will frustrate it, you will exhaust it. Then you need something more. And that is when you realize that there is another sphere of existence, which Kierkegaard calls the ethical sphere. Being an unconditional esthetic person would frustrate you. Would lead to a sense of emptiness, a sense of void, and this, in turn, might stimulate you to start maybe admitting the presence of others, appreciating others, being more sensitive toward others. Of course, you might feel this frustration, emptiness, and it might get you nowhere. In fact, for clear between one sphere and another, there is no continuity, but sometimes pursuing one unconditionally to an extreme level might frustrate that sphere of its meaning, of its significance, which might maybe propel you to think of a different way of life, right? And ethics is the next existential sphere, right? And then after ethics for kindergarten, there's the religious sphere. The ethical sphere makes you respect more, maybe the institutions you understand more what what they're there for, also especially others. Respecting others be more sensitive toward your neighbor, the religious would introduce a higher power in your existence, a higher force of some kind, some transcendent reality which introduces spirituality. Doesn't have to be God, but something higher than you, not you super human, right? Again, there's no continuity between one and the other, so you can be stuck in this sphere for the rest of your life. More importantly, the decision to transition from one sphere of existence to another is expressed to what kindergarten calls the leap. Why a leap, a leap is a high jump. And very often for him, this leap is done in the unknown. It's a jump which you undertake in what he calls fear and trembling. Why? Because you're afraid of the unknown that this leap will take you toward, because you have no idea where it's going to lead you, maybe to more separate, maybe to some unpredictable catastrophe. You don't know what the ethic it is. If you're living in this sort of mindset, you do it anyway. We all do it. Sometimes we love someone enough, you know, or we're very passionate about this project. We have to leave our whole country, or wherever we happen to be living, and there's moments of anxiety, like, where is this taking me? What if I'm taking their own position, because I'm going to be adding them to the unknown? And you do it because you believe on some level that it's a better step just because of that. And to be fair, any act of faith is based on the unknown. Otherwise it won't be faith to be certainty or logic. So faith depends on the unknown to be faith. But with it comes of. Course, anxiety, fear, meaning and the understanding that with no idea what we're doing, you just believe in something. Is it

**Speaker 3 25:11**

Not a bit productive to say that?

**MT 5 25:17 [students' utterances are unclear]**

Yes, of course. I mean, you can have a bit of this, a bit of that. But yes, these are all simultaneous to different degrees ingrained in us absolutely. So it's just whichever is predominant. I mean, for him, he says, like his, to different stages of our life, one of these tends to be more predominant than the others, but we do make sort of life decisions sometimes to be a different person. They don't always happen so well as we expect them to. Yeah, I don't think that necessarily means an entire break. It's a bit too extreme. Yeah, that could be some something you can criticize them about. So for kindergarten, ethics comes from a strictly individualist solitary discipline made all along. It's quite a terrifying kind of thoughts mean it seems to assume no one will tell what's good for you, you find out on your

own when you make the decision on your own based on your life and what you've been going through and what you want your life to end up as. And this is how he justifies ethics. And again, it's very different from the type of ethics we have discussed, related to Aristotle, which is based on your character, and it's based on a part of who you are as a human being. Because for Aristotle, being ethical is organic. It's a part of who you are as a human, as a human savior. Right to flourish, to fulfill ourselves. We are inclined, for Aristotle, to pursue a certain path, the path of the virtues, which we slowly develop toward the good life. But for Kierkegaard, there is no such thing. We act in faith, in hope, but the action is going to lead us towards something completely unpredictable, and therefore what we have at the end of the day is just faith. Right now for Mac and fire, precisely because we have sought to justify ethics through sources like reason, like individualism here, which are not really that related to ethics, as very few ethics, right, we are left with what he calls a moral veto in our society. Since we do not ascribe ethics to what our characters to who we are, and we have changed ethics into a list of propositions rules which we have sought to rationally justify and ethics, true ethics, authentic ethics, has disappeared, and instead, it has resulted in certain famous or popular type of life science, which we often tend to look up to, all right? Foremost among them is the bureaucratic manager. These are what we call the entrepreneurs, anyone who works with the management of some type of finances, right? Human Resources, bankers, CEOs of corporate companies, people who are involved with making profits, essentially financial profits. Their ethics are derived from the Athenian ethics. Sorry, their virtues are derived from the Athenian virtues, but now again, they're twisted and distorted toward self gain, financial self, self gain. For these people, their ethics is pretty much what we call instrumental. So any qualities they would try to foster. Are there to are there as means to a different end? And the end is to make as much profit, as much as possible. So you can have corporate companies selling themselves as philanthropic, as having these charitable marathons, as giving donations, but they're obviously doing it to save face, to appear good, so more customers would flock to them and buy more from them, right for for instance. So here you have virtues, sure, in a sense, but the virtues are used instrumentally toward the monetary gains. Yes. So here we have an ethics which is based on efficiency, maximizing profit, no matter what, in a very ruthless manner, so manipulating others and manipulated by the system we have created. The manager examines economic resources and has no qualms about shutting down factories wholesale in order to achieve the best return for their shareholders. Their area of expertise is efficient management, which is for them, which for them has no moral dimension. Their code of ethics is simply meant to maximize on profits as quickly as possible, but they are, in turn, exploited by the system itself. And we'll be looking at Charles Taylor later on, who says that their behavior, their ethics of behavior is at its most dangerous when it infiltrates their private lives as well. So when they use relationships and their family and their activities through the types of ethics they use for their work in their work environment. So they are both, in a sense, maybe unconscious as well, manipulators, but they're also manipulated by the system they are a part of who watches the TV series called succession. It's a great example of how CEOs and corporate companies, the big ones, especially using a new CEO through a very pleasant facade, anyway. So it's not just managers. Of course, we're speaking here about the whole hierarchy of the corporate world, right from the bottom to the very top. The second one, the richest piece, and here Mensah has in in his mind, the aging rock stars, these decadent libertines who live off drugs, booze, parties, and of course, they have their reputation which stabilizes and finances their hedonistic pursuits, but for the estates, their ethics, of course, is exclusively based on what the guard would call the esthetic, which means sensory gratifications, right? Think of Merlin Manson captures this very well, actually. And finally, to keep the dog hanging together, is the therapist. So the therapist tries to balance things up. You know, most people for

McIntyre are manipulated and controlled by some version of the manager and the estate. The therapist makes us think that we're not, or he makes us. He tries to make us forget that we're not, that we are controlled by them. So the psychologist, the psychoanalyst, the fitness trainer, right, the influencer, the masses, the chat show presenter, right, the real reality TV. Kim Kardashian, all of these people trying to give a very pleasant, sunny side to life. They give us a very idealistic loser type of life, which they try to promote, and sometimes in a sense, force down our throats. And in doing so, they help us forget that we live in a world controlled by the market, which is in turn manipulated by the big corporate companies and their representatives. Right? So these aim to make life a bit more tolerable, but they do so of course, by giving us a complete delusion of what's happening in reality out there in the streets and in the real world. All right, so the therapist keeps the whole store, the whole sorry cultural show on the road for most of society, who is manipulated in turn by versions of the manager and the estate there is the television therapist, the chat show host, who joins everyone along and allows them to avoid having to look too deeply at the meaninglessness and superficiality we're seeing about the team building games of corporate companies exactly what they try to achieve. They try to give a kind of smile into the hole in a situation which is actually a very ruthless type of situation. It anyway. So for McIntyre, we have two choices. We're at the kind of nostrils, either we follow a more organic time of ethical life, so we change who we are by developing the virtues Aristotle, in a sense advocated or we follow what he calls a ruthless individualism that Nietzsche seems to have been preaching. I don't agree here with him so much on his idea of what Nietzsche actually is saying, but he does preach a sort of fruitless individualism to an extent Nietzsche doesn't does that. So he says, either we go all alone, individualist as kick guard also claims, also the way the world seems to be telling us to you, on your own, make as much money as you can. Pretend to be generous kind, but in truth, you know, maximize on your profit, no matter what or we go more toward the communal side, where we respect each other, we help each other out. We expand on our sensitivity towards the other and a sense of community and its institutions one or the other. But for MacIntyre, he says this is already happening. Why? Because the first shoes are already among us, but they are practiced in small communities, example, the community of sports, if you play basketball, basketball abides by certain skills which are related to certain virtues, right? You have to respect the members of your team. You have to help each other out, coordinate each other out in order to win again, right? Isn't that a virtue, of course, within the boundaries of basketball, but it still is a virtue. Also in other types of groups you happen to be in, like your circle of friends, perhaps close friends in a relationship. In small communities, the virtues are still present, and they are necessary if that community is to thrive, right? So all types of small communities, let's say chess, sports, maybe even the community of of being students, among others, there must exist certain virtues and over there for that community to be sustained, to be successful in some way. So already these virtues are around, but in small in small islands, in pockets, right? What we need, perhaps, is to expand these virtues to other areas of our life, to link, perhaps these small communities into a larger kind of life, right into our free time, into the way we act with others in general, and therefore develop a properly virtuous life. It's as if we say, you have these little islands of communities or groups you are a part of where the virtues have to be represented for that community and for yourself to become an expert or good at something, think about them. To be good at something, you need to develop certain virtues, which, in a sense. Are like skills. Take chess, right? You have to be very concentrated. You have to be very cunning, right? What else is there? I forgot the rest of the anyway. So these virtues need to be practiced in a game like chess, of course, within the boundaries, within the confines of the game. Now what if we understand this, and with that, such virtues also help us prescribe, or help us guide our lives in general. So in a sense, the very fact that such virtues help our

communities and our membership in such Hong Kong communities thrive and be successful is indication that they're important even to overall morbid lives when we relate with each other, when we talk to each other when we pursue other things, especially, of course, in our workplace. So right, let me read this and call it a day, I guess, 11 year. So for McIntyre, we're at the crossroads. We're faced with the stark choice of following the supreme individualist, Nietzsche. In or following the philosopher Aristotle, who understood the importance of our membership of a community which confers identity upon us. But in one sense, the choice has already been made for the virtues live on. In any case, in the small communities we forge for ourselves, the various practices and traditions which make up human communities, from education to medicine and from politics to business and commerce, all depend upon people being able to develop and sustain the virtues without the virtues, communities of whatever size simply collapse. All right, is it clear or some examples to concern to saying that in order to (unclear).

**Speaker 2** 41:00

Well, together you may because you have to have similar virtues.

**MT 5** 41:10

Virtues that could be questioned because maybe, yeah, different cultures tend to, maybe it's a question of priority. Some cultures give more product to certain virtues than others, but they still, in general, remain the same, virtues, like honour, like kindness, like wisdom, hosting. I was being recorded.

MT 6

## Male Teacher 6

Sat, Dec 07, 2024 10:41PM • 1:15:43

### SUMMARY KEYWORDS

perpendicular line, gradient flip, general equation, intersection point, simultaneous equations, distance formula, Voronoi diagram, bisector method, function definition, mapping inputs, domain range, set notation, vertical line test, real numbers, imaginary numbers

### SPEAKERS

MT 6, Speaker 1

[Students' utterances inaudible throughout]

MT 6 00:00

Okay. So guys this is a recording, doing some kind of analysis, but don't worry about it. So guys any crucial step that will help you link the line and the point given to find the distance of this one, any step that you can think of? You cannot think of any step? No? Nice. Anyone can think of any step to that. Okay, so we're going to see how it looks like. Let's start with this, then what we write? minus  $2x$  plus eight, ah yes minus eight. And then? The perpendicular to that is ... (student's name)? Yes. I will divide by five to arrive in the  $y$  equals  $mx$  plus  $c$ . Now, why is that useful? So you want to find a line that's perpendicular to this? Okay, so what was Plus?  $C$ ? I have no clue. Okay. So guys, if I know this equation, I know that that equation perpendicular to it at any point would look like this. Because I know that gradient has to be flicked with a minus. That is the first step. Thank you ... (student's name). So guys, now I know, a general equation about sample bending to align to this one. So I know this is my line rearranged. And I know that the perpendicular would be five thirds.

MT 6 02:28 [students' utterances are unclear]

Ask me ... (student's name), it will be other people's question as well, I'm sure. Minus, because when you are here, and you want to make  $y$  the subject. Okay. So this is this the same equation just rearranged so. Okay, Let me explain, let me explain. That's what I'm trying to explain. So, we are given this equation, right? One line, the black line, if I just do this is the same equation as this just rearranged for  $y$ . So this is still the same equation? Why did I wrote in this form? In order to find the equation of another line, which is perpendicular to this. So, this new equation, the only thing that has in common with this one is that the gradient is flipped with a minus, so it's perpendicular to it. And I have a  $C$  there because I don't know where this line is. This is a general equation for any line that would be perpendicular. I don't .. if I find  $c$ , then I will be able to find exactly this one. But now it's just perpendicular. So it could be any line. It could be any line. Okay. No, yes. So, this is a general form. This is just a line, which I know only one thing about it. What? That it has a gradient that's perpendicular to the top so it's somehow vertical to it at some point. Now, in order to be more specific, Jakub, what do I need to do? What's the next step I need to find? But I need to find what and I will substitute? I need to find  $c$ . So I have to substitute  $x$  and  $y$ . Do I know where the  $x$  or  $y$  is that are specific for this? Which ones two one, four? Perfect, ... (student's name), I know that this line goes to two and four ..., but it's the line that goes

to two and four. So, I can put two and  $4x$  is two and  $y$  is four. Plug them in two and four and find  $c$ . You can do that, try it and see if we get two thirds. So that means that now that I know  $c$ , I know my equation  $\frac{5}{3}x$  plus two thirds. Or you can you don't have to write that as a fraction. Jakub... did you do it? You did the next steps as well? Nice. Guys, any question up to this point? Please ask me now. Okay, now ... a question. Okay. So guys, now I know. Now I know the equation of the red line. But is this enough? Is this enough to help me find this distance, I just know the general equation of this big red line, nothing else. In order to find the distance, guys, what do I need to know? In order to find distance between two points anyone? in order to find the distance between two points? What do you need to know about this though? Both the coordinates. I know this, what is the other point that I need to know?

**[students' utterances are unclear]**

**MT 6 06:37**

Exactly. So guys, the second thing I need to know is the intersection point I need to know the  $x$  and  $y$  of this point. In order to find the distance. ... (student's name), here, try to focus. I need to know these two coordinates to find the distance. So how can I find these coordinates? Guys? Any clue? How can I find that intersection point. Hussein, any clue? Plotting, guys, plotting or simultaneous equations. If I saw the black and the red line and see where they meet, intersection point, I can find the coordinates of  $x$  and  $y$ . Can you do that guys on your cards try and do it plot in plotting the red can the blue equation and see where they meet, so you can find this point.

**MT 6 07:40**

if you're good with this, it's fine. That's how I do that. If you find this difficult you just plot on the calculator. For difficult equations, it's much faster to plot on the calculator if the numbers are taking.. So guys, remember you can either plot them to find intersection point plot them or yes, or you can go into an applications and then ... simultaneous solver, any of the two (unclear).

**MT 6 08:34**

So guys, if you're gonna plot them, if you're going to plot them, you need to use your equations in this form. If you're gonna use the simultaneous solver, you need them in this form. Actually, you would have to write say  $X$  plus five  $y$  equals minus eight and this one, you would have to write it as  $5x$  minus three  $y$  equals minus two. If you multiply by three ... I just multiply multiply this by three and move the  $x$ 's on the  $y$ 's together. Tell me ... (student's name)

**[students' utterances are unclear]**

**MT 6 09:31**

so if you use a simultaneous ..., you need to have them in this form. If you're just plot them and finding intersection points, these are fine.

(unclear)

So you will need those  $2x$  Will you need  $x$   $y$  and  $z$ . So three the next one is my next one is minus eight do the next one. Do you know ... (the rest is unclear)

**[MT6 walking around the classroom and checking students' work]**

**MT 6 10:51**

Plot them and find intersection points in here. Okay guys are we good? What did you get? minus one minus one minus one minus one so now guys if you know minus one or minus use the distance equation to find the distance.

Yes.

11:33

(unclear)

**MT 6 11:45**

Two times five, so ten all over three. If I move ten all over three to the other side, it will become? minus ten all over three plus four. Now in order to be able to add them I need the same denominator so I'm going to multiply by three minus 10 plus 12. But do that on your calculator; you don't have to do just put two times five over three and move it. I mean instead of two all over three you can write zero point whatever the calculator gives you 0.77. ... (student's name), okay? So guys did we manage to get minus one minus one anyone that needs help with it? Show me.

12:44

(unclear)

**MT 6 14:10**

... (student's name), come on!

14:21

(unclear)

**MT 6 15:13**

So why don't you just put ... in second place and then intersection five ... (unclear).

**MT 6 15:36**

If you do this. Guys, so, ... guys I see that by graphing and zooming you get the calculators to get stuck sometimes. So, I think that the simultaneous solver is better because you will never get this problem with the zooming.

So this works better. ... So guys, now that I know that this point is minus one minus one, what's left to be done in order for me to find the distance? How can I find the distance ?

**Speaker 1 16:23**

(unclear)

**MT 6 16:27**

Powers n plus plus N What was the formula? Remember? For distance?  $x^2 - 2x + 1 + y^2 - 2y + 1$  and all we do so guys, you need to use the equation of distance distance is  $x^2 - 2x + 1 + y^2 - 2y + 1$  ... from Pythagoras so you need to use the distance using these as your coordinates. You're done? Try it to either see if you're gonna get your five on a three.

**Speaker 1 17:28**

I got two calculators, this is yours.

**MT 6 17:42**

... so guys see if there's anyone who can't get 5.8, let me know.

**Speaker 1 18:01**

Okay.

**MT 6 18:05 [students' utterances are unclear]**

See if you're okay, by putting doing the subtraction, the squares, the root and everything if you know how to plot them in. minus minus plus in the middle. If you need your data booklet for this, feel free. Does anyone need them? So you can check where the distances remind yourself of the formulas a bit if you need it, if you need them .... So guys. Anyone stuck? Are we good to move on? Okay, let me show you. I want to show you one last thing.

**MT 6 18:54**

So, guys, last thing, I want to show you about voronoi diagrams. And we won't be using calculators for this. So any mobiles or stuff you can put them away? Let's look at the last one. So guys, how do I add a point? So if they give you a Voronoi diagram, and they ask you to add one site, if you add one site, then everything that you arrange as you can probably imagine there's going to be a new cell phone that site. So what is the method to be able to do all this new ... on that site? So what would you do guys any idea? What would be the first move you would do when you have a new site to find the new cell around the new site?

**Speaker 1 19:53**

Find by sector to ...

**MT 6 19:57 [students' utterances are unclear]**

Perfect so definitely you will have to go for That bisector between this and the one close to it like this No, somewhere in the middle does it make sense? then what would you do? What would be the next one? Do the same with the ones around. ... (student's name) take a look. If I know this new, I know that the bisector is between them like this. That will be the next one. Then between the one next to it and then between the one next to it I'm done. Does it make sense? So you start with the one closest to it. Let me show you, you start with the one closest to it, you find the perpendicular bisector. Okay, that's one part of the cell. Of course, you cut the ones that go into the new cells you just keep that point and then you continue with the ones around it this one that one and that one. Let's see how it goes. First perpendicular bisector between these two that your new point that you want to keep and then perpendicular bisector between these two that ... keep and the perpendicular bisector between the last one and then you erase everything in it and that's your new cell.

**MT 6 21:26**

Okay, does that make sense? No Yes? Are we good? Ok guys, try and do one on your own, copy this in your books and other cell ... accounts at this point here. (unclear)

**MT 6 21:54**

Copy this in your books and add this here and show me how ... you will need a pencil for this, and if you don't have a pencil let me know. We have, we don't have to be super

accurate, by eye. Copy this as you see it, not the graph just just this same shape. Anyone that needs a pencil for this ? ... it's the same for the exam.  
Anyone that needs a pencil?

22:53

[students' utterances are unclear]

**MT 6 23:09**

... (student's name), shhh.

23:19

[students' utterances are unclear]

**MT 6 24:39**

Anyone finished?

**MT 6 24:45**

Yeah, so guys, first thing you should do. The first thing you should do is find the bisector between the between the closest one and this one. Okay so that would be so you would have a line like this. Then the next one would be between these two. And the third one would be between this and the one in the bottom which would be somewhere here.

**MT 6 26:07**

... (student's name), calma, it's very annoying.

26:23

[students' utterances are unclear]

**MT 6 26:28**

(teacher walking and helping students) Not the top left, you did it under. So guys first a perpendicular bisector this one. Second one is this; third one is this one. So I guess this has to be closer.

**MT 6 26:59**

So guys, what do I do. I erase the ones around it so Not good It's more so many ways the lines inside that cell this if I were if I was using the ruler, this one should was probably there was here. So when I also use this one, you should get something like this, take a look. And now this distance is .... (unclear) So guys, the lines should be between these two between these two between these two perpendicular bisectors exactly in the middle.

**MT 6 28:00**

So ... (student's name), don't do that come on. Use English. And if it's not something important, just don't do. Don't say it. So guys. Now this means what does it mean? What does this point show me?

This point, what does this point show me? What is this point in face? Does anyone know? What is the point where the three lines meet the vertex? As we say, what's so special about this point? Does anyone know? Say it.

[students' utterances are unclear]

**MT 6 28:48 [students' utterances are unclear]**

... the three points. So for example, if these are, I don't know hospitals, and you need a supermarket to provide them with goods, then this would be the point you would build it for example. Or if I have three major cities and I want to put my mobile antenna sound to serve them all, I would have to do this and say okay, this is the point that is equal distances from all of them. So, I can choose that point to put my antenna so I can serve them all, for example. Okay, does it make sense? So at any point where we call the vertex where the lines meet is equidistant from that sites around this point is equidistant from the sides around this one and so forth. Okay. So guys, what do we do? Once more, I'm summing this up. What do we do when we have a new site? We start by finding the perpendicular bisector to the one closest to it, and then the one next to it with all the neighbours one by one, first perpendicular bisector. Second between these two. Let me delete those. That's the first one, the second between these two, the third between these two, and so forth. We continue until we have a whole cell, then we erase all the lines in between. Now, we're done. Okay. Any question guys?

**[students' utterances are unclear]**

**MT 6 30:43**

I'm going to give you some a bit of work on this on the weekend. And now. And now introduce a new topic. So that's chapter five has to do with something that you might be familiar with, which is functions. You probably have heard it before. Please look on the board and tell them if there's any of them that remembers any of you that remembers how to deal with this. Take a look. Just a small intro. Take 30 seconds. See, choose which one you think is right. And we can then vote. 30 seconds.

**MT 6 31:41**

Think on your own. Which one do you think is right? Which one is F of  $3x$ ? It's free to guess it, I will not charge you for this. So, 10 more seconds. Guess one of the possible answers.

**MT 6 32:14**

So guys, show me when I done the countdown, show me a B, C or D so I can see what you think the answer in 5,4,3, 2 and 1. Show me what do you think, come on, come on, come on. Some As, some Cs, some Ds, D, D, C, D? They cannot ... C, as I was saying it's free, the whole thing. Just choose one. Okay, guys, if you don't have any clue how to find this, don't worry, because we're gonna go through them together. Okay. If I put, guys, f of  $3x$  means that instead of  $x$ , I put  $3x$  instead of  $x$ . So instead of this  $x$ , I have to put  $3x$ . So what is two times  $3x$ ?  $6x$  plus one? Okay, so, guys, this is a function, I'm going to remind you what function is, how do we work on them. And I want you to be super chilled out because you're the calculator will do most of the work for you. It's simpler than what you were doing before. Okay, so calculators can do this kind of stuff and help you get the solution. So guys, let's understand functions in case we don't know what they are yet. And just some weird symbols there. Let me remind you the basic stuff of what the function is. And then we're going to see how we can solve some questions. So guys, first thing, what does a function do? A function gets one number and matches it with another one. For example, if I have a function, let's say  $x$  squared, what does this mean? It means that I can give it an input of give me a number, whatever number three, and I get an output of nine. So each word so function imagine it like a machine, you feed it with numbers, and it gives you output you feed it with some data and it gives you something out to like a computer. I press A and I see A on my screen if I'm on WORD..., So, function is like a machine you give it something and it gives you something

out. So, for example, this function, if I give it zero, what do I get? Two times zero plus one, which is one. So zero matches with one. If I give it two for example, you will get five and so forth. Let's try something guys. suggestory formula / speaker and hearer oriented Get your calculators and type this type this which is super simple, just type  $2x$  plus one in your plot, your top left y equals  $Fx$  by the way,  $Fx$  is is the wire y equals  $f x$  and y is the same thing. So when you are writing your equations from the top left, where it says Y goes top left y goes  $2 x$  plus one. Yeah, top left top this is everything so guys put to x plus one do we all know how to put X the X is next to the blue to the green button to the button next to the green button plus one and now...

**MT 6 36:39 [students' utterances are unclear]**

Guys, now let me actually show you this. Now guys, how can I find a value? Please bear with me. How can I find the value? So I'm gonna do the same as you. So I'm gonna go there. Let me quit this. So I'm gonna do the same as you. I'm going to go there clear visuals out. So what was it  $2x$  plus one  $2x$  plus one. Now if I want for example, if I need to find the F if I need to plug in 2.6 What would be the answer and this is an easy one but for any equation. So what do I do guys? I go on second and trace where it says calculate second and trace where we use to find the intersection point.

**[students' utterances are unclear]**

No, we are going to do just value the first one. if I just press one there if I just press one, I see my equation and what's your report ... 2.6. If my x is 2.6 What is my y 6.2. Simple. So for any equation, any equation guys, you can go on second and trace. You can put the x that you want and you can find the equivalent y. You put the X and and you get your y. Did you all manage to get the 6.2? ... (student's name) ? good no ...

(students are working)

**MT 6 38:55**

So guys check. So, guys if you get an error, go to the window and change your ... (unclear) to something smaller than to starting from zero

**(students working) [students' utterances are unclear]**

Okay, so guys. So what is a function? A function is a machine let's say that links, xs and ys; it links input and output, this process here that I'm showing you, which links every x with every y. ..., It's called mapping. Okay? It's mapping the inputs with the outputs. So, does anyone know what a domain and what is a range? Do you remember? By any chance? So, guys, all the possible axes you can get? So for example, from here, what are the possible axes I could get? For this equation? What are the possible axes? ... Generally, do I have any kind of limitation, if at all, so this means all the real numbers, every real number I can use here. So all the real numbers would be my domain, every possible number. And the range is all the possible output I can get. So, domain, the Xs, the inputs, range, the outputs. Okay? If I'm just using these numbers, then my domain is minus 1.0, 1.7 and so forth on all my my ranges from minus one to 7.2, for example. Yes, I'm going to show you how we write this when it could be any number. Okay, so guys domain is a set of all my xs and the range is the set of all my ys. Okay? Domain is the set of all the possible inputs Xs; range is the set of all the possible outputs. So range is y, is all the possible Ys Yes. So guys we could have many ways of linking Xs and Ys. Okay, we could have a relation between Xs and Ys, but not all

the possible relations are functions, we're gonna see that functions have a specific characteristic that is different to any kind of relation. Okay.

**MT 6 48:20**

Let me show you this first group. I'm gonna tell you what the functions are. So guys just to make this clear, so my domain is all the possible Xs what is my domain here?

Let me see hands up. So we don't start talking. What is my domain here? My domain. Minus three and three, from minus three to three. Okay, let's see. So, all my possible Xs is from minus three plus three, whereas my range is ...

**[students' utterances are unclear]**

**MT 6 49:12**

Who said it? So you still can't find the domain, the Ys? They ain't showing yes, no. No, the Ys. Who can find the Ys? One to minus two. So all the possible Ys, they're your Ys. And guys, you always look at your maximum and minimum Y. That will be your range and your maximum X that will be your domain. Okay, from two and from two for the y's In the domain is the x's, the range is the y's. Okay? So, you can play with this the link is on the PowerPoint, give me one sec. Okay. So guys, domain range, the x's on the y's and every X can link to different y's okay. So, what are the pairs of coordinates two and A, two and b two and C domain? What is a functional? not all the relationship of functions functions are is a mapping where every element of the domain is mapped to exactly one element on the range. One with one. So, if you have, I will show you, if you have So, are these functions, do each one match with exactly one he matches with him, the one he matches with one as well, all of the domains match with exactly one. But if this is not true, if I get something like this, for example, if I get this, if I put two and I get two possible answers, this is not a function anymore. So functions are very specific, they match one to another one. Okay. So, this is not a function because it's matching to two possible answers. Okay. Does it make sense? So then let's see the definition again. So a function is mapping says every element on the domain is mapped exactly to one element on the range. So, let me show you a couple of examples. So, guys, I'm mapping the x's, all the x's on the domain and all the y's on the range.

And is this a function? Why? So does each one of them does any of them matches two?

**[students' utterances are unclear]**

It is, if you see two lines starting from the domain and going to two possible answers, then it's not a function. But this is one to one thing he's two. And he's two as well, but or minus two. But you don't get 1x with two possible Ys. And I want to show you how this looks in the graph. So you can recognise, okay. So, this one is not a function, because from one you get many possible answers. This is a function because each one of them matches exactly with one. Okay. So let me give you an example of a graph. Let's say that you have this graph, and then you have this graph. Okay. Are both of them functions, do they show me functions? Or not? What do you think? Look, again, are these functions is every X matching to exactly one way. Both of them. The first one is okay. So, every possible x, if I go it matches exactly one y and possible x matches one y. What about this one? Every X is matching two Ys. So this one is not a function. These guys, what I just did is called the... the vertical line test. So you can do a vertical line and see if it's cutting more than one point then it's not a function. If it's only cutting one point when you do the vertical line, then it is a

function. Okay, so the theory you need to know is here what is the function what is a mapping diagram? What is the vertical line test? Okay, let's do some examples. Guys, in your books start with this. What is the domain and range for these two relationships? What's the domain? What is the range? Write them down by the what's the domain? What is the range?

**MT 6 55:21**

Ten more minutes, we're getting there. Domain range, keep a note. Go on, use your hand.

**[students' utterances are unclear]**

**MT 6 55:52**

It is not just recognising them. It is also how you write them, guys. See how we write them. How do we write a set? We make this bracket, we make this bracket. So what is my domain which values would I choose? ... (student's name) 024 and five and see how I write the set. look at the brackets. This is called set notation. And that's the next thing I will remind you now how we write these things. And ... (student's name), my range there as well done for you five, six and 10. Okay, so when we want to do a set of numbers, we make this, we make this symbol and we add them in using commas. Okay? This is called the set notation. I'm going to show you how it works. I'm going to remind you now. ... (student's name), guys, if you give if you take the numbers on the table, again, the same thing, the axis is the domain, their range is the Y. Okay, I have some examples. I'm going to go through it quickly. Guys, now, how would I write what we discussed before? If my  $x$  would be any number, how do I write it?  $X$ ?. So my variable is  $x$ , where  $x$  could be any number, this means it belongs to  $\mathbb{R}$ ,  $\mathbb{R}$  is the symbol for the number. So  $x$  such as such that  $x$  belongs to the set of the real numbers, any number, any number which is real. Okay? You will not go through numbers, which are not real, there are some numbers called imaginary numbers. That's why we separate them to live and imaginary. So guys, how do we write that my my domain is for example, any  $x$  that could be any real number  $x$  line whereas  $x$  belongs to the real numbers, this is what that means. Okay, you will have to identify these when are given in the question, or you will have to give your, your answers in this format. That's why we're going to go through it now. Okay. By the way, these are the possible numbers, the number groups, let's say, the natural numbers 0123. Negative not involved. So the natural that don't involve the negative. These are all the integers. So again, no decimals, nothing. Negatives included. And then you have different ones. Anyway, we are using the real ones, which includes fractions, negatives, decimals, pie, numbers that never finished things like that. So these are the all of them. These are the imaginary ones you don't need to worry about I'm just reminding you that different groups of numbers, when we say  $\mathbb{R}$  we actually include all the possible numbers that we have seen up to this point? Decimals, negatives? So yes,

**MT 6 59:21**

No, we're gonna keep to the real numbers .... We're not gonna ever do this. No. So guys, for example, take a look at this one. Let's say that this is the graph given, and I see that it starts from one minus one on three. Does anyone remember what that dot is?

59:48

**[students' utterances are unclear]**

**MT 6 59:52**

No, that's not a Voronoi diagram. Good try. But think again, guys. What is that point? Does anyone remember? What's the difference between this point and an open point like this? Have you seen this before? What? What? What did it mean? You don't remember, like if you've seen it does anyone remember when you did the the qualities perhaps, including and not including. So when the circle is full, you are including this number. So that means  $x$  is bigger than minus one and including minus one. So  $x$  is where  $x$  is bigger or equal to minus one, and my  $Y$ s are bigger or equal to minus three, all these  $x$ 's and all these  $y$ 's are part of my domain and range domain, the  $x$ 's range the  $y$ 's. And, guys, when I have an equation like this one, look at the graph, then all my  $x$ 's are part, all the  $x$ 's could be part of this equation. The  $x$ 's just continue, I have no limitation for my  $x$ 's. So  $x$ s belongs to our any serial number, whereas my  $y$  is smaller or equal, if it's full, if it was open, it wouldn't be equal go smaller than one, because that's my  $Y$  was one smaller than one. Okay. So last thing for today, we want to be able to recognise this type of writing. So that's the set when you see these, these is the set all the  $x$ 's such as  $x$  is bigger than zero, for example. There is also one other way of writing this, which you will see in your book, instead of this line, we put this as well, okay, it's the same thing, set of all the  $x$ 's, whereas  $x$  is less than two, for example, it's exactly the same thing. Okay. Guys, sometimes, usually, when we have fractions, for example, if I had this  $Y$  equals five over  $x$ , , what is my domain? What are the possible  $X$ s I could have? Easy to all the  $R$ .

**MT 6 1:02:35**

... (student's name), if this is my equation, what is my domain for this equation? as well? Nice. ...the domain ..., is there any number that is not allowed?

**[students' utterances are unclear]**

**MT 6 1:03:01**

Which number is not allowed? Gonna have a fraction? Zero. So I need, guys. When you have a denominator, your  $x$  cannot be zero. Hopefully you remember that. So how would I write this? That my  $x$  could be any number but zero? How would I write it? Can anyone give it a guess? How would you write that I want all the axes but not zero.

**[students' utterances are unclear]**

**MT 6 1:03:31**

Go ... (student's name) ? Yes. Instead of 2 what do I write? How would I write it guys, I want all the numbers part zero equal and close 0 but I want all the all the other ones as well. So then I go in three parts,  $X$ , all of them but zero, but seven, seventeen. Okay. So if I need to exclude one, I put a third part of information,  $X$ , all the possible numbers, all the numbers but one, but zero but seven .. but whatever. Okay? Makes sense? Okay, let me see this.

**MT 6 1:04:23**

Okay, one last thing, guys, is that all of the closed and open circle? When it's closed It means that it's included. I want that number. When it's an open circle, you don't get the equal sign. Okay, I'm going through super basic stuff, just to be sure. Okay, now for the first time. So, when it's smaller or equal to eight means all the possible values from minus infinity to that number. So, guys, that's the set notation and is also this notation. Is this familiar? When I get this, it means that  $A$  is included, when I get the bracket like this, it means it's not included. So, when  $a$  is included, you do this when it's not included, we close the brackets this way. So

this means that A is included that y is equal, not included, not equal. Okay. So, if, for example, your domain or your range is between 0 and 20, and you want zero and 20 to be in, you would put these type of brackets. And if you don't want them in, you would put these ones not including the two sides. Sorry. Okay, guys, I'm gonna try to give you ah, we have seven more minutes. So let me let me give you some more examples on this. So guys, all the things we discussed, I'm not adding any more. Look at these ones. Find domain and range, domain and range. Some examples. By the way, your books (unclear)

**MT 6 1:06:33**

And I want you to write your answers using the set notation. What I just showed you one domain, so the domain is for the x's and the range for the y's. Use set notation, guys. So use this bracket x whereas x write it down. Don't do it in your head. ...

**MT 6 1:07:17**

... (student's name), we did both Xs and Ys for both of them. Try the other one as well. Is there any problem with the Xs? Is there any x excluded? So what should I write? X, whereas x belongs to R any possible x? There's no problem. Any x could be in it. There's no no x that is excluded. If you, if this continuum, they keep opening and opening and opening up and including all the Xs. Okay? What is that notation of Y?

**[students' utterances are unclear]**

**MT 6 1:08:15**

You look confused...v(unclear) Why would it be in the real world? Because this graph opens and opens and opens up and the more it goes up, it includes more and more Xs no, the Ys you don't have these ones. But the Xs as it opens and opens and opens it keeps including more and more and more. So it could be any x there's no limitation for the Xs can be from minus three to five. On the y Xs is anything above minus three. So how we're gonna write these guys, above minus three? So guys, any number any number bigger or equal than minus three? And it could be a real number y belongs to R, yes. Because it's not. I mean, it's not just the integers above minus three, it could be any number above minus three. Because in a specific data set, you could have just, I don't know, integers you could have natural numbers. So if you have any possible number you need to say that as well. So guys, what is the domain ? for the second one. domain for the second one. Xs? Did you do it? Why? Can you see the possible Xs on this? Yeah, what are they? minus three and it continues. So four minus three and above. So how would I write it? X bigger or equal to minus three? Where x could be any number above that? Okay, so x ... equal to minus three. Is there any limitation for my Ys? It's exactly the opposite. My Ys start from zero as they spread up, they could be any possible Y. Does it make sense? Guys? Take a look. See if there's any question Yeah, ... (student's name). Okay. Last one for today, last one. Domain and Range guys for these two domain and range. See if you can write it with set notation.

**MT 6 1:11:44**

What is the range of my Xs? What is my domain? What is the biggest possible x? Eight and is there any smallest? So how would I write it?

**[students' utterances are unclear]**

**MT 6 1:11:59**

Anything? More than eight Smaller than eight, including eight. Smaller and equal than eight. And my Ys. What's the smallest? Minus two? Everything bigger than that?

**[students' utterances are unclear]**

**MT 6 1:12:25**

Yeah. Yes, the ... (unclear) shows that it goes like, forever. Okay. So that's one way of showing it. And the last one guys. Who wants to give it a try? Who feels confident about the last one? Show me some confidence if you want to go for a break.

Is it only ... (student's name) ? Come on guys. Anything bigger than  $4x$  equals so the Xs have to be above two. This is the  $x$  equals two. So, I'm not allowed to have this  $x$  zero.

**[students' utterances are unclear]**

**MT 6 1:13:21**

minus one is .... So even bigger than the minus one minus one. ... (student's name) , what were you saying?  $X$  could be me. From from two below, so I'm not allowed to have this?.  $X$  could be any guys.  $X$  could be anything. This could be  $x$ , this one could be  $x$ . And as this opens up, all these  $X$ s could be possible. But my  $y$ 's have to be bigger than minus, minus one. They start from there and go up. But they're not equal. Not yet. It's going to be a completely empty one. You will see, no guessing and this looks like not but yeah, you're gonna see it full orit is going to be completely wiped away if it's not good. See you guys.

FT 1

# Female Teacher 1

Sat, Dec 07, 2024 11:21PM • 1:00:48

## SUMMARY KEYWORDS

lesson plan, unit 3.1, revenue expenditures, capital expenditures, finance function, profit and loss, fixed assets, revenue expenses, depreciation, balance sheet, working capital, business culture, organic growth, redundancy, lease agreement

## SPEAKERS

FT 1, Speaker 3, Speaker 2, Speaker 1, Speaker V (from the video)

**[Students' utterances not clearly audible]**

**FT 1 00:00**

Food okay at the back? Hugo, how come you're not feeling cold? It's beyond me. The other one there, trickling in. You're okay. Mela, I'm not seeing ... (name of a student), so there is definitely an empty place. She is, or is it fine? So how many desks are empty? Only one, yes, so it's only ... (name of a student). All right, what are we going to do today? I finished unit 3.0 so 2.0 we won't find the probability. All right, you only have my PowerPoint for it, so it is the foundation for a lot of topics in Unit three. So obviously, I didn't just invent the content. Okay? Throughout the day. Then we're also going to cover unit 3.1 which is called revenue and capital expenditures, the introduction to finance as well. All right, after I've done that, I will just shift to revision. You know that we also have another hour after the break. Alright? Some of us will feel like champions, because some of you are running all right, and I can't wait to run because I'm feeling cold. So anyone who has a free lesson after this one, I think I'll just start running and then continue running with you after. So I just need to rush. Okay, so that is how I'm planning the lesson, new material, revision. Okay, ready for it?

All right, in the meantime, let's watch the news so we can get started. Give me a second; I pressed the wrong button.

So, what's in the news? The main headlines today: we're still hearing criticism aimed at the UK. Last week, Sir James Dyson—the Dyson guy, known for his vacuum cleaners—was quite vocal. He called out the UK government, urging them to get their act together regarding the economy.

Yesterday, we also got news that the UK car industry has hit its lowest production levels in 66 years, due to a combination of the recession, Brexit, and logistical issues with parts. And who would've thought? Onions have become a luxury in the Philippines. Apparently, onions are a staple in almost every dish there, and because of a shortage, prices have skyrocketed.

Another big story is the renewed push for workers to return to the workplace instead of working online.

Speaking of controversy, a wealthy Indian businessman has been accused of fraud. That ties into our higher-level topic of crisis management and contingency planning.

Take Boeing as an example: their 737 model, which was involved in two major accidents—one in Ethiopia and another in India—was found to have a known system problem. Despite that, the planes were still allowed to fly. Now, Boeing faces a massive court case, with families of the victims seeking compensation. This is an excellent real-world example that could inspire a great IA or extended essay idea.

In other news, Musk is still making waves with Twitter and Tesla. Trump is back on Facebook, so life's bound to get... interesting.

If we quickly check the one-minute news summary, it's dominated by the tragic mass killing in the US. Unfortunately, uncertainty often fuels emotional responses.

During this, take out your notes or whatever gadgets you'll be using. And I don't want to see unnecessary movements on the desk, all right?

**Speaker V (from the video) 04:34**

Israel has conducted strikes against Palestinian militants in Gaza. The Israeli military reported that warplanes targeted an underground facility used for the production of rockets by Hamas, in response to rockets fired from Gaza.

In the United States, authorities have charged five former police officers with the murder of Tyree Nichols, a Black man who died after being stopped for an alleged traffic violation in Tennessee.

In Haiti, police officers and civilians have protested in the capital following the killing of more than a dozen officers by criminal gangs. Police accuse the government of failing to take adequate measures to protect them.

Meanwhile, events are underway to mark International Holocaust Memorial Day, observed on the anniversary of the liberation of Auschwitz-Birkenau. The day honors all those murdered by the Nazis during the Second World War.

**FT 1 05:36**

So we're up to date. Shall we start unit 3.1 it's on COVID 19, so you have no excuse not to keep up to date with COVID. All right, it's ... (unclear) who asked me, who doesn't have cognitive ... (unclear)? Last time you were on it, what can you be studying in business? Three, okay, we start so now that you know a little bit of terms related to accounting, we should be able to proceed with adding to the knowledge with regards to this important function. So what does the accounting function, the finance function, do? Any idea, what will we be studying? You should know, what we will be covering in the topic about finance? What does an accountant do? What does the financial controller do? Any idea? Profit and loss. That's a document that accountants have to prepare. How often, if you are a PLC, if you are PLC, you need to literally publish your P and L? Every three months. But the P and Ls are prepared instantly every day if you want for management. So we're all the time keeping our eyes on the data that is coming in. Has the data become really important nowadays? So, data is literally feeding you with information for decision making. What does the finance function involve? It's not just about managing money; it's also about making investment decisions. For example, we explore which equipment or product to invest in. There are various tools we'll learn to help accountants and the finance function make decisions based on quantitative data, or numbers. However, it's not all about profits; we also consider factors like environmental impact or the well-being of workers.

Moving on, has anyone worked with accounting terms beyond profit and loss? Have you heard of the balance sheet? What about cash flow? You should have included cash flow in

your business plan for JYe. Did you? I hope you're following it because it should guide your next steps.

One of the first key concepts we'll examine is capital and revenue expenditure. This is an important distinction in finance. Have you encountered these terms before? What does it mean when they say something involves a huge capital expenditure? Let's break it down. Capital expenditure refers to spending money on fixed assets—assets that a business uses over the long term. Can someone give an example of a fixed asset? Correct: land and buildings. Why is that a good example? A fixed asset is something you plan to use for more than a year, not something you intend to sell. It's also of substantial value.

Now, what about revenue expenditure? This refers to the day-to-day expenses required to maintain and operate a fixed asset. For example, if you buy a car, expenses like fuel or routine maintenance are considered revenue expenditures. Even major repairs fall under this category, whether they're routine or due to accidents.

The distinction between these two types of expenditures is important because it affects accounting treatment and financing. For example, you wouldn't take out a loan to buy fuel, but you might for upgrading a factory or purchasing expensive equipment. Upgrades related to fixed assets, like adding solar panels to a building or enhancing a vehicle's GPS system, are also considered capital expenditures.

Why does this distinction matter? Because capital expenditures and revenue expenditures are recorded differently in financial documents. Capital expenditures go on the balance sheet as fixed assets, while revenue expenditures are part of the profit and loss account (P&L).

There are two main financial statements: the P&L, which tracks income and expenses, and the balance sheet, which shows assets, liabilities, and equity. Understanding what goes into each is crucial for finance professionals.

The Grade 9 curriculum outlines nine criteria for identifying capital expenditure, which can be remembered using the acronym "BELT." For example:

- **B**uying fixed assets, such as a factory or machinery.
- **E**xtending the value of a fixed asset, like adding to a warehouse.
- **L**egal costs associated with purchasing a property, such as notary fees.

Does anyone have questions about this so far? These concepts will form the foundation for more advanced topics later. For now, focus on understanding the basic terminology.

**Speaker 1** 18:03

No.

**[Students' utterances not clear]**

**FT 1** 18:05

Even for example, if you're buying a car and you're buying it from abroad, and you have been charged tax that is part of the cost. If it's refundable by VAT, it's even better, because you will deduct it, then again, transportation costs to get the fixed asset in its location. If I'm going to buy a piece of equipment, and it's gonna cost me 10,000 euros, but to be transported to my factory, I need to cash out another 500. The accountants will tell you, you know, give me that bill as well. Because there's I'm going to include this not as transport costs, but as part of the cost of the fixed asset, it's allowed to be capitalised – another meaning for the

term capital. How many have we done last lesson? Do you remember? One of them was the capital city, what did we do for capital? Capital, capital city, the amount of money by who? when we say capital, who gave us that money? Shareholders or the owners. All right. And then we used another one which was capital in intensive, what does it mean?

More automation, more machines all right? Then we did lend labour capital, the factors of production. And we looked at capital in that sense as men need resources. There was one of you who said that, remember that one of you said it. Okay. If you're improving the fixed asset, that is still part of the capital expenditure, installation costs, so you got the machine they transported it for you and now you need to get an electrician to get it all set up for you. You don't include that expense as an electrician cost, you top it up to the value of the fixed asset. Okay, you like the beltin? Have you ever met someone from Valletta, yet? Yes, who? You are from Valletta, all right!

Oh so you live there, you live in Valletta. Oh, how nice. It's so alive Do you swim in Valletta, Simon? Do you swim? Where? .... That's where I got covid.

Any questions? Fredrik all right? .... Because of your arm whoa, what? Revenue expenditure. So, give me some examples of day-to-day expenses that can come to mind. What kind of expenses does a business have on a day-to-day basis? Ejja. A maintenance electricity, thank you another one maintenance maintenance, maintenance of a building maintenance of a machine any other expenses? employee's wages, they are an expense, they are not a fixed asset, the employees who cannot buy them, right. Any other one, one last one. Electricity, insurance and rent. Very good. Well done. Okay. Mela, if you're gonna take a fixed asset and repair it, because Anastasia decided that she's going to smash it against the wall, right? If you're trying to bring that fixed asset to its normal state, you're not gonna break it. In that case, it's still an expense, you categorise this as revenue expenditure, right? So no addition. So for example, I take this room decide to whitewash the paint there was right? In that case, I'm just bringing it back into its normal state. So it would be a revenue expense, right? It's called revenue expense, because it's like, Oh, my God, how contradictory is its revenue? Or is it an expense? It's an expense that helps you to generate revenue. So the fact that I rented a place, it's helping me then to generate revenue, I'm paying electricity, it's helping me to generate revenue. ... No, cause if you're upgrading a fixed asset, the tax, the value to the fixed asset. So that's called capital expenditure. Alright, so if I buy this room, if I'm just whitewashing it, and just bringing it back into its normal state, it's a capital ... our revenue expenditure, if I decide that I'm going to fit into this room, new modems and new internet and new cables everywhere, that is going to be a much major overhaul, and that is going to be capital expenditure. All right. Any expense. So we've got things in fuel, there's an example all right? So even though we are not covering these yet, you're already getting an idea of the things that go there. We call them day to day expenses, expenses on a day to day basis. So even the coffee that your workers use in their canteen, those are day to day, cleaning materials, anything that you can think of, that affect you in a business, and these go here, right? So even if in the exam, he asks you to distinguish between the two very, very common, you could relate that one goes here and one goes here. And later, we'll be even more experts in that. Do I have any questions? You're fine? it's not a difficult topic at all. Can I proceed? ..., (student's name) all right?. Can I proceed? Alright, what's the difference in defined .. so basically capital expenditure will go in the balance sheet, and our higher level students later will take the value of this asset. I use this with my accounting students. This is a car right? It's Jamie's old book. I have four of them. I gave them all around to accounting teachers over the years. This car cost me 9000 euros. Can you see it there? That 9000 euros accountants are going to include it in this document as a big asset that belongs to the business. But then what they do is they'll say, but you're going to use this car, you're going to use it over nine years, I'm inventing. Right? So if you're using it over nine years, it's like

you're splitting bits cost over nine years. So what the accountants are allowed to do, they're allowed to split that cost and take it as an expense, bit by bit every year. And what's the big deal about that? Any expense that you take in the p&l? Who do you give the P and L to? For what? Taxes. Now if I'm going to include all expenses, am I going to have more profits or less profits? And if I have less profit, so I have more tax or less tx, less profit? So accountants have to be sure what they're putting their six that's it, because then bit by bit, will take them there for taxation. Alright, so what are the costs? Because you use that car for a number of years, we don't take it all in the first year. Accountants are very fussy about what we call matching ... concept that if an asset is being used over 10 years, you divide its use over 10 years, that you're higher, right. So you will be doing this with me. Okay, on the other hand, this one, immediately, it all goes as an expense against taxation in the first year. All right. So fixed assets, capital expenditure, we take them against tax bit by bit, but the revenue expenses, water, electricity, rent, petrol, immediately they are reused against our tax bill. Thank God, all right. We don't want that tax bill, do we. It's all about tax, isn't it? And mind you, they are allowed .. accountants are .. if they don't do this thing, where they divide this cost bit by bit as an expense, they are not following the law. So the government allows you to do that. Okay. So, failure to recognise one or the other means that your final accounts, your taxation is not correct. And the government is going to send you a new updated tax bill. So it's better if you do it well. Right. All right, is that a mobile I'm seeing there? So, the next unit 3.2 is all about sources of finance, we will be looking at the different ways to finance either a capital or a revenue expense. Whether we are buying a fixed asset or whether we are paying the water and electricity bill, I'm going to be using different sources. Okay, let's say I want to buy a car. I want to buy a piece of equipment for my business. Where can I get the money from? Alright, like what okay, you know, what else can I do? If I'm not maybe granted a loan? You can ask your shareholders Okay, imagine this. Tesla needs a piece of equipment costing 100,000 euros and there are shareholders I need 100,000 euros what happens then? No that I can take 100,000 euros I want my share .. right. So be careful if you're a PLC, you're only going to ask for a very, very huge amount of money because otherwise you're sending the wrong message. When it takes off Tesla will issue new shares and ask the shared capital owners to give them more money only for example, if they're opening a new plant in Germany, or they've just opened one in Asia, which requires billions usually not a few 1000 ... what else okay, so we said you can turn to the owners ;you can use the bank what else can you do if you need to buy a fixed asset? sell something? What are you gonna sell? another fixed assets and other fixed assets? So, I sell an old car and with that money I get at least for a bit ... it for the new very good answer. ... like what? ...? Okay, so I give you this exchange. ... Alright, so you're saying that with the wages you're gonna be saving, you're gonna buy the machine. Alright, wouldn't that take a little bit of time? You... in order to buy the machine initially you still need an amount of money. Where can you get it from? Grants the government can give you a grant old profits, very good. Okay, so the old profits of the business they are kept aside for future fixed assets. Now let's go completely on the other thing I need to buy petrol where can I get the money from? Bank overdraft well done. Do you remember that one ... (student's name) ? Were you there for the bank overdraft? No, but you were always here this week. We did bank overdraft last lesson. So, what was about bank overdraft? You see, I managed to revive your memory. All right, good. All right. So ..., why they are all different. One thing I want you to keep in mind before we go we're gonna go into unit 3.2 eventually, keep this in mind last time I opened this for you. Thing is accounting equation. All right. A What are the two elements of a? Okay, so you know it, what do I need two components here? Good boy. ... What's the other asset? there are two ... What are the liabilities ... (student's name)? No, got you., limited liability. No. No, that's a company. No, that's here ... I like to think they are next to each other. They are very

good friends, as you shall see later. Always put them next to each other. And finally the capital. Now, one thing that you need to keep in mind is today, we opened on these on the tangible fixed assets today. And we said that when you're buying debt, ideally use either that one or that one. If you are financing these, only use those. So when you mentioned I need to pay wages, that is a bank overdraft facility. I need to pay for the petrol, that's something minor put it there. The big ones here never consider that for the big ones, right? We call it Life with life. So this is an introduction to the next topic as well. All right? So, we're done with unit 3.1. What I've lined up for you now are a couple of revision questions for your exam. So, can I have some help from the people at the back maybe while giving out the green booklets? Will you help me? You love it ...

I had four of them they were a whole pack and I gave them out over the years to account teachers. This is the last one so I'm holding on to it. Thank you for your help.

So this is all my ... all right? I put it up for you. (unclear)

All right so we all have a booklet. Go to page 141. I'm gonna write it on the board. Sorry. ...

All the time. Why? Because I sent something there's no comment ... supposed to be something like ...

Can I please hear his query? What did you see on my school? On the 13th of January, did you update something? Could be I went in and put in the grades for your ansoft classwork.

Mela I forgot to update D with grades. I have to go in and put in the grades. Mela page ...

Can you stop it ... (student's name)? Page 141 please. Shhh The only question that I'm interested in is question e. It's a 9-mark question. I think by now you're dreaming about they whether it's six or not six and beyond all right, I managed to get into your head a bit. There is a case study called Creative blue creative blue is thinking of growing and in order to grow it has two options. The last question is asking you to help them take this decision thereby denying .. Remember how we need to plan the essay into two pros two cons and the conclusions now since you have two options, you can decide to have a pro and a con for one and a pro and a con for the other one. Alternatively, you can choose some common denominators where you're comparing all the time one with the other. So I leave to you the main structure as soon as I can see two pros and two cons I'm happy with that right. so you have five minutes to read it to get an idea of it and then after that we'll move on to the next part. So five minutes, read it, jot down any ideas, remember as well the application how important it is.

(unclear)

So it's important as well to .. the case study really well.

This is not the topic that we just did. This has got to do with the unit 1.5 ... (unclear)

because I'm revising. It's your notes I'm not taking it now. If I told you to write it, you would know. Tell me. what's turnover turnover is another in that case staff turnover. So how many workers are leaving. ... (student's name), stop it.

If anyone has never heard about the term stock turnover, t's how many workers are leaving the business in a year.

(unclear)... Read it, get an idea. other than stock turnover you probably haven't ever heard about the term working capital chewing gum and so has anyone ever heard about the term working capital? You two have. an industry say simple way can you explain it to your friends? No you made it complicated for him because he told you the real meaning of it which is debt and for now I think it's a little bit too early for you give it give it something simple. No, ... (student's name) are you able to give a simple explanation to your friends of what is working capita? You don't remember it? Thank God I'm not wearing my my shoe that I can throw easily. Mela, working capital refers to how easily you can access funds in a business. So this particular page it says if we go for this one will exhaust our working capital so should I exhaust the funds that she has available? easy for her to get like her bank and her

cash. So for now, only for now, you can think about it as the bank and cash available. Were there any other terms who which which are sort of blocking your understanding of the case? Paragraph two was a bombardment of HR and it's all new to you so if there's anyone in anything sorry in paragraph two that is troubling you let me know. What's the Democratic leadership style? ... (student's name) any idea? Very good. Is this nice? Is that something interesting? I have no here you don't like it? Why? ... they're more strategic, more, more experienced? Maybe. Alright, you like it?

(unclear)

Very good. So, if every every time we're involving our workers now if the business is quite small. does it mention how many employees it's got? Because I don't remember how many. 24. Okay, there it is in the beginning. And it's not a big number. But every time I have a decision for all 24, I'm full, it's gonna take some time. However, the fact that everyone is involved that brings with it a very important type of business culture. Culture is a huge thing in business. What does culture mean? Why is culture such an important thing? What does it mean? It can motivate the workers okay, but you gave me why a good culture strong culture is important but you didn't explain to me what culture is.

**Speaker 2** 43:07

The way they approach (unclear).

**FT 1** 43:13

Okay, the way they approach anything, anything like what,

**Speaker 2** 43:22

(unclear)

**FT 1** 43:35

Approach anything. All right, let's get a little bit more professional when we talk about business culture. Yeah, let's elaborate on that, the way that business

**Speaker 3** 43:50

kind of runs itself (unclear).

**FT 1** 43:53

... (student's name)? Okay, lifestyle.. I'm gonna put even yours.... Approach she said... a little bit more professional, when we talk about this culture, let's elaborate on that. ...Okay, morals prevailing, the vision and mission. Okay. So their mission and vision is not motor vehicle, its mission and vision. Katrina sorry? What do you mean? Okay, so how did the idea come up, the history. The foundations of the business all right? Isn't one of the main things mentioned there to give you an idea about this creative group business? And how the relationships are, do make decisions together? Right, that your anything? Right? Approach to anything approach to decisions? Does it make sense now? Yes. So how do we take decisions together? How do we talk to each other? How do we communicate? So basically, when you come into a business, take (the name of the school) as an example, when you walk in, you see these majestic and things around you and you're already breathing in the culture. You show the students in uniforms and you're already getting an idea, okay? This is the way things are done here. It's a grand building with a lot of greenery area, the way people that

you see, the students, .... So we are all happy and smiling. It's a nice, positive culture, they are happy. You see the students talking with the teachers, and we are not killing you. So it's a positive culture. So all of the relationship

**FT 1 45:39**

That happens inside the business. Now, why am I emphasizing that? We're not doing HR yet. Even though we're not doing HR, you have a question here with the culture with a creative view is very important. The question you asked me was, was a staff turnover, and they told you that the business has got no staff turnover? What does that mean? Everyone's happy. They want to stay? Almost no one wants to no one wants to leave. It attracts the workers? Because no one is leaving? I want to go to work. Yes. Now, the culture seems to be very positive, very friendly, very open. Now all of a sudden, we have two decisions. And the two decisions that you have in front of you, one of it is remind me what is the first one. I've just read it I already forgot. Grow internally. You remember the two growth options, we can either grow on our own internally. Alright, so we go out bit by bit, or in the second case, they told you take creative blue, find another business, I don't know who it is, and together you have a new business. Now, I did a whole session on culture. Can you see culture anywhere there? Very good? Okay, so ... different language. All right. And we are going all of a sudden to mix with another culture. So the mixes we don't know what's gonna go on go on. Now one of the things that we said about this, which is a very important topic for your exam, organic growth? Organic growth, when you're growing on your own? Imagine our decides to have another extra class in every grade. All right. And then we'll build, God forbid, a bit of our garden, to extend some of our classrooms, right? We're growing organically, the impact on the culture is not going to be that massive. Now we're gonna get new teachers and new students. And that is always feeding into the culture, and the changes inside when you get new people. But imagine here, all of a sudden, we're like, Okay, we're gonna join with a school from South Korea. So Koreans everywhere, right? Language, so it's different impact on the culture is different. And we are very worried about that staff turnover. So one of your ideas could revolve around culture. So you can take one of these. Where did it go? One of the negative parts and open up all on that. Because if we're going to join with South Korea, it's gonna be a negative. On the other hand, what you can do, thank you for telling me that because I told you what you can do instead of pro con pro con, you can see okay, let's take the big idea of culture in a it's positive but in B, it's negative and you go around and you already got a pro and a con there. Now, have you got any other ideas we can use for this particular case?

**[Students' utterances are unclear]**

**FT 1 49:21**

Okay, so length, okay, fast. Right. So you're going to take the idea of one is faster than the other? How fast is the M is the decision has to be taken, how long do we have for this particular contract to give results? So I don't know if I didn't mention anything about the timeframe but we usually say that this is longer than this. Now if you think that that is a very limited point. One other aspect that you can join with is which one requires more money. So which one do you think is going to be The most expensive the first one so you can also add the idea. Of costs, the first one is the first one, you're doing it all on your own. Everything on yours the other one, you're sharing the baby, remember, all right, there is another big idea that can really, really be easy for you to use. And so you remember the answer to remember I wanted to a line through it , and no one wanted to do it. What was the line? Risk? Which one is the most risky do you think? Why is a more risky? What? Why is a more risky? Because

you have no knowledge of the market. Okay, no experience. No knowledge is the ... about South Korea. And you're gonna get South Koreans on board? So that reduces the risk, doesn't it? All right. So A is more risky in that regard. Does any one of you for any other reason think that it's the other way round? No, the other one is more risky? Hmm, you don't know the market. But with the South Koreans, you'll know it better. So it becomes less risky? Now which one did you say is the most expensive? Does that make it the most risky? So if you want to use this as an idea that you okay, one of them has got this less risk because of the know-how but the other one has got more risk because of the amount of finance required on your own? Right. Is it too much? You're okay? All right. So, there are a lot of ways for you to answer this. And there isn't one answer, the most important thing is balance, balance it out, how do you get balance? Right? ... If you're gonna go all along the line, oh, it's really good. Automatically, your conclusion is gonna be a, and I won't give you more than six marks, definitely even less, because this is nine, because it's not balanced. All right. But you need to have both sides of the coin. What do you do in the end?

**[Students' utterances unclear]**

**FT 1 52:17**

Oh, how am I meant to decide? So I'm gonna say this. Listen, it seems like option A is more or Option B, there isn't a right answer. What do you always tell my students in the end after you give them the conclusion that you want? And how do you start this last paragraph? How do you cite it to make it really obvious that the examiner what the last paragraph is? In conclusion, write it, there's some of you who write it just two paragraphs, and I'm like, is this another advantage? Did he finish on time? Is this the conclusion or so always, like babies write it. In conclusion, so it's there, in their face. Issa, when you conclude, can I have your attention, please? when you conclude, whether you're going a on b, I don't care. As long as you support your arguments, ermm ... (student's name), in the end, always say something along this line. Right? there isn't enough information. We need to carry out more research. We haven't put any numbers yet. We haven't looked at any impact on the workers how the workers reacted. Have you even considered the fact that she said she's gonna take a whole team to South Korea? Would you go? How many of you would pack tomorrow and going back to South Korea? South Korea, the others what's holding you back, Whose six kids at home? Yeah. What's holding you back wants to stay behind? Why don't you want to go? You said yes. Why wouldn't you go? He's tired of moving. Some workers are tired of packing and go again. I'm gonna change the job. I want to say here. So that could be a whole thing about some of the workers might be upset. I just say one last thing. When I asked you for a definition of culture, you gave me a term. What was it? I think I wrote it on the board. No. You said motivation, didn't you? This term can always answer any part of your question. Any question we're dealing with has always got workers involved in some way or another unless it's completely robots completely capital intensive, which is very unlikely. In this particular case has any one of you considered how the workers will be impacted by this move. Some workers might be thrilled with the opportunities. But on the other hand, some others might feel that it's too much for them, they don't want to move again. All right. Tell me. So we didn't go into this yet. But that could be a question you could raise, how are the standards of living the cost of living between the two countries, they will be different, the way of life will be different. But if you're going in different locations, they might have a different package for you. Because they acknowledged the cost of living is different. Yes, they will decide the owners and the management. But if for example, when When, when, when you are working in a business, and let's assume that they're going to send you on an assignment in London, the wages given in Malta and in London are not the same. So they

will be like, listen, since you are going in and in a city that is much more expensive, we'll be giving you these additional. So yes, there will be that consideration, hopefully. Probably, especially if you're renting. So you will have to look into those things. I didn't go into creative flow in that detail. All right. So do you think you're able to answer this question? You just need to write it up, legibly. No, on line paper. I'm just gonna move to brainstorm another one. That's the plan. So we can try another question. PAGE 23.

**FT 1 56:51**

(unclear)... Ok stop talking. 1, 2, 3

**FT 1 57:13**

Page.... Shhh. Find the book. Let's look at another question. (unclear)

(unclear) We have a question about a topic that we've recently done together? Shhh Explain one positive and one negative impact of the multinational company RE on the developing country. As you can see, it's only four marks. So I would like the positive one you do it as a paragraph. Right. And then you write a paragraph about the other one one and one all right, not more, if he asked for one than one. So I want you to read this and we'll share on the board. What ideas do you think you have about this particular case study?

**[Students' utterances are not clear]**

**FT 1 58:39**

We're reading it and sharing it. .... Redundancy inti you're the one who gets all the terms. Any takers? What is redundancy? Okay, so you lose your job. Fired, you stole. Or you drove your booss crazy. All right. Yeah. It's not your fault. You lose your job. This business can't keep you anymore. The business does not have orders. For example, I'm keeping it basically. Right. So I'm sorry, we don't have any orders anymore. We need to shed some workers. Right now. We're seeing this happening in Microsoft in Spotify in Google workers. I didn't do anything wrong. They are being made redundant. Okay. ...(student's name), chewing gum in the bin.

**FT 1 1:00:00**

What?

**Speaker 1 1:00:19**

Miss what's the lease?

**FT 1 1:00:20**

Lease is when you run something when you rent a property for example your parents if they don't have property here, instead of the rental agreement they refer to it as the lease.

## Female Teacher 2

Sun, Dec 08, 2024 9:54AM • 33:41

### SUMMARY KEYWORDS

coherent waves, destructive interference, constructive interference, bright fringe, dark fringe, path difference, intensity variation, single slit interference, double slit interference, signal generator, frequency coherence, amplitude difference, interference pattern, light intensity, sound intensity

### SPEAKERS

Speaker 2, Speaker 3, FM 2, Speaker 4, Speaker 1

### FM 2 00:00 [students' utterance are not clearly audible]

Alright guys, we were talking before about your exam paper. I gave you good.. questions; I sent you slides. As if I'm gonna go and look up the toughest ones from higher level. I'll give them to you at the end, because I know what you will do. Okay? Let's go back to here. So, we've looked at the interference, we've looked at the weathering phase going to be constructive right fringe or ... Obviously, the reverse is going to hold true as well. How are these meeting? Out of phase. So, let's say they are piling 2, piling 4 out of phase. If they meet like this, what will we get? Destructive interference. Right? Instead of saying in phase or out of phase, we can talk about pi radians. So if two things are ... Have you done circular function with Mr Galea? Yeah, so they are in phase? Yeah, or else pi on two, pi over four or eight, yes, radians, radians. ... Okay, we talk about it more when we do ... harmonic. All right. So if I'm going to get destructive interference there, we're going to get obviously a dark fringe or ... or here's the question I want to hear from you. For this in particular to happen, total destructive interference, what important condition must be met? Simon? It must be coherent. So, this is going to be an important term – coherent. ... (student's name), what do you understand by coherent? ... (student's name) the same frequency in phase and what else? ... the amplitude has to be either what? the same or frequency negligible difference very close. Remember what we said. If one of them has a larger amplitude, what will happen? This is not going to be flat out, okay, we're going to get something like this. And this will not be so large, it's going to be something like that. Okay? So my interference pattern that will form is going to be different, right? So if I have to put up a screen over here, Keeping all this in mind, how would you describe the interference pattern over here? (student's name). ... very good. So we're going to get the bright dark, bright, dark, bright dark. Where would we get what would we get at the centre? Right? Okay. So over here, that is where we're going to have the bright light or the light, large sound okay, and then we're going to have the dark, and then we're going to have yet another bright. And that's all. We refer to this as  $n$  equals zero and the others would be  $n$  is one on either side over there. If I have two waves, reaching this point here, how are they arriving in phase or out of phase Pram? In phase. And if they are meeting at  $n$  equals one, ... (student's name), how are they arriving? At the bright fringe, ... in phase as well. What would be the difference between the waves which are meeting here? And the two waves that are meeting at  $n$  equals one, ... (student's name)? Why is intensity different and where is it more intense? .... Good, where? Where is there a path difference? At  $n$  is zero or  $n$  is one?  $N$  is one? Why would this be more

intense than that one? You were correct when you said that. Because of the distance being travelled. Okay, so the further away they are moving from the centre, there's going to be a difference in the intensity of the light. So that's the first important thing. Second thing. Do you remember what we talked about when we looked at the idea of half difference? Can somebody explain to me what that means? Half difference? Yes, ...

05:47

(unclear)

**Speaker 1 05:50**

length of the path of each wave is maybe different (unclear).

**FT 2 05:56 [students' utterance are not clearly audible]**

Is it always different? Okay.... So we're talking about the red ones, this wave would have travelled more than that wave. Okay. And so we'd say, If I had to place this on the other one, then I would have this distance, which this wave has travelled more than that way? And that is our half difference. How does that half difference relate to what we were saying here? constructive and destructive interference? If I have a constructive interference, what sort of path difference will I have, ... (student's name)? If it's constructive? What will the cause difference be like? ... (student's name)?

**FT 2 06:57 [students' utterance are not clearly audible]**

... (student's name)? ... So we said last time, the constructive interference, my path difference is going to be  $n\lambda$  where  $n$  is going to be one or two, or three. So, if I look at my interference pattern, okay, in the centre here, there is no path difference. And the zero so these two waves .... these two ways have travelled the same distance. Okay? If I look at the first bright fringe, then the path difference, there is going to be one wavelength. It's a bright, so it's constructive. So they are in phase. If on the other hand, I'm looking at the bits where we have destructive interference, what would the path difference there be like? Good. So that is going to be?  $N + \text{one half wavelength}$ . All right. And this is ... And this is something you'll need to remember, you do have this in your data booklet to help you saying that constructive interference, when  $\lambda$  destructive, it's  $n + \text{one half } \lambda$ . Okay, so far? Good. So, let's take a look at the past paper questions. We're not going to be working them all today. Some of them will need to go into the next lesson as well. Right? Part three and four we'll do another time. All right. So, this question is relating to the intensity of the pattern that is formed. So we had said last time, like if I look at my central bright fringe, and then I look at, so this is bright in the in the dark patch, and then another  $n$  is one on either side. We said this is going to be much brighter than the others, right? Because there is no path difference as they're travelling the least distance. As soon as I go into  $n1$ , my intensity is going to drop. So, which of those graphs over there is showing it, correct one? C. Guys learn that .... This is for single slit interference. Okay, why am I stressing this right now? Because soon we're going to be looking at other types of interference patterns, which will look like that. Okay, so we really need to be careful that we're following the correct ones. Okay? Yes. The angle is the one from the centre. So, if I'm looking here, this is my single slit. Here there is no angle - zero. Here. There is the .... So as the angle increases, the intensity is reduced ... from the middle. Yes, look, over here, that is the origin. So that will be your zero. And then you've got an angle on either side? Like a fan? Yeah, ... (student's name), that's like the angle because there are two sources. .... I'm talking about a single source, but that single source creates light, which is .... We'll talk about the double slit later on.

**Speaker 2 10:52**

But then we had, like two two sources.

**FM 2 10:55**

had like two points of light from the same slit from from the same slit. Later on, we'll see what happens when we have two. All right. Can you jump to question three, please? Question three. Take a look at it. Wait, you don't have it on this. Nope. Sorry, you don't have this question on yours. I don't see why. Okay. So let's take a look at this question over here Just read the first bits and just answer part A for now, ignore Part B. Okay. Highlight anything you think is going to be important for you.

Just give me a quick show of hands when you finish reading and understood it.

(unclear)

Just read it; we'll do it together to understand what's happening. All right. So, if you have to read this question guys, you're in your exam, what would you underline as being possibly important information? So, we've got in order to demonstrate two sources of interference of sound waves, two loudspeakers are connected to the same output of a signal generator. Why would this be important? They're connected to the same output of a signal generator. So, they're producing a sound from the same generator. Why do you think that is important? Yes. Good, they're generating the same frequency and that's going to be important why? It is going to be coherent very good. Okay, so notice how they didn't tell us we have to ... (unclear). They're giving it to us in an underway. The loudspeakers are fixed four metres apart. And the diagram below, the line A B is parallel to the loudspeakers at a distance of 10 metres from the loudspeakers and P is mid-way between the loudspeakers. So it will allow me to talk about lights. And where did we collect the light to see the interference pattern... (name)? We had a screen. So, this time a screen is not going to help us because ... sound, but they've just put up a line and they're going to move something, a microphone, up and down, to be able to detect the sounds. Katrina walks along line A B. So, somebody's walking from here to there carrying a microphone connected to a detector, she registers a sound that alternates. What does that mean? Changes in intensity from loud to quiet. In light, what is the loud and quiet? Right and dark. Exactly, It has to do with intensity. So, all the things that we learned about the lightning we have to apply to here. But with sound, so let's begin. this is something which is .... Which should be coming out of your ears. Describe the conditions necessary for a sound off minimum intensity at Q to be registered at Q we have four lines, three marks, Why is there minimum intensity of skew? What is happening describe the conditions necessary? Hands up please.

**Speaker 3 16:22**

Here. Frequency, wavelength?

**FM 2 16:25**

(student's name).... So that's good. Okay, the waves must be coherent, there's no need to say of the same frequency etc. etc. coherent, good coherent waves. And do we have that? Yes, because it's coming from the same signal generator, very good the same source. ... (student's name), they are going to be meeting very good out of phase at q because that's the point we are talking about and therefore (unclear)

[students' utterances not clear]

**FT 2 17:02**

Destructive interference - that's the key term they're looking for. ... destructive interference. So guys, you've got the three points. You've got them in your hands now your last step write in the paragraph, four lines, those three terms have to be in that paragraph and what we see used correctly, okay. And when I say correctly, you do not say coherence means .... we're just going to put what we said together in a nice, neat paragraph.

I will be asking one ,maybe two of you, to read out your paragraph to the rest of the class.

(students working out the task)

**FT 2 18:50**

Anyone who would like to be a guinea pig? Friedrich? Nice, tell us, slowly, so we can hear you and follow.

**Speaker 3 19:03**

For no sound to be registered at .(unclear)

**FT 2 19:07**

I like that. But be careful. You said for no sound. Minimum sound okay.

**Speaker 2 19:18**

So, for minimum sound to be registered at q, both waves have to be coherent and (unclear) ... goes out of phase to create a structured interference.

**FT 2 19:28**

I would just add the two waves meeting at q must be coherent. Because otherwise, it is like what waves? Good. Nice one. Anyone else? Yes, ... (student's name)

**Speaker 4 19:45**

place and rail structure (unclear)

**FT 2 19:49**

Good. So again, the way you put them together is fine. As long as you've got your three ideas over here. Can I clear? Okay, we got to skip Part B. We'll do that after tomorrow's lesson, right? And we're going to go to the next bit over here. We're told the waves interfere constructively along the lines labelled A and B. State what is meant by constructive interference and then draw another line labelled C along which the waves interfere constructively and another line D along which the waves interfere destructively. So, we're going to do a quick think pair share session here and I'm giving you maybe one minute or maybe two to work out the answers on your own and then I'm going to pair you up, discuss it and bring the answers to the class. Okay off you go. You've got two minutes starting now.

22:54

(students working)

23:07

Okay can you please pair up with you two, you two, you can join these two over here and ... (student's name) and .. (student's name), okay? Show your answers if you agree. I'm giving you one or two minutes to do that. Then, we'll go through it together.

**Speaker 4** 23:42

that's okay, so if I (unclear)

**FT 2** 24:25 [students' utterances not clear]

So if I have this and this, it's still going ... the result is still going to be .... All right. Okay. Did you agree? Yes. Let's see. For, for what for constructive interference, no. We're not talking about an interference pattern. We're just talking constructive interference. Okay. Let's recap. When we talked about superposition and interference, obviously, that definition was that the resultant displacement is going to be the sum of the individual displacements. So, it's always, the resultant is going to be greater. Like I was saying to ... (student's name) here. If I've got this one and this one, okay, the resultant is still going to be greater than both of them.

**Speaker 3** 25:36

But if there's a different frequency will they still meet?

**FT 2** 25:41

If there is, yes. Imagine I've got this wave and then I have this wave. Okay, so my results would be resulting in two separate points. So here, it's going to be the same. And then here, it's going to start increasing, because I've got the addition of this plus this. So, then it's tough to play around. But if I have ... (unclear) Yeah because it has nothing to do coherence has nothing to do with constructive interference Simon. Okay. ... (student's name) ? There's negative marking in... No, there isn't anything ... Okay. So, let's see what we wrote, what is important to write if we've got constructive interference happening? What do I have to mention ... (student's name) ? The aptitude to this point, you want to show that bigger, greater, larger, whatever you want. Rather than aptitude what are we looking for, though?

**Speaker 3** 26:51

Intensity, displacement (unclear)

**FT 2** 26:52

The displacement, good. So, in constructive interference, you need to mention that oops. In this, in constructive interference, you need to mention that you've got first of all, two or more waves, which are meeting that's important, otherwise, you don't have interference, okay. And that the resultant displacement is going to be greater than the individual displacements.

**FT 2** 27:39 [students' utterances are not clear]

Anything we can add for a third mark? Not necessarily in phase... If it's constructed, the resultant is greater than the individual ones, what would be the result? Very intense okay, to call that the maximum intensity. So, even generally, okay. In this case, we've just been told two waves .... When we say maximum intensity means it's more than the other one. But yes, if they're not exactly supposed to be the biggest of the so called the maximum. Okay. Distinguish between the normal everyday constructive interference. And when we're talking about interference status, right. Next two questions on the diagram above.

Draw another line A B and C along which the waves interfere constructively and where they interfere destructively. So, where can we draw a scene where another place where they are interfering constructively, yes ... (student's name). Come, you want to come?

**FT 2 29:14**

Constructively first. Okay. All right. Good. Thank you. And we're .. label C. Okay. Yes. ... so where is D going to be? (unclear). We'll do it with a different colour.

Do you agree with him?

**[students' utterances are not clear]**

**FT 2 29:50**

Yes. Good. Okay. All right. I'm going to retire now, and ... (student's name) is going to teach you. Can I remove ...? Okay. The last bit. The diagram below, not to scale, is an arrangement for observing interference pattern on a screen when the light from two slits as ... overlaps. A beam of light from a laser, what should you remember, is incident on the slits and after passing through the slits, the light is incident on the screen, the separation between the slits is large compared to the width of the slits and the distance between slit and screen is large compared to the slowest separation. A) explain why, two marks, and interference pattern will not be observed on the screen if the laser is replaced with a tungsten filament lamp, the old lamps. Think about that for a minute or maybe less. Why will we not get an interference pattern? If instead of a laser, we're using a normal bow? Basically. Hands up if you think you know the answer. Wow, yes, yeah. We have Somebody? Oneish. What am I letting myself in for? two, three? ...Pardon?

**FT 2 31:52**

Yes, yes, the light bulb is ... monochromatic. Not coherent. That's the big condition. But... the waves coming from that bulb will have different frequencies, different wavelengths, they are not coherent. So, you would get the pattern that will be constantly changing. All right. So, two marks for that. Okay, you need to use, for one mark, you need to use the idea that it's not coherent. And then the fact that since it's not coherent, it will form a steady interference pattern. .... Okay. Putting this into into the context. All right. I'm going to skip this next one. Because we haven't done double slit yet. All right. I'm going to stop this over here. Okay, we're going to move into now, the next section, which is what happens when we have a double slit, right. Any questions about what we did? Just now? Clear. Super. All right. So, let us move on to our next bit. So, now, now we're going to be a little bit more specific.

**FT 3**

## Female Teacher 3

### **SUMMARY KEYWORDS**

past paper, psychology questions, research method, ethical considerations, credibility, generalizability, internal validity, external validity, ecological validity, quasi experiment, field experiment, natural experiment, random sampling, self-selected sample, convenience sample

### **SPEAKERS**

Speaker 1, Speaker 2, FT 3

### **FT 3 00:05 [students' utterances are not clearly audible]**

As you know today we will be working on the past paper, okay, so you can take out your work please and... so that we can read it. So, the others are not here? They're not here okay. Just to know if something happened. First of all, how are you? Cold? Issa, we'll switch on the lights and we close the window. Leave it a bit ajar because since they eat here, I need to get rid of the kitchen smell. Leave it a bit like that. Is it better? Other than that? How is it going with psychology? Any questions from yesterday?

01:19

(unclear)

### **FT 3 01:25**

So, with regards to the paper, today I'm going to start with a bit of an explanation on what I think are the tricky bits. Okay, so that then you can refer back to the explanation to the past being; see if you need to arrange something or if after the explanation you would have changed something. I mean, this is all revision. So ,everything that I'm going to say we said before and you have access to all the notes. You will also have access to all the answers after. So, do you have the stimulus paper in front of you? Okay. How did you find it with regards to? How was it? Was it okay?

### **Speaker 1 02:38**

There was only one question I had a problem with and then it was the suggested an alternative or additional research method. I was kind of stuck with that and didn't really know what to write but I still wrote something. I don't know if it's good.

### **FT 3 02:52**

okay. Okay, so that question kind of you were not confident in okay. It makes I can understand your feel a bit ... about it because you know what, there is more than one right answer. So. there is not only one. We are going to discuss possible answers. Mela and ... (student's name), how was it for you? It was fine.

### **Speaker 2 03:22**

It was okay. But I had trouble with the second question ...

**FT 3 03:30 [students' utterances are not clear]**

Okay, question two was remind me. The ethical consideration. So, the food mindset no? The quasi we're doing? So, question two is that we can. Is that ... (student's name)? Hello. Sorry. It's okay. ... (student's name), what happened? I was thinking ... (unclear)

**FT 3 04:06**

... Oh, I see. I see. Okay, settle down please. Okay, I know this is exam week, but lessons are as usual, okay. Try to focus and be punctual like usual. We are doing the food mindset homework, okay? The research three, paper three, sampling. Chiara, the second question was describe the sampling method used in this study? What was the second question for you, Sara? Describe ethical considerations. Ah, okay. Okay. Should one be Oh, yes, yes. Okay. That's perfect. Okay, we will come to that. Okay. Erm okay the others, please, who came now, take out your homework okay because we are going to correct it together and grade it. However, before I am going to go through what I thought needs extra attention and also for some revision before we can actually grade the work.

**[students' utterances are not clear]**

First of all, issa, we'll see what what you answered okay, but first of all there was a question about credibility. Is that correct? It was one B if I ... It was the third one. Okay, thank you ... (student's name). So, and this question carries nine marks, okay. So, whenever you get a question about credibility, question number three, okay, you remember we did part of the lesson about question number three; and you also have the notes. Why? Because it carries nine marks okay. So, we have to pay attention. Now, this time, it is about credibility. And there is a reason why I want to pay extra attention on the fact on this credibility. And first of all, usually credibility is asked is not asked for quasi experiments. okay. But in this in this particular paper, it was asked about quasi the experiment so, it needs a particular direction, okay, when credibility is asked about an experiment, quantitative research, okay? So, let me start from the beginning. First of all, to .. for some revision, okay, since we are very, very close to the exams, this we did last year - credibility and generalizability. Okay, there are terms that we use to see the quality of the research, okay, what is the quality of the research? Okay, so, I'm starting from the very, very beginning and when it comes to experiments specifically, usually, these terms are not used, when we are talking about especially credibility the the question that we have in the past papers, so we need to answer it in a particular way. Basically, I'm going to show you how to look at the validity of this study, okay, when we have quantitative research and they are ask us asking us about the credibility Are you with me till now? Everyone? I'm not seeing nods? Okay, thank you ... (student's name) Okay, so, credibility and generalizability, okay, the questions about credibility and generalizability usually are questions numbered, the third question in the in the sample paper in the past paper, paper 3. They are the terms that we use to establish the quality of the experiment of, in this case, because it's a quasi-experiment of the study/ What is the quality? are there is it plagued with confounding variables? Or is it really controlled? Okay, for example. What is the quality? Is it ... is there bias in the research? Is there .. can we ... is it too artificial ... for example, okay? So, when when we are asked about the credibility of the research like we are asked in this particular sample, they are asking us, what do you think is the quality of this particular research? Does this make sense to you?

**[students' utterances are not clear]**

**FT 3 09:03 [students' utterances are not clear]**

So, it is the quality of the research. Okay. So, with regards... I'm then going to explain validity, we did this last year, but I'm going to go over it again. So, when they ask us what is the quality of the experiment because this is what the examiner is asking you in paper three. What is the quality of this experiment? You have to look at what is the validity and integrity and ... This is how we look at credibility in quantitative research. Are you with me? Does this make sense? Okay. So, let me show you how we can go into validity when it comes to the quality of experiments. So an example, okay. Credibility, first of all, is directly assessed on paper three examination for for HL. You are all HL here. Okay. And one of the possible options for question three, one of the possible ways, it is a common question in question three in the paper three question three, okay is how the researcher could ensure that the results of a study are credible? Okay. So, credibility is something that we need to be prepared for Question three. You have the notes also on teams, okay, make sure that you go through them and also the homework that we did in the beginning of this year about credibility. And so, today we are going to focus so usually credibility is around qualitative research and we have a past paper about that, so we will revise also that. But today, what we are going to revise which is a bit more, perhaps tricky, we want is credibility when it is asked for experiments by quantitative research correlations, for example, this way. Okay, in that case, and do not be confused, okay? If it's quantitative research, if it's a correlation, if it's an experiment, if the research is about numbers, okay? And he and the examiner asks you about the credibility, it is about validity. And we are specifically going to look at the internal and the external validity, and I'm going to explain them to revise them okay. So that you can if you have such a question in the exam, like this particular past paper, you can we don't let the examiner trick us okay. Okay, so, are you with me till now? ... (student's name), with me? Okay. So, numbers, credibility, we look at the validity, internal and external validity, okay?

**FT 3 12:29 [students' utterances are not clear]**

So, a definition of validity. Okay. So we said we are going to look at internal and external validity, but to keep it really, really simple, okay, to keep it really simple. Validity evaluates whether this study, the research, okay, is really whether the result, okay, is reflecting the cause-and-effect relationship. Okay. So, the definition would be whether this study is actually reflecting what it is supposed to measure? And what do we mean by that? How can we see that the result that we have is because of what happened between the IV and DV because this is what we're saying? Okay. Let's look at the different aspects of validity. First of all, we have the internal validity and the internal validity focuses only on this study, because the external validity focuses what happens after the study, I will explain how, but the internal focuses on the study. What do I mean? As I said, one of the, one of the aspects of internal validity is to to what extent can it be claimed that the research outcomes are the result of the experiment..? So, to what extent are the results, if for example, I tell you, I'm going to test your memory, okay, ..., and we did this experiment hypothetically, many times. I will tell you; my hypothesis is that music makes you remember more. Okay. So, I will divide the group: one group, I will give you a test to memorise. Okay. Or a list of words. I will play a loud music and give you 10 minutes to study the list of words. The other group will work in complete silence, same 10 minutes same list of words. Okay. First of all, what design this would be? Repeated or independent if it's two groups? Absolutely. Okay, so we use independent measures design. Okay, and one group in silence and one group listening to rock music, same list of words, same paper, same conditions, same everything. And I realise that those who are sitting in silence actually were very ... So, I am accepting which hypothesis, the null hypothesis. Absolutely. So, then if somebody had to evaluate the study, okay, they will say, but to what extent is the result that those in silence remember more is

actually reflecting the fact that there was music or no music? Could it be because the teacher chose those who usually score higher and she put them in the silent group? Was there random allocation to conditions? Okay, this is what we're looking at internal validity, okay. Or did she just take year 13s who are perhaps more used and more skillful in studying in this silent group and then she took the year 9s in the music room? And the year 13s are perhaps more skillful in studying not necessarily but it could be a confounding variable and that would what would it do to internal validity? Would it increase it or would it decrease it? Absolutely, absolutely, okay, because of the confounding variable. So, internal validity this is why it's it is focused entirely on the study, how did the researcher conduct the study. Okay, focus entirely on this study. And it refers to the extent to which it can be claimed that the research outcomes are a result of the treatment. What treatment? What do I mean by treatment?

**[students' utterances are not clear]**

**FT 3 16:53**

The treatment of the variable Okay, the one condition and the other condition okay, how we treat it how we treat the variable. So, this is what we are looking at, how rigorously a study was conducted from a methodological point of view Okay, it looks at the methodology whether it was the result of the manipulation of the IV okay which we can also call the treatment. As I told you, you have your notes there. If it is plagued with extraneous variables, it is .. if there are very various other alternative explanation why you could have had the result that you had, the validity is, okay? Is it clear now? So, this is the internal validity. Let me move on okay this is this I said already to what extent can we say it was the change in the IV that caused the change in the V. Okay, okay these are all notes so that when you are studying you will find the definition and whatnot. Okay em although they are part of validity, but the external validity now is not looking at this study okay? That's the internal validity looking at the methodology, but the external validity is looking at at the extent to which your results could be generalised to other people, okay, to other people in the same population but, okay. So, to what extent can it be generalized. Population validity okay. Like I just explained, so, when the sample is representative to the target population it is there is a high population validity, okay. So, let's say I am going to study IB students and my target population is IB students in Malta. To ensure the validity I put all the names in a computer generated machine and randomly it chooses my sample okay. That would increase the the validity of the study. Another type of validity which you are really used really use in all these studies is the ecological validity. Um, you know, the ecological validity. We use, we use ecological validity a lot because we look at if the findings are generalised from the experiment to other situations, okay. Obviously when we are talking about ecological validity, we cannot not talk about artificiality. Okay, Ash experiment for example. No? Was it artificial the ash experiment or was it like high in ecological validity? What do you think? Absolutely. Very artificial. Okay, that is a classic example of an experiment with low ecological validity. Okay. Solomon Asch .Do you remember which theory was it? Was it related to? Yeah. Okay conformity. What's that? You knew that.

**[students' utterances are not clear]**

**FT 3 20:38**

Conformity in the social cultural approach. Okay guys revise, it's very important for the SAQa. It's very important to revise because obviously paper one is very important. So, basically, a simple question I used to ask you is to what extent does it resemble daily life?

Ash, let's stay with Ash, Salomon Ash and visual, visual acuity study. Does it resemble daily life? Gosh, how many times have you been in that situation? Me, never. So, it doesn't resemble anything in life. Now, sometimes what happens is that researchers want to increase internal validity. So, they want to control for confounding variables. So, they control and control the experiment. So, what happens? The more you control it, the more artificial it becomes, okay. So, we can say although, but we can say that there is an inverse relationship between internal validity and ecological validity in the sense that to avoid bias to control for confounding variables like we are saying, okay, you try to make the experimental condition more artificial, more standardised, but in turn, it reduces the ecological validity and because it makes it more artificial although it does increase the internal validity okay. So, Ash experiment, to stay with the Ash experiment and conformity, it is it is high on internal validity you can replicate it easily, but then the ecological validity is very low. Okay. And this concept we have been using throughout the studies especially in experiments no? When, when we evaluate them, internal validity, ecological validity when one goes up, the other goes down, okay, this inverse relationship. Okay, external validity we also look at sample sampling besides the artificiality because the more random the sampling is, the more we can it is high on internal validity, but then sometimes it puts the ecological validity on the other direction. Another thing but, most importantly it is the artificiality, okay, that is.. Another point, which I hope you didn't find difficult in the in the past paper, but I thought I will revise it because we are doing revision anyways is the experiment. Mela, quasi experiment, we've been doing it since year one, okay. It's the quasi prefix, we can change it with almost an experiment. We've saying this, okay. It's almost an experiment. It's still an experiment. Okay. Called quasi. The difference between quasi and true experiment. You had it for homework a few weeks ago and just revising here, okay. Obviously, the allocation into groups in the quasi is not random. Okay, there is no random allocation in groups. I'm going to explain it just for the sake to go through it, because even in the homework, there were some misconceptions. So, I'm going to go through it really quickly. Nothing big, but just some errors. Some students may summarise I would have commented probably. So, the major limitation of a quasi in any in the approaches the major limitation of a quasi is that the cause and effect cannot be made. So you cannot say that this causes this. Okay. Do you have an idea why we can't say this causes this, something about the manipulation? Exactly, since we can't manipulate the independent variable, we cannot say that a caused b because we didn't manipulate the A. Okay. So, this is exactly why it is a major limitation of the quasi, that the cause and effect inferences cannot be made. Like you said, we can't manipulate and we cannot also another reason is that we cannot be sure that the groups were the same in the beginning at the start of the study. And I gave you an example here. So, let's say I am interested in anxiety. And I say, I think anxiety influences performance, test performance. Okay. So, one way of going about it is I give you a test, a standardised test that measures anxiety, or a fidget test to see how much you fidget. Something that informs my thinking that 123 are more anxious than 456. Okay, so you were anxious from before? Okay. And then I give you a test. And I see how it goes, Did I manipulate the variable of anxiety? Why, because of the test. Now I measured it, but you are anxious before. So now, if 123, who are scoring low on anxiety, are also better at the test? And 123 a the back who are scoring high in anxiety score low in the test? Could there be another explanation as to why they score low? Could it be that these students or anxiety also causes deficits in attention? Which is why they are all they were not attentive in the first days, or even more that deficits in attention cause anxiety, which is why they score low. My point is there could have been other explanation. Okay, as to why I got the results that I got, because I didn't manipulate the anxiety. And perhaps you tell me, but how could you have gone about with? Sometimes we can't, okay, if we are studying like we saw along the way, I

gave you examples if you are studying mental illness such as schizophrenia, you can't induce it. You can't really induce depression. So we have to work with a quasi. Researchers could sometimes do something, for example, if I'm studying anxiety, I can take the 10 people at the back and I tell them, your test results are going to be due in an hour. Does that induce anxiety? Yes, no. So either way, I induced an anxiety situation and that at the front, I don't tell them anything. And by manipulating the anxiety in this case, ethically, I would have caused stress no, and deception. So some revision also about ethics. Okay, so in this case, then I'm touching on ethics whereas with the quasi if I just measure what was before I wouldn't have have, I would have upheld the ethical considerations let's put it this way. But what I'm telling you is that also so that you are familiar more and more familiar with with the quasi okay because the quasi it is very important that you remember that that the researcher doesn't manipulate the variables okay. So, a limitation of the quasi when you see a quasi a limitation is to what extent is the result caused by ANP? Were they were they the same in the beginning? Okay, or are there other explanations Okay, these things we have been doing. Okay, I'm going to rush a bit through this, okay. Because I want to leave time to now okay to experiment. I gave you some examples on the notes so that when you are studying you can see. Okay, a quick revision guys different types of experiments. Okay, field experiment, anyone can give me the definition of a field experiment or not the definition, describe it.

**[students' utterances are not clear]**

**FT 3 29:47**

It's similar to a quasi, also dependent variables cannot be manipulated. It is done in an outside the settings of participants' real lives.

**[students' utterances are not clear]**

**FT 3 29:58 [students' utterances are not clear]**

Okay. like ... (student's name) said thank you, very well. Obviously the researcher .. what is important in the field to remember is that many extraneous variables cannot be controlled that is one of the things to keep in mind when you hear field what about the external variable the extraneous variables okay even if you get it in the other papers, field experiment. Ecological validity is usually high. Why? Because it's in the natural environment of the individual okay. So and then you have the researcher manipulating D V in the natural setting. So natural experiment natural experiments are very similar to the field experiment. They are obvious that the natural environment however here the researcher doesn't have any control over the IV. Okay, the independent variable. I have the automatic, okay, this is the IV. Okay, I will change it because I don't know why I can't. I have automatic... (unclear)

Wait a bit. DIV okay. So, if I want to study for example, we used to say the level of aggression following the ban and smoking inside okay, that is the natural experiment. Okay, a natural experiment. I didn't put up the ban okay. I didn't put up the ban of smoking inside the restaurant, but it is an actual occurring phenomenon okay. Do not confuse field with quasi this is where our field wins naturally, okay. All natural are quasi experiments. Okay. So natural experiments are quasi why because the researcher cannot manipulate the independent variable. Okay, if I'm standing the levels of aggression following the gun ban in one of the states of America, okay. How is the researcher look going to manipulate the ban? That is a quasi, but it's a natural experiment, because it is a naturally occurring event. It could be following a tsunami, it could be any natural ... even that the researcher doesn't have control of them. Revise the types of experiments. You also have the true experiment Okay.

With the true experiment, obviously, it is the most simple experiment if you want when we come to a random allocation of condition and the experimenters are manipulating the conditions of the IV. Okay. A word about sampling. Okay, revise self-selected, when we say self-selected, we revise this over and over again .... Okay, so self-selected, like I told you, for example, if you want to, I wanted to recruit couples. So I went to a talk and I asked couples to come to who wants to enrol in this interview, I write an advert on Facebook, okay, or on the newspaper, or wherever you want to write it, I can't get a photo with me. And you see who is going to offer. Okay, so to come. Who responds to the advert basically, it's a self-selected sample. Okay, convenience, stroke opportunity easily available. Okay. So they're not, in a way recruiting themselves, but it's who I find available and used to tell you if I go to the mall on Tuesday to the market and my sample there. Okay, that is convenient sampling. we know that university students are very popular. So now you want to step away from university to get used to it because many researchers are our university professors. Okay, so that would be a convenience or an opportunity sampling okay. Random sampling gets in a way. The easiest if you want when everyone in the population has an equal chance. Okay, so if I'm studying ... (the name of the school) IB, I will put all the names of the IB students in (the name of the school) that return me and select the sample that I want. Okay, and that would be random sampling because everyone had the chance. Okay? But if I am going to go for a convenient sample of psychology students and ask them for consent, that would be that wouldn't be random, okay? Because not everyone has an equal chance, but the psychology students have a chance or disclaimer clearer. Are there any questions about what I explained on the paper? Okay. So I'm going to give you a few minutes, go through the paper again. Okay, please, and see if you would change something. Okay, from the questions. I am you have questions about credibility ethics we're going to discuss ... (student's name) but look at the other questions as well. You have five minutes and then if you need more time, let me know so that I know where you are stuck. Okay.

(the recording stopped because the device stopped working)

FT 4

# Female Teacher 4

Tue, Sep 05, 2023 10:34AM • 35:40

## SUMMARY KEYWORDS

market, price, profit, efficiency, costs, average total cost, produce, competitive market, productive, experiencing, breakeven, equal, economic, marginal revenue, yesterday, situation, fields, terms, decrease, means

## SPEAKERS

Speaker 1, Speaker 2, FT 4

### FT 4 00:00 [students' utterances are unclear]

Shhh now we can just start. Yesterday as I told you yesterday, we will go, we have just to finish this topic, but before going ... .. again we will revise what we did yesterday because I have to be sure that you understood and if you have questions about yesterday, I will .... .. What happened? I already told you not to come late because I will not wait. I don't know why you always come late even if you are here at school? So, yesterday I uploaded this slide ... and when I got your comments, you know, on Teams ... please just even if you've just started to tell me okay, I see this slide please be sure that you see them.... I speak alone with myself. Andy, what we did yesterday? What do you remember about what we did yesterday? What we are analysing, which market structure? Let's start from ... So, we are analysing the ... competition and what are the features of ... competition. So, we have a lot of ... (unclear) You were absent and you just came now?

### FT 4 01:49 [students' utterances are unclear]

Anyway, what I was telling is that there are identical ... (unclear) or services. So it means that how many things we have in this kind of market? A lot of, there's not a number. Okay, so we have many firms, and they all offer the same good and something else about the ... competition. So the price what is it? What is it about the price? So, we say, that they are price .... you must use the terminology now we said this, it's two weeks that you have to have it you cannot say the same price, you know, you have to be, you have to use the right terminology. Because we know that is it is one of the main features when we go through your scheme and if you don't use that terminology now, for sure you will not use the right one in this ... (unclear). So, they are price takers, it means that they all take the same price of the market and what is the price markets that they will take? The revenue price, okay. There is another feature that said about it yesterday ... What we said? No, there is something written here. Yes, the more firms produce product, the price will decrease. So, this is a consequence of what ... do you remember what are the features , there is one specifically that we analysed and this is the consequence of what what is it? There are no barriers to entry and exit. So, because of these we have analysed what you were saying about the price change and the supply change. When you have that number and the fixed .... And yesterday we said in the long run, what is the difference between short term and long run?

### FT 4 04:05

It is simply relating to the factors of production. What does it mean? ...

[students' utterances are unclear]

**FT 4 04:20 [students' utterances are unclear]**

In the long run you can also change capital and .... If you think about a simple example because the example will help you. if you have to open a new shop or you have to open a new factory, for sure you will do it in the long run... that usually is more than meet current demands. We cannot wait one week or few months. Usually the short term what you can change is just the number of the workers so how many workers you have or on which activities you know you can also change what are the shifts of the workers in order to change the production So, we analyse what happens in terms of bad security that ... that is perfectly competitive market in the long run and what do we say in terms of their entry of new firms in the market? What does it mean? What will happen in the market? The supply will shift why because of an increase or decrease? So, what we have here is a shift on which side? It is a shift on the right. So, this is the main the first point, entry of new firms in the market. It means that a number of the supply in this market will increase. So, your supply will shift and when there is an increase of the supply you already know from what we did in the first unit that the shift will meet on the right. This shift on the right what does it mean in terms of equilibrium? So, you have a decreasing price and an increase of the quantity. What is it important what we said yesterday this quantity what it represents? So, this is the quantity they have to reduce it by the good market. Here I repeat it because those are what ... usually ... you can confuse. This is the output of the whole market, and you cannot confuse ... without ... usually as I told you, the whole market is on the left and right and on the right you have a single firm because ... of a single firm creates exact the opposite of the whole market. So, what does it mean entry of firms in the market then? That your firms will enter in the market? why they will enter this market what will attract them? The profit. So, the economic profit, what is the economic profit? Yes, and what does it mean that you are after ... So, you heard that? Yes, your average costs are lower than the revenue ... when you are greater than the costs Okay. As you prefer, it is important that you remember the ... before ... and after... (unclear) So, your economic profit, your firm will experience an economic profit only if you have that revenue greater than the cost. So, it means that you will have an extra ... (unclear) and you will not just have the profit to cover the cost. Then what we did yesterday, we analysed the situation of ... market, but also for the simple fee, because what we have to understand what will happen in this market when new firms enter. So, they will enter in the market because they are attracted by the profit, but this will lead to a decrease in price and what will happen for one field. What does it mean this decrease in price? The profit, the revenue decrease the marginal revenue exactly will decrease. Why the marginal revenue will decrease? Because you know that you we are in a perfect competitive market and the fees are what we say before they are price takers. So, if the equilibrium price is changing, they will accept the new equilibrium price. Now, they will put ... (unclear) don't accept this price it means that they will start to sell their output at a lower price. This shift of the marginal revenue code to remind you this is equal to the demand that is equal to the price because this blue 1.20 is the old price in blue and 15 is the new one. What does it mean for one firm? That in terms of the quantity that this firm ... (teacher waiting for students to answer) to sell it will be lower because now we have many firms, and their profit is split between them. So, we have that what we say is that the entry limits the profit. So you have firms that are entering the market because there is a profit that attracts them, but for each firm that is in the market, you have that this new entry will... profit . What we say about this

is the example that we already did yesterday with numbers what about exit? So, if you have exit from the market, ... (unclear) just going a step back. Why they ... (unclear) the market? So it is exactly the opposite. There is not an economic profit, there is a loss and what does it mean that there is a loss? So, you are beyond ... and it means that your costs are greater than the revenue. So, you have a loss. And then it will be a signal for the firms to exit the market. When the firms exits the market, it means that the supply as we say it as it is shown in this diagram, which shifts on the left, so, it will decrease. Now, this shift on the left what does it mean in terms of the equilibrium? It will change and exactly the quantity will be lower and the price will increase. So, it is exactly the opposite of what will happen with the entry in the market. So, what we have here that the quantity of the whole market is decreasing. Now, what we expect for one firm?

**Speaker 1** 10:47  
(unclear)

**FT 4** 10:50

... because now, we have a number of firms that is lower. So, what will happen this is again your whole markets they are price takers. So, it means that they will all take the new price. Now, the new price is higher and a new price means a higher profit and then higher quantity of output sold by who are the firms that remain in the market. So, what what is the consequence? So it is that the exit of the firms when you are in a perfect competitive market, and... (unclear) the losses. Here you have to pay attention and you have to specify that you are in a perfect competitive market. Why?

**Speaker 2** 11:40  
(unclear)

**FT 4** 11:43 [students' utterances are unclear]

Sorry? Because they are price takers but also because, what about the barriers, there are no barriers, if you are in a number of the structure that we will study next week, you will not have these because there are barriers to entry and exit. So, this is important to ... (unclear) there are four structures that we will study and it's easy to confuse between them. So, in order to not to confuse it is important that you have ... (unclear) what are main features, because all these analogies are consequences of the features of the market. So, because there is there are no barriers to entry or exit, firms can add directly to the market anytime in the long run. That means that you can have these situations in terms of change of supply and change of demand ... okay. Now, what do we have to see today that is the last part and then we will go head explain as I told you yesterday .. explain what you have to do for internal assessment. But now there is this last part that is not something new yes. ... because because every time that in the long run, there will be firms exiting or entering the market, you will reach ... (unclear) process we say but you will reach the .... So, for a perfect competitive market, you have a situation in which the firms will just earn normal profits, not economic profit. Another structural you mean? As I told you, perfect competitive market, if you remember when we have introduced them, there it is a theory I mean, it is extreme and it is exactly the opposite of the monopoly that we will study. So in reality there are not real life examples, the most similar but still it's not a perfect competitive market is more similar to a monopolistic competition, it is related to the primary commodities and natural resources where usually ... (unclear) more or less the firms are price takers but if you remember you have the perfect competitive markets, that we assume that information are perfect, but we say that there is no market with perfect information. So why we start with the competitive

market? To understand what is it the extreme of a free market where there is a perfect competition, but in the reality there is not a perfect competitive market. We can find the natural versus primary commodities, something similar, but it means that you for sure do not have all the features. For example, the one about the information, okay. ... You may for the ... (unclear) using real world examples. The second question, yes, usually, and real world example in a perfect competitive market, there isn't. In the case, I'm not saying that for sure they will not ask you, because maybe they can ask it to you to see if you know that there are no real life world example, so that you can discuss and you can explain. Yes, in reality this is a theory, but the most similar market can be this one. Okay? What about efficiency? This is something not new, because we already have done the allocation of ... (unclear) versus the allocation of the resources at the beginning when we did the market supply. But as you know, now that we are at the end more or less of microeconomics, all the topics that you did before, we are starting to link them. And then we have to understand now what happens in terms of the efficient allocation of the resources in a perfect competitive market. But the entry and exit in the long run of firms, in a perfect competitive market is a way when you reach the ... (unclear), the firms will reach the most efficient allocation of the resources. Why? Because it means that they are just earning a normal profit, so they are allocating the resources in the most efficient way in order to have enough revenue to cover their costs. When you have an extra cost or when you have ... or you have a loss, it means that you have not allocated efficiently the resources. Exactly when you have an efficient allocation of the resources when you are at the ... So if now if I'm not at .... and in this case, your equilibrium is ..., that is ... situation (unclear), it means that you don't have an efficient allocation of the resources. Here you will find an explanation, but we already spoken about it, about two types of efficiency, productive efficiency and ... efficiency (unclear). What is it about the first one. You have the first one when the firm produces at its minimum average total cost? So, what does it mean? What is the minimum average total cost for the firm? The firm is producing ... (teacher waiting for students to reply) the average total cost that is equal to the price. What does it mean? That ER, when your price is equal to the minimum average total cost, you have only a local profit, because you are selling at a price that will allow you to cover your minimum average total cost. So, the resources in that case that you are using to produce the good for the service of the market that you are ... (unclear) average total costs. Now we are just defining them, but then you will see it on the diagrams okay. What about the ... (unclear) efficiency? The ... (unclear) efficiency is when the price is equal to the marginal cost of production. Now, if the price is higher than the marginal cost of production, it means that the society benefits more from the product than it costs forms to produce it. So, it means that you are producing and you are selling at the price that is greater than your marginal cost. So, there is for sure a greater demand and the expenses that would be an economic profit. So, you are not going at the ... (unclear) The same if your price is lower than the marginal costs of production, less product is demanding and then it's at a loss. So when you have that the allocation of the resources is efficient when the price is exactly equal to the marginal cost .... Now, we have to see it on the diagram that we did. So, this is exactly, those are the same things that we already have done. For this reason they are at the end. So that it will be easier for them to understand why. So, we said, let's start from the first one the productive efficiency and we said that it occurs if the firm produce and the price equal to the minimum minimum average total costs. Now, this is your price. What is it this situation? The one that is represented here?

**[students' utterances are unclear]**

**FT 4 19:21**

Sorry? This is the profit maximisation and? Yes, it is. So, you have this is exactly the situation of the economic profit why? Because you have that the average total cost is lower than your ... price okay.

**FT 4 19:42 [students' utterances are unclear]**

Now we said that when there is a productive efficiency, if the marginal the price sorry is equal to the average total costs. When the price is equal to the minimum average total cost? Which situation the three ones that we studied? When you are ... when you have ... profits, only if you are at ... (unclear) If you see now this, your average total cost is lower here. So what you have here is ... the economic profit. When your minimum average total cost, it means the minimum point of this ... is equal to the price while you have exactly the breakeven situation. So, what does it mean? That this is the case in which your average total cost, the red one, is lower, the minimum, is lower than the average total cost ... experienced by the firms. Here, the point is not that which average cost is experiencing crisis, sorry. You have to compare this red point with these, because this one that you read on this axis it is the average total cost that is experiencing by the firm. But it's not the minimum, because the minimum of the ... (unclear) is the minimum point, the lower point of ... (unclear), that is the red one. So, in that case, you have that the firm is experiencing an average total cost that is greater than the minimum that the firm can experience okay? So, when the firm is at an average cost like that that is greater than the minimum, again, your meaning is that red one, it means that there is an economic profit.

**[students' utterances are unclear]**

**FT 4 21:43**

But this means that the firm is not producing at their maximum. Efficiency in terms of productive efficiency. Why's that? Because you have productive efficiency, only if the price is equal to the minimum average total cost, so your price must be equal to this red point, and otherwise, you're not going to have productive efficiency.

So, this is something to show you now. What is it, their situation I mean? They have situation is always in the long run that can be reached. Why is that? What we said before between short run, comparing short run and long run and the profit? ... (unclear)

**[students' utterances are unclear]**

**FT 4 22:35 [students' utterances are unclear]**

Economic profit can occur only in the short run. So this means that here the firm is having an economic profit and if the firm is having an economic profit, you are in the short term. So, when we have that the firm will not manage to produce efficiently in the short term, when the firm can have a productive efficient efficiency in the long run because it is in the long run that we said before, that's ..... your marginal revenue will shift, and you can reach the breakeven situation. So, it means that productive efficiency is reached both when you have firms entering and firms exiting the market. So those two are examples of cases in which in the long run, in the perfect competitive market, the firm can produce at a productive efficiency level that means that your price is equal to the minimum average total cost. That is exactly this point where they... Is it clear? We have just applied what we said the definition

of the productive efficiency to what we said about entry and exit in the market of the firms. Let's see allocative efficiency right here. It's again the same, we will just apply definition of the allocative efficiency to understand where the firm will manage to produce at an allocative efficiency level. It occurs when the price is equal to the marginal cost. So, what is happening? This is your equilibrium price. This is  $P_1$  - any price that is lower. What will happen in this market at  $P_1$ ? Shortage or excess demand because at  $P_1$  you have that your quantity demanded is greater than the quantity supplied. So, you have a shortage or excess demand. And now we will take that  $P_1$  as our marginal costs. Now what does it mean that if you compare your equilibrium with your marginal costs, that is any  $P_1$  that is lower than, cause we are analysing this situation, are lower than the equilibrium, we have at your price is greater than the marginal cost. What does it mean? The firm is not producing at the level of allocative efficiency. So, what we have here, you have two quantities, this is your  $P_1$ , but it's not the one from the profit maximisation, that is where your marginal cost is equal to .... (unclear) So, what does it mean? That when the firm can experience allocative efficiency, at which stage? when the price is equal to the marginal cost?

**[students' utterances are unclear]**

**FT 4 25:58**

If you think about loss, normal profit and economic profit? it is exactly the same that we said for before for the productive efficiency. Here what type are you experiencing? Profit? Loss? Economic profit because your average total cost will be lower and because you are experiencing an average total cost that is lower ... in the short run, but in the long run we say new firms can enter or can exit from or into the market and when they enter or exit from the market, we say that then we've reached the breakeven situation.

**[students' utterances are unclear]**

**FT 4 26:48**

So ... costs will be equal to the price and your marginal costs will be here, okay? So, what does it mean? That when the firm is ... productive and allocative efficiency when the firm is in the situation of long run, and it is in the breakeven situation. So, both entering and exiting of the firms in that market ... in which demand ... (unclear) and experiencing a lot of efficiency. If you remember when we say that when we did the allocation of the resources in efficiency, we say that it happens only in the equilibrium. But we also say that the market always change, and always try to find the new equilibrium. It is exactly the same, these markets will always try in the long run to reach their breakeven situation that is the most efficient from the productive and the allocative from the resources point of view. So you have that in allocative efficiency and productive efficiency will reach the breakeven point okay? And only in the long run. Again, when it will happen, we are studying the theory; we make a lot of assumptions. And you know that it is very difficult that a firm will produce in an efficient way. Why? Because they want to make profit. When you are at a breakeven, there will not be an extra profit. But it's something that, you know, we will not have a market with firms that do not earn extra profit. Otherwise. it means that all the firms just work just to ... (unclear) the costs, and it is not something realistic. But we have to understand why it could be possible so that we can understand why the reality is something that usually does not happen. You have a question on this. So, I already uploaded as I told you this slide. Please don't use only the slide to study this topic So you have always to use the book. You have always omitted the slide you have to for sure with the diagrams because you can see that how many times you won't understand how they shift and how they change. But you still

need the book and Cognity. The book because it's quite structured. I mean, and you have a lot of other example; Cognity because you will find a lot of usually video, real cases And on Cognity you also have in some units interactive diagrams. Okay, so please don't use only the slides. ...

**FT 4 29:49 [students' utterances are unclear]**

Obviously, when you reach the breakeven as the single firm, it means that all the firms are obviously are in the same situation. So when you have one firm that will reach the breakeven, we analyse one firm, but it means that it is after .... (unclear) So, it's both for the market and ... (unclear) Now, as I told you, we will go and we will start to see what about internal assessment? As, as you know, your internal assessment because I already said something about it. We didn't start it before because you have an economics internal assessment that is a portfolio and three commentaries. One micro, one ... (unclear) and one on global economy. Now, we can start it because we are finishing the first part of the syllabus. So, for this reason we are starting now. You will find here some slides I tried to prepare so they can help you to understand the main points.

But if you go through the syllabus, and I shared it with you at the beginning of the year, You will find exactly all the structure, mostly about an internal assessment. So, what is it about the economics internal assessment. First thing is the portfolio. So, it means that it is something that you will start to build now. And that more or less, we will finish it next year around mid-January. Why that? Because you will develop a new commentary on each part of the syllabus step by step. So, when we finish the part of this part of the syllabus, you will work on the commentary for that part. It means that the mark for this internal assessment is something that you will start to build now. You receive ... for each commentary you will have submitted draft and the final version. So, it means once that you have submitted draft, I will give you the feedback. Then you will work on the final version that will be submitted before you start to work on the next draft. So what you will do for each final question is something that you cannot then revise. Why am I saying that? Because it means that the mark depends on what you will do now. So, it's not something that you then you can revise and I will revise with you. You will build the mark of the internal assessment unit by unit. Okay. Firstly, micro then macro and then global economy. So, you have to produce three commentaries that must be based on three elements from articles. Now, this is just an introduction, then you could have read that for each of the criteria that you have to respect about the ... (unclear) how to write it. Each article must be placed in a different unit of the syllabus. What does it mean? That you must choose an article, one that is related to the real case example that is linked to what we studied in microeconomics, another one is related to what we will study in macro and the third to what we study in global economy. You will have to produce then three commentaries. Each commentary must have its own cover sheet, then we'll see how it has to be. And finally the portfolio needs to have its own cover sheet. So you have portfolio cover sheet, one cover sheet for each commentary and the three commentaries.

**[students' utterances are unclear]**

**FT 4 33:50**

So you will ... (unclear) step by step. But then next year I will collect everything in one file that will be your internal assessment portfolio. So each comentary has to take cover sheet. And each article has to be included in the portfolio, it is something important. Why that? Because now we will start to make the first commentary, then you can choose the news and you know that sometimes it can happen that you have lost the article that you choose, or the

websites you know can change something, you must download and save. ... Because you must include ... copy and paste the article in the commentary.

**FT 4 34:41**

So if you lost it, .... (unclear)

**[students' utterances are unclear]**

**FT 4 34:44**

Okay, so each article must be included in the portfolio. What is the weight of your internal assessment on your final grade? You are all HL and for HL it is the 20% of economics final mark so as you can see, it is not small. And it is something very important ..... to build what will be your mark. Let's let's start from the .. how we have to choose ... for the articles because ... (unclear)

FT 5

## Female Teacher 5

Tue, Sep 05, 2023 10:34AM • 56:07

### SUMMARY KEYWORDS

talking, trauma, audience, metaphor, writing, dramatic, christmas, crisis, ben fogle, spelt, quotations, essay, macbeth, marks, literature, terminology, john, poetry, feature, letter

Speaker 1, Speaker 2, Speaker 3, Speaker 4, Speaker 5, FT 5

### FT 5 00:00 [students' utterances are unclear]

Right. ... (students' names) ? Is he is he not here today? ...? ... (student's name), are you here today? Good. Glad to hear it. ... (students' names) Okay, ... (student's name). It looks as if you're about to go on a mission somewhere. It's very interesting. Have you heard of, who is that kind of an explorer who goes and does things on islands and all sorts of things. What's... the Ben Ben Fogle? Ben Fogle. You've heard of him? He, uh, you know, we were doing Scott at the Antarctic, we were doing letters and his last letter to his wife. Well, Ben Fogle has, he's made a film or series where he is going to the Antarctic, but he is using, he's already been to the Antarctic, but he's going to take the exact same equipment that Scott has, and also exactly the same food. So, nothing, he can't change anything. So that he wants to see the hardship. He wants to see the actual effect on on himself, etc. etc. And I don't know whether he's done it. I think probably he has done it. And he's come back. But they may have made a film in the process, but I just thought it was interesting considering that we've been talking about it. Okay. ...., ...., ...., .... (students' names), still away, ..., ..., ... (students' names) Deal. Okay, right. I'm going to go to begin with. I'm going to go through your essays, the ones that you did on literature, and some of you did trauma. And some of you did the presentation of women, some of you didn't bother. And I'm not talking, I'm looking at ... (student's name). I'm not looking at you. I'm looking through you. Okay, so and yes. And you can tell from my tone, that they weren't good. Okay. I think the highest mark was 22 out of 30. Because you get for the literature exam, you get 10 marks for you tell me. Thank you. A - Knowledge and understanding. Okay, u equals 10. B. You can say, analysis, and discussion, and evaluation and evaluation, A and B. And remember the analogy I gave you the other day analysing a urine sample, and it sounds a bit revolting, but analysing the urine sample, you can say it's got this in it that component, it seems to have a lot of sugar in it, etc, etc. And then the evaluation is now what is it? What do we need to do with it; what does this show. Not simply there is sugar, there is a level of this, there is something there, you know, whatever. It indicates there is another problem, it indicates that somebody has got diabetes if they've got too much sugar in their urine, or something like that. Okay, so the analysis is the thing that you're looking at in the in the little pot, or what they call it in the lab, and the the evaluation is now what, now what? How can we say what the thing is? All is all clear and everything fine? Do you understand? So you can't just say that is a metaphor. How do you spell metaphor? You got to the age of 18 and you don't know how to spell metaphor, and you misspelt it about six times in your essay, which means if you can't spell the terminology correctly, you're going to get no marks for language. Sorry, that's the way it is. Yes.

**Speaker 1 04:20**

m-e-t-a-p-h-o-r

**FT 5 04:23 [students' utterances are unclear]**

Yes, ... Okay. And there's no point in just saying there is a metaphor, you've got to analyse it. So for example, one of you, can't remember who, referred to the metaphor, when when poor ... is being beaten up by ... (unclear), and then he he has again that terrible trauma, as he says he feels as if he has been in barbed wire and it's ripping at his skin. Now, that there again, that is an extended metaphor. It includes say a motif as well, which has moved its way through the entire novel. Okay, what does it indicate?

... (student's name), what does it indicate?. And? Have you ever tried climbing over a barbed wire fence? Have you no, anybody? Have you tried? Why? ... private place? (unclear)

**[students' utterances are unclear]**

**FT 5 05:30**

So it's hard, isn't it? It's hard, especially that barbed wire, which is it's sort of like ... (unclear) that sort of thing. And I was in Italy at Christmas, and my husband and I went for a walk. And I said, I'm going to walk back the way I came, on the road. It's simple. Okay, straightforward. He says, I could walk up the hill, and I said, but you don't know the way; it doesn't matter. Anyway, about two hours later, he got back home. And he was ripped all over his arms, because he had to go through some bushes, it was getting dark, he would have been completely stuck. He didn't have his phone, I didn't have my phone. Because we were going for a walk. And so so okay, it's painful. It's painful, and it hurts and it rips. Okay. So using that as a metaphor is highly effective. Okay. So develop that. Right. Just because it's a novel, doesn't mean it doesn't have figurative language. Okay, so that is very often weak. Okay. C is? ... (student's name) ? C? Why don't you know.? It's, you've got an exam coming. Guess.

**[students' utterances are unclear]**

**FT 5 06:57**

... (student's name)? Structure? Focus and structure or focus and organisation? I'll let you have that. And that's where the focus and organisation - are you answering the question? Very important. And you have to link them because what is the key word is the question.

**07:23 [students' utterances are unclear]**

... In the question that you choose in the exam, keyword, two works. But what do you do with those two works? Compare? Okay, so if you write two essays in the same exam, that's not good. Because you're supposed to be comparing. I don't want you to compare every few lines, that doesn't give you enough time to get into depth. Okay. So, but the ... (unclear) is important that focus the comparison, how does this person present trauma and pride, how does this person and in what form is this being.. Okay, so D is ... (student's name). Thank you - language. And that is worth five marks. Now, some of you have come tumbling out of this essay with eight. At the the thing, the big overwhelming thing that I'm getting is I'm getting a sense that, you know the plot roughly, roughly, not deeply, but roughly. And so you roughly talk about the plot, and that that's all I'm getting at the moment. Macbeth. You know, you've got on full of scorpions, you just said his mind is full of scorpions, you need to have full of scorpions is my mind dear wife and it's plaguing him, this sort of trauma of what

he has done. But it's the witches who are thoroughly enjoying it, the supernatural sort of element and haunted by his ideas. And literally haunted. Who? Yeah, do mention that. And so, what you need to do is you need to say at the opening or at the end of act three Banquo goes to .... (unclear) Macbeth is publicly humiliated. Okay. And you need to have some quotations for that as well. You didn't mention it; you said he's haunted, yes.

09:35 [students' utterances are unclear]

...

**FT 5 09:40 [students' utterances are unclear]**

I see. Possibly, if you're going to say he's haunted, and there's a ghost in it? I think possibly you can ... Okay, but you've got to know the quotations. If you are writing about a play. Generally, if it's going to be Macbeth or it's going to be Othello or something like that, you need to talk about acts and scenes, pivotal points of the play. Okay, how would you call a pivotal point in a Greek play. Well done – peripeteia. So in in Shakespeare, you could say peripeteia. But you could say the pivotal point, okay, and generally speaking in Shakespeare, where is the pivotal point? Second act. Act 3, act 3. Three is actually act three scene three in Othello, act 3 scene one in Romeo and Juliet. Hooray, great. See you tonight, and then 10 minutes later, he's killed .... And it's all gone wrong. Okay, and he's banished. So it is horribly wrong. Othello, he's just about to spend his first night with his wife whoopee. And he's really looking forward to it. And then a seed is planted by Iago in act three, scene three. By the end of Act three scene three is just about to go up to his bedroom. At the end of Act Three, scene three he's decided he's going to strangle his wife tonight. So he goes up to the bedroom and strangles her. In act five he discovers that actually she wasn't unfaithful. So what to do? Because it's a tragedy. He hangs himself. Okay, so he's got to die. He's got to die. Okay. So use dramatic devices, link the things together. Okay. And there's no point in just giving me an overall generalised plot, it will not do. And some people said that Nora is manipulative and full of pride. Well, that's a misjudgment, personally, I think it is a misjudgment. She manipulates all the time. Does she? Where? No. I'd like to see that. Okay, so can you pass that back to ... (student's name) ? I've written on it. I've given you a mark. I'll give you a mark for everything from now on. You've got to use capital letters, you've got to make textual references. Not one single quotation from the text. Okay, so you've got to and that shows what what's it show? Knowledge and understanding of the text. If you can't use a quotation, if you can't pick something out, then then you don't do it. You ... but you don't know it (unclear) . This is from .... and ... (student's name). On top of that, you could say this metaphor develops, if you're talking about poetry, if you're writing about poetry, you must write about figurative devices. You must. And in Simon Armitage, what's the other thing that's absolutely essential, ... (student's name)? In the Not Dead. ...

[students' utterances are unclear]

**FT 5 13:17 [students' utterances are unclear]**

And what's key, a key factor? ... (student's name)? What's a key factor of the collection of poetry The Not Dead? Trauma, yes, but what else as a feature as a poetic feature. Who's speaking? Yes, so therefore what are we talking about? The soldiers speak, what devices is it using? Yes, so we're getting there. We're entering the edge of the cliff. So, tell me what you call it in terms of analysis. Anybody? Nobody? Yes. Yes. Narrative voice. So, you're saying he captures the narrative voice of traumatised soldiers. And I think one of you, anyway, didn't quite the right name for .... (unclear) And right, that might be accurate in what you're actually writing down. Okay. So narrative voice is key. Trauma is key. Guilt is is key. And

the collection is called the not dead, which is highly effective because it's suggesting no one was alive either. So that is so important. Can you pass that back to ... (student's name)? Okay, what is? Seven people wrote about Antigone? What is Antigone's motivation? Yes. ... (student's name) Antigone's motivation. You did your higher-level essay on Antigone. So, motivation. It's the gods. Kreon You are my uncle, you are a man. You cannot dictate to the gods; you cannot deny Polynices the right to go to Haines. Okay, so what is her motivation. She is full of integrity. She doesn't want power at all. She's full of integrity. So, you say she's full of pride and wants power and is manipulative. It's just not not the case at all. She is willing to give up her life for principle. And I think if you know in a way in a way who historically would give up their life for principle ....

**[students' utterances are unclear]**

**FT 5 16:21**

The martyrs. You know, a lot of them were like St ... (unclear) he was he was shot several times, martyrs who are ... martyrs who, you know, they go through terrible traumas because they will not acquiesce; they will not give up. So strong character, even though, even though she is young, okay. So don't call Nora a girl. I think you called her a girl several times. An idiotic girl, something like that. Please do use the right terminology. Okay, I gave you the terminology for drama, didn't I? Let me just check and I'll put it up on the board for you. And particularly for A Doll's House. Sorry, just just have a look at your essay and at the end of the lesson if you want to come and challenge or if you want to come and say hang on a minute what do you mean by that?

Now I'll tell you what I'll do. I don't think I've got it up here. So, what I'll do oh wait a minute, maybe? Maybe Maybe.

No, so I'll, I'll do it for you. But can you just give me some terminology when involved in a play because a lot of you are doing plays. I noticed this The Kite Runner that you can do I noticed the poetry. And like I said, my advice is now the poetry down. Okay? Because if you can get those voices, you are in the realm of war, you're in the realm of trauma, you're in the realm of of society and society reflecting etc etc. So and now to voice the importance of narrative voice. How would you link narrative voice with any other text that you studied? So you're looking at Simon Armitage, which other text is very effective in terms of narrative voice ...

**[students' utterances are unclear]**

**FT 5 18:45 [students' utterances are unclear]**

Kite Runner, first person narrative, why is it so effective? Because he reveals. He is a bit ... confessional in many respects. Okay. How will that link with another text that we studied? Sylvia Plath, thank you, confessional poetry. Now, that's, that's not my words. So that's the words of critics -confessional poetry. So, he is confessional. He said, I did this, I did this. I did this to Hassan. It's my fault. And I'm weak, and I'm lazy, and I'm stupid. And my dad believes so as well. And now I'm going to try to atone. So he goes through trauma, but he also goes through atonement. Yes.

For Sylvia Plath. We need to say obviously more than one poem, right. So how much would you say cause she has a lot she has something ... or she has something in Pursuit, you know (unclear)

**[students' utterances are unclear]**

**FT 5 19:46**

Pursuit, I think has got great because there you can, you can really, you know, describe events that took place 1956 - the first meeting ... within a couple of days afterwards, the metaphor, the Gothic imagery there, a sense of excitement, you know, the danger of attraction with the attraction of death. Women for some reason, he has so many affairs; he had dozens and dozens that because I've read a new book about it, and the biography about it. And, you know, like I said, on the night that Sylvia Plath committed suicide, I assumed he was in bed with ASEAN Weibo, but he wasn't. He was in bed with somebody called I think, Susan Campbell. .... So he was cheating on both of them. So again, he seems to be this now who, where else do you see that? That sense of ... the power of this man?

**[students' utterances are unclear]**

**FT 5 20:46**

Now that's talking about taking Yeah, yeah. Well, in in simple practice. Perhaps Yes. Because of his No, I was talking about Ted Hughes.

Where else in Sylvia Plath's poetry? Perhaps, because of his attitude to nature, but how about Ode to ...? ... (unclear) that women were incredibly attracted to him in some ways. Okay. All right. And you're talking about The Kite Runner. But that .. but Doll's House. Yes. You've got that same relationship. So we go men, it would go with trauma, it would go with patriarchal societies. Another word for patriarchy?

(waiting for students to reply)

**FT 5 21:50 [students' utterances are unclear]**

Hegemony is another word for patriarchy. Okay. So, if you're in a society, which is very difficult to get, sorry, trauma ? yes it would, it would because of guilt, because she feels guilty for ...

**FT 5 22:16**

... and when you think about the presentation of women, some of you were writing about Mrs. Lind and Christine, and you were saying about about her, but she gave up just as much as Nora gave up. Why? What's the example of what she gave up? Yes?

**[students' utterances are unclear]**

**FT 5 22:45**

She gave up her love ...? Yes, her mom said, look, we have a whole family to feed... Exactly. So she gave up her first love and caused him trauma. She left him and married somebody else. We don't know who and in order to support the family, so she sacrificed herself. And in many ways, you could argue that Nora is sacrificing herself. Right? Okay. That's going into lots of detail. But the only thing is none of you have used a doll's house in in any assessments. So you could all use it for the exam. If you go back. All right, tell me some some dramatic devices and then we're going to switch to language. Okay. So, what language would you use, that I'm not getting, for the drama? Playwright? Okay. How to spell playwright?

**Speaker 2 23:51**

[students' utterances are unclear]

**FT 5 23:57 [students' utterances are unclear]**

Why is it spelt like that? Because writing is not spelt ... (unclear) it's, it suggests skill. Okay, it's used; its root is in skill. So, if you're a silversmith or if you are a ... (unclear), right or something like that, then you are skilled in making objects etc. Okay, so that's the that's where you spell.... (unclear) Okay. Next thing. Dramatic terminology. I did tell you, yes. dramatic irony. dramatic irony. Yes. Now, I still argue that dramatic irony is. Well, it's seen in Antigone, because the audience knows that Antigone is the one who has given the last rites to Polynices. Okay. Okay, .... He's been verified by the state. So he's good. He's fine. He's He's after that like it's fine. So, ... what somebody's done this is disgraceful. Who is it? And then ... dramatic irony. What else? Oh, and the dramatic irony is where else; which other play? Oedipus Rex. It I don't think it is. The audience's is getting clued up. Other people know that the audience hasn't made it you don't know ... categorically. In Othello, Iago's opening monologue to the audience is I hate the Moor and I will lead him by the nose as horses are. Is it horses are? Sorry, asses are. Okay, and I'm going to do this and you watch me, this is great. And then later on he has another soliloquy; he speaks directly to the audience; that has dramatic irony. But the irony Yes. An unfolding tragedy. Yes. All that is unfolding. So the audience is thinking golly, but they don't know for sure because there isn't a conversation off stage because all centres on one platform.

**Speaker 3 26:17**

I was gonna say could it be in the Doll's house when we know that the letter is sent we know why she's... (unclear)

**FT 5 26:23**

Exactly. In Act 1 she admits to Crispin that what she's done. So, the audience are fully aware of it. We know what's in the letter. Okay. Right. And that what does it do? What does it create? Tension tension. Yes. Can you spell these correctly, please? tension and suspense.

**FT 5 26:51**

Suspense is all SS it isn't c. So it's not suspect. Okay. Tension. Suspense. Okay, we're waiting for Torvald to open that letter, we can see it; it is that the audience can see it in the post box. And you know, it's lurking there like some bees ready to pass. Okay, something else?

[students' utterances are unclear]

**FT 5 27:12**

Yeah, dramatic entrances and exits. And nobody, nobody, referring to either Oedipus or Antigone or Doll's House made the comment about a dramatic event. So dramatic entries. It could be a dramatic breakdown. Okay. It could be Antigone's dramatic defiance. Okay. It could be the dramatic monologue by Nora where she knows she's going to be caught in her terror. Okay, so that's an essential word. Okay, exposition.and denouement. Of course ... Okay, so, exposition is what?

[students' utterances are unclear]

**FT 5 28:15**

Yeah, so it's when the ... story gives some, a lot of information to that the audience is caught up ... (unclear)

It's what is this play about? Okay. Is it about love? Is it about denial? Is it about, you know, what is it about? What's the scenario; basically, it's the scenario.

**Speaker 4 28:38**

I think it's like that the second act where the court is all around and then this gloomy soldier comes in and he basically gets exposition on that He's great. He's a ...

28:50

**[students' utterances are unclear]**

**FT 5 28:53**

... he just won a great battle against the Norwegians and the Irish, thane of Glamis, and he's so brave that he's he's comparable to ... Brave Macbeth. ...

**[students' utterances are unclear]**

**FT 5 29:32**

Ok good. So that's the exposition. The exposition here is. ... Where's the exposition in a Doll's House? We know it's Christmas Eve. And we know that Nora is getting ready for Christmas. Yeah.

**Speaker 5 29:40**

Was that when Mrs. Lynde comes in and then they sit down and tell me about your life?

**FT 5 29:46**

Yes. Because otherwise what is Nora going to do? She could have this inexplicable soliloquy, where she's standing there going. I wonder if I paid off the money on time, you know, forged the signature for etcetera, etcetera. So, there is the exposition. If you put that sort of terminology in there, ... (student's name), you will get better marks. Okay, if you're just telling me the plot, you're not going to get good marks Okay, the climax, so think about the climax, and in some cases the climax becomes anagnorisis. So, what is the climax of A doll's house would you say?

30:34

**[students' utterances are unclear]**

**FT 5 30:48 [students' utterances are unclear]**

Explosion. the climax is the explosion and ... as to the end and then of course with Oedipus Rex, it is the realization, okay? It is that moment of realisation, that moment of anagnorisis. So, when you are, if you're going to be writing about Antigone or Oedipus Rex, you're going to use anagnorisis. If you're writing about A Doll's House use climax, a dramatic climax. Okay. Pace real realism, suspense, tension, tempo, dialogue, of course, dialogue and confrontation.

Okay, so there are confrontations in, in both plays, in all three plays that we've studied, confrontation. And if you're having a confrontation, it necessarily is what ... (student's name)? Yes, you're right. Dramatic, it's dramatic. It can be violent confrontation. Okay, so

so that and isn't that what we love? Isn't that what the audience loves in a play? If you haven't got any confrontations? It's going to be ... (unclear) for three hours? Yes.

**FT 5 32:19**

I was gonna say good confrontation also contain .... It's like, yes, it is, must be good. (unclear) So if you're going to have that you've got you can have stichomythia. ... it changes the pace case. Okay. So you have monologue, monologue monologue, ping pong, ping pong, ping pong between the between whoever it is, okay? A line each, stichomythia. Very, very effective. And that is what we do. Basically, there are more, and what I will do is I will and if it's tragic tragedy and that sort of thing. What I will do is I will put these down as part of terminology, and then I will, I will send them to you on teams, okay, so that you then start applying it to your writing. Because if you don't look at that, then you're not using terminology. All you're doing is telling me the plot. I don't want you to tell me the plot.

**[students' utterances are unclear]**

**FT 5 33:28**

Yes. Oh, what about denouement?

**students' utterances are unclear]**

**FT 5 33:31**

Oh denouement is where everything is resolved, suddenly aha. And it might be I mean, this is the denouement in in Oedipus Rex. Most famously, in Shakespeare's dramatic in his romantic comedies, where everybody gets muddled up, identities get muddled up, everybody ... (unclear). And there is a plot and a subplot, sometimes a third plot, and then at the end, what is the resolution, and it's a it's a resolution, but denouement simply means you are exposing what really happened.

**Speaker 4 34:04**

But there isn't in A Doll's House, because it's not really resolved.

**FT 5 34:10**

Well, no, but there it's a revelation if you like, but not in the same way as a romantic comedy. Okay, so I'll put that up for you and do that. And equally think about context of production and context of reception. Okay, because you might get a question, say, literature can be shocking, or literature can disturb or literature and society. Can you think about a shocking, a good example of something shocking? Are you really tearing a piece of paper? Okay, so shocking, something shocking. In your wider, in your wider knowledge of literature.

34:58

**[students' utterances are unclear]**

**FT 5 35:03**

Satanic Verses, Salman Rushdie. And I told you he's a blind in one eye now. He can't use his right hand. So yes, but maybe ... banned until the 1960s. Brave New World banned in some countries, Harry Potter is banned in some States of America. And, and so is Philip Pullman

in the in this trilogy? Because he implies, he's talking about the Catholic thing. Okay, so shocking. Where Where where's the disturbing the the the audience? Yes.

**[students' utterances are unclear]**

**FT 5 35:40**

In wider literature? Oh, no, no, in this. Nora leaving.

**[students' utterances are unclear]**

**FT 5 35:50**

Yes. Nora the the that's part of the play. That when it was first performed, they found it absolutely shocking. And so in some countries like Germany, he had to go back and you have to undo and she had to come back in because of her role as .... So what you can say is a controversial, it's very controversial, but on the other hand, one of the most performed plays. Okay, in that. And please remember, Bina 1879 is not the 1800s. What is it? The 1900s. Okay, it's the 19th century, okay. So be careful about that. Otherwise, you'll just keep on saying something that is wrong, okay. Compare Know, and ask kn o w, by the way. And the other thing is, no quotations put the quotations in, you use the Gentiles, you used a lot of very irrelevant quotations. So you in the silly thing is you have the book there in front of you, you could have gone to it and found it. So, you've got to, you've got to otherwise you're not going to get good marks. And that's, you know, this is your last almost your last chance to do it. Okay. Right. Change of subjects for next week, I did. I did find all these for you, which is about Ukraine, about Syria, about Afghanistan, etc, etc. But I wouldn't want you to write on these so we're going to do one but collectively. We're trying to get across that half an hour.

37:46

**[students' utterances are unclear]**

**FT 5 38:22**

Right. Okay. ... (student's name). Tell me, what's the first question, you're going to ask yourself...

**Speaker 5 38:53**

Context, kind of.

**FT 5 38:55 [students' utterances are unclear]**

What do you mean by context? Can you expand? What is it good? Okay, what is it? That's the first thing and I'll have to say you are getting better at that. So, the first question you ask yourself is what? And the first thing that you do is ..okay, all right. Okay, next question. Yeah. Purpose. And it's important for you to ... (unclear) in that because you can't just say it is. Okay, because you can't just say it is an advert. That suggests that the product is being sold, and that's not accurate. Okay. What next? ... (student's name)? Okay how. There's another one we need.

**[students' utterances are unclear]**

**FT 5 40:05**

Why? Why? Well, that's purpose.

**[students' utterances are unclear]**

**FT 5 40:09**

When was it written? Okay, so context. No one, ... (student's name) another one.

**[students' utterances are unclear]**

**FT 5 40:27**

What are you being asked to analyse about the text?

**[students' utterances are unclear]**

**FT 5 40:35 [students' utterances are unclear]**

Well, that's what really? Yeah. The format, okay, but absolutely that Yes. I was thinking about, all that sort of thing but also the audience audience okay. Yeah. Audience, but who is producing it? Okay. So, it is it Greenpeace? Is it? Crisis for Christmas? Okay. And crisis, the Christmas is a real it's very, you know, very widely known. And okay. And then you're thinking about how and then you're thinking about graphics, layout, okay. Images. All right, and why I mean, okay. All right. All right. So, take a minute or two. And I am going to give you let's say, literally two or three minutes to, to look at this. And I'd like you to give me some features of this of this text, and some also some technical language. Yes. So yeah. Well, the first thing when you look at it, what's the first thing that you see? Sorry, what sort of banner? Horizontal banner? And? What sort of feature is it? Prosodic feature. What about what about it? Yes, it's large. But what else?

**FT 5 42:37**

Three words. Oh, that's the cold weather alert. Yep. I'm talking about the stuff on the banner.

**[students' utterances are unclear]**

**FT 5 42:49**

Personal pronouns because that's one feature of persuasion use a personal pronoun you. And what about that, will you? God Okay, drawing you in. Yes. Yes, synthetic personalization. Yes, because they want to grab your attention. But this is a rhetorical question. Okay. Um, what else ... (student's name\_? Another thing, look at the image. No, look at the image of the banner. Or it's snow. It's snow. Look at the World cold and then it's snow. Okay, because if it was a Christmas decoration, it would suggest that you have the money to buy Christmas decorations. So it isn't that at all. Okay, so they're the sort of things am yeah, and think to yourself, you know about these about these headlines headers. Another minute or two

(students working)

**FT 5 44:10 [students' utterances are unclear]**

Tell me an expectation about Christmas. Why, why crisis at Christmas? Expectation? Yes. Because at Christmas everyone .. (unclear) their family. Having a good meal on the table, warm.

**[students' utterances are unclear]**

**FT 5 44:47**

Okay. Yep, presents money, all this sort of thing. And so any other points about this the layout or the anything? Would you like to expand on that one. On any features of this.

**Speaker 5 45:03**

It's divided into paragraphs. So there's like a main idea for example, donation and explains why you need to donate. Yeah, it says we know it works. And then there's a paragraph explaining why.

**FT 545:14**

Okay, so what do you call those? We know it works to meet this crisis. We need help urgently. So what do you call that? ... (student's name)? Not sure. Yeah. I'm getting it. Yes. Subtitles, something just as simple as that paragraph, subtitle and the subtitle tells you about the subject of the next paragraph. Okay, good. And when you turn over the page, ... (student's name), what?

**[students' utterances are unclear]**

**Speaker 2 45:53**

It hooks you, because it's just talking about one guy.

**FT 5 45:56**

Okay, so what you could say, if you ever get something like this, it goes from the general to the particular. And you will find that over and over again, when it says, you know, the crisis in Afghanistan simply gets worse. Amir has not eaten properly for three days. Okay. And so, you know, it goes from the general to the particular and then that hopefully gives you the opportunity to identify with them or to feel sorry for them. Could you say crisis at Christmas is juxtaposition? Yes, yes, you could. Yeah. And what about the image of the man there? ... (student's name), can you explain the image of the man?

**[students' utterances are unclear]**

**FT 5 46:51 [students' utterances are unclear]**

And what are his paralinguistic features? ... (student's name)? Can you see this kind of a smug smile? Why is he smug? If he's been given as an example of Christmas. Well, we got crisis at Christmas. ... (student's name), any ideas? No. Yes, yes. ... (student's name). Yes, because it tells you about his his life. And when he was for look, was for his brother was killed in Second World War bombing and able to cope with a tragedy his father committed suicide. Oh dear, it is going very badly. John, his mother remarried Three years later, but a new husband was alcoholic and would violently abuse her and the children. What a life! How's he supposed to recover from that? At the age of 14 frightened for his mother safety, John hit his stepfather over the head with a chair. John and his younger brother were taken into care soon after John's younger brother died of leukaemia. What? ... Sorry, I shouldn't be laughing. That's terrible. It's full of tragedy. And so how could you not feel sorry for this guy? It's not because he went to a private boarding school and then squandered his parents' money, didn't bother getting a first class honours degree at university and, and then became an alcoholic, you kind of think, well, you have plenty. Everybody's dying around him. So, when he was 18, John found work as a cocktail waiter in hotel bars. But and you know that volta there, he was often forced to sleep through sleep rough between jobs, incredibly lonely and terrified of a dress. At night, he would lie grasping his most precious possession to his

chest, a picture of himself and his mother, after suffering a nervous breakdown, which you would. John spent time in an institute institution for the mentally ill. Now, now retired. So it's got a sort of a brief, what would you call it?

**Speaker 4 49:16**

An Introduction.

**FT 5 49:21 [students' utterances are unclear]**

A brief bio. Okay. John rents a room in a lodging house. And now we get the voice of of John. I've come to crisis at Christmas for the wonderful hospitality, sufficient transport, delicious food and kindness and volunteers, he says, Okay, now, there he is standing there. I've had a miserable life. He's not standing there like that. He's not standing there like that. He's standing there like that. I am proud. I've got through this. And everybody's incredibly kind and supportive and everything. So it It's a it's not a smug look, it's a contented; don't feel sorry for me. Yes. Now retired. That's the last part of the four paragraphs. Although he has had a dreadful life, especially a dreadful early life, he has come through it, but with help and support and support. Alright, so that is if you like, by using what sort of evidence do you call it? Yes, anecdotal evidence, okay.

**FT 5 50:51**

Is that spelt A N E C D O T E?

**FT 5 51:01**

But it also it also summarises his life. And what it actually what you what you notice, okay, he says he's terrified of arrest and lonely and all that sort of thing. But it isn't using sob sob language. It's say this happened. And then this happened. And then this happened. And although yes, in the third paragraph, it talks about the nervous breakdown and the Institute, he isn't sort of wanting you to feel sorry for him. He's simply saying, I want you to know about crisis at Christmas, and about everything it does for me.

**[students' utterances are unclear]**

Okay, so, what I'd like you to do, we think, Oh, and then you can look at that to that box there. The frame there, which gives you information about crisis at Christmas. And can it be think of a reason why this is that sort of Castle? That strip there that banner? Yeah. Protecting? Could be could be protecting? Yep. Please reserve a place for a homeless person this crisis at Christmas? And oh, yes. Tell me about the, the sort of what the font for crisis down there. Kind of, it's yes. Does it suggest a crisis? Something that's disturbing? Maybe, maybe, but there, that's one opportunity for you to interpret. Okay. So, write an analysis. And, well, this was for SL know, your writing? Because the other one was? Let's see if I got it here. Yes. The other one was an autobiographical Autobiography of what's his name? Keith Richards. Who's Keith Richards? Rolling Stones? Yeah, the Rolling Stones. Okay, so that was the other one. So one is autobiographical, and the other one was a charity advert. Okay. So what I'd like you to do for homework is I'd like you to write an exam style essay. And the question is, write an analysis on one of the ... include comments on the significance of context, audience, purpose, and formal and stylistic features. All the thing about this charity advert ,the crisis at Christmas, what more do you notice about it? What do you notice about this? Normally, with a charity advert, it tends to be yeah

**Speaker 3** 54:09

They tend to have like, a hungry children, and puppies. We all feel sorry for them.

**FT 5** 54:18

Exactly. And so this one isn't, here's the image on this one is I'm making it, I'm doing it. I am surviving. Okay. Yes. there is an honesty to it. But there's another thing, which is that it's quite long. It's quite long. Instead of using the tricolon and using imperatives, it is saying please, it doesn't say reserve a place for the homeless person. Please. And then tell me about the images in this box here. In this frame. Yeah, there's a tag, bit like a present. Changing Lives for 40 years and what else? A handwritten thank you. Alright

**[students' utterances are unclear]**

It personalises it. Okay. Right. So I'd like you to go through this. I'd like detail. And the other thing is that you must be working on and reading and rereading and planning the literature. Okay. You can't get away with a generalisation. Right, I'm gonna give you the last 10 minutes or so to start planning that, get it ready, read it through carefully, systematically, and then we'll go from that, okay I mean, it just, it is funny because he says you can help fill that space with someone for just a few pounds for 23 pounds 39 Seems very specific. 23 pounds 39.

**FT 6**

## Female Teacher 6

Tue, Sep 05, 2023 10:03AM • 1:18:49

### SUMMARY KEYWORDS

overlap, bonds, electrons, orbital, hybridization, called, p orbitals, sigma bond, shape, good, hydrogen, form, carbon, draw, type, sigma, bonding, undergo, present, dipole

Speaker 1, Speaker 2, Speaker, 3, Speaker 4, Speaker 5, Speaker 6, FT 6

**FT 6 03:13**

Okay, so, today we are going to have HL, topic 14. Can anyone remind me what we had been doing?

[students' utterances not clearly audible]

**FT 6 04:01**

Structure... we covered. We went deeper into the bonding. And we found that there were also what we call?

[students' utterances not clearly audible]

**FT 6 04:13 [students' utterances not clearly audible]**

... intermolecular forces were divided into three. Which were these three? ... (unclear) dispersion good. Dipole dipole. So, what's the difference between dipole dipole and ... dispersion?

**Speaker 1 04:41**

Dispersion is... it has to do with ... (unclear)

**FT 6 04:54**

No, one is temporary; one is permanent. Which is temporary?

[students' utterances not clearly audible]

**FT 6 05:00**

.. right. It is instantaneous dipole dipole interaction. It is there now not there in the next fraction of a second right? So, all molecules have .. dispersion forces. Then more strength comes along the dipole dipole because the dipole is permanent. A dipole moment makes a polar point, but then the strongest forces are the?

[students' utterances not clearly audible]

**FT 6 05:33**

... bonding alright? Which is between h and?

05:39

**[students' utterances not clearly audible]**

**FT 6 05:45**

No, not carbon. Nitrogen, oxygen and fluorine; nitrogen, oxygen and fluorine right. Now, today we are going to look at in more detail. We're going to look at the covalent bonds in more detail. So, we said that covalent bonds are formed by the sharing of electrons. Now, let's look at hydrogen.

Look at hydrogen. Hydrogen has only one electron. It is minus 1 and it will join the other hydrogen which is also minus one.

How do they share? Usually, we just write that there is hydrogen H<sub>2</sub>O and that is a covalent bond. Where is that electron? Where is it? Where do you find this electron?

**Speaker 2 06:43**

We said it is in the... in the .. (unclear)

**FT 6 06:46**

In the outer shell. What is the, what is the outer shell of hydrogen? NS. What is it? NS orbital. It is NS orbital. What type of shape has it got?

**[students' utterances not clearly audible]**

**FT 6 07:05**

... So you could have a ... or ... (unclear) around the orbital with one electron and the other orbital with one electron. Now, sometimes two of them like that... (unclear)

What happens is that this ... round one S orbital is going to overlap to the other S orbital and when they two overlap and they become like a cloud, right, it comes together like a cloud, we call that a sigma bond and this is a simple opposite of ...

**[students' utterances not clearly audible]**

**FT 6 07:44**

Right, that it's a ... bond (unclear). It's formed by direct overlap of two orbitals, and they overlap head on, right. They are overlapping head on with each other. That is called axial as well because they are overlapping along the bond.

There are others which are going to be different and it is axial overlap.

08:15

**[students' utterances not clearly audible]**

**FT 6 08:25**

Right. So, if we look at our Cognity, .... they overlap head-on.

So, it is formed by ... head on (unclear). Very important, especially for the multiple-choice paper. So, we have a diagram with two hydrogen atoms in a molecule of hydrogen and two ... overlapping head on. ... they can be single, or they can be double. ...

Now where is the electron density? Where is it? Is it at the edges? But no, it is in the middle, right? Most of the electron density is concentrated in the region between the two nuclei.

What holds these electrons together? It is actually the ... (unclear) of the shared electrons with the nuclei otherwise it would escape.

It is the nuclei which are holding those together. And as we have seen in the model. In this respect the model works fine. These can twist, right, they can twist. The ... by (unclear) bonds can rotate.

So, there is the rotation around the ... 1(unclear). But it ... (unclear) between an S orbital and an S orbital. It could be an S orbital and the fluorine because what is what is the atomic number of fluorine?

**[students' utterances not clearly audible]**

**FT 6 10:19**

So, it's 17. What is ... configuration?

**[students' utterances not clearly audible]**

**FT 6 10:27**

17 is the atomic mass; the proton number is nine for fluorine.

So, so, it will be 1 S 2 2 S 2 to P5. Yes, to P5. So, you need just one more to complete the shell. Now, at Orbital; how do we draw the p orbital. A P orbital is this dumbbell shape, right, dumbbell shape. Now, the S orbital is circle. When they come to overlap, this is a P x. P x is overlapping with the S orbital and you will get that form. Right. So, it's not just S overlapping with an S, but it could be an S overlapping with the P.

In the second diagram why is the .. bigger? Why is it bigger? It is a bit uneven because. It is a bit uneven, but that is because this one will probably pull it pull it towards it. It's the shape which has been disoriented, the shape has been deformed.

It's not because the H has a close grip of the electrons because if anything the f should have a bigger hold of the electron or negative. It's that the spherical shape has been remoulded.

Right, the big spherical has been brought to a point, all right.

**FT 6 12:43**

Now we could also have two fluorines going to combine them together by covalent bond and in that case again we have this overlap, right, the sigma bond. So, the sigma bond is the direct overlap of two orbitals.

The important terms are head-on overlap, head on or axial overlap.

**[students' utterances not clearly audible]**

**FT 6 13:19**

Yeah, we have another type of bond. It's called the pi bond. It's from the Greek word pi. Pi bond is formed by the overlap. Now, here we can't confuse a term called unhybridized p orbitals. We don't know unhybridized p orbitals. Right. It's another type of bond. And these are formed when you have ...

**[students' utterances not clearly audible]**

**FT 6 13:47**

Unhybridized p orbitals are orbitals which are not being used up in bonding, for example.

You can have a carbon which only has four atoms attached to the two carbons. Every carbon has to have four bonds. So, you have carbon, bond, bond, bond, bond. Now every carbon has to have how many bonds? Four, so 1234 1234. So, there is going to be a double bond. If there is going to be a double bond, one of them is going to be sigma because it's going to

hold them together. The other one is going to be a pi bond. The other one is going to be, ... a p electron which is not bonding. So, let's have, who would like to make a model of Itin?

**[students' utterances not clearly audible]**

**FT 6 15:13**

Yeah, make a model of Itin Itin involves two carbons and four hydrogens. The black is carbon.

Would you like to do another one, ... (student's name)?

Girls, would you like to do the model of Itin as well? Come on, try... (student's name), have a try.

(students working)

**FT 6 16:58**

How's it going?

**[students' utterances not clearly audible]**

**FT 6 17:06**

Yes, very good. I noticed that some of you realised that you have to use the frequency ones, okay, for the double bond.

Okay. So, one of these will be used to hold them together. This one will be from P hybridized or unhybridized orbitals. More about that coming up now.

Right. So, a pi orbital, a pi bond is formed by unhybridized orbitals. It could be the overlap of, this could be like p bonds. Imagine that this is the p orbital.

Right, it will be the overlap of two unhybridized orbitals although these signify a pair. And here I'm using an example of a pi bond. This would overlap with this one, they would overlap like this. You would have a pi orbital like this.

**FT 6 18:22**

Put your mobile away. You have pi orbitals like this and they will overlap, Now when they overlap, they are overlapping parallel to the bond axes. Now what do we mean by all this? You will soon understand.

So, we have pi bonds are formed. What is very important to remember is that pi bonds are formed by sideways overlap, not ... overlap, sideways overlap of atomic orbitals. There is pi bond formation between two carbon atoms and unhybridised pi orbitals. So, carbon can form double bonds, and when a double bond is formed, one is sigma one is pi. One is sigma, one is pi.

It can also, carbon can also form triple bonds. If it's a triple bond, it will be sigma and two pis.

**[students' utterances not clearly audible]**

**FT 6 19:33**

Right, so this is a pi bond here. They are not used for dynamic bonding. A pi bond is not as strong as a sigma bond. The extra strength of the ... (unclear) comes from the greater overlap of the atomic orbitals in the bond. Why? When you can apply a bond, the atomic bonds cannot overlap as much, right, and it will be a weaker bond.

So, as a summary a sigma bond is formed by head on overlap of atomic orbitals, the electron density is concentrated between two nuclei, because both nuclei need to hold on the electrons which are being shared.

It can be present on its own or in combination with pi bonds and a sigma bond allows free rotation of the attachment groups. Pi bond, on the contrary, there is sideways overlap, the electron density is on top or at the bottom of the molecule parallel to... (unclear) it is not found independently, it is there must be a sigma bond first and then pi one. And it doesn't allow the free rotation of the attention moves. Now from here I'm going to ... because I haven't found the ... in this chapter (unclear). Yes.

**Speaker 3 21:21**

So, like how many bonds we have to study just sigma and pi?

**FT 6 21:24**

Sigma and pi. Those are the ones. Yes, but we are going to see, I'm gonna show you what is unhybridized, alright. What is unhybridised orbital because these have to do with atomic orbitals. So, we know that there are two types of orbitals which are S, P there's also D and F.

**Speaker 3 21:50**

Okay, but for us, it's just S and P.

**FT 6 21:56...**

S and P that's right. We don't do D.

**Speaker 4 23:01**

Miss, I'm not sure if it's an error of a set or I'm just misinformed, but Miss Why did I manage to do H, C HH. Yeah, but it's not correct. Because I know I know I put on here but like I'm just saying this. Because this one here is not an H. This is a free, a hydrogen should have exactly one hold.

23:28

(unclear)

**FT 6 23:58**

Okay, so now I'm going to explain what unhybridized means

24:08

**[students' utterances are not clear]**

**FT 6 24:44**

Happy Birthday ... (student's name). How young you are; you're still 17.

Ok so here we're going to look at, in simple terms, we think of a bond as forming between two atomic orbitals, each one being one electron. And they overlap to form a molecular ...

**[students' utterances are not clear]**

**FT 6 25:25**

The sigma bond... we have just said a few minutes ago. So we have two atomic ... (unclear) overlapping along the bottom axis. This type of bond is the overlap of s orbitals, p orbitals,

and hybrid orbitals. It is always the bond that always comes as a single covalent bond. If it's a single bond, it's a sigma bond; if it's a double bond, there must be a sigma and a pi. If it's a triple bond, there will be a sigma and two pies, but there must always be a sigma bond. So, we have had h and h. So, they are like that. Here, we have two Ps. ... an H and an F.

Now, Pi ones, I have the presentation here, because the overlap is going to be parallel to the bond axis, right on top and at the bottom of the sigma bond. On top and below the sigma bond. A pi and a pi

And as the diagram is showing me here, if you have a double bond, one of them is sigma, and one of them is pie. It doesn't matter if it was the top one sigma or the bottom one sigma. Are you understanding what I'm saying?

**[students' utterances are not clear]**

**FT 6 26:53**

If it's a triple, you will have a sigma and two pi.

So, which are the weakest sigma or pi? It's important that the sigma is not weak, because they will easily break apart from each other.

So, we have some examples here, we have an h<sub>2</sub> with an NS overlapping with an S. NS and the P. In..., since the outer electrons are in the P orbitals, the Ps will overlap. In ... (unclear) you have S and H they are both S. If you have an NP, you will have a sigma and a pi. If you have ..., it will be ...(unclear) Now, we come to this term called hybridization, all right, hybridization.

What is hybridization?

**[students' utterances are not clear]**

**FT 6 28:03**

Put your mobile away. I know you are receiving messages... Mela.

Hybridization. Imagine that I put a pear and an apple in a liquidizer, all right. You know what a liquidizer is, all right? What will come out?

**[students' utterances are not clear]**

**FT 6 28:34**

Pardon? A blender, a blender. In a blender. Let's say that we put an apple and an orange in a blender or a banana or something. How will they come out?

Will you be able to recognise the apple and the orange or? No, they are going to be mixed together and come out the same. Now over here we are going to get orbitals which are the s which is spherical; the Ps which are PX horizontal. The PY which is vertical and the P that has a different arrangement. We are going to put them together and they are going to come out hybridized.

So unhybridized are the original shapes of the orbitals. So, is it clear? Unhybridized are the original shapes of the orbitals. The spherical and the dumbbell shape. Hybridized are going to be the same shape. It's like putting them together in a blender, and they all come out to be the same. Now, let's go for a bit of background knowledge. Now, a little bit of background. Carbon has an atomic number of six, what is its electron configuration? 2P ... If I have to draw the arrangements, you will get that. Now, a common fact is that carbon always has how many bonds?

**[students' utterances are not clear]**

**FT 6 30:52**

Four. Carbon has to have four bonds; we always say that, right ... (student's name)?

**FT 6 31:23**

.. 1, 2, 3, 4. So, look, this has four bonds. 1, 2, 3, 4 okay? If you don't have enough ..., you have to settle for a double bond. If there aren't enough, we have to settle for a triple bond. So, it's a common fact that carbon has four bonds. Now, from your knowledge, so far, you know, that for a really good covalent bond, you have to give an electron and R has to give an electron. They share the electrons, so they pair up, right? Electrons will pair up, like in hydrogen, you have one, and then other ones. Now, can you explain to me, please? Why? How is it that carbon pairs up with four electrons when it only has two single bonds, single electrons?

Does this make sense? Does it make sense?

**[students' utterances are not clear]**

**FT 6 32:30**

Why not? Yes... for electrons to pair up, they must be unpaired. They're single. Here you have a pair of electrons; they're paired up, and these are not paired up. So how can I say that carbon has to have four bonds. Because if carbon needs four bonds, it needs to have four single electrons, which I will pair up.

And so you never know this, but when carbon is going to go, is going to join up with other with other atoms, these two electrons here need to become unpaired so that you will get four single bonds. So, we're going to follow now on the diagram, when carbon is going to form a ... (unclear) CH<sub>4</sub>, the carbon only has two unpaired electrons. So, if it has two unpaired electrons, it can only share another two.

But what happens is that carbon is undergoing the process - the carbon atom will undergo what we call excitation and electrons from 2S will be promoted to the empty PZ. We always say this is XBYPZ; the electron is going to be promoted to the empty PZ. Now, when we look at meetings in more detail, you will find that these are equal sigma bonds. **How can they be equal if the shape of this is spherical and this is dumbbell shape?** So, they are going to go into the blender, they are going to undergo a process called hybridization and the S and the P orbitals are going to come out with the same shape.

**[students' utterances are not clear]**

**FT 6 34:39**

So that you will get four hybridized orbitals. Hybrid – you know what a hybrid is. A mix. So, these are going to undergo a mixing process and they will come out the same because, remember as well, that an s orbital is closer to the ..., so it has stronger energy than ... which is ... (unclear)

So, what we are going to learn is the process of hybridization. Hybridization. This is, these are the electrons in carbon. One is 2S<sup>2</sup>, 2P<sup>2</sup>...

**[students' utterances are not clear]**

**FT 6 35:28**

You have to in the ground this is the ground state normal ground state. You have two electrons in the 1S, two electrons in 2S and a bit further apart, because remember we used to draw them on top of each other, following the 2S further away from the nucleus we have the 2P. The P orbitals provides three suborbitals: PX, PY, PZ ... What did ... say? (unclear) ... that they are ... (unclear) Orbitals are seemingly occupied first before we start pairing them up. So, I fill them up safely. Now, the carbon is going to combine with hydrogens. So, what is going to happen is that one electron from the 2S. Have a look at this and you will understand this. One electron from the 2S will be promoted to the empty PZ, right, that is called excitation, the carbon is in the excited state. And the electron configuration will show me four seemingly occupied orbitals available for bonding.

But then, there is the other issue before sigma bonds in meeting are the same. And here I'm saying that one electron is S and another electron is P and it cannot be; they need to be the same. What happens then is the process of hybridization and the 2s and the 2P. Now, what happened the last time? We had the ground state then we have excitation and then it was ... (unclear) went up to empty PZ. So that I will have four unpaired electrons. So that I will get four single electrons. Are you following?

**[students' utterances are not clear]**

**FT 6 37:47**

But unless electron has a different energy from the P electron, so they undergo a process called hybridization and, look at them, this is of higher level than this. When they undergo hybridization, they come in the middle, and you get four single orbitals, and they are exactly the same. They undergo hybridization; they are of equal energy, and you have four unpaired electrons ready for bonding ... This ... brings up the energy of mixing red paint and white paint. If you're mix red pain and white paint, you're going to hybridize the paint and get ..., (unclear) right?

Now, how many orbitals did I hybridize? How many orbitals did I put in the blender?

**[students' utterances are not clear]**

**FT 6 39:27**

Four. I put an S, 2PX, 2PY and 2PZ and I got four hybrid orbitals. So, this type of hybridization is called SP<sup>3</sup>, SP<sup>3</sup>. I use an S and three Ps - SP<sup>3</sup> hybridization.

Let's draw SP<sup>3</sup> hybridization. I'm going to start off with an S. And I'm going to start off with PX, PY and a PZ, all right? Blend them together and you will get this.

You will get that. Each of these is going to be shaped like this. Like a little bubble at the end. And the four of them SP<sup>3</sup> are all the same shape. They are going to bond, for example, in ... (unclear) would bond with a hybrid and they have four bonding pairs. And what do we know about ... (unclear) what does it say?

**[students' utterances are not clear]**

**FT 6 41:49**

And what type of electrons are we pairing here? what type of bonds?

The VSEPR theory says that... Do I have a bonding pair or alone pair? So, bonding per bonding pair repel each other, so these will be at 10109.5 degrees and the shape to be

tetrahedral ... all right. So SP3 hybridization is found in tetrahedral molecules. Isn't that interesting?

**[students' utterances are not clear]**

**FT 6 42:36**

Yes, very good. SP3 hybridization. Aren't these diagrams fascinating? Especially for ... (student's name), like flowers on your birthday.

42:59

**[students' utterances are not clear]**

**FT 6 43:01**

Okay, very good, very good. Here all we have are sigma bonds. Why? Because we have direct overlap. So, SP3 provides only sigma bonds, right, and we have no evidence here. So Sherlock Holmes would come along and would say but this use an .... (unclear) Would he be able to find it here? No, he will not be able to find it. Why? Because it has been hybridized; there is no spherical shape. There is no dumbbell shape - they have been changed into hybridized orbitals.

Are you eager for the pie now? Not the pie to eat. We should have got a pie for ... (student's name). We have got another type of pie today.

Shall we have a break now or the pie later? What's the time please?

**[students' utterances are not clear]**

**FT 6 44:03**

Okay. Three minutes break.

(break time)

**FT 6 48:55**

Ok, time up. Time up. So, this has ... equation. You cannot take the S or the P. Ok, you cannot take out ... (unclear). So SP2, let's go to SP2. As the name itself suggests. What does the name suggest?

**[students' utterances are not clear]**

**FT 6 51:01**

Yes, one S orbital and two P orbitals are going to go into the blender so to speak, right. So, here we have this is part of the electron configuration. Here it is. You will have 2s - one S is at the bottom two s two, two, P two always since we're going to make the carbon combine other atoms. The carbon atom undergoes excitation. What happens? An electron, the first bit is always the same, what happens during excitation? An electron from 2S is promoted to empty PZ, but since the atom is going to combine only with three other atoms, only three will undergo hybridization Look at this diagram. Look how interesting it is. The three which are going to be hybridized are going to be on their own.

**Speaker 5** 52:15

Miss can this be observed?

**FT 6** 52:19

No, it cannot. It's the result. And the unhybridized will remain the same. Consequently, you are going to get three hybridized. Which are the three hybridized? Which colour do they have? The brown and one which is unhybridized. The one which is unhybridized will form the pi bond. So you're going to have the one S; you're going to have PX, PY and PZ. They are like that. When they come out of the blender I am going to use only three: S and 2 Ps I will get ...

[students' utterances are unclear]

**FT 6** 54:27

Right so, could we draw the hybridized orbitals, ... (student's name)?

**Speaker 6** 54:34

I'll try.

**FT 6** 54:51 [students' utterances are unclear]

Now you have to be.. (unclear) Wait, are they all the same?

But you already have four there, you need to have three hybridized. What you could do, ... (student's name). So, erase it. You could start off with the unhybridized, the red. Let's say that we're going to leave this unhybridized. So, draw this dumbbell shape. Very good. Now you have the other three, have to be spread away from each other as far as possible. Now if you have a circle, how can you spread the three 3 pencils ...? So you have to draw three ... (unclear) painting, you're going to put a different colour. Very good. The angle will be 120. Now, usually. That's very good.

**FT 6** 56:14

Now, usually, because I would like to show this combining with something else. So, this one is unhybridized. This is unhybridized. It has been made dumbbell shape; the others are hybridised. Now, I am going to draw the same way ... but I want to join the two together. So, you have this one, which is unhybridized. This is the other part, right. And then I'm going to draw the unhybridized. Now, since I'm are going to join them on this site, because you didn't have a place, Ieva, to put the other carbon, I am going to draw them like this: 1, 2, 3 and the other one, it's the same – 1, 2, 3. And the hydrogen comes along. So what do I have so far? I have a C with bonding to an H bonded to an H, the sigma bond in between with the C with bonding 2NH, bonding 2NH, the sigma bond in between, with the C bonding 2NH. And what happens to these unhybridized orbitals? They overlap. They overlap either on top of the bond axis or below the bond axis. So, there it is, this is line. What do we call this unhybridized overlap between the overlap between unhybridized orbitals?

[students' utterances are unclear]

**FT 6** 58:05

Sigma. No, unhybridized orbitals. Pi. So, this is my Pi bond. There it is. That's your pi bond which can be at the top or at the bottom. Sometimes when you draw a line like this, like that one. Sometimes they draw this. It's like a sausage, all right?

There's an overlap on top or at the bottom, all right, above or below. ... Sideways, they overlap sideways we say, so they will be like this.  
How will that affect the bar levels for the..? (unclear)

[students' utterances are unclear]

**FT 6 59:18**

No, they are just going to be like this. Sort of in a way this is ... will explain it better than this. Here, the orbitals are going to overlap sideways, all right?  
And this is SP<sup>2</sup> hybridization. It is present in alkanes. We've done alkanes? Alkanes are SP<sup>2</sup> hybridized – it's a bond of 180 degrees.  
Alkanes, with a Y. Excuse me, what did you say?

[students' utterances are unclear]

**FT 6 1:00:14**

So, do you like the diagram? Yes. ... (student's name), what are you talking about?

**Speaker 6 1:00:23**

We're talking about differences between alkanes and ... (unclear) because they're different in Russian. ...

**FT 6 1:00:27**

What do they call them ... (student's name)? You knew this before ... (student's name)?

**Speaker 6 1:01:00**

Yes, she did the whole course. She never did O level, she did the Russian programme which was fantastic. She did the whole course already.

**FT 6 1:03:21**

They belong to a family called hydrocarbons. The value of hydrocarbons are the simplest organic compounds you can find because they only consist of carbon and hydrogen, right, only. And there are three families: the alkanes, alkenes and alkynes.  
We also studied that - according to the number of carbons.  
Ok, let's do the last one. Right, let's continue. We are going to the next one, which is SP hybridization. So again, we have the excitement of the carbon atom, the promotion to the empty P<sub>Z</sub> and P<sub>Y</sub>. Sorry, P<sub>Z</sub>, but this time the carbon is only going to have two other bonds directly attached to it... Since we only need SP<sup>2</sup>, then we will use the energy to hybridize those only and the other two unhybridized remain where they were before. What do we get? We get this. Look at the brown orbitals. You have 2 SP and two unhybridized p orbitals, two of them. So, you're going to get 2 pi bonds.  
Who would like to draw this? ... (student's name), would you like to draw this on your birthday?

[students' utterances are unclear]

**FT 6 1:06:09**

Look, either you try ... (unclear) and then two unhybridized.  
There you go. It's called SP hybridization. What type of shape will the SP hybridization molecules have? What's that called ... (student's name)?

**[students' utterances are unclear]**

**FT 6 1:07:52 [students' utterances are unclear]**

So, go and help him, ... (student's name). I mean ... (student's name). Go and help him.

Now, what do you want to arrange, ... (student's name)?

So, remove this, ... (student's name), and draw that.

What are they called? So, ... (student's name), rub this off and draw the unhybridized ...

Unhybridized, not hybridized. The same shape, the dumbbell shape ... Ok .. (student's

name), draw number 8 – arrange it. Draw a straight number 8. Ok, that's one. Now, do

another one. And then remove this. What's this? What line? Remove this. Move your ...

(unclear) a little bit. No, all of it. Draw one like this from here to here Le, this is hybridized

... (student's name), so this is not number 8.

This is hybridized. So, I want to draw a line like this here. Like that, exactly. Now, these should overlap.

That's it. Now this is hybridized. These are not hybridized. So, draw a line from this one to

this one and from this to that. Mela, this is with this. Le le le, straight it has to be. So, this

should be a bit down. This is the same as these two. So, draw it again, ... (student's name)

and ... You can move the board should you want. Try using different colours for hybridized and unhybridized.

**[students' utterances are unclear]**

**FT 6 1:12:54**

Yes, that's one. That's the other unhybridized, yes. Very good.

If you have it like that.. You need to practice, okay. Try and do the other one coming from the same centre, right, and then the other one would come from the same centre as well. This means this the hybridized one will come out from there.

... (student's name), are you okay? Do you understand it? Did you do this before? No. ...

(student's name), did you do this before? You did it before? In summer? **[students' utterances are unclear]**

**FT 6 1:13:36**

Oh my goodness ... (student's name). That's not very ... (unclear) Look, ara, try and draw

...

This one, now the other one. Issa, what you need to do – this one move it here. Now, put the

red here. Very good, better now. Then, do one overlap in black yes. And it will be over or

below it. Well done. And those two are... (unclear) I don't want it paired. Yes, they are two

pi bonds.

**[students' utterances are unclear]**

You enjoy it? Yes. Okay, I see this afternoon then. So, this is definitely HL, isn't it? Yes.

Bye, see you later

**FT 7**

## Female Teacher 7

Tue, Sep 05, 2023 10:34AM • 1:22:26

### **SUMMARY KEYWORDS**

heart, structures, circulatory system, observe, oxygen, lungs, blood, blood vessel, label, image, system, knowledge, good, aorta, carbon dioxide, left, vessel, bicuspid valve, question, artery

Speaker 1, FT 7

**FT 7 00:41**

Sit down, please. If you're not biology students, get out.

**[students' utterances are unclear]**

01:49

Ss and T singing Happy Birthday.

**FT 7 01:52**

Make a wish, blow the candle. It's not allowed food in the bio lab.

**[students' utterances are unclear]**

**Speaker 1 02:17**

Ha can't eat – it's Ramadan.

**[students' utterances are unclear]**

**FT 7 02:29**

You can you can give it back to her she doesn't mind the ... (unclear)

Can you please sit? Ok, you can be individual. ... (student's name) is not going to be with today with us she's involved in the junior concert. Really much appreciated.

So, can you please erase the board?

**[students' utterances are unclear]**

**FT 7 03:05**

So, ready? We're starting. May I ask you to recall from our previous lesson, what is. And don't shout at once. I know that you're full of energy and knowledge. What was the system we start studying? And actually not just studying because you already have some foundation, furthering knowledge about what is the system, physiology system, we're going to fill the knowledge.

**[students' utterances are unclear]**

**FT 7 03:39**

Circulatory system. Another question just brainstorming activity. What is the main organ in this circulatory system, main organ?

**[students' utterances are unclear]**

**FT 7 03:55**

The heart, okay. So, we have studied the structure of the heart last time by making dissection of mammalian cut, and more specifically pig's heart. We have dissected the heart and we have observed the structures. So, what I want you to do now is to the best of your ability recall, recall inflammation. Nothing new. We're just making sure that you remember the terms and you remember how to spell them. This is not a quiz. This is just revision, you're not allowed to check your cognity. You're not allowed to check any text resource. This is not a quiz; it is just a recall information. You're sitting in pairs or you're sitting individually. That's fine. You have socks that relate to our topic about the heart. That's excellent. I want you to write down. Can you please erase the board?

Make them clear. If you're working individually, that's your individual task. If you're working in a pair, that's your task as a pair. I want you to write down as many structures of the heart you can remember from our previous lesson. And I'm going to time you. Okay, I'm going to give you one minute, so you can now think about it, don't write, think about this. I'm going to find my mobile and I'm going to time you. It's going to be one minute, think about it. Don't write so it's going to be fair. Then the winning pair or the winning individual is going to enter my good book. I'm going to replace my black book with a good book. So, you're going to have your names there.

**FT 7 06:13**

Can I use yours? I left mine in the car. So, can you set it up for one minute? Are you all ready? When the minute is over, I will stop. Are you ready?  
You may start.

(students working)

**FT 7 07:44**

Okay, stop now. What we're going to do now is, we're going to observe the image of the heart that is in your ebook cognity and we're going to compare the terms. You have two markers on the board, you have used one of them. So, use the other marker, so you can correct if you have correctly spelled the term, correctly, you're going to check with the book, make the tick. So, in that we're going to pull up the points. If you have the term but it's misspelt. Okay, every single letter has to be correct in the right position, then you don't get the point and you can make an X. Okay, so we're counting the points ...

You have the last chance to look at the terms if you think something has to be corrected spelling wise, you can do so.

I'm going to enlarge the image. So, we're going to revise the structures. And you're going to correct. When we finish revising the structures, you're going to tell me the points and I'll see which are the winning pairs or the winning individual. So I'm starting from the left side of the heart. When you face the cut, the image of the cut, this is the left side and this is the right side. So you should have labelled the output chamber of the heart as the left atrium. Can you please check the spelling? If it's correct, you can give yourself a point.

If it's not correct, even a letter, mark it as x. The left atrium is connected to a left ventricle, check the spelling, which is the lower chamber of the heart, the left ventricle. Usually, the students have spelling mistakes in the last part of the word ventricle. So, make sure you spell it, as you see it on the board. About the valve that connects the left atrium with the left ventricle. It's called the bicuspid valve. But as I said, there are many structures that carry two names and are acceptable, you can use them on the exam paper, you still get the point. Yeah, the name of this valve is can you remind me?

**[students' utterances are unclear]**

**FT 7 10:50**

Where is it located between what chamber? Atrium and what chamber, ventricle, so it's very similar to the word atrium and ventricle. Do you remember?

**[students' utterances are unclear]**

**FT 7 11:03**

Atrio ventricular valve, I'm going to spell it on the board. And because it's on the left side, we start with left atrio ventricular valve. Can you see the spelling? Atrioventricular valve or you can call it the bypass...

We continue? I'm not going to label at the moment the blood vessels, I'm just going to label the chambers, the structures, then we'll go through blood vessels. Then we have the right side of the heart and the upper chamber is called the right atrio, right? Can you check the spelling?

Then the low chamber of the heart is a right ventricle. The valve between. Be honest, please, when you correct your work. The valve between the right atrium and right ventricle is called tricuspid valve or the right atrium ventricular valve. The same spelling as the left. And during the dissection, ...(student's name) was very successful in identifying the tricuspid valve.

It's called tricuspid because there are three flaps that are observed by casting because the two flaps, but Ieva identified the tricuspid valve and we made the video. And I actually want to ask you, since we had the photographer in the class that made the very beautiful images, pictures of you, if you give me the consent, I can publish, not me, it's Ms Sylvana Debono is going to publish them in the school magazine, Dwardu scoops as well. Usually the images go with the short kind of paragraph or two. So if you like to write a paragraph of your experience during the dissection of the heart on Wednesday, you can write it. And can you submit it to me; can you email it to me this weekend. You know as soon as possible. As soon as I got get your articles, I can send it to Ms ... (an employee's name), so the school can see how much fun you have during the biology lessons. So few few words, you know about a paragraph or two about your experience during the dissection. And the images.

**FT 7 13:49 [students' utterances are unclear]**

By the way, do you did you give a consent that your images could be published in a school magazine that in the beginning of the school year, you had to sign some form? So, if you didn't, if you don't want your image to be displayed, just let me know. So, we won't display it. I have several images; I'll just choose the one that you're not there. These are the structures of the heart when the heart is dissected. Okay, there is one more structure which you're observed. It's the muscle tissue that is in the middle of the heart, in the centre of the heart, which is called the septum.

**[students' utterances are unclear]**

**FT 7 14:34**

Yes, you may, as long as you call it septum. You can call it interventricular because it's between the two ventricles. You can call it cardiac. Anything to do with the heart check is the term cardiac .... Ready? You're counting your points so far.

**[students' utterances are unclear]**

Now we are going to start identifying the blood vessels. And during the dissection, I have pointed to you how you can be sure what is the name of the blood vessel. So, the blood vessel that brings a blood that is rich in nutrients, and oxygen comes from the lungs. And today we are going to observe the lungs, actually. And I have told you that anything to do with lungs has a specific term. Do you remember what is the term? Pulmonary, okay? Anything to do with lungs is called pulmonary. So, the blood vessel that comes from the lungs to the heart is called pulmonary and the blood vessel, we're going to further our knowledge you already know about the types of blood vessels, we're going to talk a bit more about the structure, the blood vessel that brings blood to the heart is called the vein. Since we have the blood coming from the lungs, and bringing the blood to the heart, this blood vessel is called pulmonary vein. There are two pulmonary veins. The two pulmonary veins. Can you suggest the reason for that? There is a left and a right pulmonary vein bringing the oxygenated, ... the nutrient to the left atrium. Why there are two?

**16:27 [students' utterances are unclear]**

Why are there two pulmonary veins? Yes? Because there are two sides, parts of the lungs. So there is a left lung, there is a right lung. So that's why we have two pulmonary veins. And this is labelled as left pulmonary vein and right pulmonary vein. Do you see ...? Okay, so the different sides of the heart. However, however, when you start practising exam, we did exam paper questions which I have collected for you. But if you want to practice more, that's fine, they're usually going to ask you to label one of them.

At the moment, they're showing you from the two sides, this is called the left pulmonary vein. So this is the one I expect you to know well, okay. And this one is the right pulmonary vein. So, if you have one or the other, or both, and you have the correct spelling, you can give yourself point. So, the blood ... (unclear) to the left pulmonary vein, to the left atrium, passing to the bicuspid valve, proceed to the left ventricle, and the blast is going to go out to the ... to a vessel, which is considered to be the largest vessel in the circulatory system, which is called?

**[students' utterances are unclear]**

**FT 7 18:09**

This is the largest artery - alter it is artery. But it's the largest artery, this is very easy to identify on an image of a heart because this aorta divides into several small branches, arteries that supply blood to every single organ of the body. And you can identify it because usually there are three, kind of smaller, vessels coming from the aorta. So, if you have the image, and you're asked to label the aorta, look for the blood vessels that have three small vessels coming out. So that's the aorta. So, artery takes out the blood from the heart; vein brings the blood to the heart, okay. In this case, the aorta takes rich in oxygen, rich in nutrients, blood to every single cell in our body, every single tissue, to every single organ. Are you with me here?

**[students' utterances are unclear]**

**FT 7 19:10 [students' utterances are unclear]**

There is another valve that it kind of it was difficult to observe on the on the dissection, but this valve is at the beginning of the aorta, and has again two names. One is called aortic valve. Here it is, because it's at the base of the aorta. So, so that's easy to remember, because it's aorta - aortic valve. There is another name that is also acceptable. Have you heard of semi lunar valve? Yes. So, if you're familiar with semi lunar valve, use that term. It's a semi lunar because of the shape. It looks like a half moon and that's why it's called semi lunar. However, if you're not familiar with these terms, remember aortic valve because it's easy to remember it's at the base of the aorta. Are you with me? So, we have the oxygenated blood rich in nutrients going to every single cell in the body. And oxygen and nutrients are used in the cells for process, which is named... help me. What is the process that uses oxygen, and nutrients. Respiration, respiration, so oxygen and nutrients combine to produce ..what are the products of respiration? That's previous knowledge, we're building on your previous knowledge.

Water is a product. Carbon dioxide okay. Water is very useful, it can be used in the body it's called metabolic water. Carbon dioxide is not useful for the body, and it has to be taken out of the body by the process of inspiration, expiration, exhaling. However, the main point of respiration is not production of carbon dioxide, which is the waste material, it's not production of water. The main point is... production of energy in the form of ATP, very good. And the fact that there is water produced good for the human body, carbon dioxide, the body has the adaptation to get rid of the waste material. The main point is to have energy for the function that is happening in the cell. Are you with me? Now, how is this carbon dioxide, which is the waste material, taken out of the body?

**[students' utterances are unclear]**

**FT 7 21:42**

But the circulatory system as well. Now, all the carbon dioxide that comes from the lower part of the body. So this is kind of building on your knowledge, I don't think you had to know that in your previous course of study, IGCSE or O'level. When the carbon dioxide comes from the lower part of the body, it has to enter the heart through a blood vessel, which is called inferior, maybe it's new, okay. When I finish, again, I will give you time to write down the words that you didn't spell. So, you can correct them, time to practice. Because it's coming from the lower part, it's called inferior, the word inferior means from the lower part – vena cava. So this is the vessel that is coloured blue on the image, just to know that if it's blue, there is a carbon dioxide, more concentrate, there is oxygen, but there is more concentration of carbon dioxide. That's why it looks blue, like your veins on your wrists. And it doesn't really show very well, but there is an arrow that comes from the inferior vena cava. And what is the chamber, the vena cava, the inferior vena cava that brings the oxygenated blood to, what is the name of the chamber?

**[students' utterances are unclear]**

**FT 7 23:04**

The right atrium as well. We have cognitive sound coming from the head, and from the upper part of the body. And things that come from above, they have the name superior. Here it is, superior vena cava, they're both vena cava, but one comes from above and the other one from below. As well, we have the arrow pointing to what chamber of the heart?

**[students' utterances are unclear]**

**FT 7 23:32**

So from the lower part, from the upper part, the deoxygenated blood, the blood that carries a lot of carbon dioxide enters the right atrium, then this deoxygenated blood through the .. valve or the height ... valve enters the right ventricle. And then it has to leave the heart and take the carbon dioxide to the lungs.

Since we know that anything to do with the lungs is called pulmonary, so this blood vessel is going to be called pulmonary, right? But since the blood is taken out of the heart, what is the name of the blood vessel that takes the blood out of the heart? Out of the heart. Artery, okay, So, pulmonary artery is a blood vessel that takes the blood from the right ventricle into the lungs. And again, like the pulmonary veins, there are two parliamentary arteries: one takes the blood to the left lung, the other one to the right lung. Usually you'll be asked to label just one of them. They're not going to make it complicated on your exam paper. When you ... you're just going to be asked for one label.

When deoxygenated blood enters the lungs with the exhaling, the carbon dioxide is going to be released out of the body. And with the inhaling the oxygen is going to enter the lungs, and the cycles are going to repeat. Okay, I'm going to stop here. And I'm going to ask you to count your points. Explicit performative / speaker oriented

And after a few seconds, I'm going to ask you to tell me how many points you have collected.

**[students' utterances are unclear]**

**FT 7 25:31**

Say it again. Yes, yes, that's what is expected from you, it's just the aorta.

So we're going to have ... and we need to write the winning students, all students.

Maybe I should call it the knowledgeable book. The students need knowledge.

Knowledgeable is better. So, would you like to share your score as a pair? ... No, you don't have to.

**[students' utterances are unclear]**

**FT 7 26:28**

Spelling counts.

26:31

**[students' utterances are unclear]**

**FT 7 26:39**

Doesn't matter. That's the benefit of working in a group. You take the glory and the shame. So how many points? Six points? ... (student's name)? Nine points, uuuu. Six points, six points? Eight points. So we have a winning group. The birthday boy. So ,we have ... (student's name) in the knowledgeable book today. You see, it's a good day, you're always becoming wiser, and ... (student's name).

Okay, well done. Congratulations, the sweets will come after. So, I'm giving you the time, as much as you need, to copy in the books the structures that you didn't know, with the correct spelling just to practise.

I'm going to repeat that so you can hear the term but write them down. This is simply practising. We started with the left atrium bicuspid valve or left atrium ventricular valve, left

ventricle, right atrium, bicuspid valve, or right ventricular valve, right ventricle, septum, blood flow, pulmonary vein enters the left atrium passing to the bicuspid valve, left ventricle, going out to the heart to the aorta by passing the aortic valve or the semi lunar valve supplying oxygen and nutrients to all the cells then bringing carbon dioxide to the heart by the superior vena cava, inferior vena cava to the right atrium to the bicuspid valve to the right ventricle, out of the heart to the pulmonary artery and, by the way I did not mention that in the base of the pulmonary artery, there is also a valve. This valve also can be called semi lunar valve because it looks like a harpoon. Or the easier term because it's pulmonary artery, you can call it a pulmonary valve. So that's if it's a new term for you, call it a pulmonary valve and then reaches lungs and then during the exhaling is out of the body. Are you ready? Did you write all the terms? Okay, now erase the board, all of it. and I'm going to give you another fun quiz.

**FT 7 30:09**

We have observed the structure of the heart through dissection. We have learned today how to spell the structures of the heart. Okay, so this is the second time we're discussing the same topic. Now what I want you to do is this is now individual quiz. Don't worry, it's not going to or it's not going to get anywhere the outcome, but you're just simply going to add your name to my knowledgeable book. So I want you to label, as well for time, so ... (student's name) I will need your assistance, I want you to label as many structures as you can on this paper. . Write your name. This is the image that is coming from the past paper, I just took it from 2021. A minute and a half or two minutes we can do two minutes. Two minutes ok. So, when you're all ready, we will start. Now, can you please close your sources of knowledge? This is only practice, don't worry, your independent learning is at home I'm just here to assist you.

So you're gonna start, just ... don't start, we'll all start at the same time. You're going to label as many structures as you're capable but now just write your name. I'm going to put the timer and then we start.

Just write your name so I'm going to start you have two minutes. Ready? Start.

**FT 7 33:39**

You have 25 seconds.

**FT 7 34:01**

Okay, you have 3 seconds.

**FT 7 34:05**

Stop.

Stop, leave your pen. I'm going to show you all the structures. Please grade yourself. I'm going to ... (unclear) the labeling so you don't get confused.

So, can you please look at the image? Now you have easy access to Cognito. You can look at the Cognito as well. Just grade yourself.

The structure has to be correctly identified number one and correctly spelled number two. Then you will give yourself a point. As many as you can. It's a separate label aortic valve, an aorta – these are two labels, you can give yourself 2 points. ... Or semi lunar. If we structure your label, if it's correctly spelt correctly identified it's a point. As a final task, you will be asked to label and annotate all the structures of the heart as a final task at the end of the school year. We're just practicing now.

Are you ready? Did you count the points?

**[students' utterances are unclear]**

**FT 7 35:41**

Five, five is good. You can get ... You need to start believing more and more in yourself. ... Next year May. 12, 8. So far we have 12. 13. ... Should be 13. Ok, count them because now it's between ... and ... (students' names) 13. Well. ... and ... (students' names)

**[students' utterances are unclear]**

**FT 7 36:55**

Well done, I have to extend my book of knowledge, because you become very knowledgeable by the minute.

Now, would you like a short break like two minutes, and after the break, we're going to actually observe the lungs, we're going to observe the heart, we're going to see how they're connected. What other systems they take part.

And the lab codes, let's see if I can find them. We're not going to dissect it, we're just going to observe it. So have a short break if you need to go to the bathroom. If not ...

37:54

**[students' utterances are unclear]**

**FT 7 38:06**

As well, if you want to touch the consistence of the structure, you can use your gloves. If you don't want to touch the structures, you don't need to use the gloves, so we can save the environment by reducing the waste.

Well done, you prefer not to have a break in order to learn more. Biology is a break to your brain. Well done. Actually, this is very good exercise for the brain. Switch, learning, studying from one subject to another. Because then the brain has more capacity to absorb, understand. If you're just spending a whole day studying biology, there is a limit to your brain.

**[students' utterances are unclear]**

**FT 7 39:08**

.... Excellent. Organising is the first step. Organising, planning because even if things happen, obstacles and you can't fulfil your plan, it's behind in the back of your mind. It's like you know that you had the responsibility. So, it's kind of you're going to cover it up the next day. But if you don't have a plan, you can always say oh, there is plenty of time till the end of the year exam. And actually, there's not. So, if you're ready, I'm ready. I'm just going to ... (unclear) the structures and we're going to discuss and then you can observe.

Move up closer if you're ... (unclear) coming closer to the lungs and the heart.

Okay, so, we are starting with the circulatory system and we have the heart as the main organ of the circulatory system. Okay. Now what are the systems involved in the circulation of the blood?

**[students' utterances are unclear]**

**FT 7 40:37**

What other systems? We will know at the end of the course the cardiovascular system? What does it mean cardiovascular system? Cardio has to do with the heart. What is the vascular system?

**[students' utterances are unclear]**

**FT 7 40:56**

Say it again - tubes. It's called cardiovascular system because the word vascular refers to tubes and these refer to blood vessels. And we're going to study them more in detail. Well done, that's the circulatory system. There are other systems that involve and help the circulation of the blood. We already mentioned one system with one main organ. Respiratory system the main organ of the respiratory system is the lungs. We have said that there is a left and right lung. The lungs are actually connected with a very long pipe, which is called, previous knowledge, what's this called? Trachea is the pipe that connects the lungs with the entry of the air. What is the entry of the air? Mouth or nose. In the next topic, we're going to study about the respiratory system, and we'll talk more about it - something to look forward to. Why is it better to breathe air through your nose rather than through your mouth. But the mouth is connected with the lungs and with the trachea. Now the trachea, some students already touched in the morning. And you're going to have a chance to touch it afterwards. It's quite steady. Next to trachea, we have another pipe that's very soft. Can you guess what is this pipe that goes along the trachea?

**[students' utterances are unclear]**

**FT 7 42:29**

That's the esophagus and the esophagus is part of what system we already studied? Digestive system. Okay. So the digestive system is also kind of involved with this circulatory system. I'm going to make the connection later on. But it's a very soft tube, and the trachea is very hard. What is the structure that makes the trachea harder? You'll be allowed to touch it and actually, you can see it. What is the structure that makes, you can see it, makes a trachea much stronger compared with esophagus. It's called cartilage. It's not a bone. But it's ... (unclear) exactly we have the combination of the cartilage in the nostrils. So, this is the cartilage that keeps the trachea straight. And why should trachea be straight?

**[students' utterances are unclear]**

**FT 7 43:26**

So it doesn't, it doesn't collapse. It's not flexible. And how is this beneficial to the respiratory system?

There's a straight path for oxygen, for oxygen that we can find in what? In the air we are breathing in. Common mistake is that students say that we're breathing in oxygen. This is not the only thing we're breathing in, we're breathing in oxygen, carbon dioxide, we're breathing in nitrogen, water vapour - that's called all air. So, when we breathe in, the oxygen is the one of ... (unclear)/

So that's trachea connecting mouth with the lungs. Inside of the lungs, we can't really see it, but there is a branching of vessels and we're going to learn more about the branching, which simply you know very well. That every branching, every folding just increases the surface area to volume ratio for whatever functions happen there. So, this is the two lungs that are

providing support to the heart as part of the circulatory system. We have the pulmonary vein, coming to the left atrium, bringing oxygen and nutrients. Okay, we have the left pulmonary vein, and we have the right pulmonary vein and they both join into the left atrium bringing the oxygen going to the ... valve, left ventricle, aorta, ... valve, every organ in the body releasing oxygen and nutrients, picking up carbon dioxide that comes to the heart, to the right side of the heart, to the superior vena cava, inferior vena cava and then to the tricuspid valve right ventricle, then to the pulmonary valve, into the pulmonary artery, which is the ... (unclear)

**[students' utterances are unclear]**

**FT 7 45:35**

You can touch the consistence. This is kind of in between the two lungs. This part is esophagus at the top of the digestive system. So, so far we can say that circulatory system is connected directly with the respiratory system and also with the digestive system because when we have this small nutrients digested to small particles soluble together with the oxygen they can be absorbed into small intestines, to the liver. Unfortunately, we don't have the liver here. It's all lungs. While you're observing this ... this is esophagus, very clear ... So you can observe, what I'm going to do is .. we know that the lungs are full of air because it's like oxygen...

So simply I'm going to have a beaker and I'm going to have a small piece of the lungs and I'm going to place it in the water so you can see how pieces of the lungs are kind of floating on the surface of the water. They're not heavy because they look like heavy pieces of lungs. Actually, they're not. That's why when we touch the lungs, they're very soft. So, I'm going to do that. So you're going to enjoy yourself observing ...

**[students' utterances are unclear]**

**FT 7 47:12**

How many presents we gave you ... (student's name) for your great birthday? So, I'm getting scissors. Ok, I'm ready, I have the beaker. I've got the scissors if someone would like to cut a very small piece so don't waste the lungs. Small piece of the lung and you can place it in the beaker. Let's see if it's going to float. If it floats, it means it's full of air. That's a big piece. Well done, your second surgery in life. So as you can see, you can actually take a photo of the lungs and you can place it again...

48:55

**[students' utterances are unclear]**

49:09

Oh that's a very nice image. May I get it on Teams?

**[students' utterances are unclear]**

**FT 7 49:18**

Yes, you can, you can point to the two tubes I can actually give you the tweezers. So, you can have the tweezers, one for two students... so just sit next to each other.

**[students' utterances are unclear]**

**FT 7 50:24**

Okay, if you're done observing, we will continue. You can dispose of the gloves in the bin. ... here.. they need to be washed. We will give them a wash.

**[students' utterances are unclear]**

Yes, take a short break, just for fresh air.

**FT 7 53:22**

If you have a free lesson, Monday, Tuesday, come to me ...

**[students' utterances are unclear]**

**FT 7 56:08**

Thank you, let's start. That was taking long. So we skip this ... for further reference. ... And the next question will be to correlate the structure to second function. For example, you have to label the left atrium, what could be allocation to the left atrium?

**[students' utterances are unclear]**

**FT 7 56:41**

Not out of the heart. But very good beginning of your explanation. If we have to annotate the left atrium, we have to say something that is happening in the left atrium. And ... (student's name) says rightly so, it transports deoxygenated blood from the left atrium to the left ventricle, and then out of the heart to the aorta – that could be a function. As well what else can say about the left atrium? As the function, as annotation, based on the knowledge you have.

This is a high level of learning, labelling, identifying structures. It's learning that could be considered as the foundation learning. That higher level of learning is annotating, which means relating the structure to the function.

What can be another rotation for the left atrium?

**[students' utterances are unclear]**

**FT 7 57:50**

We said left atrium transports oxygenated blood from the atrium to the ventricle through the aorta to the rest of the body. What else can you say? Hint. Where is it coming, this oxygenated blood? Exactly, can you try to show me another rotation?

**[students' utterances are unclear]**

**FT 7 58:25**

Excellent. So you have to be as well. Having in mind how many points you're going to be given for answering the question. If it's 1 point, 1 annotation - one correlation, structure function is sufficient. If it's more than one point, you have to go further. So as optional homework when you're studying this topic when you're preparing for the end of year exam, you have to be able to spend time saying to yourself and even recording on a piece of paper annotation for each of the structures we have mentioned and labelled them today.

The same way we did it with the left atrium, okay, but this is going to be fun.

**[students' utterances are unclear]**

**FT 7 59:21**

Yeah, we're still not here, but we have to continue. I'm showing you the image on Cognity, now you can look at Cognity. The image is figure two for the same topic and the figure is labelled double circulatory system. So, we are now continuing with furthering our knowledge. We said the main organ of the circulatory system is the heart. Bellatrix added that actually circulatory system is called cardiovascular system because it's not just the heart but as well all the tubes, all the veins, all the arteries. You're going to learn even the small blood vessels later all involved in the circulation. However, now we are learning about double circulatory system. So, if the statement is the human circulatory system is double, can you justify this statement by giving a reasonable explanation? Give supporting arguments to this statement?

**[students' utterances are unclear]**

**FT 7 1:00:31**

I'm going to say it again. I'm just reading what the figure is labelled - the human circulatory system is a double circulatory system. Share, don't be afraid, start with the simple explanation.

Hint, double.

**[students' utterances are unclear]**

**FT 7 1:00:55**

What is the meaning of double circulatory system. Start with the simple, then we're going to add more information to make it more explanatory. ... (student's name).

It has like two wires, two legs, two legs and things like twice.

**[students' utterances are unclear]**

**FT 7 1:01:15**

If you look at the human body, and if we kind of dissect the human body in half, that's what you're saying. We kind of have two sides, and they're symmetrical. In a way. That's why it's double. Can we concentrate on the heart? Let's see, we are just dissecting the half the heart in half. Okay, so we're going to have two sides. Right. And we mentioned last time, if we're talking about the left side, what is happening in the left side? If we're talking about the right side, what is happening in the right side? And what is the structure dividing them? Ieva, just to put you in the picture, we have this statement, the human circulatory system, it's a double circulatory system. So, we're giving justification. So ... (student's name) started bringing a reasonable explanation of this statement by saying that the heart could be divided into two sides left – something is happening there; right something is happening there. What was the structure that separates the left and the right side of the heart?

**[students' utterances are unclear]**

**FT 7 1:02:23**

It's septum. In other organisms, there is no separation, there is no septum. So, the left or the right, whatever is happening there, it's more mixed than in the human. The human is

separated and has a function. So, what's happening on the left side, what is transported in the left side, since it is called circulatory?

**[students' utterances are unclear]**

**FT 7 1:02:42**

Oxygenated blood is transported on the left side. Okay, what is transported on the right side? Deoxygenated blood. Excellent. However, however, this is not the direct connection to the statement that the humans circulatory system is a double circulatory system. It's indirect connection, indirect, do you understand ... (student's name) ? We need more explanation in order for you to get the point and get into the book of knowledge? A bit more. Okay. ... (student's name) ?

**[students' utterances are unclear]**

**FT 7 1:03:30**

Okay, so there are two pathways in the human body where the blood goes, Okay, we are coming closer to the two pathways. Okay?

The heart, the blood goes through the heart twice. Excellent. That's the simple explanation. You start from there.

The blood passes through the heart twice. And then we connect with ... (student's name) a statement. It passes twice, because there are two pathways of the blood separation. Excellent. Excellent. So can you elaborate a bit more ... (student's name) on the one of the pathways on the first cycle of the heart?

**[students' utterances are unclear]**

**FT 7 1:04:34**

Excellent.

Would you like to say it a bit louder because I don't think everybody; maybe you can come here and maybe you can point to the board so they can hear. I heard you. I don't know if everyone can do. So we are explaining one of the circulation; we said the blood goes to the heart twice. So, the full circulation is through the inferior and a superior vena cava. The blood enters the hearts and it is pumped through the pulmonary artery, which is then transported to the lungs, and then it comes back up to the pulmonary artery, vein. Back to the heart. So excellent. So one of the circulation, it's simply – heart, lungs, heart. It's heart, lungs, heart; that's one of the circulation from the heart to the lungs to release the carbon dioxide, picks up oxygen and enters the heart. Can you tell me why ...'s (student's name) explanation about the double circulation wasn't a direct supportive argument.

**[students' utterances are unclear]**

**FT 7 1:05:51**

Yes, someone.

... So kind of includes both sides of the heart. If it's leaving as Ieva said, if the blood is leaving the heart, we're involving the right side of the heart, leaving the heart, going to the lungs, then coming back to the hearts bringing oxygenated blood.

So in a way, ... (student's name), your explanation was the beginning of the explanation, say the two sides of the heart, but one of the separation is heart lungs heart as simple as that.

Happy?

Now, since the circulation is heart lung heart, can you give a name to this circulation?  
Pulmonary circulation.

**[students' utterances are unclear]**

**FT 7 1:06:52**

Pulmonary circulation, this is called pulmonary just because it takes the blood to the lungs and then brings back to the heart. Now, what could be the second circulation the second time the blood is passing to the heart?  
What is the second separation?

**[students' utterances are unclear]**

**FT 7 1:07:17**

Systematic, systematic, well-done ... (student's name). You get a treat.  
The concentration was on thinking and kind of recalling the previous information. So so for the second circulation of the double is can you repeat it again?

**[students' utterances are unclear]**

**FT 7 1:07:40**

Systemic or systematic? Both accepted systemic systematic, what is the first connection in your mind? If it's called systemic, systematic? Yes, ... (student's name).  
All the systems of the body. So, the heart is the organ that we start with the blood vessels, goes to all the systems of the body and comes back to the heart. And again, we have, ... (student's name) connected the left side of the heart, because the left side of the heart is transporting oxygen to all the systems of the body, then picking up the carbon dioxide and bringing it back to the right side of the heart. Both sides are connected. Okay, so you also, it's a good beginning of the explanation, but the rest is more accurate. That will give you the point. Okay, well done. So ,we have the two circulation: pulmonary and systemic or systematic circulation. So, raise your right hand.  
A little bit of exercise. As far as you can. Exercise, and then tap yourself on the shoulder. Well done. You had a very good foundation so we can build more. Congratulate yourself. Now. I'm going to ask you to work in a pair. And I'm ... looking for a diagram.

**[students' utterances are unclear]**

**FT 7 1:09:37**

Okay, this is the one I was looking for. Thank you very much ... (student's name).  
I want you to go to topic 6.2.1 and we're going to start learning more specific details about the blood vessels. And the first one is artery. So you can see the blood vessel. It's a vessel because there is an opening in the middle. Do you remember we said when there's an opening, what is the scientific term?

**[students' utterances are unclear]**

**FT 7 1:10:04**

Lumen. So there is an opening, obviously, for the blood to pass through. And we have an enlarged vision of one section of artery, we have all these labels. So, I want you to be in a

group of two, or maybe three, because you're not even number. And you can have a different task.

Task number will be to observe. Obviously, we're talking about the structure of the artery. Observe what is on the image, you can read the structures. You can connect it with some familiar terms, like, for example, do you know what is a tunica?

Have you heard the word tunica? Yes. ... (student's name)? What is a tunica? It's like a clothing. It's like something like... It's like it's a part of the outfit. So that's kind of common word tunica. So obviously, tunica is something covering, covering the body, right? So, this is the term we're going to use here. But your first task is to observe, okay, if you don't have Cognity, you can observe here. Your second task is, okay, to think what you're two people, okay, you are going to have a role play, one of you is going to be a teacher, you can decide who is the teacher, the person that is going to evaluate knowledge. It doesn't have to be the teacher; it can be simply a student evaluating knowledge. The other one in this roleplay is going to be a student that is very good in observing, identifying, okay, you as a science students, you should have observational skills. So, one is going to be evaluating the knowledge, the other one is going to be observing. Now, the one that is going to evaluate, the teacher, is going to formulate a question, but you're not allowed to share it with your partner, you have to think about it, you can write it, it's going to be a question that you're going to be ask the other person, but the answer of this question should be not from previous knowledge, it should be from the image this the person answering should be able to answer by just observing, nothing else not knowing. You have the structures labelled there. You have the names; you can answer by using these terms. So, one of you is formulating a question. And, obviously it can be simple question is, what do you see?

**[students' utterances are unclear]**

**FT 7 1:12:58**

But try to make it more specific, more oriented to the artery, structure of the artery. So formulating a question, it's actually the more difficult job, because you use it to study at home and have the question ready and answer the question. But if you think, like a reverse psychology, think what is the image, what is the possible question that could be asked to me to evaluate my knowledge? What possibly they could ask me? And actually, you will learn more by thinking what could be the possible question, rather than just reading the question and figuring the answer.

It's not a better way of learning. It's just a different way of learning. So, you have to kind of train your brain to see the things not just from one side, but from the other side as well. So whoever is going to formulate the question has the kind of more challenging tas;, formulate the question and the other student is going to answer. Then you can swap roles, the other student can ask a question, and the one, who was the teacher in the first role play Can be the student. So you have two minutes, one minute.

**FT 7 1:14:21**

Time flies.

**[students' utterances are unclear]**

**FT 7 1:14:23**

But okay, so can it be just one; one question and one answer?

Start. You have one minute. Actually, we have five minutes. We're Friday. No, it's Friday. Okay, the challenge is on. Let's see if I can write your name in the book of knowledge. The challenge is yours.

Observe the image, formulate your question.

**FT 7 1:15:37**

Ready? So (+ clapping). Who is the student that is a risk taking? IB students should be risk takers.

... (student's name). It's his birthday. Who is the risk taking students to formulate the first question? ... (student's name). What is the purpose of connective tissue? What is the purpose of the connective tissue? Remember, someone can answer just by using your observational skills? The answer is in the image.

**[students' utterances are unclear]**

**FT 7 1:16:22**

What is the wall? What is the purpose of the connective tissue? Another great student?

**[students' utterances are unclear]**

**FT 7 1:16:32**

To be honest, I'm not sure if I'm going to attempt to answer. I think it is to either one option, I have to keep all the structure together because on both sides, they turn around or two perhaps protected because there's a lot of pressure it within the arteries. And, and externally, there is a lot of movement. So perhaps .... Okay, very good. I'm going to search again, what else?

1:17:15

**[students' utterances are unclear]**

**FT 7 1:17:22**

So can I just finish it that? Many times the answer is in the scientific term. Remember, humans, the scientists have invented these scientific terms, so it will be easy for them to communicate with the whole world. And they're making it as relevant to the function as possible. The word connective is obviously connecting. And this is the right way of thinking even if you don't know at the moment, because you'll be under stress on the exam paper. But connective is obviously connecting. So we have a connective tissue on the outer layer of the artery, we have a connective tissue for the inner layer of the artery, and rightly so Ieva said, that if it's on the inner part, it's kind of surrounding protecting, and you also added in a way that it doesn't allow the blood to enter enter the structure of the artery and actually to be transported because it's the vessel it has to protect from the blood going otherwise, other ways. It has to go to the certain target organ, the other thing you have mentioned it's kind of supporting the blood vessel, keeping all tge tissues together and as well as connecting the arteries to the other body parts ,to the other body parts, so the organ can function together. Well done. I hope you had fun and I hope that you have learnt more than you knew when you started the lesson.

**FT 7 1:18:52 [students' utterances are unclear]**

Have a nice break and I owe you one minute and a half. Three minutes. Yes, you're right. I owe you three minutes. I owe you three minutes Thank you.

### Appendix 3

Focus Group

Fri, Jul 21, 2023 10:52AM • 29:26

#### SUMMARY KEYWORDS

students, indirect, direct, directness, gender, teachers, address, language, power, differences, tone, realise, men, work, put, cultural background, expect, women, classroom, teach

00:00

**Interviewer:** But you know ... Yes. You signed the consent forms, so now it's too late.

00:14

**Interviewer:** Okay. I don't know. I think that there should be still two more people. Maybe they are stuck somewhere. I don't know about Dean, because he never replied to me, neither Mr. Watson, but there were two others that confirmed.

00:28

**Interviewer:** Can we start? I'm stressed; I don't know why.

00:47

**Interviewer :** So, first of all, thank you so much, because I know what it is that we are all have to check our exam papers and so on. And I am gathering you here for this horrible reason of my dissertation, Basically, as you probably know, but I will remind you of, my dissertation is about indirectness in a school environment. And and my interest is basically to check whether female teachers or male teachers are more indirect or not. Okay. I'm not going to tell you what the research says and so on, because I don't want to influence your answers in a second. And I'm also interested in the fact whether indirectness can be considered in any way a sign of power, or perhaps directness. Now, is it clear basically what indirectness is? Or shall I somehow recap a little bit? You know, like, it's basically how we address the students, and even asking something like, can you open your books, please, is considered indirect? Because basically, the students could tell you, Yes, I can. And then he can just remain, you know, not doing anything, not opening anything, because you're just asking about the skill can you do you have the skills to do it. They just say yes. If you want them to do something you have to be, but you have to, or you don't have to, you have to be direct and say Open your books. That's it, this is very direct bald on record it's called. And there are all the other ways even, even as they say, open your books, please is already considered maybe not indirect, but you are softening your imposition by using the word please. Okay, so I don't know if this is clear or not, and then you have all the other ways of asking, like, for example, do you know? Or do you think that we could do this task? Or shall we do it? Or let's do it, it's like, you're putting yourself sort of the equal position with all the others in the classroom, instead of being the one in the position of power? Okay, so since the the most interesting, and the most important thing for me is to talk about gender. So what is your opinion about? You know, the differences between the female and male teachers? I don't know if you can basically see it from your own perspective. But do you think the way we address our students, whether it's direct or indirect, has anything to do with gender?

03:16

**FT 1:** I never thought about it. Okay. You made me think about it.

03:21

**Interviewer:** Yes, I know. Because what's the point of thinking about it?

03:25

**FT 1:** And you made me aware about certain things that you were already anticipating that we are doing. Stuff like I am ... the softer tone, I think you said.

03:34

**Interviewer:** Maybe.

**FT 1:** Things like, Oh my God, I'm doing this and I didn't know.

**Interviewer:** Yes, because we don't think about it, yes.

03:44

**MT 1:** I'm not very sure about this, but I think it's more of a cultural aspect, the way you speak and the way you address people, and it has to do with a cultural background, more than a gender, I think. But I don't have any data. So, I mean, we know that British, they use a lot of 'please' and they have a polite way of addressing if you say open your book, it will be a bit offensive. Yes, but in ways it could be the way to do things. I mean, so I think that no matter if it's a male or a female, a British teacher, for example, they will use please no matter what's the agenda.

**Interviewer:** Okay. All right.

**MT 1:** But even perhaps, I mean, even perhaps, it's also the background of the person, I guess, as well. Even British, whatever teacher male or female, will address accordingly, depending on his own background, his own experience, and.

04:53

**Interviewer:** Would you perhaps consider this statement saying that females are expected to be more indirect as per our gender roles and the expectations towards our gender.

**MT 1:** Could you repeat?

**Interviewer:** Would you say that, let's say, women are perhaps more indirect because of the expectations towards our gender, that we are expected, sort of, to be nicer. Yes.

05:23

**FT 2:** No. Not at all.

**MT 2:** I agree. I think culture and culture is a big impact, like you mentioned about like the Dutch in particular are very, very, very direct. But yeah, I am, I think, I don't think so necessarily that because of the of the gender aspect, I see in my, by the way I see myself, I think I would change my tone and the way I speak maybe to gender of a student, slightly different thing.

05:52

**Interviewer:** Okay, so that's an interesting point. So, would you say, for example, that the way you address the students differs, when taking into consideration the gender of the students? You just speak in a different way?

06:03

**MT 2:** I think, I think, definitely, subconsciously definitely.

06:09

**Interviewer:** Who would you be more direct with?

**MT 2:** with boys

**MT 2:** With the boys. Okay. And why is that so?

06:17

**MT2:** They're tougher, right? They, they literally need someone to say, like, listen, you need to be doing this now. Whereas with what we were always, this was even at university that what we were always taught that you have to be very firm and direct with the boys, and they respond well to that and they respect that. Whereas with girls, if if you if you if you get on their bad side, they're going to keep they're going to keep keep that grudge forever. So, you got to be softer with them. And that's, that's that was what we were taught by by, you know, academics.

**Interviewer:** Okay. Yes.

06:53

**MT 2:** It has to do with maturity levels.

06:57

**Interviewer:** Yes. So that is also, I think we were discussing it once, after my observation of your lesson, and that, would you, again, address your students differently if, let's say, they were younger as opposed to being older?

07:11

**FT 3:** That's what I think. I think it has nothing to do with gender. Okay. I don't teach ... I have one girl in IB, but she gets the same treatment as the rest. She has to. But yeah, I think the level, age makes a difference. They're IBs. There's more of that. We're on the same level sort of thing. With the younger, you know, I think there's more of that you have to do this now, you have to do this at the instruction mode. With the IB again, very often, it's more of a discussion, how are we going to tackle this question ...

07:49

**MT 2:** I think any any differences do narrow a bit the older they get? Even like when addressing adults. Same tone. As I get it from my experience of teaching practice, teaching in all girls' schools or all boy's schools, form 3 level that yeah, I can imagine that the tone would have been slightly different.

08:11

**FT 2:** I do agree with you though when you say that girls hold a grudge, they will hold a grudge. And they will ...

08:19

**FT 3:** I disagree. I taught in mixed schools. They were boys that held grudges as much as girls...

08:29

**Interviewer:** So maybe we've come to this first initial thought that it's cultural background, and then your personality simply.

**FT 4:** Personality yes.

**Interviewer:** But what do you think the students expect from us? We're talking about IB? I'm not talking about younger ones. Do you think that they expect us rather to be very direct and tell them what to do? Or do they prefer us to be rather indirect?

08:56

**FT 4:** I think that in terms of expectations, they expect us to be more indirect than we make think it is. And we're also deep, you're also supporting them to be more independent to take more responsibility. So, I think that expectations would lead them to share the ownership of the problem. rather than telling them what to do.

09:17

**FT 3:** You know, sometimes I think they do want us to tell them too much. And you're like, no, let's try and figure this out.

09:25

**Interviewer:** Okay, if let's say we could delve, you know, dig a little bit deeper into it. Can you remember perhaps any particular situations when it was good for your students or for you to be very, very direct and in what other situations it was better to be indirect.

**FT 3:** In a lab under..

**Interviewer:** Okay, why?

**FT 3:** Safety. You can't afford to do that "why are you doing this?" Stop that right now!

**Interviewer:** Okay, perfect.

09:56

**MT 2:** In my role as a head I've always..., especially with students struggling with deadlines or or miss deadlines. There are, it's, you start off indirect, but then at a certain point there needs to be directness. And there needs to be, when you get to a certain point like 'listen if this is not in my ... here is the consequence. Like, you know that there is there's that. So initially, it's more indirect. It's like, I heard you, I understand, but then it's different, maybe, maybe less in the language, but also the tone as well. But then it has to be direct.

10:38

**Interviewer:** Again, would you? Would you be like this with any student? Because this is the way you are? Or it's because we are discussing IB students. So, let's say, there is this certain level of maturity? And that's why we are discussing things like that with them.

10:54

**MT 2:** I think. I think we might I think it's it's more with IB, but I think it is personally also my my style as well. That's, yeah.

11:06

**Interviewer:** Okay. Yes?

11:08

**MT1:** I think the level of maturity of the students makes a huge difference. Because I mean, this year teaching a standard group for the first time. And I was teaching higher groups before. And I have to be much more direct with these guys here. Because otherwise, you just, I mean, you don't have endless time for students to adjust and follow things. So, if these students cannot follow what you want them to do, you might need to intervene more. So, I see that there's a need for this more this year.

11:44

**Interviewer:** Okay. Is it is it related just to their lack of knowledge, skills or more to let's say, misbehaviour, for example, those situations?

11:55

**MT 1:** All these. I mean, the lack of knowledge or the skills. They come from a place, a way of not being able to follow procedures, which they kind of ... together. So I think that the one thing and the other.

12:14

**Interviewer:** Okay.

**MT 2:** I agree with that, I think Alex has one IB class that students tend to be in because they have to be in as opposed to a choice. Usually, the ones he has, Maths applications, are the ones who don't like maths, but they have to do maths for the IB. So I think their attitude in that class is all it is they are going to have lower motivation, they're going to less want to do things. So, I think the directness, he has to have more direct approach because of that, whereas other ones, a student who's chosen to do psychology and wants to learn psychology, it's a very, very different, you don't have to be as direct with them, because they have that intrinsic.

12:53

**FT 2:** The other thing is with I'm, I'm very direct when it comes to things like because they don't know, they don't know how to say, they don't know the terminology, they don't know the structure, the way to go about. So, we do that. And then they do it, with another text or something. So, once they've got the hang of the of the terminology, I try to hand it over to them as much as possible, and then review.

13:19

**Interviewer:** Okay, perfect.

13:21

**FT 4:** Yeah, I remember when you came in class, I reflected, because I never thought about it. Then I realised I'm direct on certain things that I do not accept, or for just for example, I don't know, the windows, the room is usually stuffy. So I insist that the window is at least partly open and they want to close it, so that I don't compromise. But then when it comes to other things, such as Can I see your work, please, because I never have any issues. Like, I will see the work but then if I start having issues, I will obviously escalate my approach. But I did, t when I reflected, I realised I'm more direct on the things that I don't compromise on. So, if somebody tells me I'm sick, and she will hand in the certificate, for example, and told me I was sick yesterday, then yes, perhaps on that I would, I would compromise with that, in that situation, obviously. And so I think it's, it's the context and when when I feel I have an environment I can work with, then I can soften my approach. If I feel then the environment I can't work with or somebody's using the mobile or somebody is chatting, then I it escalates in my approach.

14:53

**Interviewer:** So that would be somehow related to discipline and class management.

15:00

**MT 2:** I'm indirect in those cases as well. Okay. Yeah, it's in the language in the language, but not in the tone of the message. Okay. in a sense, like if a student is on the mobile or it is, like, like, you know, they're not paying attention I'm like 'should I put it on for all of you, please?' like that is that is it's indirect language. But the message is very, very direct as in you'd better put that phone away. So...

15:29

**Interviewer:** Would anyone use humour?

15:32

**FT 3:** Yes. Because this is what I'm thinking. It's also another issue, because sometimes the tone is escalating, but the language may have still, we're still using humour, we're still using Do you mind putting that away, please. But the tone and the body language is not soft. So, there are shades of indirectness and directness sometimes.

15:59

**Interviewer:** Yes, literature says the same thing. It's very inconclusive. About that particular window thing. If you let's say you enter the classroom, and the window is closed? How will you address the student? Will you just tell them open the window? Just like that? Or would you still ask them in a polite way?

16:17

**FT 3:** Now, if I would still ask in a polite way, however, if they're closing it, I would probably escalate the tone.

16:36

**Interviewer:** Okay. Then, we talked about age, we talked about the students. Now, what about our experience as teachers? Would you say that the experience has anything to do with the direct or indirect, let's say, I don't know, less experienced teacher and he will start or she will start off being indirect for some reason or another or whether the other way around?

**MT 2:** I think it's the other way around.

**Interviewer:** The other way round. So, less experienced teacher would be rather more direct?

17:02

**MT 2:** You mentioned about power. I think when people are, I think those teachers that they feel that they're in industry where they have to put the kind of, they're nervous, they want to put their authority and dominance on people and don't feel confident with the power that they have, they use kind of more what they deem to be more powerful means. Whereas if, if, if a person has true power, they don't need to be direct.

17:30

**Interviewer:** That's, that's an interesting point. Another one actually, on the list, if you consider indirectness, in anyway, that it could be it could be considered powerful. A sign of power, in the same way..

17:46

**FT 3:** Yes. If I've got the authority there, I don't need to impose it. I can afford to ...

17:54

**FT 1:** It's your reputation as well, sort of. Once it's there, the kids will follow.

17:59

**MT 2:** If it's followed. Because if I say you might you might put your phone away, and they put it away, then there's probably that, would you mind putting the phone away, and they don't, as you used to say, I used to say the same words, but it's it's it's there. It's the indirect message and you can be comfortable in being indirect if you know that your, your your statement still holds power in that sense. But you may be indirect because you're shy and timid and you don't even want to do, you know, impose with direct language, then that's obviously very, very difficult.

18:32

**FT 3:** Once you've got the the authority in the class, and also in you've gotten to know the kids, sometimes you don't even have to say anything, you just go (Teacher showing a "threatening" facial expression)

**Interviewer:** Yes. That's true. That's true.

18:45

**FT 1:** That's what I meant by reputation. They know that you are going to expect certain things. They know that you are firm. So, you don't even need to emphasise that in every lesson. Because once you're in, their expectations change.

18:58

**FT 3:** When I first came here, I was in shock in the first lesson. They were like 10 minutes late, then the second time, but then I put the attendance on the board: late, late, late, late and that was it;.

19:33

**Interviewer:** So okay. So, in a way we come to the point where we could say that directness is a sign of power. Okay, would you perhaps say that maybe power, although I am suggesting maybe right now, but would you say that power is when we can decide whether we want to be one or the other? Because let's say our students may be they don't have this possibility. They don't have the choice, let's say because they're in a lower position. So then power is really more of a situation when actually, we can decide, okay, I want to be direct, because there is a reason. Or I will be indirect because of something. And any other any other reasons why people would like to be indirect.

20:16

**FT 4:** I think indirectness sometimes is a sign of connectedness to the students. The relations. When I'm connected with the classroom, I realise that I soften. When at the beginning when I'm not so connected, because I don't know the students, I realise I have to be more..

20:38

**Interviewer:** Yeah, you have to establish your authority.

20:41

**FT 4:** Your reputation, your presence and then after that ...

20:45

**FT 3:** You can enjoy it then; you can do it then.

**Interviewer:** Yes. Okay. All right.

20:52

**MT 2:** I just mentioned the word standards. And it's the same thing the way directness is, and showing consistency with your standards is very important. And so early on, it's showing them like, No, this is the red line for me. This is where I, this is where my expectations are. So in that sense, then when you the those standards are crossed, then usually there needs to be directness.

**Interviewer:** Okay, yeah.

21:16

**FT 3:** I think also the indirectness makes the classroom less threatening as an environment.

21:23

**Interviewer:** So would you say that these sort of, I don't know, not ideals, but the way we are in the classroom these days has evolved because in the past, it was more of a teacher who has the power, authority and is the most important. And these days we want to focus more on building rapport with students.

**FT 3:** Yes, thank God.

**Interviewer:** Okay, so perhaps indirectness also comes with with this notion that we are more like ...?

21:52

**FT 4:** Yes, we're here to be for each other. We're no longer the ones giving instruction. Nowadays, we are the facilitators of knowledge.

22:02

**Interviewer:** So, it's all student centred.

**MT 2:** Especially with IB, especially with IB. Yeah.

**FT 4:** Because it's no longer the teacher knows everything. They know more than us just by Googling something. We are just there. It's true. We're there for certain skills. So yes, different, what we are there for has changed completely.

22:21

**Interviewer:** Okay. I think one of the last questions, do you think that indirectness can at any point be, I don't know, misinterpreted, can be ambiguous, unclear? Can it be misunderstood by the students?

22:40

**FT 2:** Those school examples that you have given, I wouldn't say that.

22:44

**MT 2:** I think it's cultural context, sometimes. Okay, cross cultures. across cultures, sometimes, in some cultures, like we said, they're more direct or not so so if they come from a culture where everything is really indirect, if you're not direct, but the main thing that okay this is not, this is not a command or, you know, this is this is this. So, and also with neurodivergent kids, you can neurodivergent people on the spectrum, for example. They, they, so the direct should be; direct is clear for them. Yes, yes. Because it's obviously interpreting emotion and tone is more difficult for them. Direct commands work work better.

23:39

**Interviewer:** And what about Maltese people? What would you say they are rather direct or indirect?

**Everyone:** direct.

**Interviewer:** So, since we here, the language of instruction is English, do you think it influences our...

**FT 4:** It softens me definitely. In Maltese, I'm a Maltese hamalla. It changes me completely. I'm louder.

24:09

**Interviewer:** That's that's an interesting, interesting thing, not really entirely related to it. But But yes, it makes a difference. So because it's English, you mentioned that at the very beginning that English people would be very polite, and they would use please and so on and so forth. So

24:36

**MT 2:** Again, it's a cultural thing, and language is part of the culture. Same thing with with Arabic students. They usually speak to each other the way they're talking to each other at home it's a whole it's all shouting the loudest isn't it.. It's not that in an aggressive way. It's just that's, that's more of their way. That's their way

24:59

**MT 1:** Like with the Chinese they are super direct, they go like, 'explain this to me now'.

25:15

**Interviewer:** Okay, guys, I think that I've asked all the questions that I had.

**FT 4:** Did we help?

Interviewer: Yes, you did a lot. Thank you very much. I don't know if you want to add anything, but it's very, very helpful. I mean, we'll see what comes out of it. But I think that I could probably summarise that, as I can see, based on the questionnaires, based on what the students are saying, based on my conversations with you, that's actually indirectness has not much to do with gender. Although, I can tell you right now, officially, that according to the statistics, and research and studies and literature, that women are more indirect than men. That's it.

26:00

**MT 2:** I think it's one of those things where I think there's, there's, there's a combination of factors. Yes. So, gender is just one of them. But then when you factor in culture, you factor in other things, such as profession and other things. I think then you have other other other things as well.

26:25

You said that it's more nurturing sort of.

26:29

**FT 3:** Yeah, I think we're, I mentioned that with the idea of it being less threatening, like, yes, even if they're going to be working a problem, which I know that there are difficult set of problems. If I'm saying, let's do this together, let's work in the group. It's easier for, they relax. As opposed to now you're going to work it, and then I will collect it and see what you've done.

26:51

**Interviewer:** Yes, that's true. But about this nurturing thing, it also it's written in literature that basically women are considered more indirect, because apparently, we know, you know, the rules of social relationships better than men.

27:12

**MT 2:** I think it's one of these things where it's like, yeah, if you look at the mean, the mean is known by mathematics. I think the mean is not going to be too, too dissimilar. But I think you can go to the extremes. And let's say you had like, 1000 teachers here, and you pick the top 10. Direct and the top 10 Most indirect I think we would get mostly men, mostly women. But I think in the middle, I think it's at the extremes. It's by principle, yes, that's true. It's like it's the same thing. With athletics, we take the average, with athletics, the differences

between men and women are not that not that big. But then once you go into the professional aspect, he goes to the very, very, top end, it becomes massive. It's because you're not dealing with your average man, you're dealing with a man who is the pinnacle

28:00

**MT 1** And it all goes back to socialising again, because men make more money out of sports, or I mean, if women mature faster they treat them in a more indirect way they learn this faster maybe I mean, I think it goes back everything goes back to the social aspect.

28:18

**Interviewer:** The atmosphere and the rapport which is just basically very important because I mean, I don't know I once heard that students don't learn from teachers that they don't like that they don't like to hear so fantastic. I love it. I can send you pictures and things you know, it is amazing. Thank you very much.

## **Consent Forms**

### Consent Form for Guardians

#### **Information about the study**

My name is Zaneta Szatkowska and I am a postgraduate student at the University of Malta, reading for a Master of Arts in English (Language). I am presently conducting research as part of my dissertation titled Indirectness in a Maltese School Setting; this is being supervised by prof Lydia Sciriha, email address: [lydia.sciriha@um.edu.mt](mailto:lydia.sciriha@um.edu.mt). The aim of my study is to determine whether female or male teachers use indirectness more frequently in a Maltese school setting. In addition, it is carried out to verify whether educators and learners perceive indirectness as a sign of weakness or power.

#### **Your Participation**

Any data collected from this research will be used solely for purposes of this study.

Should you choose to participate, you will be asked to fill in a questionnaire on the use of indirectness in a school setting. The researcher will be present during the collection of data to support the respondents and to help with queries that might arise.

Data collected will be collected through the use of one self-administered questionnaire which will take around 30 minutes to complete. Your lessons with respective teachers will also be observed and audio recorded to collect examples of teacher-student interaction. Upon the collection, the interactions will be transcribed and analysed in terms of indirectness.

Participation in this study is entirely voluntary; in other words, you are free to accept or refuse to participate, without needing to give a reason.

You are also free to withdraw from the study at any time, without needing to provide any explanation and without any negative repercussions for you. Should you choose to withdraw, any data collected from them will be erased as long as this is technically possible (for example, before it is anonymised or published), unless erasure of data would render impossible or seriously impair achievement of the research objectives, in which case it shall be retained in an anonymised form.

If you choose to participate, please note that there are no direct benefits to you.

Your participation does not entail any known or anticipated risks.

#### **Data Management**

The data collected will be treated confidentially. The researcher will keep the questionnaires in a file till the end of the research. Together with the audio recordings, they will be kept in a

locked cupboard to which the researcher will have sole access. The researcher and her supervisor will be the only people to have access to the data.

Please note also that, as a participant, you have the right under the General Data Protection Regulation (GDPR) and national legislation to access, rectify and where applicable ask for the data concerning you to be erased.

All data collected will be stored securely in a file closed in and erased upon the completion of the research.

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### **Participant's consent**

- I hereby declare to have read the information about the nature of the study, my involvement and data management.
- I have had the opportunity to ask questions about the study and my questions have been satisfactorily answered.
- I declare that I am 18 years or older.
- I understand that should I have any further queries, I can contact Zaneta Szatkowska (zaneta.szatkowska.20@um.edu.mt)
- I agree to participate in this research study.

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Participant's guardian's name (in block)

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Researcher's name (in block)

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Participant's guardian's signature

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Researcher's signature

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Date

## Assent Form for Minors

### **Information about the study**

My name is Zaneta Szatkowska and I am a postgraduate student at the University of Malta, reading for a Master of Arts in English (Language). I am presently conducting research as part of my dissertation titled Indirectness in a Maltese School Setting; this is being supervised by prof Lydia Sciriha, email address: [lydia.sciriha@um.edu.mt](mailto:lydia.sciriha@um.edu.mt). The aim of my study is to determine whether female or male teachers use indirectness more frequently in a Maltese school setting. In addition, it is carried out to verify whether educators and learners perceive indirectness as a sign of weakness or power.

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Should you choose to participate, you will be asked to fill in a questionnaire on the use of indirectness in a school setting. The researcher will be present during the collection of data to support the respondents and to help with queries that might arise.

Data collected will be collected through the use of one self-administered questionnaire which will take around 30 minutes to complete. Your lessons with respective teachers will also be observed and audio recorded to collect examples of teacher-student interaction. Upon the collection, the interactions will be transcribed and analysed in terms of indirectness.

Participation in this study is entirely voluntary; in other words, you are free to accept or refuse to participate, without needing to give a reason.

You are also free to withdraw from the study at any time, without needing to provide any explanation and without any negative repercussions for you. Should you choose to withdraw, any data collected from you will be erased as long as this is technically possible (for example, before it is anonymised or published), unless erasure of data would render impossible or seriously impair achievement of the research objectives, in which case it shall be retained in an anonymised form.

If you choose to participate, please note that there are no direct benefits to you.

Your participation does not entail any known or anticipated risks.

### **Data Management**

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Participant's name (in block)

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Researcher's name (in block)

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Participant's signature

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Researcher's signature

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Date

## Consent Form for Educators

### **Information about the study**

My name is Zaneta Szatkowska and I am a postgraduate student at the University of Malta, reading for a Master of Arts in English (Language). I am presently conducting research as part of my dissertation titled Indirectness in a Maltese school setting; this is being supervised by prof Lydia Sciriha, email address: lydia.sciriha@um.edu.mt. The aim of my study is to determine whether female or male teachers use indirectness more frequently in a Maltese school setting. In addition, it is carried out to verify whether educators and learners perceive indirectness as a sign of weakness or power.

### **Your Participation**

Any data collected from this research will be used solely for purposes of this study.

Should you choose to participate, you will be asked to fill in a questionnaire on the use of indirectness in a school setting. The researcher will be present during the collection of data to support the respondents and to help with queries that might arise. In addition, 2-3 of your lessons will be observed, audio recorded and observation sheets will be completed based on the above-mentioned observations. You will also take part in a focus group in which questions will be asked by the researcher in relation to the topic of the dissertation.

Data collected will be collected through use of one self-administered questionnaire which will take around 30 minutes to complete. The lessons will be observed and audio recorded to collect examples of teacher-student interaction. Upon the collection, the interactions will be transcribed and analysed in terms of indirectness. Additionally, the focus group will also be audio recorded and transcribed.

Participation in this study is entirely voluntary; in other words, you are free to accept or refuse to participate, without needing to give a reason.

You are also free to withdraw from the study at any time, without needing to provide any explanation and without any negative repercussions for you. Should you choose to withdraw, any data collected from you will be erased as long as this is technically possible (for example, before it is anonymised or published), unless erasure of data would render impossible or seriously impair achievement of the research objectives, in which case it shall be retained in an anonymised form.

If you choose to participate, please note that there are no direct benefits to you.

Your participation does not entail any known or anticipated risks.

## **Data Management**

The data collected will be treated confidentially. The researcher will keep the questionnaires in a file till the end of the research. The file together with audio recordings will be kept in a locked cupboard to which the researcher will have sole access. The researcher and her supervisor will be the only people to have access to the data.

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Participant's name (in block)

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Researcher's name (in block)

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Participant's signature

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Researcher's signature

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Date