

# **Critical Thinking and Dialogic Teaching: Assets for Accounting Education**

by  
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## **Abstract**

The need for reforming accounting education to transform it into a more meaningful and relevant practice has been going on for years, with various claims hailing from all over the globe. Enhancing critical thinking skills of accounting learners is a central theme for those advocating for a change in accounting education (Wolcott et al., 2002). Furthermore, the concept of dialogic teaching has been identified as a complementary pedagogical approach to and enhances critical thinking (Davies et al., 2017). Dialogic teaching is built around the ability of the educator to create an environment in which dialogue with and amongst classroom participants can take place.

This study aimed at determining if and how critical thinking and dialogic teaching are currently used by local accounting educators and to develop a resource pack that infuses dialogic teaching and critical thinking with a specific focus on the topic of depreciation. This study also aimed at identifying potential critical thinking and dialogic teaching possibilities within the proposed accounting Learning Outcomes Framework. For this dissertation a qualitative research approach was adopted. Data was collected through two sets of semi-structured one-to-one interviews with three accounting educators and three in-class observation sessions for each educator. The in-class observations and the first set of semi-structured interviews explored the educators' outlook and handling of critical thinking and dialogic teaching in relation to accounting education and generated ideas which inspired the preparation of the resource pack. The second round of semi-structured interviews provided useful evaluative feedback in relation to the resource pack.

This study highlights that dialogic teaching and critical thinking are compatible with the teaching and learning of accounting and that they provide multiple benefits for both the learners and educators. It also suggests that the implementation of the Learning Outcomes Framework, specifically those related to accounting, call for a learner-centred pedagogy that can be assisted through the use of dialogic teaching and by instilling critical thinking in our classrooms. This study also sought to outline the potential of critical thinking as a tool that brings about transformation and promotes social justice.

*Keywords:* Critical thinking, Dialogic teaching, Accounting education, Resource Pack, Learning Outcomes Framework

## **Dedication**

To my family and all accounting educators and learners,  
particularly those who might make use of the proposed resource pack.

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## List of Abbreviations

AECC	Accounting Education Change Commission
AICPA	American Institute of Certified Public Accountants
I1	Interview 1 transcript
I2	Interview 2 transcript
IBL	Inquiry-Based Learning
NCF	National Curriculum Framework

# **Chapter 1: Introduction**

## **1.1 Purpose and Focus of the Study**

Having studied accounting since the age of thirteen, throughout the years I have reflected upon the way I was exposed to the subject during the various stages of my educational path. At the early years of studying accounting, the subject was portrayed as one that involved mainly computational exercises. However, with the passing of time the importance given to theoretical aspects of accounting started to take over the computational aspect. I also felt that a number of accounting educators that I had, seemed not to give enough importance towards making the subject more relevant and meaningful to the learners. As a result, little attention was given by these educators towards making use of dialogue effectively during their teaching of accounting and in assisting their learners to enhance their critical thinking skills, rendering the subject to a predominantly prescriptive technical exercise.

My encounter with the description given by Riordan and St Pierre (1992) of what goes on during a typical accounting lesson, sounded very familiar yet worrying at the same time. Riordan and St Pierre (1992) outline how accounting information tends to be presented and tested solely from an arithmetical point of view, limiting space for developing critical thinking through an effective use of dialogue and very often ends up favouring memorisation skills. By comparison, during the Master in Teaching and Learning in Business Education course, I had the opportunity to interact with a number of accounting educators whose common interest was a genuine effort to assist learners in seeing the relevance of the subject through an active-based approach which

highlights the interaction of the learner with the subject matter, questions taken-for-granted notions and makes sense of accounting knowledge through cycles of questioning and attempts to come up with meaningful tentative answers. In addition, this study was also inspired by the idea of Freire (1970, p. 81) that “education as the practice of freedom—as opposed to education as the practice of domination—denies that man is abstract, isolated, independent, and unattached to the world; it also denies that the world exists as a reality apart from people”. Being a prospective accounting educator myself, I felt compelled to delve further into the notions of dialogic teaching and critical thinking as valuable assets for a transformative accounting education.

Along the years, various calls were made advocating reform in accounting education. These calls came from a range of sources from all around the globe, including the accounting industry (Arthur Andersen et al., 1989), educational bodies (Accounting Education Change Commission, 1990) and educational research (Merino, 2006; Chabrak and Craig, 2013). The need for critical thinking has featured as a central theme for those advocating for a change in accounting education (Wolcott et al., 2002). Despite the existence of diverse obstacles to enhance critical thinking in accounting education, Young and Warren (2011) recognise that critical thinking skills are “a prerequisite for a successful accounting career.” Furthermore, literature suggests that dialogic teaching is complimentary to and enhances critical thinking (Davies et al., 2017). Dialogic teaching is built around the ability of the educator to create an environment in which dialogue with and amongst classroom participants can take place. The premise is that through an effective use of dialogue, the learners are engaged, stimulated and offered the possibility to strengthen their thinking and understanding (Alexander, 2008). In addition, the newly proposed local Learning Outcomes Framework for accounting education also addresses the need for reform

and encourages the use of dialogic teaching alongside the need to enhance the accounting learners' critical thinking skills.

## **1.2 Research Objectives**

The main research objective pertaining to this study is to determine if and how critical thinking and dialogic teaching are currently used by local accounting educators. This overarching research objective is supported by the study of the following three specific objectives.

1. The study of the extent to which accounting learners are being exposed to critical thinking and dialogic teaching in the local scenario.
2. The identification of potential critical thinking and dialogic teaching possibilities within the proposed accounting Learning Outcomes Framework.
3. The production of a resource pack and the subsequent evaluation and feedback by three established accounting secondary schools' educators.

To reach the objectives of this study, a qualitative research design was adopted. This study aims at highlighting the importance and relevance of dialogic teaching and critical thinking with regards to accounting education. As a result, secondary data was gathered from a variety of existing literature, while primary data was collected through the use of in-class observations and semi-structured interviews. Three accounting educators from state, private and church secondary schools took part in this study. The participants provided their consent for the researcher to carry out three in-class

observations of their lessons and to participate in two one-to-one interviews. The in-class observations were aimed at serving as a complimentary tool to the semi-structured interviews, thus assisting the triangulation of data. The purpose of the in-class observations and the first set of semi-structured interviews was to provide the researcher the possibility to explore the educators' outlook and handling of critical thinking and dialogic teaching in relation to accounting education. Furthermore, the in-class observations and the first set of semi-structured interviews generated ideas which inspired the preparation of the resource pack. The second round of semi-structured interviews with the participant educators aimed at providing the researcher with an evaluative feedback in relation to the resource pack.

### **1.3 Structure of the Dissertation**

This chapter has introduced the study and defined the objectives of the research, while Chapter 2 portrays a thorough review of the literature related to critical thinking, dialogic teaching and their relevance to accounting education. Chapter 3 discusses the research methodology approach of this study and explains the selection of the study participants and the tools used for data collection. In addition, this chapter also describes the process of how data was gathered and analysed. Chapter 4 presents the findings that emerged from the observation sessions and the first round of interviews with the study participants. These findings are analysed and discussed in Chapter 5 in light of the literature presented in Chapter 2. Chapter 6 explains the preparation of the resource pack and presents the evaluative feedback that emerged from the second round of interviews with participants. Finally, Chapter 7 highlights the

overall conclusions that emerged from the study and pertinent recommendations including potential areas for further research.

## **1.4 Conclusion**

This chapter provided an overview of the purpose and focus of the study and outlined the research objectives and the structure of the dissertation.

## **Chapter 2: Literature Review**

### **2.1 Introduction**

This chapter presents a review of the literature relevant to critical thinking and dialogic teaching, in relation to the teaching and learning of accounting. It starts by providing an overview of how learning and development takes place and then an account of accounting education is also given. The notions of critical thinking and dialogic teaching are discussed in terms of how they developed over time and their relation to education, particularly accounting education. This chapter also discusses the relevance of critical thinking and dialogic teaching in light of two important local documents, being the National Curriculum Framework (NCF) and the Learning Outcomes Framework.

### **2.2 Learning and Development**

Following his study about young children and the way they reason, Piaget (1970) argued that learning and development takes place in stages. As a result, he formulated the human cognitive development theory. As cognitive development takes place in stages, the author suggests that children start to comprehend and learn about the world around them through their connection with the surrounding environment and by exploring it. The degree and extent of comprehension of the world around them, will vary according to the child's level of maturation (Piaget, 1970). This theory, sheds more light on the taxonomy previously developed by Bloom (1956) that deals with lower order skills and higher order skills. Bloom's (1956) taxonomy is built around the concept

of having specific levels of thinking which are incremental and thus suggest that a learner moves from one level to another until one reaches the highest level of thinking, that of creating something new.

Vygotsky (1978) took Piaget's (1970) theory of human cognitive development to a step further. Vygotsky (1978) emphasized that learning and development does not take place in a vacuum and instead pushed forward the notion that learning and development are highly influenced by both the social and cultural contexts. He developed what is termed as the sociocultural theory, that outlines how learning is likely to take place through interaction and cooperation with others, which in turn triggers internal developmental processes. Thus, Vygotsky (1978) claims that problem solving with the help of more capable peers or assistance by more knowledgeable others, such as educators, can be very beneficial towards a child's learning and development. The sociocultural theory is built around Vygotsky's (1978) persuasion that there exists a very close relationship between speaking, thinking and learning.

Developing further this interdependence between speaking, thinking and learning, Giroux (1981) argued that educators who aim at adopting a student-centred approach towards teaching and learning, cannot ignore the cultural experiences of the learners. In fact, he states that these experiences of the learners shall act "as a starting point for dialogue and analysis" and that educators shall use them as an opportunity for the learners "to validate themselves" and "to use their own voices" (Giroux, 1981, p. 123). Despite these calls for an effective dialogue and in-class discussion that is meaningful and relevant for the needs of the class participants, Daniels (2001) noted that schools tend to be more reflective about what is written rather than what is orally discussed. Thus, he argued that this attitude does not help in giving the deserved importance to the skills and tools needed for an effective discussion.

## **2.3 Accounting Education**

In a position statement issued by the Accounting Education Change Commission (AECC), the commission had already identified way back in 1990 the need to change the focus of accounting education. The AECC identified that accounting education shall move away from simply focusing on knowledge acquisition and move towards “learning to learn” (AECC, 1990, p.310).

Riordan and St Pierre (1992) gave an outline of how a typical accounting lesson is usually carried out. They noted that very often, an accounting lesson takes the format of a lecture, whereby the educator exposes facts to the learners and then this is followed by exercises to foster learning by doing, very often in the form of numerical problem solving. Furthermore, they argued that when accounting information ends up being both presented and tested solely from an arithmetical point of view, there would be limited space for the development of the learner’s critical thinking skills. Thus, this pedagogical approach towards the teaching of accountancy, would favour learners’ memorisation skills rather than critical thinking abilities (Riordan and St Pierre, 1992). Williams (1993) also noted a very similar approach in the teaching of accountancy and added that this is also reflected in the way learners are assessed. In fact, he goes on arguing that very often, examinations are specifically formulated to only assess the learner’s proficiency in solving questions very similar to those worked out in class and this tends to end up encouraging and rewarding memorisation of processes. Since this approach promotes passive learning, Williams (1993) suggests that it can eventually foster a one-right-answer syndrome.

Closer to our time, Camp and Schnader (2010) seemed to re-affirm the above arguments. In fact, they noted how accounting lessons can easily end up being passive

and “rarely require the critical thinking skills that students so desperately need to develop and use” (Camp and Schnader, 2010, p. 655). Furthermore, they argued that while a chalk and talk approach towards the teaching of accounting can prove to be effective in developing learners who are capable of replicating what they have learned, however, this does not allow space for learners to develop to their maximum potential, as there is no interaction with the content. This approach does not offer the learners the opportunity to enhance their “ability to synthesize, evaluate, and communicate” (Camp and Schnader, 2010, p. 656). In addition, the authors also suggest that in this type of learning environment, learners are unlikely to be willing to express and share their opinions or challenge what is being presented to them (Camp and Schnader, 2010).

In an article encouraging the fostering of critical thinking skills in introductory accounting courses, Young and Warren (2011) concludes that “the demand in the accounting profession for students with strong critical thinking skills is growing, and accounting educators should assist students with the development of these skills. Accounting educators should continue to experiment with the use and assessment of critical thinking exercises, as the experimentation will lead to solutions for the problems presented by the obstacles and to the development of best practices that are appropriate for the introductory course” (Young and Warren, 2011, p. 871).

## **2.4 Critical Thinking: Origins and Background**

Along the years, several researchers and theorists came up with various definitions of what is understood by critical thinking. Ennis (1985, p.45) viewed critical thinking as “reflective and reasonable thinking that is focused on deciding what to believe or do”.

In addition, Siegel (1990, p. 90) described critical thinking as an ability “through which thinkers believe in and abide by the fair-minded evaluation of reasons”. He also goes on suggesting that in an effort to achieve this skill, learners must have a positive attitude towards being inquisitive and capable of putting aside any potential biases or conflicts of interest. Scriven and Paul (1987) during an international conference about critical thinking in education, noted that critical thinking is an “intellectually disciplined process of actively and skilfully conceptualizing, applying, analysing, synthesizing, and/or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief and action”.

McPeck (1990) spoke about critical thinking as an attitude through which one takes a step back and by considering the perspectives of others, appreciates one's own strengths and weaknesses. As a result, McPeck (1990) seems to contradict Siegel's (1990) argument that critical thinking should lead to the elimination of bias. Similarly, Boyce and Greer (2013, p. 110) also argue that it is difficult to completely eliminate bias and argue that “it may be naive to hold an expectation that freedom from bias or predisposition is possible, but in the light of critical thinking, teachers and students can strive to understand their own biases, to appreciate how they shape personal perceptions, and to challenge and revise both those perceptions and underlying biases and predispositions”. For Halpern (2014, p. 8), critical thinking can be seen as “thinking that is purposeful, reasoned, and goal directed – the kind of thinking involved in solving problems, formulating inferences, calculating likelihoods, and making decisions, when the thinker is using skills that are thoughtful and effective for the particular context and type of thinking task”.

Critical theory knows its formal origin to what is known as the Frankfurt School back in the 1930's, which contributed towards the emergence of the first generation of critical

theorists (Briffa and Poulton, 2003). At this early stage, the aim was to push forward the commitment towards the individual's integrity and freedom. This aim was also enlightened by the arguments brought forward by Dewey (1916, p. 99) in that it is crucial to have "a type of education which gives individuals a personal interest in social relationships and control, and the habits of minds which secure social changes without introducing disorder". One of the first important figures with regards to the Frankfurt School is Max Horkheimer who pushed the notion that critical theory should act as the contrapositive of traditional theory. For Horkheimer (1972) traditional theory was too focused on devising descriptive analysis and use of deduction in relation to a particular problem or phenomenon. On the other hand, critical theory tends to be more concerned about seeking an "explanation as well as the normative evaluation of what made the object of investigation problematic" and to try to "to identify the agents responsible for its transformation" (Thompson, 2017, p. 6). As a result, critical theory is built around the call to be critical towards the surrounding world and urges people to take transformative actions (Corradetti, n.d.). In addition, as argued by Corradetti (n.d.) critical theory "distances itself from scientific theories because, while the latter understands knowledge as an objectified product, the former serves the purpose of human emancipation through consciousness and self-reflection". With the passing of time and with the contribution of other theorists including Adorno, Fromm and Marcuse, amongst others, critical theory also started to discuss and ask questions in relation to industrial societies, popular culture and the composition of modern social power (Kellner, 1989 and Thompson, 2017). Thompson (2017, p. 12) also outlines that "critical theory always sought to transcend disciplinary boundaries, to move toward a dialectical form of reasoning against purely analytical forms, and to maintain the centrality of the ways that critical reason would be capable of liberating actual political

practice". In spite of this, there is also a variety of criticism that is levelled against critical theory and the idea of the Frankfurt School. One of these criticisms is that critical theory despite promoting human emancipation, very often failed to propose a sensible political action-plan that leads to a sustained social change (Corradetti, n.d.). In addition, Baugh (1990, p. 65) criticised the position taken by Adorno and Marcuse in relation to popular culture and calls their approach as "left-wing elitism". In fact, he concludes that "it is hard to see what justification there could be for the kind of left-wing elitism that Adorno and Marcuse propose. Not only does their program involve the absurdity of seeking mass emancipation by first liberating society's most privileged members, its denial of the emancipatory possibilities of popular art is not supportable by theory and is contrary to the facts" (Baugh, 1990, p. 77).

Following the previously discussed critical theory, Freire (1970) enters the scene, as he contributed towards the development of critical pedagogy, in an effort to bring freedom from oppression. Critical pedagogy and critical thinking are not the same, although they do share some common elements. In fact, Burbules and Berk (1999) argue that both critical pedagogy and critical thinking, start from the position that in general, human beings tend to lack the required abilities or dispositions to effectively discern potential inaccuracies, fabrications and distorted realities. Thus, these deficiencies justify the need to be critical, as these deficiencies restrict freedom. Concerns related to limitation of freedom are more dominant in critical pedagogy, which perceives society as being fragmented due to unbalanced power relations (Burbules and Berk, 1999). The authors also highlight that "both critical thinking and critical pedagogy authors would argue that by helping to make people more critical in thought and action, progressively minded educators can help to free learners to see the world as it is and to act accordingly; critical education can increase freedom and

enlarge the scope of human possibilities” (Burbules and Berk, 1999, p. 2). Critical pedagogy tends to go a step further than critical thinking, in that critically reflecting and interpreting the world is not enough and instead views the nurturing of willingness and ability to take action that transforms the world as a prerequisite (Burbules and Berk, 1999). Thus, for Freire (1970) a critical pedagogy should be one that seeks to fight against social injustice and offer liberation from oppressive institutions and behaviours. In consequence, the acquisition of freedom for Freire (1970) starts by recognising the different types of oppression and the individual’s role in this system. As a result, as argued by Burbules and Berk (1999, p. 7) “the critical person is one who is empowered to seek justice, to seek emancipation. Not only is the critical person adept at recognizing injustice but, for critical pedagogy, that person is also moved to change it”.

In his book entitled the ‘Pedagogy of the oppressed’. Freire (1970) criticizes what was termed as the banking concept of education. He outlines how the application of a critical pedagogy can help learners to come into contact with new knowledge and enhance their ability to interpret the world around them. According to Freire (1970), this can be achieved through the use of critical dialogue, discussion, self-reflection and by listening to experiences of other learners. As a result, for Freire (1970) critical thinkers seem to have an urge to challenge the way things are done, what is referred to as the *status quo*. Furthermore, he argues that accepting the *status quo* and sustaining a sense of inability to change it, is likely to give rise to a ‘culture of silence’. Armstrong (2007) notes how in certain circumstances, silence can be considered as an exercise of power and outlines that this can take place both in a classroom environment and within the wider community. This follows the argument of Freire (1970) in that by fostering a “culture of silence” the oppressor maintains power over the oppressed. This situation can also be replicated in the classroom, whereby the

educator can end up acting as an oppressor, especially through the perpetuation of pedagogies that hinder critical practices. As a result, he encourages educators to assist learners to develop and find a voice, in an effort to bring to an end this 'culture of silence'. In consequence, Armstrong (2007) highlights that Freire's (1970) contribution resulted in a change in the way education is looked at and learning started to be seen as playing "a role in giving voice to marginalised and oppressed groups". As a result, it can be argued that both critical pedagogy and critical thinking tend to share a common consensus that learners need to be critical of the world around them and should be driven to do something, "whether that something be seeking reasons or seeking social justice" (Burbules and Berk, 1999, p. 9). In addition, the authors argue that both movements tend to share some common objectives in surmounting ignorance, in resisting distorted realities by pushing forward truth and in encouraging tangible action grounded in reality. However, "how each movement talks about 'the way things are' is quite different" (Burbules and Berk, 1999, p. 11). In addition, Brookfield (1991) outlined that questioning what is often taken for granted, such as assumptions or customary ideas and practices, is at the very heart of what critical thinking entails. He also argued that critical thinking should be looked at as a positive and productive process, in order to appreciate its importance. Ignatavicius (2001) drawing on Freire (1970) devised a list of characteristics that critical thinkers shall possess and argued that they shall be "outcome driven, open to new ideas, flexible, willing to change, innovative, creative, analytical, communicators, assertive, persistent, caring, energetic, risk takers, knowledgeable, resourceful, observant, intuitive, and 'out of the box' thinkers" (Ignatavicius, 2001, p. 37).

Building on the foundations laid by Dewey (1916) and Freire (1970), Ellsworth (1989) argues that educating for critical thinking skills should assist "the goal of critical

pedagogy”, being that of having “a critical democracy, individual freedom, social justice and social change a revitalized public sphere characterized by citizens capable of confronting public issues critically through ongoing forms of public debate and social action. Students would be empowered by social identities that affirmed their race, class and gender positions, and provided the basics for moral deliberation and social action” (Ellsworth, 1989, p. 300).

Sultana (1991) in his concluding remarks about the challenges of critical pedagogy, encouraged educators to look at the benefits that can be sought by enhancing critical thinking skills amongst learners. “Imagine the contribution critical education and pedagogy can make to the dream of a democracy if students are constantly involved in the practice of a rational consensus reached purely by the force of the better argument, where, by means of systematic self-reflection, there is a diminishing of the existing obstructions to the realization of genuine social relations, where action is taken after all pertinent evidence is brought into play and nothing apart from logical, reasoned argument is involved in an ensuing consensus!” (Sultana, 1991, p.125). Furthermore, Oliver and Utermohlen (1995) outline how the effective development and application of critical thinking skills has become ever more relevant and of utmost importance, as individuals are continually inundated with information which is not always truthful and thus requires to be critically evaluated and assessed. In addition, Garrison (2011) argues that assisting learners to foster positive dispositions towards critical thinking, can be considered as one of the toughest challenges that educational institutions are facing in the 21<sup>st</sup> century. Notwithstanding this challenge, Sellars et al. (2018, p. 4) outline that the application of critical pedagogies “which foster individuals’ own ideas, expertise and knowledge through inquiry as well as enhance their independent decision making and active interaction with the outside world, are crucial for effective

and meaningful education". In addition, they also argue in favour of adopting curricula, pedagogies and modes of assessment that promote learners' disposition of being inquisitive and other cognitive facilities that foster critical thinking (Sellars et al., 2018). In consequence, it is not surprising that Riggs and Hellyer-Riggs (2014, p. 7) conclude that those learners who are challenged to think further, often "become aware of thinking as such and of the role of thinking in their lives. They realize that significant thinking requires reflection and active seeking of information".

#### **2.4.1 Critical Thinking and Education**

Young (1988), building on the arguments of Kleinig (1982) and Habermas (1984), made a clear distinction between an education that encourages pedagogies leading to coercion and those which favour the use and application of reasoning. For Young (1988), pedagogies that opt for teaching through coercion are more likely to result in the indoctrination of the learners rather than supporting them to make an effective use of their reasoning capabilities.

Similarly, Simon (1987) also criticised the banking concept of education. He argued that critical educators are those who perceive curricula not as something fixed and inanimate, but rather as an opportunity whereby knowledge is something which is co-constructed, taking into account both the social and the physical world that surround the participants. Thus, as highlighted by Sultana (1991, p. 121) "such an education is concerned with the development of critical social intelligence, founded on a practice of reflective self-knowledge which will enable persons to improve the rationality of their own practical judgments and actions". This approach towards teaching encourages the use of dialogue within a community of learners with the aim of bringing forth knowledge

that is relevant and that challenges taken for granted assumptions. It also supports an effective use of questioning techniques, democratic participation, builds upon the learner's experiences and a genuine focus on the process of learning itself (Sultana, 1991). Furthermore, Cunningham (1996) and then Youngblood and Beitz (2001) both outlined that active learning strategies are more likely to promote critical thinking, as they trigger cognitive processes. Moreover, Thomas (2009) suggests that active and experiential learning is likely to increase the possibility for the learners to be more engaged and participate in an active and reflective manner. Dowd and Davidhizar (1999) identified case studies as another tool that can be used by educators to foster critical thinking skills. They argued that case studies in their nature tend to provoke learners to think outside of the box and to apply learnt knowledge and put it into practice to deal with a specific issue.

Young (1992) also suggests that a critical educator is one that perceives knowledge as a product of a series of inquiry-based questions. As a result, as outlined by Simon (1987), critical pedagogy can be seen as a tool that empowers learners to be able to develop new skills and critically evaluate already learnt knowledge. Thus, critical thinking skills should assist learners in their interpretation of everyday realities and is likely to help them think about potential alternative courses of action which might be more just and impartial (Simon, 1987).

Ennis (1962) judged as imperative to remind educators that fostering critical thinking skills of the learners, is not an option, but rather an essential part of their job. Furthermore, Pithers and Soden (2000) clearly outlined that developing critical thinking skills among learners shall not be achieved by means of introducing stand-alone courses on critical thinking. Instead, they argue that it would be more effective if educating for critical thinking is embedded in subject-matter of courses. Moreover,

Young and Warren (2011) argue that critical thinking skills tend to develop slowly, and thus results are unlikely to be seen and felt over a short period of time. As a result, they argue that since improvement in critical thinking skills requires practice over time, then it would seem optimal to introduce critical thinking exercises early in the curriculum.

In spite of the long-term benefits of critical education, by drawing upon the work of Carlson (1987), Sultana (1989) notes that some educators along the years have been considered merely as agents of the *status quo*. As a result, Sultana (1990) argues that some educators seem more inclined towards developing strategies that support survival, rather than transformation of unjust structures. Having said that, in line with Ennis (1962), Sultana (1989) calls for educators to take up a different approach and become agents of social transformation. Thus, in line with what is argued by Giroux (1986), educators should equip their learners to act as critical agents.

As a result, Giroux and McLaren (1986, p. 237) invite educators who wish to foster critical thinking abilities within their learning communities, to organise learning in a way that assists learners for “responsible roles as transformative intellectuals, as community members, and as critically active citizens outside schools”. Schneidewind (1987) suggests that in order to achieve these aims, there exist five components that should be firmly in place, as follows: (i) a sense of community among the participants that is based on trust and mutual respect, (ii) a certain degree of shared leadership, (iii) cooperation, (iv) learning that integrates both the cognitive and affective aspects of the participants, and (v) concrete action. Similarly, Sirotnik (1990) also identified some aspects that should be found within a pedagogy that seeks to foster critical thinking among participants. In consequence, for Sirotnik (1990) an educator shall: (i) assist learners to develop a sense of inquiry, (ii) ensure that knowledge is not simply

transmitted but rather co-constructed, (iii) encourage learners to foster a sense of competence and (iv) build a strong relationship with and among the community of learners based on respect, trust and openness towards others. Furthermore, Popil (2011, p. 205) states that “desirable learning takes place in a supportive, non-threatening environment where feedback is given”.

What was outlined above, is unlikely to be achieved if, as argued by Sultana (1997), educators keep on portraying themselves as the experts, which for the author will only reinforce the banking concept mentality. In fact, he calls for a change in attitude and asks educators to act as facilitators and assist learners in the co-construction of knowledge through dialogue. He notes that, “while the first role is more likely to lead to docile, uncritical, subdued, individualistic, competitive learners and citizens, the second encourages the development of creative, co-operative, critical, participatory characteristics that become evident in both classrooms and society more generally” (Sultana, 1997, p. 412-413). Similarly, Young and Warren (2011) noted that education can be classified in two, pedagogies that encourage knowledge transmission and pedagogies that focus on learning facilitation. The latter works on fostering an “intrinsic interest in the subject matter” (Young and Warren, 2011, p.865). On the other hand, knowledge transmission is more likely to push towards a more surface approach towards learning and thus encouraging memorisation of content. They argue that “in a knowledge transmission orientation, teachers tend to think that the discipline subject matter is the primary learning objective of the course, and the knowledge should be clearly presented, or imparted, to students. In a learning facilitation orientation, teachers tend to emphasize problem-solving skills, critical thinking, and independent learning” (Young and Warren, 2011, p. 865).

With regards to the knowledge transmission pedagogies, Gramsci (1971, p36) was very critical and labelled as “mediocre” those educators who limit themselves to simply deliver facts. As noted by Young (2013, p. 107) schools are asked to assist learners to go “beyond their experience and enable them to envisage alternatives that have some basis in the real world”. Otherwise, “uncritically imparting and reproducing the dominant forms of knowledge would remain problematic for a democratic education” (Mayo, 2015, p. 1133).

#### **2.4.2 Critical Thinking and the Teaching of Accounting**

The American Institute of Certified Public Accountants (AICPA) (1999), defined critical thinking skills as the ability to bring together data, knowledge and insight gathered from a variety of disciplines, make sense of it and be able to take better informed decisions. Doney and Lephardt (1993, p.297) outlined that “knowing how to think - to apply, analyse, synthesize, and evaluate - are primary skills for accounting professionals”. As a result, they argue that it is imperative for accounting educators to assist their learners to develop learning skills useful for their whole life, including critical thinking skills. Doney and Lephardt (1993) note that critical thinking skills enable learners to apply learnt principles and concepts in a multitude of contexts. Thus, they argue that this pedagogical approach towards the teaching of accounting moves away from focusing on memorisation of concepts and instead instil within the learners the willingness to go deeper in their understanding and motivate them to learn beyond the formal education sphere.

In an interview, held by Johanson (2010) with Dr Stephen Brookfield, a well-known figure in the field of critical thinking, Dr Brookfield outlined that one of the main aims of education should be that of assisting learners to become critical thinkers, irrespective of their area of study. In fact, he goes on stating that irrespective of your area of study, being “mathematics, botany, theology, sociology, accounting, law or anything”, “the ability to think critically is a foundational skill needed in so many areas of life” (Johanson, 2010, p. 27-28). On a similar note, Howard et al. (2015) concluded that despite the fact that a significant amount of students manage to graduate and obtain a diploma, however “only those who have both the ability (can do) and motivation (will do) and make the best use of all the resources (opportunity) improve their critical thinking skills and reveal their true human capital” (Howard et al., 2015, p. 145).

Reinstein and Bayou (1997) argued that as time passes by, accountants are expected by their clients to go beyond simply calculating figures. They argue that accountants are being asked to be able to observe, evaluate data, predict outcomes, provide adequate advice and suggest alternative courses of action. Thus, Reinstein and Bayou (1997) outline that the ability to think critically is an underlying feature of all these tasks that accountants are nowadays asked to perform. In consequence, they argue that accounting educators must take into account all of this and ensure that their learners are equipped with the necessary skills to be effective and efficient. Camp and Schnader (2010, p. 655-656) outlined that “critical thinking skills have become increasingly important for accounting professionals. No longer can accountants simply function as the stereotypical “bean counters” who sit in the corner with a general ledger”.

As a result, Reinstein and Bayou (1997) propose strengthening the learners’ intellectual, interpersonal, quantitative analysis and communication skills. They ask

accounting educators to develop within their learners the “willingness to take nothing for granted” and to approach experiences with a questioning mind frame. Similarly, Doney and Lephardt (1993) argue that accounting educators have to re-think the adopted teaching and evaluative strategies, together with the learning objectives, so as to better coincide with higher levels of cognitive functioning as outlined by Bloom’s (1956) taxonomy. Doney and Lephardt (1993) also noted that the acquisition of critical thinking skills takes place gradually and as a result it takes time to achieve the desired outcome. Furthermore, they argue that it is critically important for accounting educators to create a learning environment that promotes the use of questioning by both the educator and the learners. To further support this questioning attitude, Doney and Lephardt (1993) suggest that accounting educators make use of case studies. They outline how case studies tend to foster reflective thinking skills among the class participants, which in turn are very useful when it comes to decision making.

Kealey et al. (2005) drawing upon the work of Jenkins (1998), argue that while it is true that as accounting learners further their studies, critical thinking skills become even more important, however they also make the point that these skills are also “necessary for success in introductory coursework as well” (Kealey et al., 2005, p. 36). They outline that the given “transactions must be analysed using the accounting equation as a framework to determine which (if any) accounts are affected and the student must at least implicitly consider how the transaction will affect the financial statements. If the student has not previously encountered an identical transaction, he or she must analogise from similar transactions that they might have encountered in the past” (ibid). In addition to this, Camp and Schnader (2010) recommends that accounting educators shall do their utmost to keep learners engaged and motivated in an effort to move towards a deeper level of learning, while fostering a healthy scepticism in interpreting

the world around them, including the business world. As a result, they suggest assisting the learners to go “beyond the mechanics of accounting and help them understand and evaluate the roles of accounting information and accounting professionals in today’s business world” (Camp and Schnader, 2010, p. 655). Having said that, the authors also note that it is unlikely to reach these aims in a non-engaging and non-interactive classroom.

In spite of the various calls and general agreement that critical thinking skills are a requisite for any aspiring accountant and that accounting educators should assist their learners to become critical thinkers, Wolcott et al. (2002) note that there seems to be no clear agreement on how best to incorporate these skills in the curriculum and on how to assess them. However, Young and Warren (2011, p. 859) took a very clear position and argued that notwithstanding the presence of the obstacles in incorporating critical thinking skills within accounting education, these skills remain a “prerequisite for a successful accounting career”.

## **2.5 Classroom Discourse and its contribution to Critical Education**

Lefstein and Snell (2014, p. 172) argue that teaching and learning can be seen as a “complex interdependent system”, in which classroom discourse acts as one of the components. They also suggest that an understanding of the classroom discourse can be gained through the organisation of the classroom, activities taking place and the adopted type of assessment amongst others. Thus, for Lefstein and Snell (2014), dialogic teaching is a pedagogy that seeks to foster a classroom environment that is truly conducive towards dialogue with and among learners. As a result, they argue that dialogue is likely to flourish in class through the use of appropriate open-ended

questions and if the educator is willing to encourage interaction amongst the learners. Alexander (2008) also shared similar views and argued that dialogue can be seen as a tool that helps both the educator and the learners to take over a more active role.

Alexander (2008) outlines that dialogic teaching is not only beneficial in terms of engaging the learners, but also in assisting them to enhance their confidence, understanding and learning. Furthermore, he also notes that the benefits of dialogic teaching are not limited to the classroom and argues that this pedagogical tool assists learners to acquire essential life skills that promote further learning and good citizenship practices. For Alexander (2008, p. 7), dialogic teaching is capable of complimenting several other pedagogical tools, yet he notes that dialogic teaching is often “surprisingly neglected”. In addition, Molinari and Mameli (2013) take the previous arguments a step further and argue that the extent of learners’ participation in the classroom, provides a good measurement of the quality of classroom discourse and that of education in general. Thus, encouraging learners to use dialogue as a means of enhancing their learning and understanding, is synonymous with effective teaching strategies (Molinari and Mameli, 2013).

Sultana (1991) referring to what Freire (1970) termed as “problem-posing education”, argues that dialogic teaching is in line with the cooperative search for knowledge, whereby cooperation is strengthened through the use of dialogue in class between the educator and the learners and the learners between themselves. St. John (1999) also speaks about the importance of allowing enough time and space for learners to think. He argues that, “there is a very primitive desire in people to grapple with that intellectual challenge and to solve it for themselves, and that when that is interrupted, it is very frustrating and dis-empowering” (St. John, 1999, p. 5). In addition, Rhem (2013, p. 2) noted that the notion of dialogue in class can be considered as “a more human and

liberating mode of instruction” and goes on outlining that it tends to be reflected in pedagogies such as “collaborative learning and (in) other inquiry-framed approaches to teaching”.

Mortimer and Scott (2003) developed the concept termed ‘communicative approach’, that seeks to determine the approach of an educator towards teaching in relation to the use of dialogue and how ideas are developed in class. They argued that this concept takes into account two dimensions. The first dimension is the ‘interactive vs non-interactive’, which takes into account the degree of learners’ participation in class. The second dimension is the ‘dialogic vs authoritative’ that deals with the approach taken by the educator, particularly when it comes to receptivity towards the learners’ perspectives and ideas. Building on this concept, Zhang (2008) outlines that when classroom discourse is characterised by a high degree of involvement by both the educator and learners, significant consideration is given to multiple viewpoints, there is dialogue with and among learners, and feedback is of a formative nature, then this approach is more in line with the ‘interactive-dialogic’ dimension. Zhang (2008) also suggests that the quality of learning taking place in the classroom depends on the quality of discourse.

In her study at six local secondary schools, Alexander (2017) focusing on science subjects, noted that the Interactive-Authoritative (I-A) communicative approach tended to be the most frequently used by all six educators. She found that “an I-A episode often involved closed-ended questions, inadequate questioning skills, little time for students to think, hearing only one voice, evaluative feedback and attention focused on ‘correct’ responses” (Alexander, 2017, p. 182). Having said that, she also noted the use of Interactive-Dialogic (I-D) communicative approach in certain instances and this was very often “due to teachers asking open-ended questions or taking up a student’s

question with the rest of the class” (Alexander, 2017, p. 182). Another interesting finding that emerged from her study was that all of the six interviewed educators recognised that the I-D approach “can facilitate teaching and learning by using students’ prior knowledge, and they recognised its potential to stimulate thinking and to check students’ understanding. They also acknowledged the way it facilitates the social construction of knowledge and fosters a sense of joy to learn” (Alexander, 2017, p. 183).

Sedlacek and Sedova (2017) outlines that while dialogic teaching aims at engaging all learners and stimulating them to think and enhance their learning experience, however there exists the possibility of ending up with some learners benefitting more than others. They argue that “where collectivity is not sustained, only some of the students participate productively, giving them an advantage over the others. Consequently, such instruction can create or increase the differences in learning opportunities for individual students” (Sedlacek and Sedova, 2017, p. 101). In addition, Davies et al. (2017) argue that dialogic teaching requires from educators the willingness to share control and responsibility for learning with the learners, as they take a more active role in co-constructing learning. They argue that in dialogic teaching learners “are required not merely to listen and answer, but to think, engage and take part in discussions about their learning” (Davies et al., 2017, p. 971). The authors highlight that if the learners feel that there is no need for their engagement and participation, as the educator takes the centre stage, then communication is likely to become lopsided. Thus, for knowledge to be co-constructed between the class participants, it becomes essential that the educator first and foremost sees value in this approach towards generation of knowledge. Furthermore, Davies et al. (2017, p. 971) also note that “the power held by

the teacher may inhibit students' willingness to talk, and teachers may need to adjust their role so their participation becomes more of a listener than a transmitter".

Sedlacek and Sedova (2017) found that holding an open discussion often acts as a good tool to ease learner's participation, as fear of providing an incorrect answer is significantly reduced. They also concluded that "the presence of students who are ready to participate in a productive way in conditions of open discussion stimulates other students in the class" (Sedlacek and Sedova, 2017, p. 107). The type and extent of classroom discourse is highly influenced by the educator's attitude and as noted by Reznitskaya (2012), effecting changes to classroom discourse is not always as easy as it might seem. Having said that, Reznitskaya (2012) also outlines that educators who carry out critical self-reflection about their teaching methods and strategies are better equipped to make an effective use of dialogic teaching.

### **2.5.1 Dialogue in the Classroom**

Dialogue in class encourages learners to make use of language in an effort to express their ideas and opinions. In fact, Hardman and Abd-Kadir (2010, p. 1) outline how dialogue in class assists learners to "express their thoughts and engage with others in joint intellectual activity to develop their communication skills and to advance their individual capacity for productive, rational and reflective thinking". The authors pinpoint that dialogue in class can be initiated by both the educator or the learners themselves. Hardman and Abd-Kadir (2010) argue that very often dialogue in class takes the form of posing an open-ended question, which tends to lead to multiple responses. When the question is posed by the educator, very often some sort of feedback or follow-up by the same educator is provided following the initial responses and this could be

carried out in an effort to foster further thinking and contributions. A similar argument was also pushed forward by Sinclair and Coulthard (1975) and described this cycle as a typical form of exchange that takes place in a classroom. This type of exchange is known as Initiation-Response-Feedback (IRF).

Aguiar Jr. and Mortimer (2013) building on these arguments also noted that through classroom discourse, power and control within a class context ends up being distributed and negotiated between the educator and the learners. Having said that, they outlined that when an IRF exchange is characterised and highly influenced by the educator's search for what he/she considers to be the 'right answer', this acts as a barrier in relation to the learner's participation. Tharp and Gallimore (1988) referred to this type of IRF exchange, as being like a recitation of a predefined script. Similarly, Nystrand et al. (1997) argued that when teachers take a dominant approach towards classroom discourse, learners are likely to end up reverting to guessing rather than developing their own opinion and ideas. If on the other hand, an IRF exchange is more formative in its nature, then it is likely to result in having more open discussions and higher participation. Interestingly, Aguiar Jr. and Mortimer (2013) clearly outlined that in both IRF exchanges, an educator still maintains control.

Black (2004) argues that not every kind of in-class participation involving talk is necessarily beneficial. In fact, he distinguishes between production and unproductive participation. According to Black (2004), when learners participate in a passive manner, their participation is unproductive. For the author, unproductive participation is characterised by the fact of having learners who simply follow the instructions given by the educator and their contributions through talk are limited and doesn't require a lot of cognitive effort. This was also expressed by Nystrand et al. (1997, p. 2) in that

this type of participation encourages “remembering what is known” and not “working collaboratively to understand what was not yet understood”. On the other hand, productive participation is synonymous with learners making extensive use of dialogue in class to consolidate and acquire new knowledge and understanding. Thus, productive participation requires learners to elaborate their thoughts and ideas and put forward arguments based on reasoning (Black, 2004). Similarly, Nystrand et al. (1997, p. 2) also noted that productive participation is likely to lead to more authentic learning as it is built around “constructing a narrative of unfolding understandings involving thoughtful interaction between and among teacher and students”.

Lefstein and Snell (2014) outlined that in arriving at a productive participation for all class participants, it is likely to take some time, as it requires the educator and learners to get used to collective thinking. They argue that for collective thinking to take place, one should make more use of open-ended questions. They also identify that the educator plays a vital role in fostering collective thinking. In fact, Lefstein and Snell (2014) suggest that an educator should express a genuine interest towards learners’ thoughts, ideas and opinions. This is compatible with the arguments made by Mortimer (2005), in that ideas should be explored into more depth and multiple viewpoints should be acknowledged and encouraged. Furthermore, Lefstein and Snell (2014) also outline that the educator shall also be open towards sharing control with the learners in an effort to enhance collective thinking. The authors also suggest that taking care of the physical environment of the classroom is also essential in developing an environment that is conducive to learning through dialogue. In addition, Lefstein and Snell (2014) also note that maintaining a good eye contact in class can be beneficial and conducive to dialogue. Interestingly, they highlight that a good educator should be able to read well the situation in class, in order to be able to identify when and how to intervene.

Failure to do so, could be disastrous and counterproductive, because sometimes “the more teachers attempt to actively promote dialogue, the less likely the pupils are to engage in it” (Lefstein and Snell, 2014, p.11).

Wells (2001) concluded that when class participants are genuinely engaged in what is being discussed and covered in class, the quality of classroom discourse is likely to be remarkable. In addition, Aguiar Jr. and Mortimer (2013) identified some courses of action through which dialogic discourse can be promoted in classrooms. They suggested that different ways of discourse in class should be explored by educators. The authors also outlined that in their formative training, educators should be assisted to develop skills that foster dialogue in class and trained to provide adequate feedback that encourages learner’s participation. Their latter suggestion was previously expressed by Hardman and Abd-Kadir (2010), who also called upon those in charge of developing teacher education programmes to push forward pedagogies which promote dialogic teaching. According to Popil (2011), case studies could act as a good pedagogical tool to further enhance dialogue in class. In fact, Popil (2011, p. 205) argued that “case studies incorporate ideas of experimental learning by providing student-centred education and providing opportunities that will motivate students through active involvement. Case studies also provide an avenue for using problem solving skills and promote decision making in a non-threatening environment”.

Despite the benefits of developing a dialogic pedagogy, Wells (2000) also notes that there are a number of challenges towards achieving this aim. One of the main challenges according to Wells (2000, p. 1) is related to the reluctance shown by some educators towards sharing power and control and due to “the increasing pressure of accountability for delivering a centrally determined curriculum and for increasing

students' scores on standardised tests of "basic" skills and memorised items of information". In addition, Clarke (2015) argues that some learners tend to refrain from participating, especially through verbal means, when they are not sure about the correct answer. Having said that, Clarke (2015) also found that learners who tend to speak overtly in class, are more likely to participate as they tend to be more willing to take the risk of answering incorrectly. Consequently, Sedlacek and Sedova (2017) argued that the threat of exclusivity in terms of who participates in classroom discourse, is one of the risks associated with dialogic teaching.

Lefstein and Snell (2014) also discussed some potential dilemmas that educators wishing to adopt dialogic teaching might encounter. One of these dilemmas relates to the approach taken when disagreeing with a specific contribution. They note that if the approach is too authoritative, it is likely to result in discouraging any further discussion from taking place. Another dilemma identified by Lefstein and Snell (2014), relates to the fact that sometimes in encouraging a learner to elaborate further one's argument or ideas, this might lead other learners to shy away from participating. The issue of power and control also leads to another dilemma, in that in an effort to empower learners to discuss, an educator is likely to act as a facilitator of discussion rather than as a participant, but at the same time the educator has to ensure that the discussion does not degenerate (Lefstein and Snell, 2014).

### **2.5.2 Dialogic Teaching and Accounting Education**

Lehesvuori (2013) concluded that educators who were exposed to the dialogic teaching pedagogy in their formative training, seemed to be more equipped to

challenge the traditional approach towards teaching, which very often is authoritative in its nature. The author also notes that dialogue in class tends to be an effective tool that assists learners to deepen their learning process and cognitive abilities. In addition, Boyd and Rubin (2006) highlighted that when educators adopt an attitude through which they take the contribution of the class participants seriously, this tends to encourage further dialogue to take place. Furthermore, they also note that dialogic talk tends to flourish when educators build upon and extend learner's contributions and ask additional questions to encourage further participation.

Chabrak and Craig (2013) called upon accounting educators to be innovative and creative in adopting pedagogies that assist accounting learners to connect with the world's and business realities. In fact, they outline that accounting educators shall be very cautious of having syllabi that "dwell predominantly on technical matters" such as the debit and credit notions, but then ignore that accounting learners should be able of "considering accounting's broader social role" (Chabrak and Craig, 2013, p. 92). Thus, as expressed by Thomson and Bebbington (2004, p. 609), accounting educators should acknowledge "the hidden curriculum" and be open towards the inclusion of a mixture of pedagogical tools such as dialogic teaching, that assist learners to extend their knowledge and understanding of the surrounding realities (Chabrak and Craig, 2013). These calls were not new, in fact, Doney and Lephardt (1993) had already highlighted the need for educators to assist accounting learners to be equipped with appropriate skills to meet the challenges of the accounting profession. They specifically noted that accounting learners should be able to think and act critically.

In consequence, they ask accounting educators to take appropriate actions to assist learners to become critical thinkers. Doney and Lephardt (1993) suggest that accounting learners need to be trained to be able to adapt and interact with the

surrounding world. They go on outlining what accounting educators can do to nourish this particular aspect within their learners. Encouraging accounting learners to adopt a questioning mindset is one of these suggestions. Doney and Lephardt (1993) also suggest accounting educators to invest in engaging in dialogue with the class participants in an effort to increase interaction, collaborative thinking and divergent thinking. They also argue in favour of maintaining a good class climate that encourages productive dialogue, feedback and evaluative practices. Expanding on these suggestions, Camp and Schnader (2010) argue in favour of the introduction of debate in accounting classrooms as a supportive pedagogical tool in conjunction with other more traditional teaching and learning approaches. They highlight that “debate is a form of active learning that keeps students interested, encourages deep analysis of a topic, and supports the development of critical thinking and communication skills” (Camp and Schnader, 2010, p. 655).

Interestingly, Tumposky (2004) also spoke favourably about the use of debate in classrooms, as it offers the possibility for learners to move along Bloom’s (1956) taxonomy, from the very basic level of comprehension to higher cognitive levels. In addition, Roy and Macchiette (2005) also identified in debate a good opportunity to assist learners in fostering their ability to listen and evaluate other participants’ contributions. In their concluding remarks, Camp and Schnader (2010, p. 669) state that the introduction of debate in classrooms “can be an extremely effective tool for accounting students as well. As the responsibilities of professional accountants expand beyond technical expertise to areas of evaluation and judgment, it has become more and more important for instructors to give students the opportunity to develop and use critical thinking and communication skills”. Similarly, Young and Warren (2011)

indicate experiential learning as another pedagogical tool that can foster dialogic teaching practices.

## **2.6 Fostering Critical Thinking through Dialogic Teaching**

Authors such as Webb (2009), clearly outlined that the educator is in a powerful position in terms of determining the extent of learners' participation or otherwise in what takes place in the classroom. Webb (2009) argues that encouraging learners to communicate and to elaborate further their ideas, are two practices that educators should seek to push forward. Sultana (1990) also notes that the way an educator looks at education in general, is a crucial factor in determining the type of pedagogy to be adopted. In fact, he argues that if an educator looks at teaching as "a relationship of equals" involving "sharing and critical reflection on knowledge", then that "classroom will probably be characterised by dialogue, participation, discussion, peer / self-assessment" (Sultana, 1990, p. 21). For Sultana (1990), critical thinking can be sustained through appropriate use of dialogue in class and argues for the need of a "dialogue between the student, the teacher and the world - the latter is not accepted as it is, but considered as a site where transformation towards more equitable and equal relationships - in terms of power, wealth, health, opportunities, outcomes, etc can be fostered" (Sultana, 1990, p. 21).

Expanding on the work of Freire (1970), Stromquist (2014) argues that in order to arrive at having a critical and productive dialogue in any class, which can lead to real empowerment of all participants and concert action, the first step is to acknowledge the existence of some form of oppression. Rhem (2013, p. 4), referring to an interview held with a professor at California State University, outlines that when an educator is

considered as an “indoctrinator”, then there is little chance of seeing the adoption of pedagogical tools that foster critical thinking and dialogic teaching. By referring to Scott et al. (2006), Alexander (2017, p. 17) argues that “teachers need to be equipped with tools to reflect upon their classroom performance before modifying their classroom practice”. In addition, He et al. (2013, p. 155) also call for the adoption of pedagogies “that increase the level of student participation and encourage autonomous thinking and learning”. Furthermore, the authors note that learners are to be actively engaged through in-class discussion and should be provided with adequate feedback about their performance. They also argue that learners “should be encouraged to be more independent and innovative – and, importantly, to be critical thinkers. Classroom teachers need to develop teaching strategies that will foster in-class discussions with students” (He et al., 2013, p. 155). In consequence and in an effort to encourage dialogue in class, O’Connor and Michaels (2007, p. 281) suggest that educators should make use of what they termed as “talk moves”. This includes asking learners to build or comment about another learner’s contribution. O’Connor and Michaels (2007) also argue that asking questions which do not have a simple right or wrong answer is also beneficial in encouraging further dialogue and arguments by the participants.

In order to increase the effective use of critical thinking and dialogue in the teaching of accounting, as noted by Bayou and Reinstein (2000), it takes more than simply starting to ask more questions during accounting lessons. In fact, they argue that this takes time and “genuine efforts” are required from both educators and learners (Bayou and Reinstein, 2000, p. 15). Moreover, by referring to work of Nelson (1995) they note how traditionally accounting assessments often failed to test critical thinking, analytical and evaluative abilities of the learners. As a result, Nelson (1995) argues that this encouraged accounting educators and learners to give more importance to

memorisation rather than reasoning out concepts. This urged Bayou and Reinstein (2000) to call upon accounting educators to re-think the way and type of tasks given as homework. They encourage accounting educators to “select homework problems and exercises that require critical thinking skills to replace those assignments that motivate memorizing and mere number crunching without reasoning” (Bayou and Reinstein, 2000, p. 15). The authors also advise accounting educators to do their best to boost in-class participation, by making use of appropriate questioning techniques, refer to real-life and relevant examples in-class and encourage learners to discuss and be critical. They also suggest the use of incomplete and interactive handouts, so as to include “spaces for students to complete, which also allows us to ask questions that require students to think critically” (Bayou and Reinstein, 2000, p. 16). Finally, they also recommend that accounting educators from time to time, “remind students that understanding rather than mere memorizing is the key to excel on exams” (Bayou and Reinstein, 2000, p. 16). Thus, as Bayou and Reinstein (2000, p. 17) summarise, critical thinking and dialogic teaching can take life in the accounting classrooms if the educators “become critical thinkers themselves” and if they “possess and show in class genuine enthusiasm for learning via reasoning, evaluating, and self-reflecting”.

Fisher (2007), also discussed the benefits to be sought from the adoption of dialogic teaching and argues that it assists cognitive development. In addition, dialogic teaching encourages collaboration between the class participants and thus thinking and enquiry becomes something that brings the participants together. Fisher (2007), notes that this assists learners to behave intelligently, enhance their communicative and listening skills, while it is likely to increase their chances of successfully dealing with problem solving. Similarly, Jones (2010, p. 9) states that “accounting is a discipline that requires flexibility of thinking, analytical and critical skills, interpersonal skills and an

understanding of business, in both a local and global world". As a result, it is not surprising that various professional bodies, including the International Accounting Education Standards Board (2009), The Pathways Commission (2012) and the Association to Advance Collegiate Schools of Business (2013), throughout the years called for accounting education to ensure the incorporation of critical thinking and dialogue in the teaching of accountancy. This is considered to be the key to move away from the restrictive approach of simply memorising content and start adopting "core professional competencies" such as "communication, analytical skill (and) critical thinking" (Apostolou et al., 2013, p. 146).

Carmona (2013, p. 11) notes that despite these calls to undertake a reform in accounting education, little has been done on a global level and thus calls for "an individual approach" to push forward these changes. As a result, Boyce and Greer (2013, p. 111) felt the need to remind accounting educators that "social and critical accounting should be brought to life". Thus, they emphasised the "centrality of bringing accounting – as it is and as it could be – "to" the lives of students, relating to their own lived experiences" (Boyce and Greer, 2013, p. 111). They also came to the conclusion that "if teachers and students of accounting cannot imagine anything but the continuation of the *status quo*, then the imagination has truly been dulled and the mind colonised" (Boyce and Greer, 2013, p. 111).

## **2.7 Critical Thinking and Dialogic Teaching: The Local Scenario**

The upcoming two sections of this chapter, sections 2.8 and 2.9 respectively, shall examine the relevance of critical thinking and dialogic teaching within the local educational scenario. This shall be achieved by referring to what is discussed in two

local educational documents, being the National Curriculum Framework and the Educators' Guide for Pedagogy and Assessment: Using a Learning Outcomes Approach.

## **2.8 The National Curriculum Framework: Critical Thinking and Dialogic Teaching**

The National Curriculum Framework (Ministry of Education and Employment, 2012) considers critical thinking as an important ability that learners should be assisted to develop further. This document discusses a number of principles upon which education should be based. The first mentioned principle is that of “entitlement” which is closely linked with assisting learners to develop their critical thinking abilities. In fact, “entitlement” is defined as “the development of a learner as he or she progresses during his or her life cycle to an adolescent, and subsequently to an adult with a value system of a responsible and engaged citizen and one who is equipped with the competences, amongst others, to lead, to challenge, to analyze, to be innovative and creative, and to accommodate for and acquire new skills and knowledge” (Ministry of Education and Employment, 2012, p. 5). The NCF (2012), also outlines that critical thinking acts as one of the tools that shall assist learners to develop their full potential as lifelong learners. In fact, the document states that to achieve this aim, learners are to be assisted to “develop an inquiry-based approach to continual learning” (Ministry of Education and Employment, 2012, p. 21). Furthermore, the document also suggests that learners should become capable of understanding “higher order concepts and corresponding underlying principles” and “to think critically and creatively, anticipate

consequences, recognise opportunities and are risk-takers” (Ministry of Education and Employment, 2012, p. 22).

When dealing with the teaching of languages, the document notes that this shall assist learners to nurture “a positive attitude towards communication” and “a disposition towards critical and constructive dialogue” (Ministry of Education and Employment, 2012, p. 34). In addition, it also highlights how the teaching of science is considered to be at the forefront to foster critical thinking abilities amongst the learners. In fact, it is stated that “through their study of science, learners acquire inquiry and critical thinking skills which enable them to ask appropriate questions, devise methods for answering them, obtain and interpret evidence and communicate the conclusions and reasoning that led to them” (Ministry of Education and Employment, 2012, p. 35). This document also focuses on the importance of educating for entrepreneurship, creativity and innovation. In an effort to approach this educational aspect from a whole school approach, it recommends strengthening the learners critical thinking abilities and effective communication within and outside the classroom community (Ministry of Education and Employment, 2012).

Furthermore, the document also speaks about the importance of engaging learners and allowing them space for interactions with the content and with other class participants. In fact, it argues that by offering this type of education, the effectiveness of teaching and learning would be higher. Thus, the document points towards making more use of “co-operative and collaborative learning which promotes the development of critical thinking and problem-solving skills” (Ministry of Education and Employment, 2012, p. 39). Moreover, the NCF also highlights the point that “teaching is most effective when learners are provided with opportunities to make sense of new knowledge in a context which allows them to interact with the teacher and other

learners to discuss and negotiate their understanding” (Ministry of Education and Employment, 2012, p. 39). In consequence, the document notes that “a teacher-dominated pedagogy, which relegates learners to a passive role, emphasizes memorisation and limits interactions between learners, is not recommended” (Ministry of Education and Employment, 2012, p. 39). Thus, unsurprisingly the document re-confirms the need for an on-going professional development of educators, as this contributes towards the formation of critical and reflective professionals.

## **2.9 The Learning Outcomes Framework: Critical Thinking and Dialogic Teaching**

In the document entitled “Educators’ Guide for Pedagogy and Assessment: Using a Learning Outcomes Approach” (Ministry of Education and Employment, 2015) focusing on the teaching and learning of accounting, provides some valuable insights on the promotion of critical thinking and dialogic teaching in relation to accounting education. The document encourages educators to acknowledge that in learning accounting, “learners do not simply engage in number crunching exercises and memorisation of generally accepted financial reporting formats but are actively engaged in selecting relevant data, understanding and interpreting financial data and reports” (Ministry of Education and Employment, 2015, p. 17). In addition, accounting educators are also asked to critically evaluate and reflect upon “predominant taken-for-granted business ideology” and to go beyond “the understanding and application of business principles such as the idea of survival-of-the-fittest, profit-maximisation, accumulation of profit and cost-cutting measures” (Ministry of Education and Employment, 2015, p. 17). Accounting educators are also encouraged to support their learners to engage in

similar reflections. As a result, the teaching and learning of accounting should assist all class participants to move beyond simply acquiring knowledge to fit into existing structures and “financial rationale”, and thus the need to nurture a “critical and independent mind, which is crucial in fostering a mentality embracing change” (Ministry of Education and Employment, 2015, p. 17). This document also urges accounting educators to place more emphasis on the “social and environmental responsibilities” and “encourage ethical conduct”, both on a personal and business level (Ministry of Education and Employment, 2015, p. 17).

This document also goes on outlining what accounting educators should do more and what they shall avoid, in an effort to reach the desired objectives of the learning outcomes framework. In fact, accounting educators are encouraged to “nurture the habit of understanding, explaining and interpreting accounts, reports and results” (Ministry of Education and Employment, 2015, p. 18). In addition, they are also asked to assist learners in being more capable of planning ahead, interpret data, carry out analysis and evaluations, and to become better communicators. Accounting educators are specifically invited to “develop a mentality of critique vis-à-vis generally accepted business notions” (Ministry of Education and Employment, 2015, p. 18). As a result, accounting educators are asked to avoid over-emphasising memorisation at the expense of a reasoned application of gained knowledge. Furthermore, accounting educators shall not “disassociate accounting from logical thinking” and end up teaching “accounting in a vacuum without connecting it to local and international events, social issues and environmental responsibility” (Ministry of Education and Employment, 2015, p. 18). Moreover, the document also warns against an excessive accentuation on the profit motive as the sole or main criterion upon which decisions are taken and, in the process ignore non-financial considerations.

The document, *Educators' Guide for Pedagogy and Assessment: Using a Learning Outcomes Approach*, also discusses the introduction of cross-curricular themes as “a shift from an exclusively subject-based approach to a more cross curricular, thematic, inter-disciplinary and collaborative approach that reflects real life situations and encourages transfer of skills from one learning area to another” (Ministry of Education and Employment, 2015, p. 20). Cross-curricular themes are closely linked to the learning outcomes framework and the objectives is that of facilitating the process for all learners to “come into continual contact with the types of knowledge, skills and understanding needed to participate actively, prosper and contribute to Maltese society” (Ministry of Education and Employment, 2015, p. 20). Though the document outlines six main curricular themes, this chapter shall focus on four of these themes which were deemed to be most closely linked to the fostering of critical thinking skills and dialogue, being: (i) Education for Entrepreneurship, Creativity and Innovation, (ii) Education Sustainable Development, (iii) Digital Literacy and (iv) Literacy.

With regards to Education for Entrepreneurship, Creativity and Innovation, the document outlines that one of the outcomes in this regard should be that of assisting learners to be “able to think critically” (Ministry of Education and Employment, 2015, p. 52). In addition, with regards to another cross-curricular theme, that of Education for Sustainable Development, this document suggests that in order to push forward the notion of “lifelong learning” a mixture of “learner-centred” pedagogical tools shall be used. This includes “participatory/collaborative learning; problem-based learning; inter-disciplinary learning; multi-stakeholder social learning; critical and systemic thinking-based learning; action learning; learning outside the classroom; experiential learning; reflective evaluation and using relevant real-world contexts” (Ministry of Education and Employment, 2015, p. 53). Through the application of these pedagogical approaches,

the document aims at equipping learners with the ability to “critically assess processes of change in society and envision a more equitable and sustainable world” (Ministry of Education and Employment, 2015, p. 54). It also aims at encouraging learners to become “critically reflective” persons and “able to evaluate decisions, choices and actions” (Ministry of Education and Employment, 2015, p. 54).

This document also highlights another cross-curricular theme that is related to Digital Literacy and notes that learners shall become able to “safely and critically navigate between online sources and select information effectively” (Ministry of Education and Employment, 2015, p. 47). Similarly, when explaining the cross-curricular theme of Literacy, the document highlights the importance that critical thinking and dialogic teaching have in achieving this aim. In fact, it outlines that, learners shall be assisted so that they become capable of using language and dialogue to present their “thinking logically and clearly and can talk to engage an audience while analysing and evaluating through an open-ended approach” (Ministry of Education and Employment, 2015, p. 57). Furthermore, it highlights that learners should also be able to share their “ideas in a collaborative way, appreciating the social elements of conversation” including the skill to wait and listen to “what others have to say” (Ministry of Education and Employment, 2015, p. 57).

## **2.10 Conclusion**

This chapter discussed and highlighted the need for accounting educators to make best use of pedagogical tools that can assist learners to interact with the subject, including the use of dialogic teaching and fostering critical thinking skills. The importance of these pedagogical tools emerged from the consistent calls made by

various entities throughout the years to ensure that accounting learners take the maximum benefit from their exposure to the subject. This shall be beneficial for both the accounting profession and the society in general, as accounting learners would be equipped to become better citizens. The emphasis placed on critical thinking and dialogic teaching by both the National Curriculum Framework and the Learning Outcomes Framework, strengthens the call for a better and more comprehensive learning experience.

## **Chapter 3: Methodology**

### **3.1 Introduction**

This chapter presents an overview of the research approach adopted by the researcher. It provides an explanation of the study design and the reasons why a qualitative methodology was opted for. This chapter also discusses how participants were selected and what ethical considerations have been taken by the researcher and the research tools used to collect data pertaining to this study. It also includes a description of the process undergone to gather data through the observation sessions and the semi-structured interviews. This chapter also details how data was analysed, discusses reliability and validity of the data and highlights some limitations pertaining to this study.

### **3.2 Study Design**

This study aims at identifying accounting educator's perception towards the meaning, suitability and use of critical thinking and dialogue within their classrooms. As a result, the overarching objective of this research is to determine if and how critical thinking and dialogic teaching are currently used by local accounting educators. This overarching research objective is supported by the study of the following three specific objectives:

1. The study of the extent to which accounting learners are being exposed to critical thinking and dialogic teaching in the local scenario.

2. The identification of potential critical thinking and dialogic teaching possibilities within the proposed accounting learning outcomes framework.
3. The production of a resource pack and the subsequent evaluation and feedback by three established accounting secondary schools' educators.

Given the objectives of this study, a qualitative research design was chosen by the researcher. As argued by Thomson (2011), the choice of what research method to be employed is highly influenced by the research objectives and by the researcher's own perception of which method is more suitable to reach these objectives.

Quantitative research tends to be closely linked with data quantification and this is likely to occur during both data collection and analysis stage. Furthermore, it tends to test theories by adopting a deductive approach (Bryman, 2012). The deductive approach aims at "developing a hypothesis based on existing theory, and then designing a research strategy to test the hypothesis" (Wilson, 2014, p. 12). In addition, quantitative research also tends to take a macro approach in relation to the issue being investigated, in that it tends to take into account the bigger picture of things. Moreover, quantitative research seems to be better framed than the qualitative technique with regards to investigations involving large number of participants and it allows the possibility of forming generalisations through the obtained results (Swanson and Holton, 2005). In addition, quantitative research also tends to present a higher possibility of successful replication of a study (Bryman, 2012). Quantitative research tends to be closely linked with the positivist research approach, whereby the collection of data is considered to lead towards the generation of factual knowledge if it is the result of quantifiable observations leading to statistical relevance. However, as argued

by Cohen et al. (2007, p.11) positivism is criticised because it tends to be less successful when it comes to “its application to the study of human behaviour where the immense complexity of human nature and the elusive and intangible quality of social phenomena contrast strikingly with the order and regularity of the natural world”.

In contrast, qualitative research can be defined as “an umbrella term of an array of attitudes towards and strategies for conducting inquiry that are aimed at discovering how human beings understand, experience, interpret, and produce the social world” (Sandelowski, 2004, p. 893). This definition is in line with the phenomenological approach towards research, whereby the natural setting in which the data collection takes place, facilitates the opportunity for the participants to provide a more meaningful and personal contribution toward the study (Creswell, 2007). As a result, it allows and encourages the researcher to further explore and analyse the personal experiences of the participants. Furthermore, Dawson (2009) outlines that qualitative research is more geared than the quantitative research approach to get into more depth and to better explore the behaviours, attitudes and experiences of the study participants. In addition, qualitative research offers more flexibility and interactivity in relation to data collection. However, through the use of qualitative research, the researcher’s role is pivotal as it is essential to gain the trust of the study participants and establish a healthy communicative relationship with them (Saunders et al., 2015).

This study has been framed within a constructivist approach. Mogashoa (2014, p. 52) outlines that “constructivism is a theory of knowledge (epistemology) that argues that humans generate knowledge and meaning from an interaction between their experiences and their ideas”. As a result, interaction with new experiences, ideas and information, offers an opportunity for the learners to gain new knowledge. In fact, this involves a process whereby learners evaluate, compare and contrast this new

knowledge with previously acquired knowledge and they either accept it or else it is discarded (WNET Education, 2004). Constructivism encourages the development of pedagogies that seek to enhance the learner's ability to question and to collaborate with other members of the learning community in reaching a specific goal (Mogashoa, 2014). In addition, constructivism also pushes forward the notion that rather than having one finite answer, learners are allowed and encouraged to develop their own answer, using the acquired knowledge and experience. Thus, as highlighted by Bruning et al. (2011), from a constructivist perspective, learners are active participants in knowledge construction and this is facilitated through effective social interaction within and amongst the learning community. As a result, the constructivist approach was considered by the researcher as the most suitable approach to reach the objectives of this study.

### **3.3 Study Participants: Selection and Ethical Considerations**

For this study, purposive sampling was adopted in determining the three accounting educators and thus, these educators were handpicked by the researcher. Despite the critique that handpicking research participants is unlikely to lead to generalisable results, this was not an issue in this study as the main aim was to collect in-depth information from educators who were in a position to provide it (Cohen et al., 2007). The main criteria used in the process of identifying and selecting the participants was that of having one accounting educator from state, private and church secondary schools. In addition, attention was given to select participants who had some years of experience teaching the subject. Experience was deemed necessary in order to identify and select participants who were more likely to possess an in-depth knowledge

spanning over a number of years and diverse educational contexts. This process was facilitated through the discussions held with the supervisor and the assistance of both the Accounting Education Officer (for state schools) and the Accounting Head of Department (for church schools).

After identifying the potential participants, permission was sought from the Directorate for Research, Lifelong learning and Employability and from the Secretariat for Catholic Education, with regard to state and church school participants respectively. Following this initial authorisation, permission was sought from the Head of School where the three educators taught accounting. Each Head of School was given a copy of the Permission Letter (Appendix B) which provided information about the aim of the study and what is expected out of the selected accounting educator. Afterwards, each educator was contacted and provided with the Information Letter (Appendix C) containing information about what is expected from the educator with regard to his/her participation in the study. The three educators were also provided with a Consent Form (Appendix D), which specifically asked them to provide in writing their approval to participate in the study. The three participants were asked to allow the researcher to observe three accounting lessons with one specific class of their choice and to participate in two semi-structured interviews each. The reasons why the researcher opted for semi-structured interviews, as well as an overview of the strengths and weaknesses associated with this data collection tool are presented in section 3.4.

In addition, the three selected educators were also asked to distribute a copy of the Opt-Out Forms (Appendix E) to each learner and guardians of the respective class to be observed on behalf of the researcher. An information letter (Appendix F) was also distributed to provide some background information about the study for the learners and their guardians.

The researcher ensured that the participants were given adequate time to decide whether or not to take part in this study and gave the necessary assurances in that anonymity was to be guaranteed throughout the whole study. The steps undertaken by the researcher to assure anonymity are dealt with in detail in section 3.6. In addition, the researcher complied with all the requirements outlined by the Faculty Research Ethics Committee and ensured that no data was collected until all the necessary permissions were obtained.

### **3.4 Instruments used for Data Collection**

The first instrument to collect data pertaining to this study was that of in-class observations. These observations were aimed at providing the researcher with a first-hand experience of the three different secondary schools and to observe how accounting was being taught by the three identified educators. Moreover, these observations were designed to act as a compliment to the initial semi-structured interviews. The observations took the form of unstructured non-participant observation, whereby the “observer observes but does not participate in what is going on in the social setting” (Bryman, 2012, p.273). In addition, these observations also took the form of ‘simple observations’, since the researcher took a stand back and did not interfere in what was being observed (Bryman, 2012). These observations were beneficial for the researcher to get a better understanding of the different classroom compositions and in taking note of the participants and the learners’ attitude towards critical thinking and dialogic teaching. These observations were guided by an observation schedule prepared beforehand by the researcher (Appendix G). Observations offer the possibility for the researcher to acquire direct access to social

interactions and they also tend to be quite flexible and versatile. Observations are also synonymous with their possibility of acting as a tool that enriches and supplement data gathered through other techniques. Having said that, observations could also encourage the adoption of selective attention by the researcher. Furthermore, another potential disadvantage of observation is related to what is known as the Hawthorne effect, in that the presence of the observer could influence and alter the participants behaviour. Another limitation is that observations are susceptible to the observer's bias and this could lead to situations whereby the observer records occurrences based on his/her perception of reality rather than what actually took place (Cohen et al., 2007). To mitigate these issues related to observations, the researcher tried to reduce the observer effect by sitting at the back of the class and refrained from taking an active role during anytime of the lesson.

The second instrument used for data collection was that of semi-structured interviews. Saunders et al. (2015) note that semi-structured interviews tend to be guided by an interview schedule (Appendix H) that cover the main points that the researcher would wish to discuss with the participants. In addition, semi-structured interviews also offer the opportunity for the researcher to omit or add further questions during the course of the interviews depending on how the discussion evolves. As a result, semi-structured interviews are often described as a non-standardised form of interview (Saunders et al., 2015). Furthermore, semi-structured interviews enable the possibility for the researcher to enter into more depth about issues discussed with the participants by making use of adequate probing questions (Bryman, 2012). One of the major advantages of semi-structured interviews is that they tend to offer a good degree of flexibility for the researcher (Bryman, 2012; Saunders et al., 2015). Another advantage is that when compared with other qualitative methods of data collection, semi-

structured interviews tend to be considered as the easiest with regard to interpretation and analysis of collected data (Zikmund et al., 2013).

The first semi-structured interview aimed at getting to know the participants and to explore the educators' perception, outlook and handling of critical thinking and dialogic teaching during accounting lessons. This aim was supported by the three in-class observation sessions held with each participant. In addition, both the first interview and the observation session were designed to provide the researcher with adequate material upon which to produce the resource pack and distribute it to the participants. The resource pack, which is discussed in detail in a separate chapter, focussed on providing alternative pedagogical approaches which encourage critical thinking and dialogue in class. The second round of semi-structured interviews with the participant educators aimed at obtaining evaluative feedback with respect to the resource pack. In section 3.5, more detail is provided in relation to how both interviews were carried out in the process of collecting data for this study.

### **3.5 Data Collection**

The collection of data was not initiated before the researcher was granted all the required permission from the various institutions. Once permission was granted, the researcher discussed the dates of the observation sessions and the first interview with the three participant educators. In addition, prior to the first in-class observation session with each participant, the researcher asked whether there were any opt-out forms that were returned back. All the guardians and learners of the classes that were observed did not object to take part in the study and thus the three educators confirmed to the researcher that they did not receive back any opt-out forms.

All of the observations took place during the month of January 2020. For each observation session, the researcher followed the observation schedule (Appendix G) and filled in the schedule accordingly. The observation schedule was designed to get a better understanding of the reaction towards critical thinking and use of dialogue in class of both the educators and their learners. Table 1 below outlines the main aspects that the observation schedule tried to capture with respect to the educator and learners respectively.

Elements related to the Educator	Elements related to the learners
<ul style="list-style-type: none"> <li>• The predominant type of classroom talk engaged by the educator</li> </ul>	<ul style="list-style-type: none"> <li>• The way the learners reacted to the educators' use of dialogic teaching</li> </ul>
<ul style="list-style-type: none"> <li>• The different questioning techniques used by the teacher in order to assess the educators' commitment towards dialogic teaching and critical thinking</li> </ul>	<ul style="list-style-type: none"> <li>• The learners' attitude towards the questioning techniques adopted by the educator</li> </ul>
<ul style="list-style-type: none"> <li>• To identify techniques and pedagogical tools used by the educator to engage the learners.</li> </ul>	<ul style="list-style-type: none"> <li>• To identify the extent of learners' involvement by their own initiative</li> </ul>

*Table 1: Aspects from the observation schedule*

The observation schedule also allowed an opportunity for the researcher to assess the extent to which the learning environment was conducive towards features of a dialogic classroom. This included taking into consideration the way learning tasks were tackled in class, the attitude towards the contributions by various class participants and what position is adopted towards alternative viewpoints. In addition, based on the work of Alexander (2017), each observed lesson was classified as 'highly interactive', 'moderately interactive' or 'non-interactive' after taking into consideration various determinants of interactivity. During the observation sessions, there were few

instances whereby the researcher took the initiative to write down any further comments and notes that were useful in reaching the aim of the observations.

The first interview with each of the three participant educators, was held after the researcher had at least carried out the second observation session. The researcher ensured that each participant had signed the consent form before conducting the interview. As indicated in the consent form, the first interview was audio-recorded, unless a participant specifically rejected this option. Audio-recording an interview is likely to be beneficial for the researcher and facilitates the transcription process. Having said that, audio-recording an interview can also act as a potential barrier for some participants to fully express themselves in a free manner (Cohen et al., 2007). During this study, one of the participants did not provide consent to be audio recorded during the interview and thus it was agreed with the researcher to only take down handwritten notes. Having said that, the participant offered the researcher ample time to take down notes and adopted a slower pace. Through this agreement, the participant seemed more at ease in contributing to this study. Less detailed handwritten notes were also taken by the researcher during the other first set of interviews that were audio-recorded. As noted by Saunders et al. (2015), taking-down handwritten notes during an interview does not only serve as a backup in the scenario that something malfunctions in the audio-recording, but it also communicates a positive message to the interviewed participants that their contribution is appreciated and relevant for the study. The first interview took place within the respective school premises of the interviewed participants. The time taken with regard to the conduction of the first interview varied from 22 to 45 minutes.

Although the second interview was initially planned to be conducted in a very similar way to the first interview, the outbreak of the COVID-19 pandemic and the resulting

closure of all educational institutions and social distancing measures, amendments were undertaken. Thus, the researcher sought and was granted approval from the Faculty Research Ethics Committee to conduct the second interview by making use of remote methods of data collection. As a result, the second interview was carried out through an online platform, whereby two participants agreed to provide their feedback through a virtual meeting and another participant preferred to provide the feedback in writing. The latter, offered the researcher the opportunity to seek clarifications regarding any issues with the provided feedback. The participants consent for this change was also sought by the researcher and is reflected in the amended consent form (Appendix D) that was re-sent to the participants before the conduction of the second interview.

Online interviewing also has its own advantages and disadvantages. In fact, O'Connor and Madge (2017) argue that email interviews offer the possibility for the interviewees to answer at their convenience, thus allowing space for editing their responses before sending it to the interviewer. However, this might also lead to a disadvantage in that the provided responses are less spontaneous and thus it could favour the production of socially desirable responses. Another disadvantage of email interviewing is that the interviewer and interviewee cannot communicate instantly with each other or see and hear one another and thus non-verbal communication is lost and the interviewer has to rely on the provided written responses. However, a compensating benefit is that time spent on the interview transcription is significantly reduced (O'Connor and Madge, 2017). On the other hand, online interviews held through the use of virtual conference meeting tools, do offer the possibility to take note of both verbal and non-verbal communication. In fact, these tend to share some common advantages and disadvantages with the face-to-face interviews (O'Connor and Madge, 2017).

For both interviews, the participants were offered the possibility by the researcher to make use of English, Maltese or a combination of both in providing their responses. In addition, care was taken by the researcher to establish a good working relationship with the participants in an effort to make them feel more comfortable in taking part in the interviews and during the observation sessions. Through these measures and the assurance with regard to anonymity, the researcher aimed to foster a positive attitude amongst the participants and to encourage them to provide responses based on their teaching experience and personal thoughts and reflections. In addition, through the adoption of open-ended questions, the participants were further encouraged to express themselves openly and this resulted in having a mixture of similar and divergent responses from the participants.

### **3.6 Data Analysis**

The data gathered during the three observation sessions held with each educator were analysed by making use of the constant comparative method, in an effort to provide a better picture of each of the three participant educators and their respective classroom. The constant comparative method “is an inductive data coding process used for categorizing and comparing qualitative data for analysis purposes” (Freeman, 2005). The findings of each participant educator were compared to those of the other participants. In addition, some of the findings from the observations were also used in determining the extent to which they confirmed or contradicted what was discussed in the first interview with the same participants. The information gathered from the respective observation schedules was given a code in order to safeguard the anonymity of all of the participants. This process assisted the researcher to identify

better the approach taken towards critical thinking and dialogic teaching by the three participant educators and their students.

In addition, following each interview, the researcher engaged in a process of transcribing electronically the audio-recorded material and handwritten notes. The researcher opted to prepare the interview transcripts in English, however since in some instances the participants made use of both English and Maltese, care was taken to faithfully represent the participants' responses. Furthermore, to safeguard anonymity each participant was given a code in the transcripts and this did not hinder the researcher's ability to compare and contrast the participants' responses. Following a careful analysis of the transcripts, the researcher was in a position to make use of thematic analysis. According to Braun and Clarke (2006, p.6), this analytical approach involves "identifying, analysing and reporting patterns within data". Thematic analysis was chosen by the researcher based on the fact that the majority of the questions posed to the participants were open-ended in their nature.

Thus, through this analytical approach, the researcher organised the data collected during the interviews according to the main themes that emerged during the discussion with the participants.

This process was conducted manually by the researcher, since it only involved few transcripts and a manual categorisation of data was deemed to provide a more accurate picture of the data, taking into consideration contextual aspects. Following the identification of the predominant themes, the questions and answers of each interview were analysed and grouped according to the applicable theme for additional analysis. In the next stage, the researcher reviewed the themes and their respective material and started to identify the elements that shall form part of the findings and

discussion chapter. Moreover, the responses of the participants were also examined in light of the extensive literature discussed in chapter two. This provided the possibility for the researcher to identify similarities and differences with the referenced literature.

### **3.7 Reliability and Validity**

Throughout the whole research process, the researcher was determined to guarantee an authentic presentation, analysis and discussion of the data collected as part of this study. As a result, the findings and discussion chapter offer instances whereby the responses provided by the participants offered diverse perspectives and this was also the case with the discussed and referenced literature.

In addition, the researcher also took into consideration the issue of positionality. Positionality refers to the distinction between the way an individual views a particular issue from a personal perspective and the position that a researcher adopts in conducting a specific study (Foote and Bartell, 2011). The researcher does have his own personal view on the subject and thus, the researcher “holds a certain positionality toward the study” (Wood-Wallace, 2012, p. 1). In consequence, during the interviews care was taken not to influence the responses of the respondents or to lead them in any way to match the researcher's own thoughts and beliefs. In addition, the researcher refrained from interrupting the participants during their responses and allowed the possibility for the participants to refer back to previously discussed questions and elaborate further.

### **3.8 Limitations of the Study**

One of the limitations during this research process is related to the use of semi-structured interviews, in that the interviewer could end up unintentionally leading and directing the interviewees in their responses. This could be due to non-verbal actions, tone used in posing questions and any possible remarks passed by the interviewer. Saunders et al. (2015) note that this scenario is likely to feature when using face-to-face interviews.

In addition, it is expected that the participants would introduce some form of subjectivity in their responses, given that they have their own way of reading the world. Having said that, it could become problematic when participants feel somehow pressured to respond in a politically correct manner rather than providing their own position on the issue. As a result, there could have been instances whereby participants might have been inclined to provide an answer based on what they judged to be politically correct and in accordance with official educational documents, rather than what they actually believe in.

To counter the above-mentioned limitations, care was taken by the researcher not to lead the participants towards any pre-defined responses or stance throughout the whole research process. As a result, the use of leading questions was kept to a minimum by the researcher and the participants were encouraged to act spontaneously and provide their own beliefs, by emphasising that their contributions would be anonymised. In addition, awareness about the influence that verbal and non-verbal cues by the interviewer could have on the interviewees, prompted the researcher to take great care to avoid this situation.

Moreover, during the analyses of the observation sessions, it was noted that the fact that the questions posed by the educators and those posed by the learners were not taken down verbatim can also be considered as a limitation of this study. In fact, had these questions been recorded verbatim, it would have enhanced the presentation of the findings in respect of questions six and eight found within the observation schedule (Appendix G)

Furthermore, another limitation was in relation to the lengthy process that had to be undertaken in order to get all the required permissions and access through the various institutions. This phase of the research study seemed at times to be interminable and discouraging, despite being necessary to ensure that safeguards are in place. Having said that, this period offered space for the researcher to reflect further upon research tools, context and ethical measures.

The preparation and distribution of the resource pack also presented a further limitation. In fact, although the study participants were not obliged to actually test parts of the resource pack, the closure of all educational institutions due to the COVID-19 pandemic, effectively ruled out this possibility. This could have further enriched the feedback that the participants provided during the second interview.

### **3.9 Conclusion**

This chapter aimed at discussing aspects related to the study design, selection of participants, instruments used for data collection and ethical considerations. It also highlighted the procedures involved in the collection and analysis of data. The following chapter shall provide an in-depth analysis of the findings that emerged from the gathered data and a discussion about their relevance in relation to the study.

## **Chapter 4: Findings**

### **4.1 Introduction**

This chapter presents the findings that emerged from the in-class observation sessions and the first round of interviews held with the participant educators. In the first section, some background information relating to the three participant educators is provided and then in the subsequent sections the findings pertaining to the in-class observations and the first interview are presented.

### **4.2 Study Participants and their Classrooms**

The three participant educators shall be referred to as P1, P2 and P3 respectively in order to safeguard their anonymity. Furthermore, the first interview shall be referred to as I1 for references made to the transcripts. All three participant educators teach accounting at a local secondary school. P1 and P3 teach accounting from Year 9 to Year 11, while P2 only teaches accounting at Year 9 level. Table 2 provides an overview of the teaching experience of the three educators, the year group, the average number of learners and the topic that was being covered during the in-class observation sessions

	<b>P1</b>	<b>P2</b>	<b>P3</b>
<b>Teaching experience</b>	18 years	3 years*	12 years
<b>Year group observed</b>	Year 9	Year 9	Year 11
<b>Number of learners</b>	14	11	7
<b>Topic covered</b>	Financial Statements	Financial Statements	Partnerships

*Table 2: Educators and their classrooms*

*\*P2, has 20 years of teaching experience in another subject.*

When the participant educators were asked to describe their experience of teaching accounting, they were very enthusiastic, with P2 stating that it is an “enjoyable experience” and went on outlining that “I loved it as a student myself and I love to teach it” (I1-P2, p. 1). P1 described teaching accounting as “a journey” (I1-P1, p. 1) and noted that this leads to a continuous reflection on how to improve the adopted pedagogical approach. Similarly, P3 described it as “a learning curve” and an opportunity to learn from the learners. P3 went on to highlight that it is “a wonderful experience” (I1-P3, p. 1).

During the observation sessions, the findings of which will be dealt within the next sections, a different approach was noted with regard to the adopted language of instruction. In fact, P1 opted for English, while P2 and P3 opted for Maltese as the language used during their lessons and interaction with students. Having said that, P2 and P3 also employed code switching between English and Maltese particularly when referring to technical accounting terms and jargon. Moreover, it is also worth highlighting that no particular or specific seating plan was observed in neither of the lessons.

### 4.3 The Observation Sessions

The following subsections shall present the main findings that emerged through the observation sessions held with the three study participants.

#### 4.3.1 Type of Classroom Talk and Attitude towards Dialogic Teaching

During the observation sessions, the researcher took note of the classroom talk and this was classified using the categories presented in Table 3 below. All the three participant educators rarely resorted to the chalk and talk approach. Furthermore, P1 and P3 tended to slightly favour more the use of discussion and dialogue than P2, who instead gave more importance to recall of information and instruction.

Category of classroom talk	Meaning
<b>Rote</b>	Chalk and talk approach
<b>Recitation</b>	Recall of information
<b>Instruction</b>	Explaining what to do or exposition of facts
<b>Discussion</b>	Sharing of ideas to solve problems
<b>Dialogue</b>	Questions and discussion

*Table 3: Classroom talk*

The researcher also tried to get a better understanding of the attitude that the learners showed in class in the instances whereby the educator made use of dialogic teaching. The majority of the learners in all of the three observed classes seemed to like this teaching and learning approach and it did seem to play a part in enhancing their level of engagement and participation. In all the three classes, some of the learners seemed to be keener than others to overtly demonstrate that they have understood a concept,

while others used the possibility of dialogue to clarify issues and enhance their understanding. In fact, in all three classrooms it was noted that few learners despite not being visibly against this pedagogical approach, had to be pushed and encouraged by the educator in order to get more involved through dialogue. Interestingly, instances whereby learners took the opportunity to build on each other's arguments and ideas were noted in the class of P3. One potential reason for this observation could be related to the fact that this class was that of Year 11 learners, who by this time are more likely to have formed a stronger relationship with each other and the educator.

#### **4.3.2 Use of Questioning by the Educators**

Through the observed lessons, it was noted that the majority of the questions posed by the educators were related to some extent to the content being covered in class. Very often, the main aim behind these questions was that of gauging the learners understanding and comprehension. Having said that, it was also observed that all the three educators tended to start their lessons by asking a few questions related to the well-being of the students. Some of these questions were still closely linked to the subject, such as checking whether learners had any difficulty during their homework. However, the researcher was also able to observe instances whereby the educators got interested in the learner's general well-being, this included a question referring to an activity held at school earlier during the day of observation and a question to a learner who got slightly injured during the previous break. In addition, all participant educators also opted to go around the class when the learners were working on a question and often asked individual learners about potential difficulties.

Moreover, during the observed lessons, it was noted that P1 and P3 tended to ask more questions of different levels when compared to P2. Having said that, P2 was also observed posing questions to learners that build on each other. There were very few instances whereby all the three educators posed the same question more than once. In addition, the three educators adopted a very similar approach when it came to learners that seemed to be confused or stuck on how best to answer a question. In fact, all educators opted to encourage these learners to provide an answer, sometimes by going on stating supportive phrases such as “you know it” or by probing the learner and provide some further clues. Sometimes this probing by the educators involved rephrasing the question. Another aspect in common was that all of the observed educators made use of both questions that are addressed to the whole class and questions which are specifically asked to individual learners. In fact, it was noted that these educators tended to ask more individually addressed questions when working or correcting a task in class.

Table 4 presented on the following page, shows which type of questions were asked by the educators, whereby ‘1’ denotes the highest occurrence. As a result, Table 4 outlines that when it came to the aim of the questions posed by the educators, some differences were noticed between the three observed educators. Interestingly, all of the observed educators made most use of questions aimed at checking that the learners have understood concepts being discussed in class. Moreover, it is worth highlighting how P3 has emerged as the educator which posed more questions with the aim of encouraging learners to make use of their critical thinking skills and this is also supported by the fact that the same educator also probed learners to think further, more than the other observed participants.

Aim of Question	Ranking of frequency		
	P1	P2	P3
Eliciting information	4	2	5
Checking for recall of information	3	3	4
Checking understanding of concepts	1	1	1
Probing learners to think further	5	4	2
Helping learners to make an argument	10	7	8
Seeking examples from learners	7	6	10*
Seeking an analysis from learners	6	10	9
Asking for an interpretation	2	5	3
Inviting learners to make use of critical thinking	8	9	6
Inviting learners to come up with creative ideas	11*	11*	11*
Requesting learners to apply learnt knowledge	9	8	7

Table 4: Different type of questions asked by the participants

*\*this indicates that this was not observed during the in-class observations*

#### 4.3.3 Learners Attitude towards Questioning

When the educators put forward questions for the learners to think about and answer, a positive climate, whereby learners seemed to appreciate the effort made by the educator to engage in dialogue was observed in all cases. This appreciation was noted through the willingness of the majority of the learners to participate and sometimes even in putting forward their own questions. As already noted in section 4.3.1, few learners were less keen on participating unless specifically required to do so by the educator. During one of the lessons observed involving the class of P2, it was noted that learners were less willing to participate than usual and one of the potential reasons could be that the lesson was held on a Monday morning. In fact, some learners seemed a bit tired and still trying to focus and the educator acknowledged their state of mind and opted to stimulate discussion at a later stage of the lesson. This implies that

creating the right atmosphere as well as the timing of the lesson are crucial to implement a discussion-based lesson.

In the class of P3 it was noted that some learners seemed to feel more comfortable to answer a question after having consulted with a peer learner and the educator consented this opportunity. Furthermore, it was noted that there was no common factor in relation to which type of questions learners found most difficult to answer. In fact, some of the questions that learners found difficult to answer correctly or fully included those involving mental calculations, those requiring a more in-depth theoretical answer and classification of items. In addition, it was noted how some learners ended up confusing accounting terms with each other or else getting stuck with respect to the perspective of looking at a transaction or accounting entry.

A number of learners within these observed classes found no difficulty in spontaneously involving themselves in what was going on in the lesson. This sometimes consisted of putting forward their own questions to seek clarifications and enhance their understanding. In the class of P1 some learners seemed interested in making connections between the subject and the real world and a question about how businesses deal with returns of items was noted. In the class of P3, some students got interested in putting forward questions challenging the fairness aspect regarding some agreements in the partnership deed, these questions reflected elements of critical thinking by the learners.

#### **4.3.4 Tools used for engaging Learners**

Apart from the use of questioning to engage in dialogue with the learners to potentially stimulate critical thinking abilities, the observed educators made use of other

pedagogical tools. All the three educators made use of interactive notes, which allowed space for the learners to complete the notes and make them their own. Having said that, P1 and P3 used their interactive notes more often than P2. P1 and P3 also had a digital presentation that assisted the lesson delivery. All of the observed educators also opted to work exercises in-class or carry out task corrections with the participation of the learners. P2 also opted in certain instances to group the learners into small groups or pairs to work an exercise in class. Moreover, P3 was observed making reference to the learners during the in-class explanation in an effort to bring more life into the subject and engage further with the learners. The pedagogical tools that the educators were noted using during the observed lessons are not exhaustive and more tools emerged during the first round of interviews.

#### **4.3.5 Classroom Relationships and Teaching and Learning**

Through the observation sessions, it was noted that all the three educators seem committed towards their learners and that during their lessons, they do try to take into account the learners' prior knowledge and experiences. Similarly, the observed educators offered space for the learners to put forward their ideas and the educators did acknowledge the learner's contribution and gave value to it. In addition, the learners also seemed to appreciate and listen to the ideas of their peers, however this was to a relatively lesser degree than the interest shown by the educators towards these contributions. Worth noting is that in the class of P3, learners seemed to pay more attention to the contribution of their peers when compared to the other observed classes.

Based on the work of Alexander (2008), during the observation sessions the researcher tried to note to what extent did the observed classrooms featured aspects closely linked to a dialogic teaching environment. In all the three observed classes, the educators and the learners tended to address a learning task together, particularly during the early stages of a new topic. In addition, in the class of P3, the educator and the learners tended to consider more alternative viewpoints when compared to the other two classrooms. On the other hand, when it came to assessing the degree of how comfortable learners seemed to be in expressing their ideas and opinion freely and without fear, the class of P1 fared better than the other two observed classes. The class of P3 also seemed to favour more situations of having the educator and learners building on their own and each other ideas. As for the use of dialogue and discussion, specifically for educational purposes, once again the class of P3 achieved better results, however it was closely followed by the class of P1. In fact, in both classes, few instances were noted whereby the discussion with and between the learners was not for educational purposes, however in the case of P3 class, this did not disturb the flow of the lesson in contrast with what was noted in the class of P1.

#### **4.3.6 Degree of Interactivity**

The observed lessons of the participant educators were also analysed to gauge the degree of interactivity that took place. In order to do so, as outlined in the observation schedule and based on the work of Alexander (2017), the observed lessons were classified as being highly interactive, moderately interactive or non-interactive. Different determinants of interactivity (refer to observation schedule, Q13) were

considered in arriving at classifying each observed lesson. These determinants included the following:

- i. the degree of learners' participation;
- ii. the extent of open-ended questions being posed;
- iii. the length of time given for learners to think;
- iv. the educator's attention towards non-verbal communication;
- v. the rate of teacher-student-teacher exchanges and teacher-student-student exchanges; and
- vi. to what extent is the educator willing to listen to all learners reasoning, thoughts and ideas.

Using the above determinants, the observed lessons of P1 and P3 were all classified as highly interactive. In contrast, not all the observed lessons of P2 managed to obtain the same classification. In fact, while the first observed lesson was classified as highly interactive, the other two observed lessons were deemed to be more closely to moderately interactive. During the latter lessons, it was observed that the same few learners actually participated in the lesson and that sometimes the educator seemed not to give enough attention to the learners' non-verbal communication.

#### **4.4 The first round of Interviews**

During the first round of interviews held with the three participant educators, the researcher sought to get an understanding of the participants definition, extent of use, encountered difficulties and potential benefits with regards to dialogic teaching and critical thinking in relation to the teaching of accounting. The following sections provide an overview of the findings from the first round of interviews.

#### **4.5 Participants' definition of Dialogic Teaching and its compatibility with the teaching of Accounting**

The participants provided quite similar responses in outlining what dialogic teaching meant to them. In fact, the three participants hinted that dialogic teaching is built around the notion of establishing an effective communication in class that encourages the participation and engagement of all the classroom participants. P1 noted that dialogic teaching consists of establishing a “two-way communication between the teacher and the students in an effort to achieve student learning” (I1-P1, p. 1). P2 outlined that through the use of this approach to teaching, the educator does not “simply deliver a presentation, but ensures students’ participation through ongoing dialogue” (I1-P2, p. 1). This was also echoed by P3, who argued that “rather than having the teacher saying it all, students are encouraged to participate” (I1-P3, p. 1). As a result, P3 noted that through dialogic teaching, the learners are offered the opportunity to actively participate during the lesson and in their learning process.

When the participants were asked about whether they feel that dialogic teaching is compatible or incompatible with the teaching of accounting, all educators stated that they are compatible. P2 noted that dialogue enables the possibility of “building on the learner’s previous life experiences” (I1-P2, p. 1) and to “bring more life into the subject” (I1-P2, p. 1). Similarly, P3 added that dialogic teaching is beneficial as it allows space for the learners to engage with the concepts being discussed. This educator noted that learners are likely to end up grasping a concept much better if they manage to interact with it and try to understand it themselves. Furthermore, P3 argued that in the absence of dialogic teaching, the educator ends up “simply passing on knowledge and content”

(I1-P3, p. 1) and this approach is unlikely to engage learners and very often leads to encouraging learning by heart. Furthermore, P1 while noting that dialogic teaching is very much compatible with the teaching of accounting, highlighted that it also links very well with Inquiry Based Learning (IBL). This educator argued that an effective application of dialogic teaching requires “more planning and preparation from the teacher side in order to direct the lesson to achieve the desired learning outcomes” (I1-P1, p. 1), particularly with regards to the questions that need to be posed to encourage discussion between class participants.

#### 4.5.1 Tools used for Dialogic Teaching by the Participants

The participant educators were asked to choose from one to five (five being the highest) how often they make use of dialogue in their teaching. Table 5 provides a summary of the educators’ self-rating.

Participant Educator	Rating
P1	4
P2	3 to 4
P3	5

*Table 5: Participant's self-rating with regards to use of dialogue in class*

P3 who opted for the highest rating, argued that dialogue acts as a tool to gauge whether students are following the lesson or not. This educator noted that dialogue is an integral aspect of the lesson and features throughout. P3 also outlined that although dialogue can take place irrespective of the number of learners in class, however having a smaller number of learners makes it “easier to get everyone to talk during a lesson”

(I1-P3, p. 1). P1 noted that the provided rating of four is linked to the previously mentioned IBL approach taken by this educator, which in its nature requires a significant interaction with the learners. P2 seemed to be more contained in determining the rate of use of dialogue during lessons. In fact, P2 noted that “sometimes I am tempted to move on with the syllabus and limit the space for pre-planned dialogue” (I1-P2, p. 1). Having said that, this educator appreciates that dialogue is important and beneficial and thus stated that “I try my best to allow space for dialogue throughout the year” (I1-P2, p. 1).

The interviewed educators mentioned a number of pedagogical tools that they use and that are aimed at fostering dialogue in class. Table 6 below presents the various tools mentioned by the participants. As can be seen, the participants mentioned both similar and distinct pedagogical tools.

Participants	Tools
<b>Mentioned by all of the three participants</b>	Questioning techniques
<b>Mentioned only by P1 and P3</b>	Interactive notes
	Digital presentations
<b>Mentioned only by P1</b>	Case studies
	Drawing on previous knowledge
<b>Mentioned only by P2</b>	No hands-up rule to ask questions
	Acknowledging all learners' contributions
	Small group discussion and tasks
	Creating a safe environment in class

*Table 6: Tools mentioned and used by the participants that foster dialogue*

#### **4.5.2 Difficulties encountered by the Participants in using Dialogic Teaching**

Two of the interviewed educators, P1 and P2, emphasized that it becomes very difficult to make use of dialogic teaching in the absence of the right climate in class that favours dialogue. As a result, they both identified the need of fostering a safe environment for the learners whereby as noted by P1, learners “feel safe enough to express their thoughts and ideas” (I1-P1, p. 2) and as added by P2 they “are not afraid of making a mistake” (I1-P2, p. 2). In the absence of a safe environment, P1 argued that dialogue is highly unlikely to take place or at least it would not involve all of the class participants. In order to create this climate, both P1 and P2 highlighted the importance of getting to know the learners and their interests as early as possible.

P3 also indirectly hinted at the above and outlined how another encountered difficulty is when being faced with learners who find it difficult to participate. This educator noted that some learners seem to “hate it with a passion” (I1-P3, p. 2) when asked to make use of dialogue in class. As a result, P3 noted that in order to assist these learners in making their participation “less troublesome” (I1-P3, p. 2), the educator shall be very careful in posing questions to which the learner knows the answer. P2 also seemed to share this difficulty with P3 and identified it as the “biggest difficulty” (I1-P2, p. 2) when “learners who do not wish to come out of their comfort zone” (I1-P2, p. 2). P2 went on highlighting that this could be due to various factors, including learners who might be shy or afraid to make a mistake, but also learners who might not be so willing “to show to their peers that they are really good in the subject out of potential fear” (I1-P2, p. 2). All of this, according to P2, strengthens the need for creating a safe environment that is conducive to learning.

#### **4.5.3 Benefits sought from the use of Dialogic Teaching**

The participant educators were asked to identify potential benefits that emerge from the use of dialogic teaching both for them as educators and for the learners. The interviewed educators identified a number of similar benefits that they can get through the use of dialogic teaching. P1 highlighted that through the use of dialogic teaching, the educator is capable of engaging the learners through interaction and went on arguing that this should be “something that all teachers should try to achieve during a lesson” (I1-P1, p. 2). P1 and P2 also noted that dialogic teaching can assist an educator in diagnosing and identifying the learners needs, both general and specific. Adding to this, P1 argued that this is possible by carefully listening to the answers of the learner and by taking note of the non-verbal communication. Dialogic teaching was also identified as beneficial in enhancing the lesson delivery, according to P2 and P3. P3 noted that through dialogue and learners’ contributions, very often the “delivery and outcomes of the lesson end up being reached in a better way” (I1-P3, p. 2). Furthermore, P2 pointed out that dialogic teaching provides an opportunity for the educator to “learn from the learners” (I1-P2, p. 2) while allowing “space to assess, evaluate and potentially modify my own way of explaining” (I1-P2, p. 2). This beneficial effect was also noted by P3 and P2 added that it assists the educator to “better devise learning tasks” (I1-P2, p. 2). Dialogic teaching was also seen as an opportunity to identify to what extent learners are following what is taking place in class, according to P1 and P3. Adding to this, P3 stated that “it motivates me when I get to know that learners are with me” (I1-P3, p. 2). Both P1 and P3 agreed that dialogic teaching increases the possibility of identifying difficulties encountered by the learners. Interestingly, P2 noted that dialogic teaching also offers the opportunity for the educator to “guide learners to challenge what is being discussed” (I1-P2, p. 2). In

addition, the same participant also identified another benefit in that dialogue enhances the educator's understanding of the learners "in a broad way, even with regards to elements not directly related to the subject, such as the emotional aspect of the learners" (I1-P2, p. 2).

With regards to benefits to be sought by the learners through the use of dialogic teaching and learning, P2 argued that this approach offers the learners "an opportunity to contribute" towards the "achievement of the lesson objectives" (I1-P2, p. 2). P2 also noted that dialogic teaching is beneficial for the learners because they can better "explore their degree of understanding", "identify potential misconceptions" and "clarify issues and extend" their knowledge and understanding while enhancing their "ability to listen to other peers' view and build upon them" (I1-P2, p. 2). Dialogic teaching also assists learners to put things into perspective, according to P3, and makes it easier for the learners to "link elements from daily life with the concepts being discussed in class" (I1-P3, p. 2). In addition, P1 while highlighting that educators cannot simply transmit content to the learners, noted that dialogic teaching can be beneficial because it assists learners "to develop skills such as ability to think and evaluate situations" (I1-P1, p. 2). This was echoed by P3 who argued that dialogue in class offers the learners the opportunity to think outside of the box and together with P1 noted that this approach can assist learners to enhance their self-confidence and be willing to "take-up a challenge and not simply aim low" (I1-P3, p. 2).

#### **4.6 Participants' definition of Critical Thinking and its relevance in relation to Accounting Education**

The interviewed educators seemed less aligned with each other with regard to their understanding and relevance of critical thinking. P1 defined critical thinking as a "situation whereby you analyse the advantages and disadvantages of something in order to arrive at your own conclusions" (I1-P1, p. 2). P3 argued that critical thinking entails "trying to find reasons and logic behind a particular situation" (I1-P3, p. 3). Building on the arguments of P3, P2 provided a more comprehensive definition and noted that "it is a way of thinking, whereby an item or an argument is not blindly accepted without adequate reasoning" (I1-P2, p. 3). P2 also added that critical thinking necessitates an attitude of "putting forward challenging questions" and the ability of questioning arguments (I1-P2, p. 3). This educator also noted similarities between the notion of critical thinking and the adoption of a sceptical perspective which is closely linked with the field of auditing.

With regard to the relevance of critical thinking in relation to accounting education, all of the participant educators agreed that it is important to enhance the learner's ability to make use of critical thinking skills. Having said that, P1 took a different approach than the other two educators and noted that critical thinking skills are more relevant "at a higher level" of studying accounting (I1-P1, p. 3). P1 argued that at secondary level, the teaching of accounting is at "basic level" and "foundational level" (I1-P1, p. 3). As a result, this educator pinpointed that the use of critical thinking during the teaching of accounting at this level is very limited and highlighted that "at this level, sometimes you end up explaining very basic terms" (I1-P1, p. 3). However, P1 also noted that as learners progress in their knowledge and exposure of the subject, they could "start to

see the benefit in being critical thinkers” (I1-P1, p. 3). In addition, P1 also highlighted that as an educator teaching both accounting and economics, in the latter, critical thinking is more often made use of during lessons.

The other interviewed educators seemed to value more the relevance of critical thinking during the secondary years of studying accounting, with P3 outlining that it is beneficial for learners to “reason things out so as to understand what is going on” (I1-P3, p. 3). P2 argued that educators have a very important role in assisting and encouraging learners to enhance their ability to “interpret and see the story behind the numbers” (I1-P2, p. 3). According to P2, critical thinking skills shall assist learners in sustaining their lifelong learning and their ability to “think differently” (I1-P2, p. 3). As a result, for P2 accounting educators, even at secondary level can “help learners to think critically with regard to the subject in relation to day-to-day experiences” (I1-P2, p. 3).

#### **4.6.1 Tools used for including Critical Thinking by the Participants in their lessons**

The participant educators were asked to choose from one to five (five being the highest) how often they make use of critical thinking in their teaching. Table 7 provides a summary of the educators’ self-rating.

<b>Participant Educator</b>	<b>Rating</b>
<b>P1</b>	2 to 3
<b>P2</b>	3
<b>P3</b>	4

*Table 7: Participant's self-rating with regards to use of critical thinking in class*

In line with the arguments mentioned in the previous section, P1 provided a lower self-rating when compared with the other interviewed educators. P1 noted that the use of critical thinking in class increases as you move from year 9 to year 11 and outlined that a case in point is when covering the topic of accounting ratios with year 11 learners. In addition, this educator also stated that “some topics seem to lend themselves more to critical thinking than others and hence offer that opportunity to go beyond simply carrying out double entry” (I1-P1, p. 3). Despite outlining the relevance of assisting learners to think critically, P2 explained that the self-rating of three is due to similar reasons indicated when discussing the use of dialogic teaching, especially the issue of limited time. Once again, P3 provided the highest self-rating among the participants and noted that the frequency of critical thinking is less than dialogic teaching, but still high. P3 outlined that during the introduction of a topic or a concept, very often the critical aspect is not given so much importance. However, once the learners start to get into terms with the material, the questions being posed by the educator tend to be more linked to critical thinking aspects and thus making use of the “why questions” in an effort to assist learners to “find the logic behind something” (I1-P3, p. 3). This participant went on outlining that encouraging learners to be critical and seek the rationale behind what is being discussed in class, could be helpful in decreasing the tendency of learning by heart.

The three participants identified a number of pedagogical tools that they use and that are aimed at fostering critical thinking in class. Table 8 on the following page presents the various tools mentioned by the participants.

Participants	Tools
<b>Mentioned by all of the three participants</b>	Questioning techniques
<b>Mentioned only by P1</b>	Inquiry-based learning
<b>Mentioned only by P2</b>	Intentionally state something incorrectly or exaggerating something in the hope of assisting learners to challenge what is being said and not be afraid of taking an opposing stand
<b>Mentioned only by P3</b>	Case Studies

*Table 8: Tools mentioned and used by the participants that foster critical thinking in class*

#### **4.6.2 Difficulties encountered by the Participants in including Critical Thinking in their lessons**

With regard to the difficulties, P1 kept with the previously expressed line of thought and noted that the main difficulty stems from the fact that learners are still grasping the very basics of the subject and thus argued that “extended use of critical thinking is limited” (I1-P1, p. 3). On the other hand, P2 argued that the use of critical thinking in class tends to share the same difficulties mentioned for the use of dialogic teaching, being the issue of limited time and the situation of having learners who seem unwilling to express their opinion due to a perceived fear. P3 identified another difficulty in making use of critical thinking and highlighted that for learners “who find the subject very challenging” and who tend to be more inclined at “simply learning by heart”, encouraging them to adopt a “more critical approach towards the content being discussed” (I1-P3, p. 3) is not an easy task. Interestingly, P3 argued that very often

these learners seem to lack “the ability to move away from learning by heart” rather than lack of motivation “to make sense of what is being learnt” (I1-P3, p. 3). As a result, an additional difficulty could be that these learners might become more disengaged when making use of critical thinking during the discussion in class.

#### **4.6.3 Benefits sought by fostering Critical Thinking in class**

The participants identified complimentary benefits that they as educators could gain if they seek to foster critical thinking in class. P1 noted that critical thinking assists educators to be more reflective while providing space for personal development and this can lead educators to be better equipped “to pass on valuable knowledge and skills to the learners” (I1-P1, p. 4). P2 developed further this identified benefit and argued that it offers the opportunity to teach the “subject in a more meaningful manner rather than in a vacuum” and allows the opportunity to link topics “to local and global issues, social issues and environmental issues” (I1-P2, p. 4). P3 highlighted that the use of critical thinking in class assists the educator to get a better understanding of how learners reason things out and “to get a better picture of their ability and learning progress” (I1-P3, p. 4). In addition, P3 also outlined that it provides the educator with the possibility of getting “to know insights” about the learner that are “not easily sought through an exam or a test”, including the “degree of maturity of the learners vis-à-vis multiple elements” (I1-P3, p. 4).

With regard to the benefits that learners could gain through the use of critical thinking, P1 highlighted that it tends to assist learners “to develop independent thinking” and to reach their own conclusions (I1-P1, p. 4). Furthermore, P1 noted that critical thinking offers learners the possibility to “look beyond the face value of any item being

discussed" (I1-P1, p. 4) and encourages them to consider "both the advantages and disadvantages" (I1-P1, p. 4). In addition, P1 stated that critical thinking equips the learners with a life-skill and it "instils in them resistance towards being simply fed uncritically by the media and others" (I1-P1, p. 4). P2 provided similar benefits to those outlined by P1 and added that critical thinking offers learners the "opportunity to challenge the norm" and to grow in their formation process as "better and more informed citizens" (I1-P2, p. 4). P2 also added two further benefits for learners, being those of enhancing their "presentation of ideas" (I1-P2, p. 4) and creativity. P3 adopted a different perspective and argued that critical thinking encourages learners to "apply things to reality" and this is likely to increase their chances of getting hold of the concepts being discussed, much better than "had they only focused on memorisation" (I1-P3, p. 4). P3 also suggested that the use of critical thinking during lessons could be very useful in getting "the best out of the bright students" (I1-P3, p. 4), who sometimes might not be taken care of due to excessive focus on those learners who struggle more with the subject.

#### **4.7 The Role of Dialogic Teaching and Critical Thinking within the Accounting Learning Outcomes Framework**

When asked about the role that dialogic teaching and critical thinking will have in the accounting learning outcomes framework, P1 and P2 were very much in sync with each other and suggested that both dialogic teaching and critical thinking shall play a more important role than before. P3 did not seem to agree with this notion and instead noted that dialogic teaching shall play a similar role to that already encouraged in the current syllabus. However, P3 agreed with the other participants that the importance

of critical thinking is going to increase with the implementation of the learning outcomes framework. In fact, P3 argued that with the introduction of the coursework, learners “will be asked to apply what they have learnt into practice and if they are not critical thinkers then their application is likely to be limited” (I1-P3, p. 4).

P1 outlined that the learning outcomes framework requires “a move away from content-based to a more student-centred teaching and learning” (I1-P1, p. 4). In addition, similarly to P3, this participant also identified the coursework as a game changer and noted that learners “will need other skills” to effectively reach the aims of the learning outcomes framework approach. Furthermore, P1 highlighted that the coursework will “offer a wide opportunity to assess other important and relevant skills” (I1-P1, p. 4) than those usually assessed through a summative examination. As a result, for P1 the adoption of the learning outcomes framework “should encourage more use of dialogic teaching in class and enhance the learner’s critical thinking skills” (I1-P1, p. 4).

P2 shared a lot in common with P1 and noted that the pedagogical tools of critical thinking and dialogic teaching can be very effective in reaching a much-desired aim of accounting education, that of equipping the learners with the right tools to discern the reality of a complex, competitive and commercialised world. Moreover, P2 argued that these pedagogical tools provide the opportunity for the educator to assist the learners to be independent thinkers and capable of dealing with “novel situations using previously acquired knowledge and make use of critical thinking” (I1-P2, p. 4). In order to achieve this, P2 noted that it requires a genuine effort from educators “to effectively merge theory with practice” (I1-P2, p. 4).

#### **4.8 Critical Thinking and the Accounting Profession**

The interviewed accounting educators were familiar with the accounting profession due to their own personal experience or that of close relatives and friends. As a result, the researcher sought to grasp the opinion of the participants with regard to what role does or at least should critical thinking play among accounting professionals. All of the interviewed participants agreed that it is very important to have accountants who are critical thinkers. P1 noted that accounting is more than simply recording transactions, “it involves principles” (I1-P1, p. 5). P2 added that any “aspiring professional accountant should ensure to possess analytical and critical thinking skills”, while highlighting that accountants are expected to “go beyond number crunching” (I1-P2, p. 3). Furthermore, P2 also outlined that more than ever accountants are “expected to be able to work with others and communicate effectively” and thus being able to be analytical, critical and a good communicator are skills that a “modern accountant should possess” (I1-P2, p. 3).

The arguments made by P3 built on those of the other two participants and noted that the fact that accountants are “faced with different situations on a daily basis” (I1-P3, p. 5), is a clear sign of the important role that critical thinking should play in the accounting profession. P3 argued that “if an accountant simply operates always with a by-the-book mentality, it is unlikely to ever be successful” (I1-P3, p. 5). As a result, this educator outlined that “a good accountant” is one who is agile and flexible enough to “cater for a wide variety of needs and situations that arise and change from time to time” (I1-P3, p. 5). Furthermore, P3 was very clear about how crucial it is for accountants to possess a good degree of critical thinking and noted that otherwise it would become very difficult for an accountant to “manage” and “survive in the accountancy industry” which is a

very dynamic environment that “requires the ability to read well what is happening around and take decisions” (I1-P3, p. 5).

#### **4.9 Conclusion**

This chapter provided a presentation of the findings that emerged from the in-class observations and the first round of interviews held with the participant educators in relation to critical thinking and dialogic teaching in the context of accounting education. In fact, it provided findings related to the participants definition, use, difficulties and benefits of critical thinking and dialogic teaching. This chapter also presented the participants views on the role that dialogic teaching and critical thinking should play in the implementation of the accounting learning outcomes framework and to what extent is critical thinking relevant for the accounting profession. The following chapter shall provide a discussion of how the findings discussed in this chapter complement or steer away from the reviewed literature.

## **Chapter 5: Discussion**

### **5.1 Introduction**

This chapter presents a discussion of the main findings presented in the previous chapter. Insights from the observation sessions and findings from the first interview are discussed in light of the literature discussed in chapter 2.

### **5.2 Defining Dialogic Teaching and Critical Thinking**

When it came to providing a definition for dialogic teaching, the three participant educators provided a very similar answer, which was characterised by the need for establishing a “two-way communication” (I1-P1, p. 1) and encourage learner participation through dialogue (P2 and P3). The definitions of the participants, especially that of P1, are in line with the argument made by Hardman and Abd-Kadir (2010, p. 1) in that dialogic teaching allows space for the learners to collaborate with others and exchange their thoughts and ideas while enhancing their communication abilities and their “capacity for productive, rational and reflective thinking”. The arguments of Davies et al. (2017) in that dialogic teaching asks educators to share control and responsibility for learning with the learners by encouraging co-construction of knowledge was reflected in the answers of both P2 and P3. Furthermore, the definitions provided by the participants also seemed to echo the idea of Rhem (2013, p.2), that through the use of dialogue in class “a more human and liberating mode of instruction” can be achieved for the benefit of the community of learners. The argument

of Sultana (1991) that dialogic teaching is in line with the cooperative search for knowledge, was also referred to by the participants in their responses.

The interviewed educators seemed to provide a slightly different idea of what critical thinking means to them. Having said that, all of the participants seemed to agree that critical thinking involves some degree of analyses with regard to ideas, arguments, concepts or situations. From the various authors that were referred to in the literature review, the definitions of critical thinking provided by Halpern (2014), Scriven and Paul (1987) and the AICPA (1999), are those that seemed to integrate together the various aspects mentioned in the definitions of the participant educators. The argument of P1 relating to the need of carrying out an analysis to identify the advantages and disadvantages of something and then arrive at forming one's own conclusions, seemed to be in line with the idea of Sultana (1991) who identified in critical thinking an opportunity to refine one's own judgement through reflection. Having said that, the definition provided by P1 when compared to the definitions discussed in chapter 2 and those provided by the other participants seemed to be narrow. P3 seemed to focus more on the idea that critical thinking is related to the individual eagerness to find and understand the rationale behind something. This argument follows the viewpoints of Ennis (1985, p. 45) and Siegel (1990, p. 90) in that critical thinking involves "reasonable thinking" and "evaluations of reasons" respectively. The definition provided by P2 was more comprehensive and seemed to build on various arguments discussed in the literature. The idea expressed by P2 that critical thinking requires an attitude of "not blindly" accepting something "without adequate reasoning" (I1-P2, p. 3) is an echo of the arguments made by Reinstein and Bayou (1997) that highlighted how nurturing the "willingness to take nothing for granted" is an important aspect of critical thinking. P2 also highlighted how critical thinking involves "putting forward challenging questions"

and the ability of questioning arguments. This aspect links to a characteristic of critical thinkers noted by Freire in that they tend to have an urge to challenge the way things are done. In addition, the definition provided by P2 also seems to refer to what was noted by Simon (1987) in that critical thinking involves interpretation of everyday realities with the aim of identifying potentially more just and impartial courses of action. Moreover, P2 also seemed to mirror the arguments of Camp and Schnader (2010) related to how adopting a healthy scepticism in interpreting the world is closely linked with critical thinking. Neither of the participant educators seemed to make a clear reference to the arguments of McPeck (1990) in that critical thinking involves an attitude of taking a step back to be able to consider the perspectives of others while appreciating one's own strengths and weaknesses. Furthermore, in contrast with the reviewed literature, the participants did not seem to give significant attention to the link between critical thinking and critical education as an opportunity to seek social justice. In fact, Freire (1970) highlighted how critical education is indispensable to fight against social injustice and offer liberation from oppressive institutions and behaviours. Moreover, Ellsworth (1989) and Burbules and Berk (1999) outlined that critical thinking shall empower individuals to seek justice and emancipation and argued that a critical education is one that assist learners to act in favour of social justice. Similarly, Armstrong (2007) argued that teaching and learning plays a vital role in giving a "voice to marginalised and oppressed groups". As a result, despite the calls of various authors, including that of Sultana (1989) who urged educators to take up a different approach and become agents of social transformation, the participant educators seemed to overlook the role of critical thinking as a tool for the promotion of social justice.

### **5.3 Dialogic Teaching and Accounting Education**

All of the interviewed educators agreed that the use of dialogic teaching is a pedagogical tool that is compatible with the teaching of accounting. The opinion of the participants seems to back the arguments of Lefstein and Snell (2014) in that classroom discourse acts as an important component in the sphere of teaching and learning. In addition, the link made by P1 with regards to the complementarity of inquiry-based learning and dialogic teaching, was also identified by Rhem (2013, p. 2) when noting that dialogic teaching is also reflected in “collaborative learning and (in) other inquiry-framed approaches to learning”. Interestingly, P3 seemed to share the idea put forward by Alexander (2008) that dialogue acts as a tool that helps both the educator and the learners to take over a more active role in class. Furthermore, the notion of dialogue as a means of providing learners with the opportunity to interact with the content and try to understand it through discussion, as outlined by P3, was also referred to by Molinari and Mameli (2013) who identified this approach as an effective teaching and learning strategy. Moreover, the argument of Lehesvuori (2013) who noted that dialogic teaching enables learners to deepen their learning and cognitive abilities, was also confirmed by P3 and added that without dialogic teaching, learning by heart would be encouraged even further. The response provided by P2 seemed to reinforce Alexander’s (2017) argument that dialogue and interaction can be enhanced if linked with the learner’s prior knowledge, and they recognised its potential to stimulate thinking and to check students’ understanding. In addition, P3 also confirmed another aspect identified by Alexander (2017) in that dialogue can act as a tool to gauge whether students are following the lesson or not.

When compared with the findings that emerged through the observation sessions, the self-rating given by the participant educators regarding the use of dialogic teaching in their lessons, proved to be quite accurate. In fact, P3 who provided the highest self-rating, was also noted in the findings of the observation to be the participant which managed to obtain the best result with regards to degree of interactivity and aspects of dialogic classroom based on the works of Alexander (2017) and Alexander (2008) respectively. As a result, it is unsurprising that P3 in the interview argued that dialogue is an integral aspect of the lesson. Similarly, the lower self-rating provided by P2 was in line with the observation's findings, as P2 was the only participant to register two moderately-interactive lesson classification. Interestingly, P2 noted that the limited use of dialogue in class is due to being "tempted to move on with the syllabus" (I1-P2, p. 1).

The observation sessions held with the participant educators and their respective accounting classes shed further light on the compatibility of dialogic teaching and accounting education. Mortimer and Scott (2003) identified two dimensions of teaching and learning the 'interactive vs non-interactive' and the 'dialogic vs authoritative'. With regards to the 'interactive vs non-interactive' dimension, the majority of the learners in all of the three observed classes seemed to like the idea of interaction during the lessons, yet in all the three classes, some of the learners demonstrated this more overtly than others. Having said that, P1 and P3 seemed to offer more space for interaction with and amongst the learners for educational purposes. As for the "dialogic vs authoritative", the observed educators seemed willing to provide learners with the opportunity to put forward their ideas. Furthermore, all of the three observed educators did acknowledge the learners' contribution and seemed keen to listen to their arguments, ideas and reasoning even if they disagreed with them. This approach

adopted by the educators is in line with that advocated by Mortimer (2005), Lefstein and Snell (2014) and Boyd and Rubin (2006) who all noted that when the contribution of the class participants is taken seriously by the educators, this tends to encourage further dialogue to take place. In addition, in line with the arguments of Boyd and Rubin (2006), P2 was also observed trying to extend the learner's contributions and ask additional questions to encourage further participation.

### **5.3.1 Tools, Difficulties and Benefits related to Dialogic Teaching**

The participants mentioned a number of tools that they use to stimulate dialogue in class, as presented in Table 6 found in section 4.5.1. This finding seems to support the call of Chabrak and Craig (2013) that encouraged educators to be open towards the inclusion of a mixture of pedagogical tools. Interestingly, all participants mentioned that they use different questioning techniques to encourage dialogue in class and this was confirmed in the observation sessions. Furthermore, despite that during the observation sessions all of the educators made use of some sort of interactive notes, the fact that only P1 and P3 specifically identified them as a tool for dialogic teaching during the interview, confirms the researcher's perception that P2 tended to make the least use of interactive notes. In addition, except for P2, none of the other participants seemed to look at the in-class correction or working out of questions as a tool to enhance dialogue and interaction. Having said that, all of the three educators were observed trying to stimulate dialogue and interaction by involving the learners during tasks carried out in-class.

Despite the fact that Lefstein and Snell (2014) suggested that taking care of the physical environment of the classroom acts as a tool that supports and encourages

dialogue, none of the participants seemed to back this claim. In fact, Lefstein and Snell (2014) seem to include the possibility of adopting specific seating plans in an effort to increase the possibility of dialogue. However, during the observations it was noted that the three educators gave little attention to this aspect. On the other hand, the fact that P1 identified in case studies as a tool that supports dialogic teaching, confirms the arguments pushed forward by Popil (2011) in favour of the use of case studies as a tool that encourages active involvement by the learners. In contrast and notwithstanding the various calls made by Tumposki (2004), Roy and Macchiette (2005) and Camp and Schnader (2010) for the use of debate as a tool to encourage dialogic teaching and learning, none of the participant educators made any reference to it. Similarly, the interviewed educators did not seem to perceive experiential learning as a pedagogical tool that can foster dialogic teaching practices, unlike what was noted by Young and Warren (2011).

The difficulties related to dialogic teaching identified by P1 and P2 in the absence of a safe environment in class that encourages dialogue and participation, echo the arguments of Popil (2011) and Lefstein and Snell (2014) relating to the need for setting the right climate in class. Furthermore, P2 and P3 outlined how another difficulty for the implementation of dialogic teaching is related to the fact of having either learners who find it difficult to participate and seem unwilling to come out of their comfort zone. This difficulty was also noted by Clarke (2015) and also seems to confirm another argument of Lefstein and Snell (2014) that it is likely to take some time in arriving at a productive participation for all class participants. In contrast, the difficulties relating to the fostering of dialogue in class outlined by Davies et al. (2017) and Wells (2000) due to the authoritative approach and the lack of willingness to share power with the learners by the educators, was not noted by the researcher neither during the

observations nor the interviews. Similarly, the argument made by Lefstein and Snell (2014) whereby encouraging a learner to elaborate further one's argument or ideas might in turn lead other learners to shy away from participating, did not seem to find significant support from the interviewed educators in their identification of difficulties. Having said that, the observation sessions seemed to support the claims of Lefstein and Snell (2014). Similarly, Sedlacek and Sedova's (2017, p. 107) argument that "the presence of students who are ready to participate in a productive way in conditions of open discussion stimulates other students in the class" did not seem to find confirmation in the observed lessons as some learners seemed to interpret this situation as an opportunity to remain silent and passive. In contrast, the finding of Sedlacek and Sedova (2017) that holding an open discussion often acts as a good tool to ease learner's participation seemed to get some confirmation during the observation sessions. On the other hand, the argument of Clarke (2015) that learners who tend to speak overtly in class are more likely to participate as they tend to be more willing to take the risk of answering incorrectly, was noted during the observation sessions. As a result, this tends to confirm the preoccupation of Sedlacek and Sedova (2017) about the possibility of ending up with some learners benefitting more than others.

The beneficial effect of using dialogic teaching identified by P2 in terms of offering an opportunity for assessing, evaluating and carrying out modifications in the lesson delivery, is in line with the argument of Reznitskaya (2012) in that self-reflection leads to better dialogic teaching and vice-versa. Furthermore, the benefit identified by the participants of diagnosing learners' needs and difficulties during the lesson, seems to confirm the argument of Lefstein and Snell (2014) in relation to the ability to read well the situation in class and identify when and how to intervene. Moreover, P2's argument that dialogic teaching enables the educator to better guide the learners to challenge

the material being covered, corresponds to the call of Chabrak and Craig (2013) in that accounting learners shall be assisted to consider the social perspective of accounting. Alexander (2008) argued that dialogic teaching apart from being beneficial in terms of engaging the learners, also assists them to enhance their confidence, understanding and learning. The benefits outlined by Alexander (2008) were also noted by the three participants with P2 mentioning the learner's ability to enhance their understanding while P1 and P3 mentioned the possibility for the learners to increase their confidence.

#### **5.4 Critical Thinking and Accounting Education**

The three participant educators expressed their enthusiasm towards instilling critical thinking within their classroom and argued that critical thinking skills are relevant in the teaching of accounting. The arguments on how best to make use of critical thinking seemed to differ between the participants, with P1 taking a different standpoint, as discussed in the next paragraph. Having said that, the three participants seemed to agree with Young's (1988) call to depart from pedagogies that lead to indoctrination and embrace a teaching and learning approach that fosters an effective use of reasoning capabilities. Moreover, indirectly the participants also seemed to make reference to the call made by Mayo (2015, p. 1133) for educators to fight against "uncritically imparting and reproducing the dominant forms of knowledge". Furthermore, their responses and behaviour noted during the observations, particularly the use of questions and willingness to interact with the learners during the lesson, complies with the notion identified by Young and Warren (2011) when they spoke of pedagogies that focus on learning facilitation. In addition, in their responses the participants also echoed the argument of Dr Stephen Brookfield in the interview given

to Johanson (2010) in that one of the main aims of education should be that of assisting learners to become critical thinkers, irrespective of their area of study.

Despite highlighting the importance of enhancing the learners critical thinking skills, P1 outlined that at secondary level the teaching of accounting is quite basic and introductory in its nature. Thus, this educator pinpointed that the use of critical thinking during the teaching of accounting at this level is very limited, however as the learners' progress in the study of accounting at higher levels, the importance of infusing critical thinking skills increases. P1 confirmed this notion in the provided self-rating, being the lowest when compared to the other participants. The argument made by P1 seems to reflect what was noted by Kealey et al. (2005), who by drawing upon the work of Jenkins (1998), argued that while it is true that as accounting learners further their studies, critical thinking skills become even more important, however these are also important during introductory courses. Furthermore, P1 also seems to agree with the arguments of Young and Warren (2011) that critical thinking skills tend to develop slowly over time, particularly when noting that with the Year 11 learners a higher degree of critical thinking tends to be achieved.

The other two participant educators did not make any references to the varying degree of applicability as regards critical thinking during introductory accounting courses as mentioned by P1. P3 spoke about the importance of enabling learners to use their reasoning abilities to get a better understanding of what they are being exposed to. This seems to reflect Freire's (1970) argument against the banking concept of education and backs his call for assisting the learners to interpret the world around them. Furthermore, P3 also noted that critical thinking skills encourage learners to ask themselves and let others ask them the "why questions" (I1-P3, p. 3) and outlined that this can be useful in reducing excessive focus on memorisation of content. These

remarks of P3 correspond to the arguments made by Doney and Lephardt (1993) and Young and Warren (2011), who also spoke of critical thinking as a tool that reduces the focus on memorisation of concepts and instead instil within the learners the willingness to go deeper in their understanding and motivate them to learn beyond the formal education sphere. Thus, the argument of P3 also confirms what was highlighted by Camp and Schnader (2010) that while a chalk and talk approach towards the teaching of accounting can prove to be effective in developing learners who are capable of replicating what they have learned, however, this does not allow space for learners to develop their maximum potential, as there is no interaction with the content.

Encouraging the learners to enhance their ability of interpreting and looking for the story behind the numbers, as implied by P2, mirrors the calls of Reinstein and Bayou (1997) and Camp and Schnader (2010) with regards to the importance of having accounting learners who are capable of going beyond simply calculating figures. In addition, similarly to Simon (1987), P2 also identified the importance of approaching knowledge as something which is co-constructed, taking into account both the social and the physical world that surround the participants. Furthermore, the responses of P2 also seemed to support the idea that critical thinking skills enable learners to apply learnt principles and concepts in a variety of contexts as argued by Doney and Lephardt (1993). P2's self-rating when compared to the arguments brought forward by the same educator during the interview might seem a bit contradictory, however it is in line with what was observed during the observation sessions, whereby P2 tended to put more emphasis on lower order questions. Moreover, P2 also noted that similar to what was argued for dialogic teaching, the mid-range self-rating is justified by the time constraint issue and the tempting attitude of moving forward in covering the material.

#### **5.4.1 Tools, Difficulties and Benefits related to Critical Thinking**

The participants mentioned a number of tools that they use and which can be useful in enhancing the learners' critical thinking skills. The participants highlighted that a number of tools that were mentioned for encouraging dialogue in class are also useful and applicable for critical thinking. Interestingly, all of the participants agreed once again on the importance of making use of questioning techniques. This seems to support what was noted by Freire (1970) in that critical thinking can be enhanced through the use of critical dialogue, discussion, self-reflection and by listening to experiences of other learners. Furthermore, the respondents also seem to confirm a number of tools identified by Sultana (1991) including an effective use of questioning techniques, democratic participation, building upon the learner's experiences and a genuine focus on the process of learning itself. These were particularly noticed during the observation sessions, whereby the participants acknowledged learners' contributions and adopted practices that offered space for the learners to express themselves and the opportunity to build on each other's contributions. Furthermore, the in-class observations also indicated that the majority of the observed learners seemed to appreciate the educator's effort to put forward questions of different levels of thinking to encourage discussion. All of this, also supports Doney and Lephardt's (1993) argument in favour of the need to create a learning environment that promotes the use of questioning by both the educator and the learners.

P1's identification of inquiry-based learning as a tool that supports critical thinking was not mentioned by the other participants but is in line with a number of authors who referred to this approach. Sellars et al. (2018) spoke in favour of pedagogies and modes of assessment that promote learners' disposition of being inquisitive, while

Young (1992) also highlighted the importance of considering knowledge as a product of a series of inquiry-based questions. P3 also mentioned case studies as a tool that encourages critical thinking. Interesting to note is the fact that P1 had identified in case studies a good tool to enhance dialogue in class. Dowd and Davidhizar (1999) also identified case studies as a tool to foster critical thinking skills and argued that case studies offer the possibility for the learner to think outside of the box and apply learnt knowledge. Similarly, Doney and Lephardt (1993) also spoke in favour of the use of case studies and highlighted their characteristic of fostering reflective thinking skills among the class participants. In addition, Cunningham (1996), Youngblood and Beitz (2001) and Thomas (2009) all spoke about the relevance of active learning strategies, as they tend to promote critical thinking by offering the possibility for the learners to be more engaged and participate in an active and reflective manner. The specific tool mentioned by P2, relating to intentionally stating something incorrectly or exaggerated, in the hope of assisting learners to challenge what is being said, did not seem to find direct confirmations in the literature discussed in chapter 2. In addition, the researcher feels important to highlight that despite the aim of P2 is to assist learners not to shy away from taking an opposing stand, however care must be taken not to confuse the learners and end up passing the wrong message. Having said that, P2's remark might find some support in Sultana's (1991) call for encouraging learners to challenge taken for granted assumptions, which could include the potential misconception of some learners that everything said by an educator is an absolute truth.

The difficulty in fostering critical thinking identified by P1 is in line with the arguments brought by the same participant as regards to the restrictive use of critical thinking due to the learners' lack of exposure to the subject. Garrison's (2011) argument that assisting learners to foster positive dispositions towards critical thinking is one of the

toughest challenges faced by educational institutions, found some confirmation in the responses of P2 and P3. P3 argued that learners who struggle with the content, present a tough challenge in assisting them to appreciate and apply critical thinking related to the subject and instead prefer to opt for memorisation of knowledge. P3 also added that this situation could lead these learners to end up being further disengaged when making use of critical thinking during the discussion in class. However, Doney and Lephardt (1993) seem to disagree and urge educators not to abandon their commitment towards assisting all learners to go deeper in their understanding and motivate them to learn beyond the formal education sphere.

In identifying the benefits that educators can get from making use of critical thinking in class, P1 and P2 argued that it allows space for personal development and to refine their teaching methods with the aim of offering a relevant and more meaningful educational experience to their learners. Their argument mirrors Doney and Lephardt's (1993) call for accounting educators to reflect upon their teaching and evaluative strategies, together with the learning objectives, so as to better coincide with higher levels of cognitive functioning as outlined by Bloom's (1956) taxonomy. Furthermore, the participants' responses also seem to refer to Giroux's (1986, p. 237) argument in favour of organising learning in a way that assists learners to take up "responsible roles as transformative intellectuals, as community members, and as critically active citizens outside schools". P3's remark that critical thinking provides an opportunity for the educators to understand better their learners and to grasp insights not easily examinable through a test or exam, seems to link with Reinstein and Bayou (1997) idea of taking care of the learners' intellectual, interpersonal, and other skills. However, it is also worth noting that P3's argument could also be seen as a confirmation of the critique raised by Williams (1993), that the method of examining accounting tends to

be specifically formulated to only assess the learner's proficiency in solving questions very similar to those worked out in class and this is likely to end up encouraging and rewarding memorisation of processes.

P1 noted that critical thinking assists the development of the learners' independent thinking and their ability to look beyond the material being presented. Thus, P1 argued that critical thinking provides the learners with a life-skill and instils in them resistance towards uncritical reflection and processing of information. This view echoes what was argued by Oliver and Utermohlen (1995) who highlighted the importance of critical thinking skills in an era whereby individuals are continually inundated with information which is not always truthful and thus requires to be critically evaluated and assessed. Interestingly, the benefits for the learners in enhancing their critical thinking skills identified by P2, matched a number of characteristics that critical thinkers shall possess as mentioned by Ignatavicius (2001, p. 37), including the ability to be "creative", "open to new ideas", "willing to change" and be good "communicators". Furthermore, P3's argument that by making use of critical thinking, learners are more likely to get hold of a concept much better than "had they only focused on memorisation" (I1-P3, p. 4), is in line with Camp and Schnader's (2010) recommendation for accounting educators to assist learners develop a deeper level of learning. Finally, P3 also noted that while critical thinking is beneficial for all learners, it tends to get the best out of the "bright students" (I1-P3, p. 4). This assertion does not get an outright confirmation in the discussed literature.

## **5.5 The complementarity of Dialogic Teaching and Critical Thinking**

During the first interview held with the participant educators, on more than one occasion, they seemed to indicate that dialogic teaching and critical thinking are interrelated and complementary to each other. This notion was also expressed by a number of authors referred to in the review of the literature.

P1 echoed the argument of Webb (2009) who encouraged educators to push forward the learner's abilities to communicate and elaborate their thoughts and ideas. In addition, the complementarity of dialogic teaching and critical thinking was also noted by P2 who identified in dialogic teaching an opportunity for the educator to "guide learners to challenge what is being discussed" (I1-P2, p. 2), mirroring Sultana's (1990) argument that critical thinking can be sustained through appropriate use of dialogue in class. Moreover, the positive approach taken by the participant educators in relation to acknowledging the learner's contributions and their openness towards co-constructing knowledge with the learners, correlate with the ideas of O'Connor and Michaels (2007) who identified the beneficial effect of encouraging further dialogue and arguments by the participants. Furthermore, the participants also highlighted how some tools, difficulties and benefits tend to be applicable to both dialogic teaching and critical thinking. In fact, for both approaches, educators mentioned common tools, including the use of questioning, case studies, interactive notes and despite not being mentioned specifically by the educators, the consulted literature also suggested the use of debate as a common tool. What was outlined by the participants seems to strengthen the idea of Bayou and Reinstein (2000) who advised accounting educators to do their best to boost in-class participation, by making use of appropriate questioning techniques, referring to real-life examples in-class and encouraging learners to discuss and be

critical. Bayou and Reinstein (2000) also advocated for the use of incomplete and interactive handouts and noted that these allow space for posing questions that require students to think critically.

In addition, as noted by Nelson (1995) and confirmed by P3, dialogic teaching and critical thinking offer the possibility for educators to get insights about the learner's degree of maturity, critical thinking, analytical and evaluative abilities which are often not easily measured through a test or examination. Furthermore, P3 also agrees with Nelson (1995) that dialogue and critical thinking instils in the learners a positive attitude towards a more reasoned out and deeper approach to learning, as opposed to memorisation of content. Moreover, all of the three educators spoke about how the use of dialogue and critical thinking in class assist in bringing life into the subject and assist learners to build on their own experiences and link learnt material to various spheres of life, echoing the arguments of Boyce and Greer (2013). Similar to what was noted by Fisher (2007), participant educators highlighted that both dialogic teaching and critical thinking offer space for the learners to enhance their communicative and listening skills while fostering a positive attitude towards problem solving both individually and collaboratively. Finally, in accordance with Bayou and Reinstein (2000), the participants also outlined that dialogic teaching and critical thinking encourage them as educators to enhance their own self-reflection, reasoning skills and their teaching strategies.

## **5.6 Dialogic Teaching and Critical Thinking in view of the Accounting Learning Outcomes Framework**

During both the observations and their first interview, the three participants made reference to the notion of “entitlement” as mentioned by the NCF (Ministry of Education and Employment, 2012, p. 5), particularly in their commitment towards a holistic approach to teaching and learning. P1 spoke very clearly about the change of mindset that is required from all educators to provide a learner-centred education and the other two participants also shared this idea, which is at the very heart of the NCF (2012) and the related Learning Outcomes Framework. The participants identification that both dialogic teaching and critical thinking should play a very important role in the teaching of accounting in a learner-centred approach, builds on the various calls found in the NCF and the Educators’ Guide for Pedagogy and Assessment: Using a Learning Outcomes Approach for the teaching of accounting. These documents outline the importance of assisting learners to adopt an inquiry-based approach to learning, by making use of dialogue which is constructive and critical which leads to the co-construction of knowledge through interaction between the class participants.

The idea pushed forward mainly by P2 but also supported by P1, that dialogic teaching and critical thinking assist learners to acquire skills that sustain their ability of becoming lifelong learners echoes the aim of the cross-curricular theme of educating for Sustainable Development. In fact, this calls for educators to make use of a mixture of learner-centred pedagogical tools that assist learners to enhance their problem-solving skills, reflective capabilities, logical reasoning and collaboration with others. P2 also supported the Learning Outcomes Framework call for educators to assist learners to merge theory with practice and to equip the learners with the right tools to discern the

reality of a complex, competitive and commercialised world. Furthermore, at some point or another, all participant educators referred to the importance of linking the teaching of accounting to the experiences of the learners and connect it to issues from the local, international, social and environmental spheres. In agreement with the NCF (2012), the participants were very critical about relegating learners to a passive role and noted how dialogic teaching and critical thinking can bring about interaction among the community of learners. P3 in particular argued against pedagogies that encourage memorisation of content as opposed to a deeper approach to learning and noted how both dialogic teaching and critical thinking can be helpful in achieving this aim as supported by the NCF (2012) and the Learning Outcomes Framework.

P1 and P3 also identified in the coursework an enhanced opportunity to assist learners in developing skills that are important for their life, while allowing more space to interact with the content and with other class participants. The participants also noted how dialogic teaching and critical thinking can facilitate the aim of being constructively critical of business notions that are often taken-for-granted as suggested by the Learning Outcomes Framework. The participants also seemed to support the call to move beyond number crunching exercises towards an attitude that seeks to find the rationale behind arguments, concepts and ideas. Despite sharing a lot in common with the notions pushed forward by the NCF (2012) and the Learning Outcomes Framework, the participants did not mention anything about the need of adopting a school-based approach towards the cross-curricular theme of educating for entrepreneurship, creativity and innovation. This theme is closely linked to accounting and also calls for enhancing the learners critical thinking abilities and effective communication within and outside the classroom community. Similarly, the participants made no reference to the need of assisting learners to navigate online sources safely

and be critical in selecting information as identified by the Learning Outcomes Framework.

## **5.7 Critical Thinking and the Accounting Profession**

The interviewed educators agreed that the accounting profession would benefit a lot in having accountants who are critical thinkers. The participants outlined that the role of an accountant goes beyond the simple recording of transactions and as noted by P1 it is built on principles which require the adoption of a critical perspective. It is not surprising that the participant educators appeared to invoke the call made by the AECC (1990, p. 310) for accounting learners to be exposed to an education that focuses on “learning to learn” rather than simply reproducing acquired knowledge. The subsequent call made by Doney and Lephardt (1993, p.297) who identified “knowing how to think - to apply, analyse, synthesize, and evaluate” as essential skills for an accountant was echoed by the participants, particularly by P2. This educator also reaffirmed the argument raised by Reinstein and Bayou (1997) that accountants are expected by their clients to go beyond simply calculating figures. Moreover, similar to these authors, P2 added that accountants are also expected to have good evaluative, communicative and collaborative skills to perform effectively.

P3 also linked the significance of critical thinking with the fact that accountants operate within a dynamic environment and argued that a successful accountant is one who is agile and capable of going beyond the by-the-book mentality. The arguments of P3 reinforces those made by Camp and Schnader (2010, p. 655-656) in that accountants can no longer “function as the stereotypical “bean counters” who sit in the corner with a general ledger”. The participants also shared the views of Young and Warren (2011)

that critical thinking skills are a “prerequisite for a successful accounting career”. As a result, the participants also agreed with Young and Warren (2011) that as educators they should assist their learners to acquire these skills.

## **5.8 Conclusion**

This chapter aimed at providing a reflection about how the data gathered from the study participants, complements or steers away from the reviewed literature. It transpired that the participant educators shared a number of similar views between themselves, particularly as regards to dialogic teaching. Having said that, some differences were noted as regards to what extent can critical thinking be infused during introductory courses of accounting. The next chapter shall provide an overview of the preparation of and the feedback of the participants with regards to the resource pack prepared by the researcher.

## **Chapter 6: The Resource Pack**

### **6.1 Introduction**

This chapter presents a brief overview of the process undertaken in preparing the resource pack including the evaluative feedback gathered from the three participant educators from the second round of interviews.

### **6.2 Preparation of the Resource Pack**

During the first interview, the participants were asked two questions related to the resource pack and the respective responses acted as the starting point in the preparation of the resource pack. In fact, the researcher tried to elicit from the participants potential topics to be presented in the resource pack and to get a better understanding of the participants expectations with regards to the resource pack. Table 9 on the following page, presents the topics mentioned by the participants to be taken into consideration when preparing the resource pack. P1 was the only participant who noted that the topics identified are the ones that learners tend to find most challenging at this level.

Accounting Topic			
<b>P1</b>	Depreciation	Accruals and Prepayments	Irrecoverable debts
<b>P2</b>	Depreciation	Capital and Revenue Expenditure	Irrecoverable debts
<b>P3</b>	Depreciation	Bank Reconciliation	Incomplete Records

*Table 9: Topics mentioned by the participants*

Given that all of the participants mentioned the topic of depreciation, the resource pack focused on this topic. This was not the only reason why depreciation was the topic chosen to be covered through this resource pack. In fact, the argument made by P1 that depreciation is one of those topics that learners tend to find most challenging and difficult to make sense of at secondary level, an argument also confirmed by other accounting educators through informal interactions, made me reflect. When compared to other topics usually covered prior to it, depreciation is an abstract concept and this contributes to the fact that a significant number of learners struggle with this topic. Thus, when this difficulty is combined with the issue identified by the participants of having limited time, depreciation could end up being heavily reliant on a rote teaching and learning approach. As a result, in-class interaction through dialogue and the enhancement of critical thinking is likely to be overlooked. I believe that this should not take place, because as accounting educators we have to take our learners a step further than simply recording transactions and follow processes mechanically. For this reason, this resource pack was designed to tap on the familiarity with concrete every-day life events and hands-on activities in an effort to bridge the gap between theory

and practice. This pack also highlights that the topic of depreciation, albeit being abstract, does offer space to make an effective use of dialogic teaching and push forward elements of critical education.

Furthermore, the participant's expectations with regards to the resource pack gathered from the interview were also an important aspect that was kept in mind throughout the preparation for the resource pack. P1 highlighted the importance for the resource pack to be "workable in the sense that can be used within the time-frame teachers have" (I1-P1, p. 5) and that the required resources are easily available and accessible within every school. P2 outlined that the resource pack should be "in line with the format suggested in the Learning Outcomes Framework" and suggested the use of "cartoons or images that can spark off further thinking and interpretation" (I1-P2, p.5). Furthermore, P3 suggested the "incorporation of tasks and real-life examples" (I1-P3, p. 5), including the use of case studies and also recommended encouraging learners to reason through steps.

As a result, in the preparation of the resource pack, the above recommendations together with other findings that emerged from the observation sessions and the first interview were kept in mind. The resource pack prepared on the topic of depreciation can be found in Appendix A. The resource pack was prepared in line with the accounting learning outcomes framework and the researcher assumed that the topics and concepts preceding the topic of depreciation were already covered in class. The participant educators were provided with a scheme of work, lesson plans, interactive notes, presentations, worksheets and other resources.

### **6.3 Results from the second set of interviews**

In the second round of interviews, the researcher sought to get some evaluative feedback with regards to the proposed resource pack from the three participant educators. The following subsections provide an overview of the feedback gathered from the educators.

#### **6.3.1 The Participants' general evaluation of the Resource Pack**

The three participant educators commented very positively about the resource pack and appreciated the researcher's effort to include aspects they had brought up prior to the preparation of the resource pack. P1 noted that a number of lesson plans include a variety of learning strategies that target different intelligences. Similarly, P2 also highlighted that the pack contains "a variety of exercises, including: fill-in the blanks, calculations, true or false, group work and activities" (I2-P2, p. 2). Furthermore, P2 also added that the material in the resource pack "is informative and presented in a lively manner" (I2-P2, p. 1) and that it reflected the notions promoted by the accounting Learning Outcomes Framework. P3 outlined that the notes are designed to act as a tool for creating interaction and "allow space for the learners to interact with it" and this increases their "likelihood of grasping the material much better" (I2-P3, p. 1). The participants also praised the use of worksheets and the PowerPoint presentations, with P3 highlighting that these are "very useful for both the students and yourself during the lesson". Moreover, P1 and P3 expressed their agreement with regards to the use of past papers at the end of the topic. P3 appreciated the effort made by the researcher to link the topic of depreciation with the effect on the financial statements and argued

that this would “make it easier when arriving at working a fully-fledged question of financial statements with adjustments” (I2-P3, p. 3).

### **6.3.2 Resource Pack effectiveness with regards to Dialogic Teaching and Critical Thinking**

With regard to the potential of the resource pack to encourage dialogic teaching and critical thinking, the three educators agreed that this aim has been reached. In their feedback, the participants identified a number of similar and distinct aspects from the resource pack that support dialogic teaching and critical thinking. All participants argued that the fact that the resource pack contains references to real-life examples offers a good basis for both dialogue and critical thinking. The three participants noted that case study 2 is an excellent example of how to link the topic to a real-life example. With regard to the same case study, P3 argued that “I also tend to use a car as an introductory example to depreciation because I feel that it is an example with which they (learners) tend best to make connections” (I2-P3, p. 3). Furthermore, P2 noted that the fact that the car used in the example is a model which learners tend to see in our roads, they can connect with it much better. In addition, P2 argued that the suggested task for lesson 1, that of encouraging learners to take a look at their parents’/guardians’ car insurance schedule, further assists the learners to appreciate the relevance and practical implications of the topic being discussed in class.

Interestingly, the participants identified the beneficial effects of making use of case studies as a tool to generate discussion and enhance learners’ ability to think critically. Referring to case studies, P3 stated that they “allow learners space to think outside the box”, “increase the possibility of collective thinking” especially if carried out in groups

or pairs and assist learners to “link the subject to outside realities” (I2-P3, p. 1-2). P1 highlighted that ‘development point 3’ of lesson plan 1 encourages a lot of critical thinking and noted that the suggested video “is a good means to instil in students the different aspects that need to be considered to make sure that decisions are sustainable” with regards to “economic, social and environmental factors” (I2-P1, p. 1). Similarly, P2 outlined that by referring to electric cars, case study 1 also offers the space of linking the subject to environmental issues.

P3 outlined that the resource pack contains several occasions for group work and in-class activities which “encourage learners to discuss and use dialogue among themselves and with you (the teacher) with the aim of furthering one’s knowledge and understanding” while promoting “teamwork and collaboration” (I2-P3, p. 1). In agreement with this point, P1 identified lesson 5 as one which fulfils what was said by P3 and supports dialogic teaching and critical thinking. In fact, P1 noted how the worksheets ‘Depreciation and Accruals Activity’ and ‘Depreciation and Accounting Concepts’ were well planned to reach this aim. Similarly, P1 outlined that revision of the steps to record disposal of non-current assets in lesson plan 7 shall “also encourage both dialogic teaching and critical thinking” (I2-P1, p. 1). P1 also appreciated the fact that in lesson plan 8 one of the objectives was that of giving value to human beings as valuable assets for both businesses and the society in general. The three participants had positive words for the demonstration carried out to introduce disposal of non-current assets in lesson 6, with P1 highlighting that it is “very effective as a visual aid” (I2-P1, p. 1) and P3 liked the fact that the disposal steps were also explained through a sequential approach. Moreover, P1 also noted that the activity held at the beginning of lesson 8, whereby learners are asked to prepare in groups a sequential list of the most important points relating to depreciation shall help to

reinforce learning and interaction with and amongst the learners. In addition, P1 also praised the opportunity offered in lesson 9 of “peer learning” as an opportunity to “further promote dialogic teaching” (I2-P1, p. 1).

Amongst participants P2 and P3 were those who provided very positive feedback about the use of cartoons in the resource pack to enhance critical thinking and dialogue in class. P3 noted that while these cartoons are “beneficial in assisting critical thinking” for all learners, however they can be even more beneficial for “those learners who start thinking that accounting is not the subject they would study any further” (I2-P3, p. 2) following the end of secondary education. P3 argued that for these learners, the use of cartoons could assist them to “appreciate that accounting knowledge can also be seen as an opportunity to grow and gain knowledge which can be used in other areas of life” and thus assist in portraying the subject as “valuable for their life, irrespective of their eventual career path” (I2-P3, p. 2). P2 also added that the quotes found in the notes encourage personal reflection by the learners, while allowing space to pass on social and ethical values in relation to the subject, rather than simply ending up “bombarding the students with financial data” all the time (I2-P2, p. 1).

P2 highlighted that the resource pack is effective in facilitating the use of dialogic teaching and critical thinking because it is likely to stimulate “different reactions from the students and might have some (students) who disagree and maybe put forward their arguments” (I2-P2, p. 1). Furthermore, P2 noted that the exercises, tasks and activities found in the resource pack do not simply “re-enforce mechanical aspects” of the subject but rather “allow space for interaction and critical thinking” (I2-P2, p. 2).

### **6.3.3 Recommendations suggested by the participants**

As encouraged by the researcher, the three participants put forward some suggestions that could be taken on board to improve the resource pack and enhance its aim of facilitating dialogic teaching and critical thinking.

P1 suggested that at the beginning of lesson 1, the term 'depreciation' is not mentioned and instead outline to the learners that "the lesson we will be discussing the value of non-current assets and ask students to give me some examples of non-current assets" (I2-P1, p. 2). After this, P1 recommended that learners would be shown a car and provided with the original cost and asked whether the car would still be valued the same after one year of use. The aim of P1 is to encourage critical thinking and dialogue by trying to "elicit the term 'depreciation' from the students" (I2-P1, p. 2). This suggested introduction would then be followed by case study 1 of the resource pack. P1 also highlighted that maybe in the discussion of 'appreciation' and 'depreciation', a picture of land and buildings can be shown and learners are asked to discuss what is likely to happen "to its value within the local context to elicit appreciation from the students" (I2-P1, p. 2). With regards to lesson 2, P1 suggested that when introducing the Straight Line Method, one could start by first introducing the learners to the formula to calculate depreciation and then to the percentage on original cost. Furthermore, P1 argued that "learning needs to be reinforced" (I2-P1, p. 2) and hence it is important to give learners a similar task to do at home. P1 also noted that maybe in lesson 3, some accounting concepts other than the already discussed accruals concept could be referred to in this lesson, including the cost concept and the consistency concept to "emphasize the ethical issues" (I2-P1, p. 2). In addition, when introducing the Reducing Balance Method, P1 suggested to calculate depreciation on the same item using both

the Straight Line Method and the Reducing Balance Method “such that the students will be able to analyse the figures obtained using these different methods and thus encourage critical thinking” (I2-P1, p. 2).

P3 suggested that in lesson 1 or 2, a clearer definition of depreciation is arrived at with the learners and is clearly visible in the notes. In fact, P3 outlined that while the fill-in the blanks exercise on page 3 of the notes is good and beneficial, however having a more concise definition of depreciation would assist learners especially when answering multiple choice questions or short definition questions. P3 also suggested that a quick revision of the accruals concept could also be carried out to further assist the learners in their understanding of why depreciation is calculated and charged to the Statement of Profit or Loss. Furthermore, P3 also noted that in line with what is found in lesson plan 2 with regards to the explanation of the Straight Line Method, it would be better that in exercise 1 one avoids “using a car as an example” (I2-P3, p. 2) to calculate depreciation on.

P2 highlighted that making use of famous characters or personalities to engage with the learners when working questions is a good approach. Having said that, P2 noted that in some questions, “in order to be clearer so that we don’t confuse the learners due to the business-entity concept” (I2-P2, p. 2), it would be better to clearly specify that the non-current assets were bought for business use. P2 also suggested that when discussing about non-current assets that depreciate and those that appreciate, maybe more emphasis could be made about the fact that no business can do without non-current assets that depreciate and thus depreciation in this sense is not seen as something bad but rather necessary to show the real value of the non-current asset over time. Furthermore, P2 added that at this stage one could also highlight that some of these non-current assets that depreciate can also be used to generate income or

reduce expenses and noted that “motor vehicles of the business can also offer space for advertising and hence reduce the cost of advertising elsewhere” (I2-P2, p. 2). This participant also recommended that in the PowerPoint presentation that accompanies each lesson, a different picture is used for the title slide, “because students might interpret this as doing more of the same and could lead to lack of motivation by some” (I2-P2, p. 2).

The participants also made some other minor suggestions. P1 suggested further past paper questions that could be considered, including “SEC 2013 P1 Q13 (e), SEC2016 P2A Q2 and SEC 2017 P2A Q2” (I2-P1, p. 3). P2 recommended to make more use of cartoons like the one found on page 32 of the notes, “because it encourages further dialogue and critical thinking” (I2-P2, p. 2). P3 suggested that although it is no longer part of the learning outcomes, a brief reference to the revaluation method of calculating depreciation could be made.

#### **6.3.4 Concluding remarks about the Resource Pack by the Participants**

The three participants agreed that they would recommend the resource pack to a colleague. Furthermore, the participants supported and appreciated that group work was infused throughout the lessons. Having said that, P1 and P3 noted two potential difficulties in this regard. P3 argued that sometimes being pressed with limited time could lead to waiving aside some activities or group work, while P1 noted that sometimes group work presents the issue that “some students might rise up to the challenge whilst some others may rely on their peers and take a back seat during the group discussions” (I2-P1, p. 1). P2 and P3 spoke in favour of providing the t-accounts already open for the learners in the notes, with P3 stating that “finding a balance

between drawing up accounts and providing them with the accounts already drawn is something that I suggest and promote, so I liked the way you incorporated this in your notes” (I2-P3, p. 3). P3 also showed specific interest in taking on board the case studies presented in the resource pack and including them in teaching depreciation.

P2 and P3 remarked that the presented scheme of work “made it easier to follow and go through the pack” (I2-P3, p. 3). They also noted that they agree with the allocation of nine double-lessons to cover the material presented in the resource pack. P1 and P2 also highlighted that while the presented resource pack is of great help for any accounting educator, however every educator to be effective “should make sure to adapt any resources to meet the needs of their students” (I2-P1, p. 3). Having said that, P2 noted that the “advantage of this resource pack is that it has various forms of items that can be used in different circumstances” (I2-P2, p. 2). In their concluding remarks, the participants provided encouraging feedback, with P3 outlining that “I assume that you took a considerable amount of time to come up with this comprehensive resource pack” (I2-P3, p. 3). Similarly, P1 stated that “the preparation of this resource pack is the result of considerable research, thought and reflections” (I2-P1, p. 1) and that it is comprehensive as it covers well the learning outcomes associated with the topic of depreciation. P1 also outlined that “as an educator I believe that this resource pack is an asset to accounting teachers” (I2-P1, p. 3). P2 also had words of praise with regard to the resource pack and noted that “the scope of encouraging dialogue and critical thinking in my opinion has been reached” (I2-P2, p. 3).

#### **6.4 Researchers' opinion on the suggested recommendations**

I have reflected upon the recommendations brought forward by the participant educators and presented in section 6.3.3. A number of these suggestions are a matter of personal preferences and judgements on how best to arrive at the same aim. The resource pack presented in Appendix A, does not contain any of these recommendations, however I did identify some suggestions that are worth considering further. From the suggestions of P1, I liked the slight modification in the introduction of the topic and the recommendation to assist the learners to see the difference between Straight Line Method and Reducing Balance Method, when explaining the latter. I would also take into consideration the recommendations of P2 in terms of making it clearer in certain exercises that items were bought for business use and to emphasize that depreciable non-current assets are essential for the business day-to-day operations. With regards to P3's suggestions, I agree that it is better to avoid making reference to a motor vehicle when working exercise 1 as it is related to the Straight Line Method and thus this could be replaced with another non-current asset, such as fixtures and fittings.

#### **6.5 Conclusion**

This chapter aimed at presenting the evaluative feedback gathered from the participants with regards to the resource pack. The participants provided their evaluation in relation to the ability of the resource pack to encourage dialogic teaching and critical thinking and suggested some recommendations that could be considered to improve the resource pack.

## **Chapter 7: Conclusion**

### **7.1 Introduction**

This chapter shall present a summary of the main findings that emerged from this study. Furthermore, this chapter also provides insights of how the research process was beneficial for the researcher and also puts forward the researcher's opinion and recommendations. Finally, this chapter also suggests areas to be considered for further research.

### **7.2 Main Findings of the Study**

This study aimed at gaining an understanding of how critical thinking and dialogic teaching are currently used by local accounting educators at secondary school level. In order to reach this aim, three specific objectives were identified by the researcher.

The first objective sought to identify the extent to which accounting learners are exposed to critical thinking and dialogic teaching in the local scenario. Data gathered from the observation sessions and the interviews held with the three participant educators suggests that they do believe in and try to infuse dialogic teaching in their pedagogical approach towards the teaching and learning of accounting. The participants highlighted that the use of dialogue in class is compatible with the teaching of accounting and encourages learners to take a more active role in their learning process. Furthermore, the majority of the observed learners also seemed to like the idea of using dialogue in class as a means of enhancing their knowledge and understanding. A number of tools that support dialogic teaching including the use of

questioning techniques, interactive notes, group tasks and case studies were identified by participant educators and these were also observed in action. Moreover, the participants also discussed the importance of creating a safe and positive classroom climate that encourages dialogue with and between the learners. In fact, the educators outlined that the main difficulties in using dialogic teaching emerge in the absence of having the right climate in class and when having learners who find it difficult to come out of their comfort zone. Despite the difficulties, the participant educators identified a number of mutual beneficial effects that could be gained from using dialogue in class both for themselves and their learners. The participants highlighted that through dialogic teaching, educators are in a better position to identify the learners needs, to gauge the learner's understanding and to enhance their lesson delivery and preparation. On the other hand, learners stand to gain from being able to contribute towards the fulfilment of the lesson objectives, enhancing their self-confidence and developing their communicative and thinking skills. With regard to critical thinking, collected data suggests that while all of the participant educators seem to appreciate the value of stimulating critical thinking, however they disagreed on the degree of applicability of critical thinking in relation to the teaching of accounting at secondary school level. The observation sessions indicated that critical thinking was used less when compared to dialogue. Furthermore, in their understanding of critical thinking in relation to the teaching of accounting, the educators seemed to overlook the capacity of critical thinking as a tool for the promotion of social justice. In order to foster critical thinking, the participant educators identified similar tools to those mentioned for dialogic teaching, although inquiry-based learning was specifically mentioned by one of the educators. With regard to the difficulties, the participants mentioned that given that secondary school learners are still grasping the basics of the subject, encouraging

them towards being critical is difficult and limited. They also highlighted issues related to limited time available to cover the syllabus and the difficulty in encouraging learners to be critical thinkers when some of these learners seem to favour memorisation of content and processes. A number of benefits from enhancing critical thinking skills for the learners and the educators themselves were identified by the participants. Enhancing critical thinking is perceived to be beneficial for the educators as it allows space for personal reflection and an opportunity to teach the subject in a meaningful manner and linked with real-life issues. On the other hand, critical thinking is beneficial for the learners in terms of offering an opportunity to develop independent thinking, explore their own ideas, equip them with a life-skill to be inquisitive and to be capable of challenging taken for granted norms.

The second objective sought to identify potential critical thinking and dialogic teaching possibilities within the proposed accounting learning outcomes framework. The participant educators agreed that within the accounting learning outcomes framework, the tools of dialogic teaching and critical thinking shall play an important role. In fact, they highlighted how these tools shall assist in moving towards a more student-centred teaching and learning in line with the learning outcomes framework. Furthermore, they noted that with the introduction of the coursework, which shall assess a variety of important and relevant skills which are not typically assessed through a summative examination, the use of dialogic teaching and critical thinking skills should become a priority for educators. This ties in with the Learning Outcomes Framework which urges educators to assist their learners by equipping them with the right tools to discern the reality of a complex, competitive and commercialised world. In addition, the Learning Outcomes Framework also proposes the notion of assisting learners to become lifelong learners. Indeed, dialogic teaching and enhancing critical thinking should be

an integral part of the pedagogical approach of the educators to encourage the co-construction of knowledge and ultimately assist learners to acquire the skills needed to become lifelong learners. The use of critical thinking skills and dialogue are also crucial for accounting educators to assist learners to move beyond number crunching exercises towards an attitude that seeks to find the rationale behind arguments, concepts and ideas.

The third objective pertaining to this research project sought to get evaluative feedback from the participants with regards to the resource pack prepared as part of this study. The participants agreed that the resource pack managed to reach its objective of encouraging the use of dialogic teaching and enhancing critical thinking. They appreciated that it was built around the concept of engaging the learners through interaction and that an effort was made to link the topic with real-life examples. The resource pack was also commended for drawing on a number of different learning strategies that target different intelligences. Furthermore, the participants also highlighted the fact that the resource pack offered various opportunities to the community of learners to think, reflect and be critical about the topic in relation to social, environmental and ethical issues. The resource pack also garnered positive comments in relation to its potential to encourage other skills beyond academic ones; such as collaboration, peer learning and communicative skills. The participants also provided suggestions that could be useful in improving the resource pack.

### **7.3 A Learning Experience**

The process to complete this study was not an easy one and at various points in time I did end up questioning the aim of having to write a dissertation in order to finish the

course that shall lead me to become an educator. Having said that, what kept me moving forward was my desire to gain something from this process that would assist me in becoming a better educator. This desire was also combined with my own personal belief that enhancing critical thinking and communicative abilities is a step in the right direction towards assisting learners to become better persons and citizens through their contact with educators who seek to develop their potential holistically. This dissertation afforded the opportunity to deepen my own knowledge on critical thinking and dialogic teaching in relation to education in general and also specifically in relation to the teaching of accounting. It provided me with the opportunity to meet with educators who shared valuable insights and knowledge in relation to the study from their own experiences, practices and beliefs. This study also enhanced my ability of creating and designing material that supports a learner-centred teaching and learning approach. Finally, this dissertation consolidated my belief that as an educator I wish to assist learners in their process of becoming responsible autonomous individuals, citizens and business participants.

#### **7.4 The Researchers' Opinion and Concluding Remarks**

As a business educator, I embrace the call made by various authors to provide an accounting education that is meaningful and relevant for the learners, irrespective of whether they would become professional accountants or otherwise. As noted by Camp and Schnader (2010), accounting educators should move away from simply adopting a chalk and talk approach as this is likely to be effective in encouraging learners to replicate what they have learned, yet it does not offer them the opportunity to develop to their maximum potential.

This study confirmed that dialogic teaching and critical thinking are complementary to each other and are compatible with the teaching of accounting. In my opinion the resource pack prepared for this study, demonstrated further the complementarity between dialogic teaching and critical thinking. To make an effective use of dialogic teaching and enhance critical thinking skills, I strongly agree with what was outlined in the reviewed literature and confirmed by the educators that one has to create the right classroom climate whereby learners feel safe to express their thoughts, ideas and opinions without any fear of negative repercussions. In my opinion this is crucial and is to be supported by a genuine effort from the educator to get to know the learners well. I believe that numerous benefits identified by the interviewed educators that can be gained from using dialogic teaching and enhancing critical thinking skills in teaching and learning of accounting, leave no doubt on how beneficial it is to incorporate these tools in our pedagogical approach. The argument of having limited time to cover all the material, albeit being an issue to take into consideration, should not be translated into a pedagogical approach that offers no space for dialogue and time for critical reflection in our classrooms. To make use of dialogue and enhance critical thinking is not an easy task as it was pointed out by the interviewed educators. However, I do believe that it is a step in the right direction in answering the calls for reforming accounting education.

While I tend to agree with one of the participants' idea that at secondary level the extent of critical thinking in relation to the subject is limited as learners are grasping the very basics of the subject, however this does not excuse accounting educators from overlooking their role of assisting learners to enhance their critical thinking skills. In fact, I agree with the arguments of Kealey et al. (2005) and Young and Warren (2011), that it takes time to enhance the learner's critical thinking skills and thus it becomes

even more important to start infusing them as early as possible. Furthermore, accounting educators should be cautious not to attribute the development of critical thinking skills exclusively to high flyers. This approach is dangerous as it hampers the potential of widespread critical education and goes against the principle of “entitlement” as identified in the National Curriculum Framework (Ministry of Education and Employment, 2012, p. 5). Becoming critical and able to engage in dialogue is crucial to all and sundry; lest we continue to perpetuate a situation of disadvantaging the very persons who shall mostly need to discern their living conditions and advocate for their own wellbeing, as is often the case with poorly paid workers having a low level of education.

Furthermore, I would like to encourage accounting educators to reflect on the opportunity of seeking social justice through the adoption of a pedagogical approach that reflects critical education. It is through this approach that we could assist learners to be critical thinkers and challenge taken-for-granted notions. It is through this approach that we could support learners to fight against social injustice. The resource pack offered space for the learners to reflect on the perils of adopting the concept of depreciation when contemplating the value of human beings and on how businesses could use depreciation in an unethical manner. I believe that with a genuine effort, other social aspects could be reflected upon while covering other topics in accounting, in an effort to enhance critical thinking as a tool for the promotion of social justice. The Learning Outcomes Framework is offering a golden opportunity to provide an accounting education that brings about a positive transformation in our learners and in assisting them to be good communicators and critical thinkers. It is calling on all accounting educators to assist the learners to appreciate and promote sound individual, social, environmental and business practices.

## 7.5 Areas for further Research

During the process of writing this dissertation, some areas that might be considered for further research have been identified. A similar study on dialogic teaching and critical thinking can be carried out with the focus being to gain insights from the perspective of the learners, ideally Year 11 learners rather than researching the perspective and practices of educators as it was the case in this study. Research could also be carried to compare and contrast the views of accounting educators teaching in secondary, post-secondary and tertiary educational institutions with regards to dialogic teaching and critical thinking.

## 7.6 Conclusion

This chapter outlined how the identified research objectives were attained in light of the main findings of the study. In addition, in this chapter the researcher also expressed his opinion on the role that dialogic teaching and critical thinking should have in the teaching of accounting and put forward some recommendations targeted to assist accounting educators.

*“We need to educate students to be critical agents, to learn how to take risks, engage in thoughtful dialogue, and taking on the crucial issue what it means to be socially responsible.” (Giroux, 2011)*

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# Appendices

## Appendix A: Resource Pack

For ease of use, the resource is presented as follows: The Scheme of Work is presented first and this is followed by the lesson plans. Following each lesson plan, accompanying resources to be used in that specific lesson are presented, including PowerPoint presentations, worksheets and other resources. The interactive notes to be used throughout the lessons are presented at the end of this pack.

*Note: The interactive notes presented at the end of the resource pack have been arranged to fit the suggested margins for the dissertation, however I would suggest using narrower margins as this would allow more space for the learners to write on the notes particularly the t-accounts and extract from the financial statements.*

## Scheme of Work: Accounting – Year 10

### Topic – Depreciation

<b><i>Double Lesson no.</i></b>	<b><i>Aspects of Critical Thinking &amp; Dialogic teaching to focus upon</i></b>	<b><i>Content to cover</i></b>	<b><i>H.W.</i></b>
1	<p>Create a positive attitude towards dialogue with and amongst learners for educational purposes.</p> <p>Encourage learners to see the relevance of depreciation and to value the ecological and social perspectives when evaluating an option/decision. Including asking questions when purchasing a product relating to condition of employment, source of raw material, effect on the environment and others.</p>	<ul style="list-style-type: none"> <li>- Introduction to depreciation               <ul style="list-style-type: none"> <li>• What is depreciation?</li> <li>• Difference between depreciation &amp; appreciation</li> <li>• Why do we account for depreciation?</li> </ul> </li> </ul>	<p>Take a look at their parents/guardians' insurance documents to see the decrease in value over the years.</p> <p>Note: if the above task could be problematic for some learners, the teacher could prepare an example of an insurance valuation similar to that presented in case study 2.</p>
2	<p>Engage the learners through the use of dialogue and assist them in acquiring a deeper understanding.</p> <p>Assist learners in developing their ability of evaluating a task and back their arguments with reasoning.</p>	<ul style="list-style-type: none"> <li>- How does depreciation affect the financial statements?</li> <li>- The causes of depreciation</li> <li>- Double entry of depreciation</li> <li>- Introduction to Straight Line Method               <ul style="list-style-type: none"> <li>• Question SLM: Percentage – full year</li> </ul> </li> </ul>	<p>No specific task is assigned in the lesson plan.</p> <p>However, the teacher shall assess whether it is more suitable to provide a short task for home similar to that worked in class.</p>

<b>Double Lesson no.</b>	<b>Aspects of Critical Thinking &amp; Dialogic teaching to focus upon</b>	<b>Content to cover</b>	<b>H.W.</b>
3	<p>Encourage learners to engage in discussion about the topic while using appropriate jargon and to foster listening skills.</p> <p>Support learners to be critical of the world around them including the business world. Hence, the ability to interpret situations within a business that could give rise to unethical behaviour, including the misuse of depreciation. This includes wrongfully claiming depreciation on personal vehicles registered as business vehicles in order to come up with a lower profit and hence a lower tax.</p>	<ul style="list-style-type: none"> <li>- Revise the causes of depreciation</li> <li>- Depreciation and the business world. Could depreciation end up being misused by businesses for unethical purposes?</li> <li>- Continue working Questions using SLM: <ul style="list-style-type: none"> <li>• Percentage &amp; Formula - full year</li> <li>• Percentage – monthly</li> </ul> </li> <li>- Mixture - SLM monthly &amp; full year</li> </ul>	/
4	<p>Support learners in formulating their opinions and assist them in sharing their ideas.</p> <p>Encourage learners to take more ownership of their learning by carrying out some research and be critical of the material being searched.</p>	<ul style="list-style-type: none"> <li>- Revise the main points of the SLM &amp; conclude working questions specifically related to it: <ul style="list-style-type: none"> <li>• With balance b/d</li> </ul> </li> <li>- Introduce the Reducing Balance Method <ul style="list-style-type: none"> <li>• RBM – full year</li> </ul> </li> <li>- Briefly introduce learners to the notion of consistency concept</li> </ul>	<p>Exercise 5</p> <p>Exercise 6</p> <p>Learners are to carry out some research through the internet to check for relationship that exist between accounting concepts and depreciation.</p>

<b>Double Lesson no.</b>	<b>Aspects of Critical Thinking &amp; Dialogic teaching to focus upon</b>	<b>Content to cover</b>	<b>H.W.</b>
5	<p>Teamwork and collaboration can be further aided through effective use of dialogue with the intention to learn.</p> <p>An appreciation of how concrete examples and learning by doing can assist in fostering critical thinking skills.</p>	<ul style="list-style-type: none"> <li>- Depreciation &amp; the accruals concept</li> <li>- Depreciation &amp; other accounting Concepts</li> <li>- Work Questions using RBM               <ul style="list-style-type: none"> <li>• Question RBM full year &amp; SLM monthly</li> <li>• Question RBM &amp; SLM full year &amp; opening balance</li> </ul> </li> </ul>	Exercise 11
6	<p>To foster an attitude of deep learning by encouraging learners to participate by answering questions posed by the teacher.</p> <p>Also, to be critical of the discussed double entry related to the disposal of non-current assets</p>	<ul style="list-style-type: none"> <li>- Introduce Disposal of non-current assets               <ul style="list-style-type: none"> <li>• Question SLM – full year</li> <li>• Question SLM – full year</li> </ul> </li> </ul>	/
7	<p>Build on the notion of Inquiry based learning by offering a learning environment that supports the learners in acquiring a deeper insight.</p>	<ul style="list-style-type: none"> <li>- Revise the steps related to accounting for disposal</li> <li>- Work questions related to disposal               <ul style="list-style-type: none"> <li>• SLM – monthly</li> <li>• RBM – full year</li> </ul> </li> </ul>	A question from one of the suggested past papers (preferably a Paper IIB question) should be assigned as a task to do at home.

<b>Double Lesson no.</b>	<b>Aspects of Critical Thinking &amp; Dialogic teaching to focus upon</b>	<b>Content to cover</b>	<b>H.W.</b>
8	<p>To encourage in class dialogue as a form of collaboration between learners in identifying the main/key aspects of the topic.</p> <p>To encourage learners to be critical regarding specific social views that seem to apply the notion of depreciation to human beings, such as by looking at human beings as depreciable items that as they grow older, they decrease in value as they cannot generate significant return.</p>	<ul style="list-style-type: none"> <li>- A quick recap of the theoretical background relating to depreciation</li> <li>- Work questions related to disposal               <ul style="list-style-type: none"> <li>• SLM &amp; RBM - mixture</li> <li>• Past paper question</li> </ul> </li> </ul>	<p>A question from one of the suggested past papers (similar to the questions worked in class) should be assigned as a task to do at home.</p>
9	<p>Make use of appropriate questioning to stimulate discussion which can in turn encourage critical thinking.</p> <p>Also, this lesson offers an opportunity to enhance dialogic teaching and peer learning.</p>	<p>Work out further questions from the past papers to conclude the topic. Make sure to tackle all issues that learners might have.</p>	<p>No specific task is assigned in the lesson plan.</p> <p>However, the teacher shall assess the situation of the class participants and decide whether to assign or not a question from a past paper.</p>

Suggested Past Papers that can be used during lessons 7, 8 and 9 include:

2012, Paper IIA, Q4	2013, Paper I, Q13	2013, Paper IIA, Q1	2014, Paper IIA, Q4
2015, Paper I, Q2 (multiple choice)	2015, Paper I, Q10 (multiple choice)	2015, Paper IIB, Q4	2016, Paper IIB, Q2
2017, Paper IIA, Q2	2017, Paper IIB, Q2	2018, Paper IIB, Q3	

LESSON PLAN – 1			
Class:	Year 10	Date:	
Subject	Accounting	Time:	
Topic:	Depreciation	Duration:	80 minutes
Specific:	Introduction to depreciation	Resources:	White board markers PowerPoint Lesson 1 Interactive Notes

<i>Objectives</i>
<p><u>General Objectives:</u></p> <ul style="list-style-type: none"> <li>By the end of the lesson the learners shall be able to understand what is depreciation and why it is important that the business accounts for depreciation.</li> </ul>
<p><u>Specific Objectives:</u></p> <ul style="list-style-type: none"> <li>To understand the importance of calculating depreciation for accounting purposes.</li> <li>To appreciate the relevance of depreciation in real life situations.</li> <li>To be able to identify which Non-Current Assets depreciate and which appreciate.</li> <li>To become aware that allowing for depreciation is in line with the accruals concept.</li> <li>To enhance problem solving skills and groupwork.</li> <li>To foster dialogue with and amongst the learners.</li> <li>To encourage learners to consider different perspectives, including ecological and social perspectives when evaluating decisions/situations.</li> </ul>

<i>Accounting Learning Outcome Framework</i>
<p>This lesson covers the following Learning Outcomes:</p> <ul style="list-style-type: none"> <li>➤ <b>5.1i</b> – Define depreciation</li> <li>➤ <b>5.3i</b> – Evaluate the purpose of depreciation</li> <li>➤ <b>5.1j</b> – Identify the main accounting concept applicable to the accounting of depreciation (the accruals concept)</li> <li>➤ <b>5.2j</b> – Explain the importance of the accruals concept in the valuation of non-current assets and/or in the measurement of profit.</li> </ul>

<i>Set Induction</i>
<p>[SLIDE 1]</p> <p>(for this lesson it is suggested that learners are grouped in pairs)</p>

The teacher shall start off by asking learners whether anyone had ever heard of the term 'depreciation' or else they try to guess what it could mean or to what it is related. Students contribution are to be written on the board.

The following questions can be used:

- Have you ever heard of the term depreciation?
- If yes, in what circumstances?
- What do you think that depreciation refers to?

Students contribution shall be referred to when covering Case Study 1.

### ***Introduction – Basic terms related to depreciation (Case Study 1)***

[SLIDE 2]

Distribute p. 1 of the notes and with the assistance and participation of the learners, go through Case Study 1.

Once you have covered questions 1 & 2 of Case study one, highlight the following terms:

- **Cost:** this is the purchase price of the non-current asset (note to students that later on knowledge gained when covering capital & revenue expenditure shall also come in handy)
- **Estimated useful life:** rather than using years of ownership in this topic we make use of the term 'estimated useful life', i.e. the period of time that the non-current asset is expected to be available in the business.
- **Estimated Residual Value:** how much will the non-current asset be valued at the end of its useful life?

Then highlight that the decrease in value over the 5-year period is known as depreciation. Depreciation can be defined as the decrease in the value of a non-current asset during the estimated useful life.

Then through discussion, cover question 3 related to possible causes for depreciation (this will be dealt into more detail in another lesson)

### ***Development 1 – Depreciation vs Appreciation***

[SLIDE 3]

Move on to the debate about how the majority of the non-current asset do depreciate in value but others experience an appreciation (an increase in value).

By working in pairs, ask learners to think about probable non-current assets that one finds in a business and whether they appreciate or depreciate. They shall complete the

table on p. 1 in pencil for the time being. Afterwards allow some time for discussion and correct the task in class. Make sure that 'Land' is included as an example of a non-current asset that appreciates in value and ask the learners for their reaction about this.

[SLIDE 4]

The following video can also be used to enhance the explanation:

<https://www.youtube.com/watch?v=wIuuvvq3NWE>

Following this video, ask students the following:

- Do you agree with his views? Why?
- When deciding in which type of non-current assets to invest, does it make difference whether we are applying this for a business or an individual? How?
- In the video, it is clearly outlined how one of the major considerations if not the only one for this guy, was related to the rate of return on his investment. However, when we as individuals or businesses decide to purchase a non-current asset, are there any other elements that one shall consider? (Can focus on: [a] Ecological Perspective - items used, effect on environment, if it can be recycled or safely disposed etc. [b] Social Perspective - does the producer of the non-current asset treat well the employees, what about the methods of production; are they sustainable? what type of material is being used? from where is this material being acquired? etc)

Outline that although the purchase of appreciating assets is more profitable in the long run, the purchase of depreciating assets such as motor vehicles and machinery is crucial for any business to ensure that it provides goods or services. And this to some extent also applies to us as individuals as well.

### ***Development 2 – Case Study 2***

[SLIDE 5]

Show how the topic of depreciation is relevant in our life and discuss how real-life example could be that of car insurance service. Distribute p. 2 of the notes and answer the first question by eliciting information from the learners.

Distribute p.3 and then carry out the following activity:

Divide the class into groups of 4 and ask them to read Case Study 2 and calculate the depreciation charge for each year and finally calculate the total depreciation to date.

Afterwards correct in class Case Study 2 with participation of the learners and ask the learners:

- Are you observing anything in the calculation of depreciation?

### ***Development 3 – Why do we calculate depreciation?***

Why do you think it is important to account for depreciation?

[SLIDE 6, each bullet enters separately]

Make & explain the following points, while filling the blanks of the notes in p. 3:

- Depreciation is an expense. (Link with Capital & Revenue Expenditure)
- Hence, we need to calculate allowance for depreciation on a yearly basis.
- Depreciation is an estimate.
- We allow for depreciation in line with the accruals concept.
- Depreciation, reduces Net Profit.

After making point b (related to notes p. 3), ask:

Why it is important not to overstate the Net Profit?

After making point c (related to notes p. 3), ask:

Why does depreciation provide a more realistic value of the non-current asset in the Statement of Financial Position?

After making point d (related to notes p. 3), ask:

What could overcommitment of funds lead to? Is it ethical? Why?

### ***Closure***

Ask students to try to come up with a short definition of depreciation.

Then carry out a short summary, covering the following points:

- Not all non-current assets depreciate in value (land is the exception)
- But the majority do
- It is an expense to the business
- Depreciation is an estimate
- Calculated to be in line with the accruals/matching concept

[SLIDE 7]

As a task for home, encourage learners to check how the value of the car of their parents or guardian/s have changed throughout the years.

## Depreciation Lesson 1



1

This slide shall contain  
the video found in this link:

[https://www.youtube.com/watch?v=OG8T\\_l1yhbs](https://www.youtube.com/watch?v=OG8T_l1yhbs)

4

### Case Study 1

Mark bought a new electric car for €30,000 back in 2015. At that time, he thought that this car would be used for 5 years, after which the value of the car would fall to €20,000.



2

### Case Study 2

Nikita bought a Ford Fiesta on 6th January 2014 for €14,000. She insured her new car with ABC Insurance Ltd and they send her the following information.

YEAR OF MANUFACTURE	2013	MAKE & MODEL	FORD FIESTA
ENGINE NUMBER	BP13131	TYPE OF BODY	HATCHBACK
ENGINE CC	1242	SEATING CAPACITY	5
COLOUR	MOONDUST SILVER		
INSURED ESTIMATE VALUE OF THE CAR		€14,000	



5

## Depreciation VS Appreciation



3

### Why do we need to account for Depreciation?

- Depreciation is an **expense**
- Depreciation is an **estimate**
- Depreciation is calculated in line with the **Accruals Concept**
- Depreciation reduces the **Net Profit**

6

Try to check how the value of the car of your parents or guardian/s have changed throughout the years.



7

## Depreciation Lesson 1



8

LESSON PLAN - 2			
Class:	Year 10	Date:	
Subject	Accounting	Time:	
Topic:	Depreciation	Duration:	80 minutes
Specific:	Causes of depreciation & Introduction to the Straight Line Method.	Resources:	White board markers PowerPoint Lesson 2 Interactive Notes

<b><i>Objectives</i></b>
<u>General Objectives:</u> <ul style="list-style-type: none"> <li>By the end of the lesson the learners shall be able to understand what are the causes of depreciation and how to work out questions using the Straight Line Method on a full year basis.</li> </ul>
<u>Specific Objectives:</u> <ul style="list-style-type: none"> <li>To identify and understand the causes of depreciation.</li> <li>To understand the reasoning behind the double entry for depreciation.</li> <li>To become aware that there are two main methods to calculate depreciation.</li> <li>To understand how the straight-line method of calculating depreciation works</li> <li>To be able to work out questions related to Straight Line Method of depreciation</li> <li>To enhance learner's ability to collaborate with another classmate</li> <li>To foster deeper learning through dialogue and questioning.</li> </ul>

<b><i>Accounting Learning Outcome Framework</i></b>
<p>This lesson covers the following Learning Outcomes:</p> <ul style="list-style-type: none"> <li>➤ <b>5.2i</b> – Explain the main causes of depreciation</li> <li>➤ <b>5.3i</b> – Evaluate the purpose of depreciation</li> <li>➤ <b>5.3j</b> – Apply the accruals concept in the computation of the annual depreciation charge taking into account the factors of depreciation.</li> <li>➤ <b>5.1l</b> – Describe the straight-line method of depreciation.</li> <li>➤ <b>5.2l</b> – Calculate depreciation charge for the year using the straight-line method.</li> <li>➤ <b>5.3l</b> – Compute depreciation using the straight-line method for one or more non-current assets and/or for one or more financial years.</li> </ul>

<b><i>Set Induction - What do we remember?</i></b>
<p>[SLIDE 1] Ask learners to be seated in pairs.</p> <p>[SLIDE 2]</p>

Afterwards, without referring to the notes ask each pair to write down some points in answering the following:

- a) What is the difference between depreciation & appreciation?
- b) Identify two non-current assets that depreciate
- c) Identify one non-current asset that tends to appreciate

Allow some time for the learners to discuss in pairs and to finish the task. Afterwards, go through the answers of the learners and create a short discussion.

### ***Introduction – How does depreciation effects the financial statements***

[SLIDE 3]

Through a short exercise of True or False, try to engage learners into thinking individually about each of the statements to be projected through the PowerPoint presentation.

[SLIDE 4, each bullet enters separately on click]

True or false?

- Is depreciation an expense for the business? (True)
- The allowance for depreciation is not an estimate. (False)
- Depreciation increases the Net Profit (False)
- Depreciation is required to provide a more realistic value of the non-current asset in the Statement of Financial Position. (True)

For each statement, insist that learners do not simply state 'true' or 'false' but lead them to come up with an argument that backs their reasoning.

### ***Development 1 – The causes of depreciation***

[SLIDE 5]

Ask the learners to think and suggest potential causes that would result in a reduction in the value of a particular non-current asset.

[SLIDE 6]

Then, outline that there are four main causes of depreciation:

- Physical Deterioration
- Economic Factors
- Time factor
- Depletion

Distribute p. 4 of the notes to the students and by working in pairs, ask them to match the causes with the appropriate definition. (Might be useful to ask the learners to write in pencil for now)

Allow some time and afterwards go through the causes with the participation of the learners and try to elicit an example to be written on the notes.

[SLIDE 7]

Then read the case study 3 with the learners and afterward ask them to answer the requirements in pairs. Once ready, go through the answers in a discussion format.

### ***Development 2 – Double entry for Depreciation & different methods***

Mention that in order to make the double for depreciation two accounts are needed.

- Allowance for depreciation A/c
- Profit and Loss A/c (part of the Statement of Profit or Loss)

Then ask the learners to think about the double entry involving these two accounts to account for depreciation charge.

Ask some learners to share their opinion and try encourage them to support their reasoning.

[SLIDE 8 – not filled], [SLIDE 9 – with the fill-in]

Afterwards fill-in the notes p. 5 by completing the journal entry and the note that explains the entry as follows:

Dr	Profit & Loss A/c	Calculated depreciation for a specific accounting period is an expense and hence it should be charged to the Profit or Loss A/c.
Cr	Allowance for depreciation A/c	

[SLIDE 10]

Also, outline to the learners that we shall deal with two main methods of how depreciation is calculated:

- Straight Line Method (SLM)
- Reducing Balance Methods (RBM)

### ***Development 3 – The Straight-Line Method***

Distribute p. 6 and outline the following:

[SLIDE 11]

By using the straight-line method, **an equal** amount for depreciation is charged for each (full) year of expected use of the asset.

[SLIDE 11, after one click]

Outline that you bought a car for €15,000 and that you intended to use it for 10 years and thus 10% depreciation is to be charged each year. Ask learners to find the depreciation to be charged and this should lead to the identification of the first way of calculating depreciation using the Straight Line Method; % x Original Cost.

[SLIDE 12]

Afterwards outline that in addition with the above situation, a mechanic told you that normally after 10 years of use, you could manage to sell the car for €3000. Ask learners to suggest a way how to calculate depreciation given this new information. This should lead to the identification of the second way of calculating depreciation using the Straight Line Method, using the equation:  $(\text{Cost} - \text{Estimated Residual Value}) / \text{Estimated useful life}$

[SLIDE 13]

Allow time for the learners to write in the first box of p. 6 the two ways of calculating depreciation using the SLM.

Afterwards, explain the following important terms by referring to p. 6 of notes:

- Estimated useful life
- Residual Value
- Scrap Value

[SLIDE 14, questions]

Then ask the learners to suggest for which type of non-current assets do they think that the straight-line method should be applied and to explain why. Also, try to elicit an example of a specific non-current asset for which the straight-line method is likely to be applied.

Following a short discussion, fill-in the empty box on p. 6 as follows:

[SLIDE 14, after one click]

The Straight-line method is mainly used for those non-current assets that tend to be used evenly over their useful life. Such as: Furniture

Mention the point that the Straight-Line method can be calculated either on a full-year basis or on a monthly basis. (this will be dealt with when working questions)

### ***Development 3 – The Straight-Line Method***

[SLIDE 15]

Read Exercise 1 and immediately highlight to students that, in order to help us concentrate on the task, once we read a question, we shall always ask ourselves these questions and answer them:

- a. What **method** of depreciation?
- b. **Rate** or **useful life** (formula)?
- c. **Annual** or **monthly**?

Ask learners to assist you in answering these 3 questions.

Then ask students to work in pairs and find the depreciation charged each year for the bought motor vehicle.

[SLIDE 16]

Check the answer of the students and then start building up with the help of the students the required accounts.

[SLIDE 17, SLIDE 18]

Work out requirements A & B and then allow time for students to copy.

[SLIDE 19, SLIDE 20]

Then work with the learners the extracts from the Statement of Profit or Loss and the Statement of Financial Position. Afterwards allow time for students to copy.

### *Closure*

[SLIDE 21]

Ask learners to think in pairs about 3 main or key ideas they think everyone should keep in mind following the lesson (be the teacher conclusion approach). Then ask some learners to share with the rest of the group.

(Optional – can give a similar question as a task to do at home)

## Depreciation Lesson 2



1

- Is depreciation an expense for the business?
- The allowance for depreciation is not an estimate.
- Depreciation increases the Net Profit
- Depreciation is required to provide a more realistic value of the non-current asset in the Statement of Financial Position.



4

### Activity in pairs

- What is the difference between depreciation & appreciation?
- Identify two non-current assets that depreciate
- Identify one non-current asset that tends to appreciate



2

What could be some causes that lead to a reduction in the value of non-current assets?

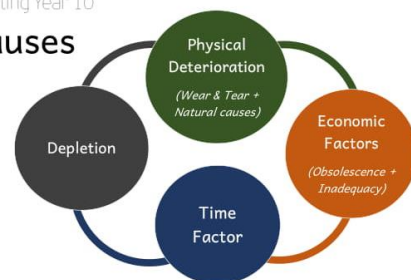


5



3

### Causes



6

## Case Study 3

MYBOOK LTD is a local business that operates a small souvenir and book shop.



7

## Two Methods of calculating Depreciation

Straight Line Method  
(SLM)

Reducing Balance Method  
(RBM)

10

## Double Entry for Depreciation

Dr		Calculated Depreciation for a specific accounting period is an expense and hence it should be charged to the Profit and Loss A/c.
Cr		

8

## The Straight Line Method

The straight-line method allows for an equal amount to be charged as depreciation for each (full) year of expected use of the asset.

Consider the following information:

- Car purchased for €15,000
- To be used for 10 years (i.e. 10% depreciation per annum)

What depreciation is to be charged for each year?



11

## Double Entry for Depreciation

Dr	Profit & Loss A/c	Calculated Depreciation for a specific accounting period is an expense and hence it should be charged to the Profit and Loss A/c.
Cr	Allowance for Depreciation A/c	

9

## The Straight Line Method

Consider the following information:

- Car purchased for €15,000
- To be used for 10 years (i.e. 10% depreciation per annum)
- Mechanic indicates a saleable value of €3,000 after 10 years

What depreciation is to be charged for each year?

12

## The Straight Line Method

This method is calculated in two ways:

- A given percentage is multiplied by the cost of the non-current asset (i.e. % x Cost); or
- By using the simple equation: 
$$\frac{\text{Cost} - \text{Estimated Residual Value}}{\text{Estimated useful life}}$$

13

## Exercise 1



*Working - Depreciation charge:*  
 $\text{€}15,500 \times 10\% = \text{€}1,550$  every year



16

## The Straight Line Method

When it is recommended to use the SLM?

The Straight-line method is mainly used for those non-current assets that tend to be used evenly over their useful life.

Such as: Furniture

14

Date	Details	€	Date	Details	€

17

## Exercise 1



15

Date	Details	€	Date	Details	€

18



### **LESSON PLAN - 3**

Class:	Year 10	Date:	
Subject	Accounting	Time:	
Topic:	Depreciation	Duration:	80 minutes
Specific:	Continue familiarising with the Straight Line Method: Full year & Monthly	Resources:	White board markers PowerPoint Lesson 3 Interactive Notes Worksheet: Causes & Reflection

#### ***Objectives***

##### **General Objectives:**

- By the end of the lesson the learners shall be able to work out questions using the Straight Line Method on a full year & monthly basis.

##### **Specific Objectives:**

- To check their understanding of the causes of depreciation.
- To be able to work out questions using the Straight Line Method (Percentage & Formula).
- To critically consider the ethical aspects related to the concept of depreciation and the effect on the financial statements
- To be able to calculate depreciation using the Straight Line Method on a full-year basis.
- To be able to calculate depreciation using the Straight Line Method on a monthly basis.
- To enhance learner's ability to discuss about the topic of depreciation and make use of appropriate jargon.
- To encourage learners to be critical of unethical business practices which might also involve depreciation.

#### ***Accounting Learning Outcome Framework***

This lesson covers the following Learning Outcomes:

- **5.2i** – Explain the main causes of depreciation
- **5.3i** – Evaluate the purpose of depreciation
- **5.3j** – Apply the accruals concept in the computation of the annual depreciation charge taking into account the factors of depreciation.
- **5.2l** – Calculate depreciation charge for the year using the straight-line method.
- **5.3l** – Compute depreciation using the straight-line method for one or more non-current assets and/or for one or more financial years.
- **5.1n** – Describe the use of an allowance for depreciation account.

- **5.3n** - Construct an allowance for depreciation account using the straight line and/or the reducing balance method.

***Set Induction – Match the causes of depreciation***

Ask students to be seated in pairs.

Instruct students to keep their files closed and provide the students with the Worksheet.

Explain that they need to match the given photos with the causes of depreciation (to be projected on screen) and write the causes on the worksheet beneath each photo

[SLIDE 2] (activity material found on p. 165)

This activity can take the form of a small competition between pairs, to see who manages to finish first and in the correct manner. Note that if by opting for a competition, it is likely to create any potential harm to the class environment, the teacher shall avoid projecting this activity a competition.

Once this is finished correct this exercise by creating a short discussion as revision of the causes. Asking learners to outline why they think that a specific picture was used to represent a specific cause of depreciation can be helpful.

***Introduction – Depreciation cartoon reflection***

[SLIDE 3]

On the other side of the distributed worksheet, learners should find two cartoons linked to depreciation. Allow some time for the learners to take a look at the cartoons and discuss in pairs what message are they conveying.

Afterwards hold a short in-class discussion, covering the following points:

- From both cartoons we can arrive at the double entry for recording depreciation
- Depreciation is an expense
- Could businesses end up creating a false image of the profit figure? How? Why?

Also, highlight how sometimes a business could end up declaring that a non-current asset has been purchased to be used by the business, but instead it is used let's say by the owner or a close relative for their own personal use. Then ask learners to think and share their opinion about:

- a) How such a situation is linked to depreciation?
- b) Whether it is acceptable? (here explain and link to the business-entity concept)
- c) What are the implications of these actions on the reported profit? (unethical reporting)

### ***Development 1 – Exercise 2: SLM Full year***

[SLIDE 4]

Ask a learner to read for the class Exercise 2.

Through questions to students determine:

- d. What **method** of depreciation?
- e. **Rate** or **useful life** (formula)?
- f. **Annual** or **monthly**?

[SLIDE 5]

Work out with students the depreciation schedule (requirement A). In working out ask students for information to calculate it together. Allow time for students to copy.

[SLIDE 6]

Then work out together with the students the machinery a/c. Allow time for students to copy.

[SLIDE 7]

Afterwards ask students to prepare the fixtures & fittings a/c and check their answer with their peer and then check together the answer.

[SLIDE 8]

Work out with students the allowance for depreciation – machinery a/c (requirement C). In working out, elicit information from students. Allow time for students to copy.

[SLIDE 9]

Afterwards ask students to prepare the allowance for depreciation – fixtures & fittings a/c and check their answer with their peer and then check together the answer.

### ***Development 2 – Exercise 3: SLM monthly***

[SLIDE 10]

Ask a learner to read for the class Exercise 3.

Through questions to students determine:

- a. What **method** of depreciation?
- b. **Rate** or **useful life** (formula)?

c. **Annual or monthly?**

Ask students to help you determine the allowance for depreciation of the office equipment for the years 2017 & 2018.

Afterwards allow time for the learners to complete the accounts and then correct it in class as follows:

Project on the ppt incomplete answers and then in turns ask different students to continue the accounts on the whiteboard (they can bring with them their task).

[SLIDE 11. SLIDE 12, SLIDE 13, SLIDE 14]

***Development 3 – Mixed question Straight Line Method***

[SLIDE 15]

Ask a learner to read for the class Exercise 4.

Through questions to students determine:

- a. What **method** of depreciation?
- b. **Rate or useful life** (formula)?
- c. **Annual or monthly?**

[SLIDE 16]

Afterwards work out the depreciation schedule with the assistance of the learners.

Ask learners to continue the rest of Exercise 4 at home and that this shall be correct in class in the upcoming lesson.

***Closure***

[SLIDE 17]

Carry out a short activity to gauge the learner's level of understanding thus far, by posing some questions for which the learners have to reply as follows:

- Thumbs up, if they are confident with regards to issue being posed
- Thumbs down, if they are not confident with regards to issue being posed
- Thumbs sideways, if they are not sure with regards to issue being posed

Ask for an explanation for their decision.

Accounting Year 10

# Depreciation Lesson 3

1

Accounting Year 10

## Exercise 2

4

Accounting Year 10

## Match the causes!

2

Depreciation Schedule (SLM full year)

Non-Current Asset	Cost €	Depreciation		
		2014	2015	2016

5

Accounting Year 10

© 2010 by Randy Glasbergen  
www.glasbergen.com

"If you claim depreciation on the hat, I can save you a fortune on your taxes. Call me."

"Is there any chance that these ancient printers could provide \$46,000,000 in depreciation deductions?"

3

Machinery A/c

Date	Details	€	Date	Details	€

6

Fixtures and Fittings A/c					
Date	Details	€	Date	Details	€
2016					

7

Accounting Year 10

## Exercise 3



10

Allowance for depreciation – Machinery A/c					
Date	Details	€	Date	Details	€

8

Accounting Year 10

Office Equipment A/c					
Date	Details	€	Date	Details	€
2017			2017		
Apr 1			Dec 31	Balance c/d	
2018			2018		
			Dec 31	Balance c/d	

11

Allowance for depreciation – Fixtures & Fittings A/c					
Date	Details	€	Date	Details	€
2016			2016		

9

Accounting Year 10

Allowance for depreciation – Office Equipment A/c					
Date	Details	€	Date	Details	€
2017			2017		
Dec 31			Dec 31		
2018			2018		
Dec 31		588		Balance b/d	
			Dec 31		

12

Accounting Year 10

Statement of Profit or Loss for the year ended 31<sup>st</sup> December (extracts)

	2017		2018	
	€	€	€	€
Less Expenses:				
Allowance for dep:				

13

Accounting Year 10

Depreciation Schedule (SLM)

Non-Current Asset	Cost	Depreciation		
	€	2016	2017	2018
Machine 1				
Machine 2				
M. Vehicle				

16

Accounting Year 10

Statement of Financial Position as at 31<sup>st</sup> December (extracts)

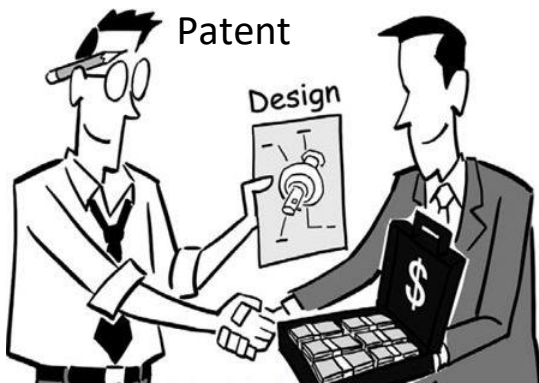
	Cost	Depreciation	Net Book Value
	€	€	€
2017 Non-Current Assets:			
Office Equipment			5,348
2018 Non-Current Assets:			
	5,600		

14



## Worksheet – Causes of Depreciation

Write down the causes of depreciation that best match the below examples (in the form of images):



## Worksheet - Reflection on Depreciation

Take a look the two cartoons that are shown below.

**What message/s are they trying to convey? Do you agree? Why?**



### **LESSON PLAN - 4**

Class:	Year 10	Date:	
Subject	Accounting	Time:	
Topic:	Depreciation	Duration:	80 minutes
Specific:	Conclude the Straight Line Method and introduce the Reducing Balancing Method	Resources:	White board markers PowerPoint Lesson 4 Interactive Notes

### ***Objectives***

#### General Objectives:

- By the end of the lesson the learners shall consolidate their knowledge about the Straight Line Method and be able to identify what is and how do we calculate depreciation using the Reducing Balance Method.

#### Specific Objectives:

- To consolidate learner's ability to deal with question involving the Straight Line Method.
- To identify what is the Reducing balance method and how depreciation is calculated using this method.
- To be able to distinguish between the Straight-line method and the Reducing Balance method.
- To be able to work out questions using the Reducing Balance method on a full-year basis
- To be able to define what is understood by the term Net Book Value
- To start appreciating how the topic of depreciation is closely linked with a number of accounting concepts.
- To encourage learners to take more ownership of their learning in relation to the subject.

### ***Accounting Learning Outcome Framework***

This lesson covers the following Learning Outcomes:

- **5.3j** – Apply the accruals concept in the computation of the annual depreciation charge taking into account the factors of depreciation.
- **5.3l** – Compute depreciation using the straight-line method for one or more non-current assets and/or for one or more financial years.
- **5.1m** – Describe the reducing balance method of depreciation.
- **5.2m** – Calculate depreciation charge for the year using the reducing balance method.
- **5.3m** – Compute depreciation using the reducing balance method for one or more non-current assets and/or for one or more financial years that is the same as the calendar year.
- **5.2n** – Fill in an allowance for depreciation account in a given template from a given set of figures.

### ***Set Induction – In class interactive correction***

[SLIDES 2 – 7]

Inform students that the question they had for HW will be corrected in class together. Project through the presentation the incomplete answers of Exercise 4 and then in turns ask different students to continue the accounts on the whiteboard (they can bring with them their task).

Check for any issues up to this point.

### ***Introduction – Some important points before proceeding***

[SLIDES 8, bullet (containing a task) enters on click]

Ask the learners to think about and identify 3 main or key points related to the straight-line method

(mainly: equal amount to be charged for each full year, worked as percentage multiplied by cost or through the formula)

Then ask them to discuss about what is the difference between SLM full-year and monthly.

Then ask them to think about something they have not yet encountered in this topic, being the following situation:

If a question provides the balances for the non-current asset and depreciation as at the end of the previous year, how will these balances be used during this year?

### ***Development 1 – Exercise 7***

[SLIDE 9]

Ask a learner to read for the class Exercise 7.

Through questions to students determine:

- d. What **method** of depreciation?
- e. **Rate** or **useful life** (formula)?
- f. **Annual** or **monthly**?

[SLIDE 10]

Allow some time and ask students to calculate the depreciation charge for the year 2018 for both fixtures & fittings and machinery and check their answer with their peer and then check together the answer.

[SLIDES 11 & 12]

Afterwards ask students to complete the fixture & fittings a/c & the machinery a/c (requirements a and b) and check their answer with their peer and then check together the answer.

[SLIDE 13]

Work out with students the allowance for depreciation – fixtures & fittings a/c (requirement C). In working out, elicit information from students. Allow time for students to copy.

[SLIDE 14]

Work out with students the allowance for depreciation – machinery A/c (requirement d). In working out, elicit information from students. Allow time for students to copy.

[SLIDE 15]

Work out with students the extract from the Statement of Profit or Loss (requirement e). In working out, elicit information from students. Allow time for students to copy.

[SLIDE 16]

Afterwards ask students to prepare the extract from the Statement of Financial Position and check their answer with their peer and then check together the answer.

### ***Development 2 – Introducing the Reducing Balance Method***

After we have seen and worked out question using the Straight Line Method of depreciation, the next method to be discussed is the Reducing Balance Method.

[SLIDE 17]

What do you think is one of the key differences between the SLM and RBM of calculating depreciation? (allow for some discussion and sharing of ideas)

Distribute p. 17 of the notes.

[SLIDE 18]

Outline that the Reducing Balance Method is calculated as a percentage of the Net Book Value (NBV) of the non-current asset.

[SLIDE 18, after one click]

Fill-in the blanks in the box outlining how do we arrive at the NBV.

[SLIDE 18, after a further click]

Then allow some time for the learner to try answering the short example question found on the notes. Afterwards correct it together with the learners.

Why reducing balance?

For each non-current asset, a lesser amount of depreciation is calculated with every year that passes, since the net book value decreases.

[SLIDE 19]

When to use the RBM?

Then ask the learners to suggest for which type of non-current assets do they think that the reducing-balance method should be applied and to explain why. Also, try to elicit an example of a specific non-current asset for which the reducing-balance method is likely to be applied (potential answers include motor vehicles and machinery).

[SLIDE 19, after one click]

In the empty box write something similar to the following:

The Reducing Balance Method is mainly used for those non-current assets which experience a heavy fall in their value in their early years. (and add two examples elicited from learners)

Also note that the allowance for depreciation using the Reducing Balance Method, like we did when we used the Straight Line Method, it can be calculated either on a full-year basis or else on a monthly basis, but for the purposes of the syllabus we will cover only full-year basis.

### ***Development 3 – Exercise 8: RBM Full year***

Distribute p. 18 & 19

[SLIDE 20]

Ask a learner to read for the class Exercise 8.

Through questions to students determine:

- a. What **method** of depreciation?
- b. What is the **rate**)?
- c. **Annual** or **monthly**?

[SLIDE 21]

Ask students to prepare the machinery a/c for the 3 years (requirement a) and check their answer with their peer and then check together the answer.

[SLIDE 22]

Work out with students the depreciation schedule (requirement b). In working out, elicit information from students. Allow time for students to copy.

[SLIDE 23]

Work out with students the allowance for depreciation – machinery a/c (requirement c). In working out, elicit information from students. Allow time for students to copy.

[SLIDE 24]

Work out with students the extract from the Statements of Profit or Loss (requirement d). In working out, elicit information from students. Allow time for students to copy.

[SLIDE 25]

Afterwards ask students to prepare the extract from the Statements of Financial Position and check their answer with their peer and then check together the answer.

### *Closure*

[SLIDE 26]

HW for next lesson (this shall be collected and assessed by the teacher):

- Exercise 5 (explain briefly what they need to do)
- Exercise 6

Also ask learners to carry out some research at home about how depreciation is linked to a number of important accounting concepts in addition to the accrual concept which was already discussed.

Thus, conclude by putting forward the following question for discussion:

Do you think it fine for a business to change the depreciation policy whenever the business feels like? Why? Are there any consequences?

# Depreciation Lesson 4



1

Motor Vehicle A/c					
Date	Details	€	Date	Details	€
2017			2017		
Jul 1	Bank				
2018			2018		
Jan 1			Dec 31	Balance c/d	

4

## Exercise 4



2

Machinery A/c					
Date	Details	€	Date	Details	€
2016			2016		
Aug 1			Dec 31	Balance c/d	
2017			2017		
Jan 1			Dec 31	Balance c/d	
Mar 1	Bank				
2018			2018		
Jan 1			Dec 31	Balance c/d	

5

### Depreciation Schedule (SLM)

Non-Current Asset	Cost €	Depreciation		
		2016	2017	2018
Machine 1	6,000	€500	€1,200	€1,200
Machine 2	15,000	-	€1,800	€2,160
		€500	€3,000	€3,360
M. Vehicle	10,800	-	€1,080	€1,080

3

### Allowance for depreciation – M. Vehicle A/c

Date	Details	€	Date	Details	€

6

Accounting Year 10

Allowance for depreciation - Machinery A/c

Date	Details	€	Date	Details	€
2016			2016		
Dec 31	Balance c/d		Dec 31		
2017			2017		
Dec 31			Jan 1		
			Dec 31	Profit & Loss	
2018			2018		
Dec 31			Jan 1	Balance b/d	
			Dec 31		

7

Accounting Year 10

*Depreciation Charge for 2018:*

Fixtures & Fittings:

Machinery:



Accounting Year 10

- Identify 3 key points related to the SLM.
- Difference between monthly & full-year
- If a question provides the balances for the non-current asset and depreciation as at the end of the previous year, how will these balances be used during this year?



8

Accounting Year 10

Fixtures and Fittings A/c

Date	Details	€	Date	Details	€
2018			2018		

11

Accounting Year 10

Exercise 7

	Cost	Depreciation
	€	€
Machinery	60,000	22,000
Fixtures & Fittings	18,500	7,500



Accounting Year 10

Machinery A/c

Date	Details	€	Date	Details	€
2018			2018		

12

Accounting Year 10

Allowance for depreciation – Fixtures & Fittings A/c

Date	Details	€	Date	Details	€
2018			2018		
Dec 31	Balance c/d		Jan 1	Balance b/d	
			Dec 31	Profit and Loss	

13

Accounting Year 10

Statement of Financial Position as at 31<sup>st</sup> December 2018 (extract)

	Cost	Depreciation	Net Book Value
	€	€	€
<u>Non-Current Assets:</u>			

16

Accounting Year 10

Allowance for depreciation – Machinery A/c

Date	Details	€	Date	Details	€
2018			2018		
Dec 31	Balance c/d		Jan 1	Balance b/d	
			Dec 31	Profit and Loss	

14

Accounting Year 10

## The Reducing Balance Method

What do you think is one of the key differences between the SLM and RBM of calculating depreciation?



17

Accounting Year 10

Statement of Profit or Loss for the year ended 31<sup>st</sup> December 2018 (extract)

	€	€
<u>Less Expenses:</u>		

15

Accounting Year 10

## The Reducing Balance Method

The Reducing Balance Method is calculated as a percentage of the Net Book Value (NBV) of the non-current asset.

Net Book Value = \_\_\_\_\_ of the Non-Current Asset - \_\_\_\_\_ depreciation to date.  
Therefore, the Reducing Balance Method is calculated as follows: % x Net Book Value



Example: A machine was bought on 1st January 2017 for €20,000. A full year depreciation is charged at 10% p.a. using the Reducing Balance Method. Calculate the depreciation to be charged for the years 2017, 2018 & 2019.

18

## The Reducing Balance Method

When it is recommended to use the RBM?

The Reducing Balance Method is mainly used for those non-current assets which experience a heavy fall in their value in their early years.

Such as: M. Vehicles & Machinery

### Depreciation Schedule (RBM)

Non-Current Asset	Cost	Depreciation		
	€	2016	2017	2018

## Exercise 8



### Allowance for Depreciation - Machinery A/c

[illegible]

## Machinery A/c

Date	Details	€	Date	Details	€
2016			2016		
2017			2017		
2018			2018		

Statement of Profit or Loss for the year ended 31<sup>st</sup> December (extracts)

	2016		2017		2018	
	€	€	€	€	€	€
<u>Less Expenses:</u>						

Accounting Year 10

Statement of Financial Position as at 31<sup>st</sup> December (extracts)

		Cost	Depreciation	Net Book Value
		€	€	€
2016	Non-Current Assets:			
2017	Non-Current Assets:			
2018	Non-Current Assets:			

25

Accounting Year 10

## HW

- Exercise 5 (SLM monthly)
- Exercise 6 (SLM mix)
- Research about Depreciation & Accounting Concepts!



26

Accounting Year 10

## Depreciation Lesson 4



27

LESSON PLAN - 5			
Class:	Year 10	Date:	
Subject	Accounting	Time:	
Topic:	Depreciation	Duration:	80 minutes
Specific:	Identify the relevance of various accounting concepts to depreciation and conclude the Reducing Balance Method.	Resources:	White board markers PowerPoint Lesson 5 Interactive Notes Depreciation & Accruals Activity Cut Out Scissors Work Sheet: Dep & Accounting Concepts

### ***Objectives***

#### **General Objectives:**

- By the end of the lesson the learners shall consolidate their knowledge about and be able to calculate depreciation using the Reducing Balance Method. Learners shall also appreciate and identify how depreciation is closely linked to various accounting concepts.

#### **Specific Objectives:**

- To consolidate learner's ability to deal with questions involving the Reducing Balance Method.
- To become aware how accounting for depreciation is closely linked with the accruals concept.
- To appreciate how the depreciation is also related to a number of other accounting concepts
- To be able to build and connect with previously learnt content.
- To assist learners in becoming better team players and to collaborate together.
- To encourage a positive atmosphere towards dialogue in class and critical thinking

### ***Accounting Learning Outcome Framework***

This lesson covers the following Learning Outcomes:

- **5.1j** - Identify the main accounting concept applicable to the accounting of depreciation (the accruals concept).
- **5.2j** - Explain the importance of the accruals concept in the valuation of non-current assets and/or in the measurement of profit.
- **5.3j** - Apply the accruals concept in the computation of the annual depreciation charge taking into account the factors of depreciation.
- **5.1k** - Identify the other accounting concepts applicable to non-current assets.

- **5.2k** - Illustrate how each of these concepts applies to the valuation of non-current assets.
- **5.3k** - Evaluate the application of accounting concept/s to given situations.
- **5.3l** - Compute depreciation using the straight-line method for one or more non-current assets and/or for one or more financial years.
- **5.2m** - Calculate depreciation charge for the year using the reducing balance method.
- **5.3m** - Compute depreciation using the reducing balance method for one or more non-current assets and/or for one or more financial years that is the same as the calendar year.
- **5.3n** - Construct an allowance for depreciation account using the straight line and/or the reducing balance method.

### ***Set Induction – Depreciation & accruals concept***

[SLIDE 2]

Divide the class into groups of 4 learners. (refer to p. 185 for details about how to go about this activity in class)

Provide each group two cut-outs of the motor van outline (found in Depreciation & Accruals Activity document) and a scissor. Also distribute to each learner a copy of the work sheet Depreciation and Accounting Concepts.

Give a brief introduction and allow time for learners to follow the instructions and complete the tasks found on the worksheet.

[SLIDES 3-5]

Afterwards go through the questions of the work sheet and create a short discussion with the learners, who will share the work carried out in groups.

### ***Introduction – Depreciation & relevant accounting concepts***

[SLIDE 6]

Ask learners about the task they had to do at home, relating to searching for relevant accounting concepts relating to depreciation.

Write in point form the learner's contributions on the board at this point. These shall be referred to later on during the explanation.

[SLIDE 7]

Then distribute p. 20 of the notes. Allow some time for the learners to work in the same group as before to match the accounting concepts with the appropriate definitions. Afterwards correct it in-class.

Then move on to identify how these accounting concepts are related to depreciation. Give an example through the accruals concept which would have already been explained earlier in the lesson and then allocate one concept to each group and ask them to think about it and explain to the rest of the class how the assigned concept is related to depreciation.

Note: After each concept allow time for learners to write how the accounting concept relates to depreciation.

***Development 1 – Exercise 9: RBM Full year & SLM monthly***

[SLIDE 8]

Ask a learner to read for the class Exercise 9.

Through questions to students determine:

- g. What **method** of depreciation?
- h. **Rate** or **useful life** (formula)?
- i. **Annual** or **monthly**?

[SLIDE 9]

Work out with students the depreciation schedule (requirement a). In working out, elicit information from students. Allow time for students to copy.

[SLIDE 10]

Ask students to prepare the motor vehicle a/c (requirement b) and check their answer with their peer and then check together the answer.

[SLIDE 11]

Ask students to prepare the machinery a/c (requirement c) and check their answer with their peer and then check together the answer.

[SLIDE 12]

Work out with students the allowance for depreciation – motor vehicles a/c (requirement d). In working out, elicit information from students. Allow time for students to copy.

[SLIDE 13]

Afterwards ask students to prepare the allowance for depreciation – machinery a/c (requirement e). and check their answer with their peer and then check together the answer.

***Development 2 – Exercise 10: RBM & SLM full year and with opening balance***

Distribute p. 23

[SLIDE 14]

Ask a learner to read for the class Exercise 10.

Through questions to students determine:

- a. What **method** of depreciation?
- b. **Rate** or **useful life** (formula)?
- c. **Annual** or **monthly**?

[SLIDE 15 & 16]

Ask students to prepare the fixture & fittings A/c (requirement a) and the machinery a/c (requirement b) check their answer with their peer and then check together the answer.

[SLIDE 17]

Work out with students the allowance for depreciation – fixture & fittings a/c (requirement c). In working out, elicit information from students. Allow time for students to copy.

[SLIDE 18]

Work out with students the allowance for depreciation – machinery a/c (requirement d). In working out, elicit information from students. Allow time for students to copy.

[SLIDE 19]

Work out with students the extract from the Statement of Profit or Loss (requirement e). In working out, elicit information from students. Allow time for students to copy.

[SLIDE 20]

Afterwards ask students to prepare the extract from the Statement of Financial Position (requirement f) and check their answer with their peer and then check together the answer.

***Closure***

[SLIDE 21]

HW for next lesson Exercise 11 (which is similar to Ex. 10), distribute p. 24  
To conclude, ask learners to share with the classmates something they feel they have learnt during this lesson and why it is important.

## Depreciation Lesson 5



1

### Activity

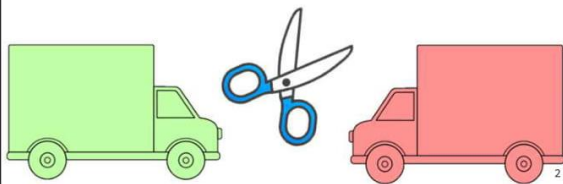


**Step 4:** Consider and discuss the following questions in your group and take down some of the points discussed in the provided space.

- What are you noticing with regards to income generated and depreciation charged each year?
- From the provided depreciation charge per year, could you identify which method of depreciation is being used? Explain your answer.

4

### Activity



2

### Activity



**Step 4:** Consider and discuss the following questions in your group and take down some of the points discussed in the provided space.

- How should we account for income generated by using the motor van and for the depreciation charged for each year?
- Which accounting concept explains the accounting treatment in (c) and step 3 in the previous activity? Explain your answer.

5

### Activity

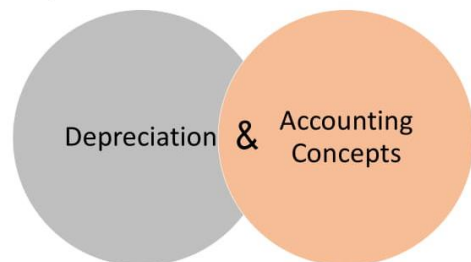


**Step 1:** Write the figures from the provided table as follows: Income Generated on the motor van shaded in green and the depreciation charged on the side shaded in red.

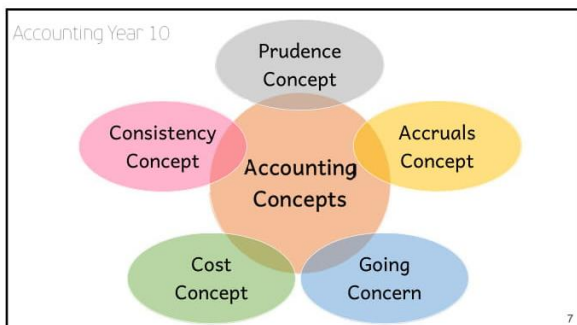
**Step 2:** Following the dotted lines that separate one year from another, cut out the years from each shaded sides of the same motor van

**Step 3:** Gather the two shaded sides that you have cut out and group them according to the years.

3



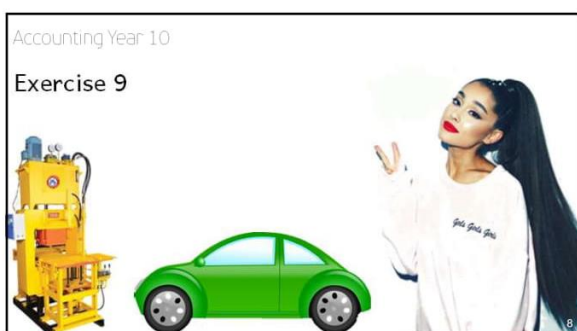
6



Accounting Year 10

Motor Vehicle A/c					
Date	Details	€	Date	Details	€
2016			2016		
2017			2017		

10



Accounting Year 10

Machinery A/c					
Date	Details	€	Date	Details	€
2015			2015		
2016			2016		
2017			2017		

11

Accounting Year 10

Depreciation Schedule

Non-Current Asset	Cost	Depreciation		
	€	2015	2016	2017

9

Accounting Year 10

Allowance for Depreciation – Motor Vehicles A/c					
Date	Details	€	Date	Details	€

12

Accounting Year 10

Allowance for Depreciation – Machinery A/c					
Date	Details	€	Date	Details	€
2015			2015		
2016			2016		
2017			2017		

Accounting Year 10

Machinery A/c					
Date	Details	€	Date	Details	€
2016			2016		



Accounting Year 10

Allowance for depreciation – Fixture & Fittings A/c					
Date	Details	€	Date	Details	€
2016			2016		

Accounting Year 10

Fixtures and Fittings A/c					
Date	Details	€	Date	Details	€
2016			2016		

Accounting Year 10

Allowance for depreciation – Machinery A/c					
Date	Details	€	Date	Details	€
2016			2016		

Statement of Profit or Loss for the year ended 31<sup>st</sup> December 2016 (extract)

	€	€
<u>Less Expenses:</u>		

19

Depreciation  
Lesson 5

22

Statement of Financial Position as at 31<sup>st</sup> December 2016 (extract)

	Cost	Depreciation	Net Book Value
	€	€	€
<u>Non-Current Assets:</u>			

20

## HW

## - Exercise 11

Share something that you have  
learnt today!



21

## Depreciation & Accruals Activity

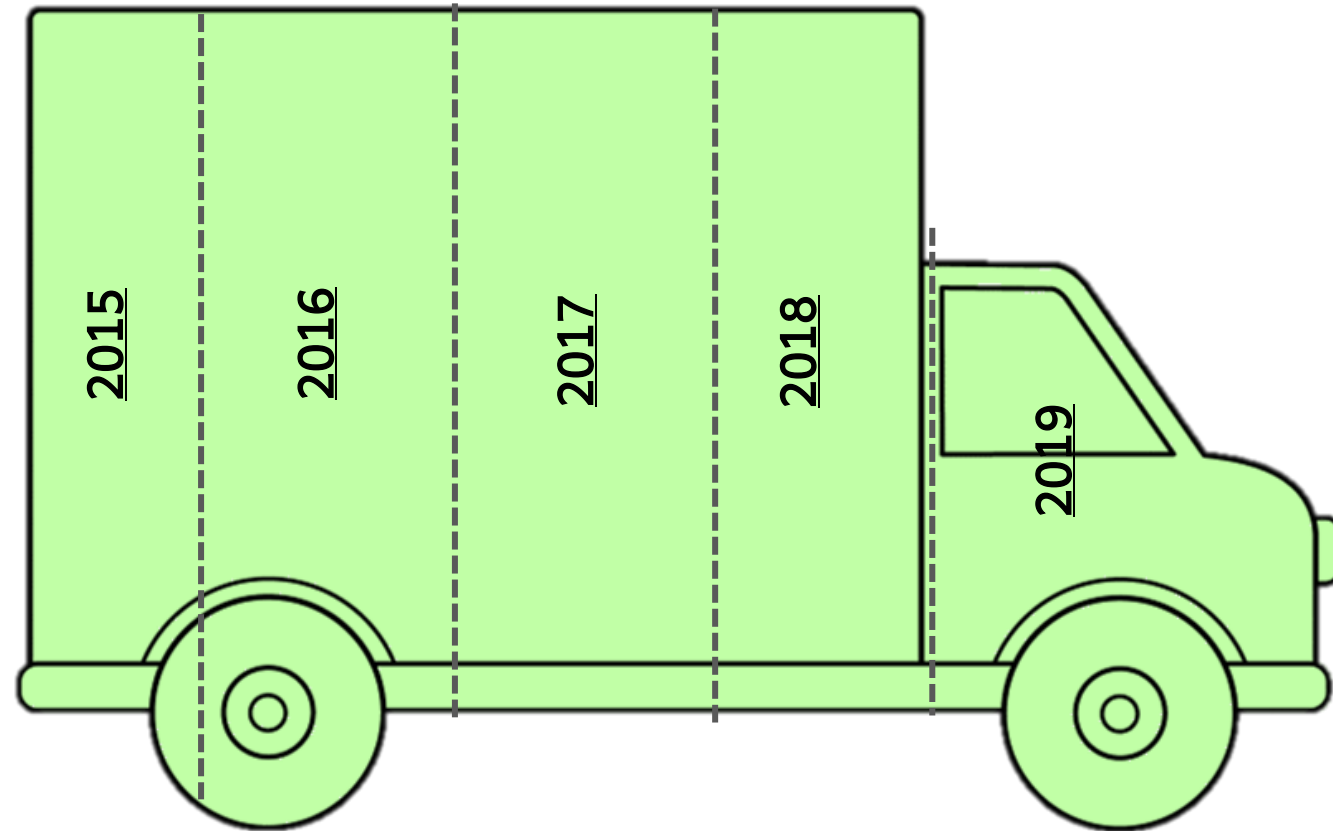
In order to carry out this activity the educators shall follow the following points.

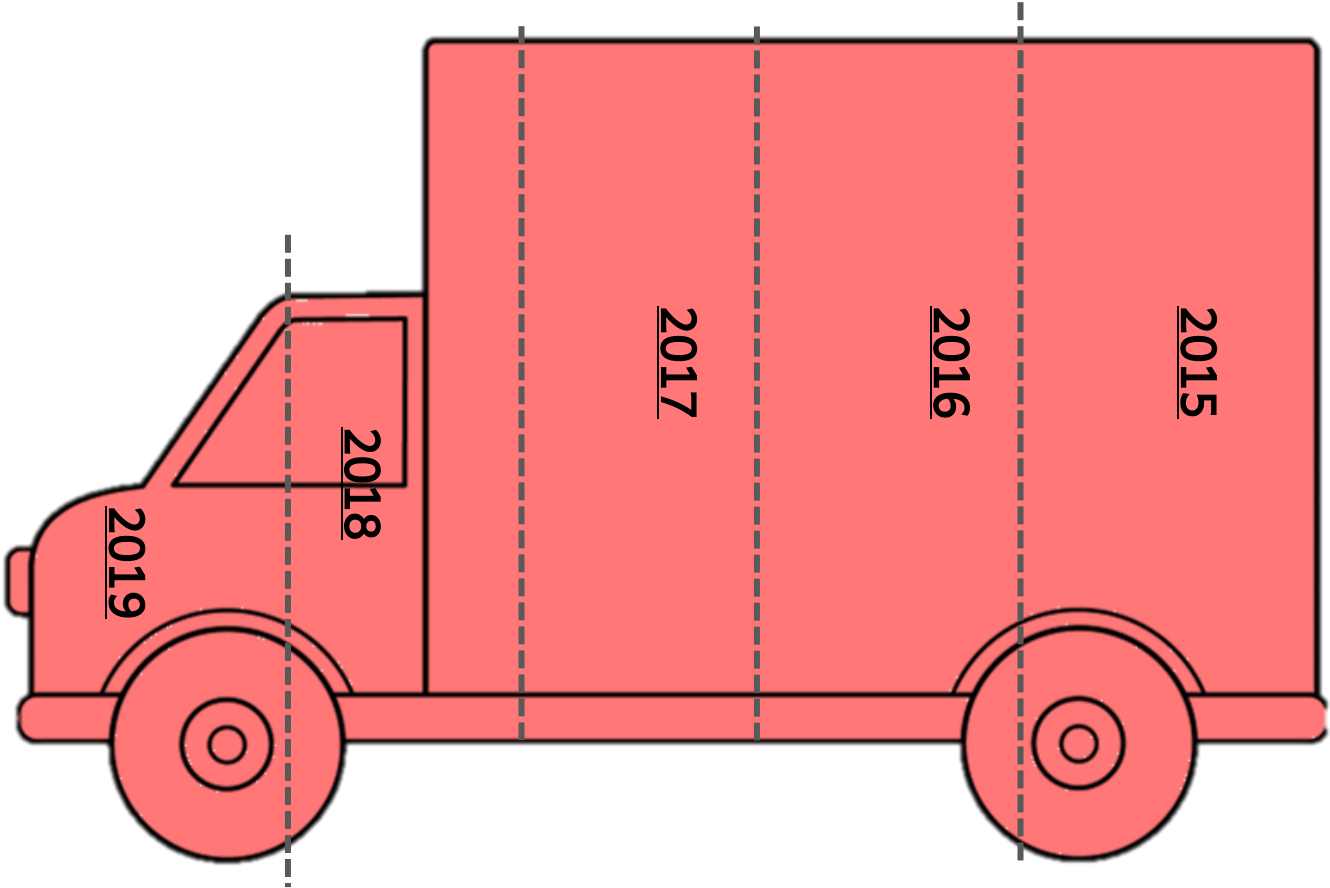
### *Remote Preparation:*

- This activity is to be carried out during the set induction part of Lesson 5.
- The educators shall prepare beforehand a copy in colour of the motor vans found on the next page. Each group shall be given one copy.
- Each shall be provided with two motor van cut outs, one shaded in red and one shaded in green. In addition, each group shall also be provided with a scissor.
- Prepare a copy for each learner of the worksheet entitled “Depreciation & Accounting Concepts”.

### *During lesson 5:*

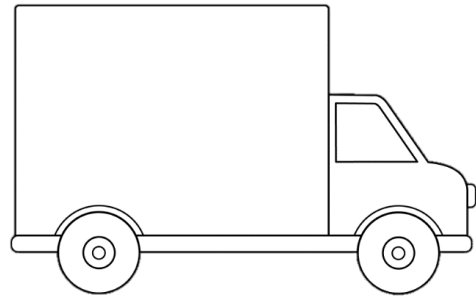
- Split the class into groups of 4 learners (or as suitable for your group).
- Provide each group with the two motor van cut outs and a scissor.
- Provide each learner with the worksheet entitled “Depreciation & Accounting Concepts”.
- Go through the worksheet with the learners. Read first the scenario and **inform the learners that the motor van cut outs represent the two sides of the same motor van.**
- Then move step by step with the learners as follows:
  - Step 1: Ask the learners to write down the figures from the table found on the worksheet follows; Income Generated is to be written on the motor van shaded in green and the depreciation charged is to be written on the other side of the motor van shaded in red.
  - Step 2: Ask the learners to cut out the years from each shaded sides of the same motor van by following the dotted lines.
  - Step 3: Ask the learners to gather the two shaded sides that they have cut off and group them according to the years.
  - Step 4: Ask learners to consider and discuss the following questions in their groups and take down some of the points discussed in the provided space. (Allow some time for this part)
- After allowing time for the learners to finish their discussion in their groups, go through the questions and elicit responses from the learners.





## Worksheet – Depreciation & Accounting Concepts

You are the owners of a business and in 2015 you decided to purchase a motor van to be used for business use. The motor van was purchased for €20,000. You are now in 2020 and you have managed to get hold of some useful information. The motor van was to be used for 5 years from the year of purchase and each year depreciation was charged on a full year basis. The table below shows income generated from using the motor van for business use and the charged depreciation:



Year	Income generated	Depreciation charged
2015	€3,500	€4,000
2016	€5,000	€3,200
2017	€6,200	€2,560
2018	€4,900	€2,048
2019	€5,000	€1,638

### **Activity:**

**Step 1:** Write the figures from the table above as follows, Income Generated on the motor van shaded in green and the depreciation charged on the side shaded in red.

**Step 2:** Following the dotted lines that separate one year from another, cut out the years from each shaded side of the same motor van

**Step 3:** Gather the two shaded sides that you have cut out and group them according to the years.

**Step 4:** Consider and discuss the following questions in your group and take down some of the points discussed in the provided space.



## **LESSON PLAN - 6**

Class:	Year 10	Date:	
Subject	Accounting	Time:	
Topic:	Depreciation	Duration:	80 minutes
Specific:	Introducing the Disposal of Non-Current Assets	Resources:	White board markers PowerPoint Lesson 6 Interactive Notes Containers with label (x3) Cars (x3) Money Accumulated Depreciation Flashcard

### ***Objectives***

#### **General Objectives:**

- By the end of the lesson the learners shall be able to understand how to account for disposal of non-current assets and prepare the disposal account.

#### **Specific Objectives:**

- To assist learners in identifying what is meant by disposal of non-current assets
- To become aware of the double entries required to account for disposal of non-current assets
- To be able to discuss these double entries and what they represent
- To be able to work out questions with disposal using the straight-line method on a full-year basis.
- To encourage learners to adopt a questioning approach towards the steps involved in recording disposal in an effort to encourage deep learning.

### ***Accounting Learning Outcome Framework***

This lesson covers the following Learning Outcomes:

- **5.3l** - Compute depreciation using the straight-line method for one or more non-current assets and/or for one or more financial years.
- **5.2m** - Calculate depreciation charge for the year using the reducing balance method.
- **5.3n** - Fill in an allowance for depreciation account in a given template from a given set of figures.
- **5.3n** - Construct an allowance for depreciation account using the straight line and/or the reducing balance method.
- **5.1o** - Identify the factor/s applicable when disposing a non-current asset.
- **5.2o** - Fill in an asset disposal account in a given template from a given set of figures showing the resultant profit or loss on disposal.
- **5.3o** - Construct an asset disposal account.

➤ **5.2p** - Prepare appropriate extracts in the Financial Statements.

***Set Induction – In class interactive correction***

[Slides 2 – 5]

Inform students that the question they had for HW will be corrected in class together. Project through the presentation incomplete answers of Exercise 11 and then in turns ask different students to continue the accounts on the whiteboard (they can bring with them their task).

Check for any issues up to this point.

***Introduction – The Disposal of non-current assets***

Explain that at a certain point in time, a business might opt to sell an asset (dispose of an asset).

To explain the process involved to account for disposal of a non-current asset the following **INTERACTIVE DEMONSTRATION** is suggested as follows:

Prepare three transparent containers, each marked as:

- Non-current asset a/c
- Allowance for depreciation a/c
- Disposal a/c

Make sure to have:

- 3 small cars that can be placed together into one container
- Some printed money (or monopoly money)
- A piece of paper shaded in red and with the words accumulated depreciation on sold car

[Slide 7]

Start narrating the story of how a business bought 3 cars back in 2016, each costing €10,000. At this stage put the three cars into the Non-Current Asset A/c container. Use the ppt throughout the explanation to show what is happening in the accounts.

Then explain how in August 2018, the business decided to sell one of these cars. As a result, the following step 1 is to be physically carried out.

Step 1: Take out a car from the NCA container and place it into the disposal container.

Ask the learners the following:

- a) If one car was sold, how shall this be accounted for in the Non-Current Asset A/c?
- b) At what amount? (at Original Cost)
- c) What is the corresponding double entry (with reference to the demonstrated step 1)?

[Slides 8 & then click for Disposal A/c]

Explain how up to 1<sup>st</sup> January 2018, depreciation on all the three cars amounted to €9,000. As a result, accumulated depreciation on the sold car amounted to €3,000. As a result, the following step 2 is to be physically carried out.

Step 2: Take out the accumulated depreciation (red-shaded) paper from the depreciation container and place it into the disposal container.

Ask the learners the following:

- a) What do you think should be the double entry to reflect this step?

[Slide 9]

(through the PPT explain that the depreciation charge for the year amounted to €2,000, so as to close off the Allowance for depreciation a/c)

[Slide 10 & then click for Disposal A/c]

[Slide 11]

Explain that the business managed to sell the car for €7,500. This amount was received in cash.

Step 3: Place some money (representing the €7,500, sales proceeds) into the disposal account

Ask the learners the following:

- a) What do you think should be the double entry to reflect this step?

[Slide 11 one click]

[Slide 12]

Step 4: Ask learners to look at the disposal a/c, which has now been closed off with the transfer to Profit and Loss A/c (part of the Statement of Profit or Loss). Then ask about whether they think that the business made a profit or a loss on the sale/disposal of the non-current asset? Ask them to provide reasons.

Afterwards distribute p. 25 of the notes and go through the accounting entries one by one and make reference to the steps carried out in the demonstration.

[Slides 13 - 14]

### ***Development 1 – Exercise 12: Disposal SLM Full-year***

Ask a learner to read for the class Exercise 12.

[Slide 15]

Through questions to students determine:

- a. What **method** of depreciation?
- b. **Rate** or **useful life** (formula)?
- c. **Annual** or **monthly**?

[Slide 16]

Complete with the assistance of students the motor vehicles a/c. In working out, elicit information from students. Allow time for students to copy.

[Slide 17]

Complete with the assistance of students the allowance for depreciation – motor vehicles a/c. In working out, elicit information from students. Allow time for students to copy.

[Slide 18]

Complete with the assistance of students the motor vehicles - disposal a/c. In working out, elicit information from students. Allow time for students to copy.

[Slides 19 - 20]

Work out with students the extract from the Statement of Profit or Loss & Statement of Financial Position. In working out, elicit information from students. Allow time for students to copy.

### ***Development 2 – Exercise 13: Disposal SLM full-year***

[Slide 21]

Ask a learner to read for the class Exercise 13.

Through questions to students determine:

- a. What **method** of depreciation?
- b. **Rate** or **useful life** (formula)?
- c. **Annual** or **monthly**?

Afterwards allow some time for the learners to work out in pairs the question by constructing the accounts as required.

Note: if time permits correct in class. However, if the first part of the lesson takes longer to explain, depending on the group, this question can be given as HW (or to complete it at home) and correct it in the following lesson.

### *Closure*

[Slides 22 - 24]

To conclude the lesson put forward the following situations and ask students to identify which of the 4 steps of recording disposal of non-current assets is being referred to:

- a) Transfer accumulated depreciation of the sold non-current asset to disposal a/c (Step 2)
- b) Show an extract of P/L and ask students where to list down disposal if:
  - i) It is a loss on disposal
  - ii) It is a profit on disposal
- c) Transfer original cost of the sold non-current asset to the disposal a/c (step 1)
- d) On which side do we record the proceeds from a sale of a non-current asset in the disposal a/c? (credit)

Accounting Year 10

# Depreciation

## Lesson 6



1

Accounting Year 10

Allowance for depreciation – motor vehicles a/c					
Date	Details	€	Date	Details	€
2017			2017		

4

Accounting Year 10

Motor vehicles a/c					
Date	Details	€	Date	Details	€
2017			2017		

2

Accounting Year 10

Allowance for depreciation – machinery a/c					
Date	Details	€	Date	Details	€
2017			2017		

5

Accounting Year 10

Machinery a/c					
Date	Details	€	Date	Details	€
2017			2017		

3

Accounting Year 10

# Disposal of Non-Current Assets



6



Accounting Year 10		
Dr		
Cr	Step 1:	Transfer the cost of the non-current asset to the non-current asset disposal a/c
Dr		
Cr	Step 2:	Transfer the accumulated depreciation of the sold non-current asset to the non-current asset disposal a/c

13

Accounting Year 10					
Motor vehicles a/c					
Date	Details	€	Date	Details	€
2016			2016		
Jan 1	Balance b/d		Jun 1	Disposal	
May 16	Bank		Dec 31	Balance c/d	

16

Accounting Year 10		
Dr		
Cr	Step 3:	Enter the sales proceeds in the bank/cash/t. receivables a/c and the non-current asset disposal a/c
Dr	Profit on disposal	
Cr	Loss on disposal	
Dr		
Cr	Step 4:	Transfer the balance of the non-current asset disposal a/c to the Profit or Loss a/c.

14

Accounting Year 10					
Allowance for depreciation - motor vehicles a/c					
Date	Details	€	Date	Details	€
2016			2016		
Jun 1	Disposal		Jan 1	Balance b/d	
Dec 31	Balance c/d		Dec 31	Profit & Loss	

17



Accounting Year 10					
Motor vehicles - disposal a/c					
Date	Details	€	Date	Details	€
2016			2016		
Jun 1	Motor Vehicles		Jun 1	Allowance for Depreciation	
Dec 31	Profit & Loss		Jun 1	Bank	

18

Accounting Year 10

Statement of Profit or Loss for the year ended 31<sup>st</sup> December 2016 (extract)

	€	€
<u>Less Expenses:</u>		

19

Accounting Year 10



## Summary

- Transfer accumulated depreciation of the sold non-current asset to disposal a/c. Which Step?

22

Accounting Year 10

Statement of Financial Position as at 31<sup>st</sup> December 2016 (extract)

	Cost	Depreciation	Net Book Value
	€	€	€
<u>Non-Current Assets:</u>			

20

Accounting Year 10



## Summary

Statement of Profit or Loss for the year ended 31<sup>st</sup> December 2018 (extract)

	€	€
<u>Less Expenses:</u>		

23

Accounting Year 10

## Exercise 13



21

Accounting Year 10



## Summary

- Transfer original cost of the sold non-current asset to the disposal a/c. Which Step?
- On which side do we record the proceeds from a sale of a non-current asset in the disposal a/c? Why?

24

## Depreciation Lesson 6



25

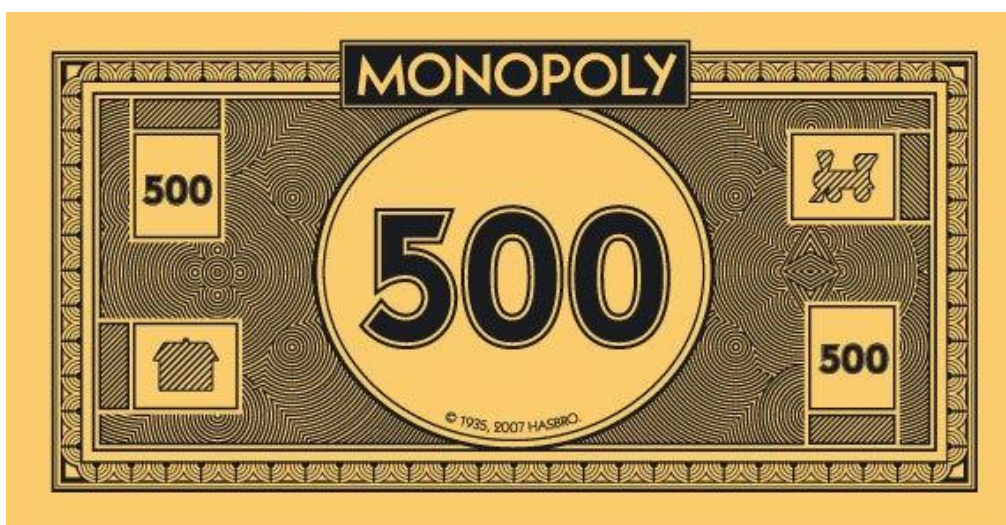
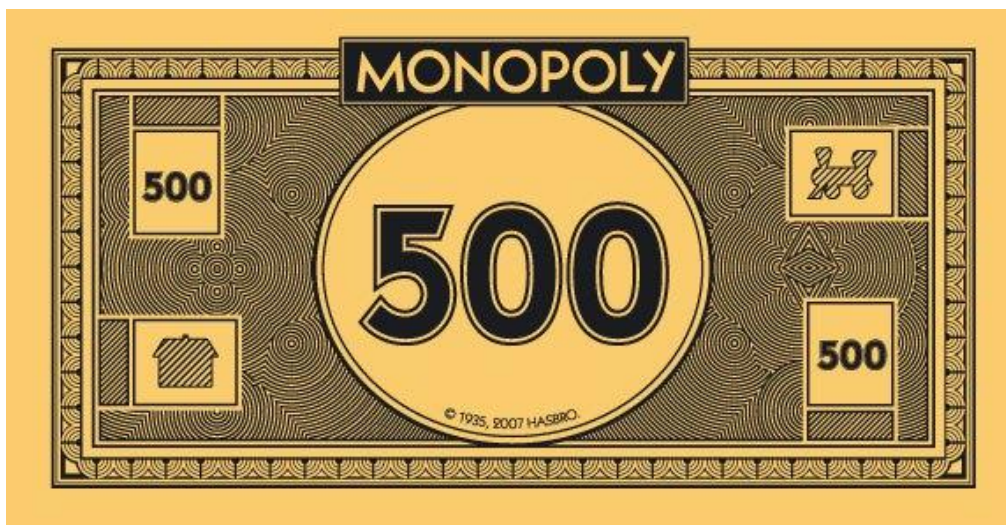
*\*Disposal Introduction Labels and other material*

Non-current  
asset a/c

Allowance for  
depreciation a/c

Asset  
disposal a/c

# Accumulated depreciation



LESSON PLAN - 7			
Class:	Year 10	Date:	
Subject	Accounting	Time:	
Topic:	Depreciation	Duration:	80 minutes
Specific:	Consolidation of Disposal of Non-Current Assets	Resources:	White board markers PowerPoint Lesson 7 Interactive Notes Disposal Steps Activity flashcards

<i>Objectives</i>
<u>General Objectives:</u> <ul style="list-style-type: none"> <li>By the end of the lesson the learners shall consolidate their understanding of how to account for disposal and work questions involving disposal</li> </ul>
<u>Specific Objectives:</u> <ul style="list-style-type: none"> <li>To consolidate learners understanding of the steps involved in accounting for disposal</li> <li>To be able to work out questions with disposal using the straight-line method on a monthly basis.</li> <li>To be able to work out questions with disposal using the reducing balance method on a full-year basis.</li> <li>To be able to work out questions with disposal when given an opening balance</li> <li>To enhance teamwork in problem solving</li> <li>Enhance learner's ability to go deeper their learning through the use of questioning, encouraging an inquiry based learning approach.</li> </ul>

<i>Accounting Learning Outcome Framework</i>
<p>This lesson covers the following Learning Outcomes:</p> <ul style="list-style-type: none"> <li>➤ <b>5.3l</b> - Compute depreciation using the straight-line method for one or more non-current assets and/or for one or more financial years.</li> <li>➤ <b>5.2m</b> - Calculate depreciation charge for the year using the reducing balance method.</li> <li>➤ <b>5.3n</b> - Construct an allowance for depreciation account using the straight line and/or the reducing balance method.</li> <li>➤ <b>5.1o</b> - Identify the factor/s applicable when disposing a non-current asset.</li> <li>➤ <b>5.3o</b> - Construct an asset disposal account.</li> <li>➤ <b>5.2p</b> - Prepare appropriate extracts in the Financial Statements.</li> </ul>

<i>Set Induction – Activity to revise the steps when accounting for disposal</i>
[Slide 2]

Divide students into groups of 5/6 learners (or according to class size). Try to ensure that learners don't make use of their notes for the time being.

Give each group the flashcards. Each group should on a desk place the flashcards in order to form the first 3 steps to keep in mind when working on disposal of non-current assets.

Distribute the papers and allow 2/3 minutes for the students to form the sentences.

### ***Introduction – What is the next step?***

[Slide 3]

While the learners are still next to the desks with the formed first 3 steps of accounting for disposal, ask them to discuss and write the next step, Step 4 when accounting for depreciation.

Afterwards ask them as a group to think and write the double entries next to each step to be carried out when accounting for disposal of non-current assets.

[Slides 4 & 5]

### ***Development 1 – Exercise 14: Disposal SLM monthly***

Distribute p. 28 & 29

[Slide 6]

Ask a learner to read for the class Exercise 14.

Through questions to students determine:

- a. What **method** of depreciation?
- b. **Rate** or **useful life** (formula)?
- c. **Annual** or **monthly**?

[Slide 7]

Ask students to prepare the machinery a/c. Afterwards correct it in class.

[Slide 8]

Ask students to prepare the allowance for depreciation – machinery a/c. Afterwards correct it in class with the participation of the learners

[Slide 9]

Work out with students the machinery – disposal a/c. In working out, elicit information from students. Allow time for students to copy.

[Slide 10]

Work out with students the extract from the Statement of Profit or Loss. In working out, elicit information from students. Allow time for students to copy.

### ***Development 2 – Exercise 15: Disposal RBM full-year***

Ask a learner to read for the class Exercise 15.

[Slide 11]

Through questions to students determine:

- a. What **method** of depreciation?
- b. **Rate** or **useful life** (formula)?
- c. **Annual** or **monthly**?

Afterwards allow some time for the learners to work out in pairs the question by constructing the accounts as required.

However, after some time, do stop and correct together the depreciation schedule and then once learners have completed the task do correct together requirements b – d (make use of slides).

[Slides 12 – 15]

### ***Closure***

[Slides 16 –17]

To conclude the lesson, ask students to help you out with a matching exercise on the presentation that acts a summary of the main points covered thus far in the topic.

Do try to ask learners to explain their reasoning where appropriate and put forward further questions to help them think more into the subject. Probing questions could include:

- Why is depreciation an expense? And what does this imply?
- What is meant by the Net Book Value (NBV)?
- What is the aim of step 3 when accounting for disposal of non-current assets?
- Are there any benefits that emerge from the consistency concept?

Ask them to bring with them past papers of your choice to work out some questions in the coming lesson.

As HW, provide a question similar to these, it could be from a past paper.

Accounting Year 10

# Depreciation

## Lesson 7



1

Accounting Year 10

Dr		Step 1:	
Cr			
Dr		Step 2:	
Cr			

4

Accounting Year 10

### Activity





2

Accounting Year 10

Dr		Step 3:	
Cr			
	Profit on disposal	Loss on disposal	
Dr			
Cr		Step 4:	

5

Accounting Year 10



### What is Step 4?

3

Accounting Year 10

### Exercise 14




6

[illegible]

Accounting Year 10

Statement of Profit or Loss for the year ended 31<sup>st</sup> December 2018 (extract)

	€	€
<u>Less Expenses:</u>		

10

Accounting Year 10


Allowance for depreciation – machinery a/c

<u>Date</u>	<u>Details</u>	<u>€</u>	<u>Date</u>	<u>Details</u>	<u>€</u>

8

Accounting Year 10

Exercise 17



11

[illegible]

### Accounting Year 10

Depreciation Schedule (RBM full year)

<u>Motor Vehicle</u>	<u>Cost</u>	<u>Depreciation</u>	
	€	2016	2017

12

Accounting Year 10

Motor vehicles a/c					
Date	Details	€	Date	Details	€
2015-16			2015-16		
2016-17			2016-17		

13

Accounting Year 10

It is an expense...	Disposal – Step 3
Dr Bank/Cash/T.Receivables Cr Disposal A/c	Disposal – Step 1
Dr Disposal A/c Cr N.C.A. A/c	...means monthly
for the proportion of the year	Depreciation

16

Accounting Year 10

Date	Details	€	Date	Details	€

14

Accounting Year 10

Worked on the NBV...	Consistency concept
No. of years a NCA is expected to be used	Straight Line Method
Depreciation method should not be changed without a good reason	Reducing Balance Method
Worked on cost...	Estimated useful life

17

Accounting Year 10

Date	Details	€	Date	Details	€

15

Accounting Year 10

Depreciation  
Lesson 7



18

## Revision of the steps involved in accounting for disposal

In order to carry out this activity the educators shall follow the following points.

### *Remote Preparation:*

- This activity is to be carried out during the set induction part of Lesson 7.
- The educators shall print and cut out the below 12 flashcards that describe the first three steps of accounting for disposal.
- Each group shall be given a copy of these 12 flashcards.

### *During lesson 7:*

- Split the class into groups of 5 or 6 learners (or as suitable for your group).
- Ask each group to go standing near a table (keep some distance between one group and another)
- Explain that the aim of the activity is for each group to form the first three steps that are involved in accounting for disposal of non-current assets.
- Provide each group with the 12 flashcards.
- Allow them time to form the three steps

transfer the cost

of the non-current asset

to the non-current asset  
disposal a/c

Step 1

Step 2

transfer the accumulated  
depreciation

of the sold non-current  
asset

to the non-current asset  
disposal a/c

### Step 3

enter the sales proceeds

in the bank/cash/  
t. receivables a/c

and the non-current asset  
disposal a/c

<b>LESSON PLAN - 8</b>			
Class:	Year 10	Date:	
Subject	Accounting	Time:	
Topic:	Depreciation	Duration:	80 minutes
Specific:	Conclusion of disposal of non-current assets	Resources:	White board markers PowerPoint Lesson 8 Interactive Notes

### ***Objectives***

#### **General Objectives:**

- By the end of the lesson the learners shall consolidate their ability to work out questions related to the topic of depreciation.

#### **Specific Objectives:**

- To consolidate learner's familiarisation with the methods of depreciation
- To be able to work out questions involving disposal given a particular scenario which involves more than one asset.
- To be able to share ideas with colleagues and be able to identify key points of the topic
- To foster constructive dialogue with and amongst learners that is conducive to learning
- To encourage learners to be critical even outside of the topic in relation to certain world views, such as that of looking at human being as depreciable items.
- To grasp the notion that depreciation cannot be used to describe the value of human beings and their contribution.

### ***Accounting Learning Outcome Framework***

This lesson covers the following Learning Outcomes:

- **5.1i** - Define depreciation.
- **5.3i** - Evaluate the purpose of depreciation.
- **5.3l** - Compute depreciation using the straight-line method for one or more non-current assets and/or for one or more financial years.
- **5.2m** - Calculate depreciation charge for the year using the reducing balance method.
- **5.3n** - Construct an allowance for depreciation account using the straight line and/or the reducing balance method.
- **5.1o** - Identify the factor/s applicable when disposing a non-current asset.
- **5.3o** - Construct an asset disposal account.

### ***Set Induction – In class interactive correction***

[Slide 2]

Inform students that the question they had for HW will be corrected in class together. Project through the presentation incomplete answers of the question given as HW and then in turns ask different students to continue the accounts on the whiteboard (they can bring with them their task).

Check for any issues up to this point.

### ***Introduction – Describing the topic***

[Slide 3]

Learners are to be split into groups.

Each group will be asked to prepare a sequential list of the most important points related to the topic of depreciation. To help them do, they can make use of their notes. Allow some time for this activity.

To assist the learners in the task, from time to time, the teacher can make the following remarks or questions to enhance their thinking:

[Slides 4-7, each questions enters on click]

- What is depreciation?
- Does depreciation apply to all non-current assets?
- Why is it important for a business to account for depreciation?
- What are the causes of depreciation?
- Which methods can be used to calculate depreciation?
- What are differences between these methods?
- In which circumstances it better to use one method rather than the other?
- Which accounting concepts are closely linked with depreciation?
- What is understood by disposal of non-current assets?
- How do we account for disposal?
- Why is there a need to account for disposal?

Afterwards the groups will share their work and explain their reasoning.

### ***Development 1 – Exercise 16***

Distribute p. 32

[Slide 9]

Ask a learner to read for the class Exercise 16.

Through questions to students determine:

- a. What **method** of depreciation?
- b. **Rate** or **useful life** (formula)?
- c. **Annual** or **monthly**?

[Slide 10]

Ask students to work out the depreciation charge for the year and then prepare the allowance for depreciation - buildings a/c. Afterwards correct it in class.

[Slide 11]

Work out with students the figure to be transferred to the disposal a/c, the depreciation charge for the year and then the allowance for depreciation - m. vehicles a/c. In working out, elicit information from students. Allow time for students to copy.

[Slide 12]

Work out with students the depreciation charge for the year and then prepare the Allowance for depreciation - furniture a/c. In working out, elicit information from students. Allow time for students to copy.

[Slide 13]

Ask students to prepare the m. vehicles - disposal a/c. Afterwards correct it in class.

### ***Development 2 – Past Papers***

[Slide 14]

Work a question from a past paper, maybe start from some multiple-choice questions and then move to a question.

The suggestion is to allow learners to try answering the question on their own while the teacher goes around the class to check for difficulties. From time to time stopping the class to correct the question in stages by involving the learners

### ***Closure***

As HW, provide a question similar to these from a past paper.

Also inform students to think about any difficulties they have related to this topic so that they could ask about them in the upcoming lesson, which shall be the last one relating to this topic.

[Slide 15]

Conclude by asking learners to share their reaction towards the cartoon projected through the presentation and is found on the notes on p. 33 (to be distributed). Ask the learners to follow the instruction on p. 33, that of looking at the cartoon, think about the question and jot down some of their reflections.

Assist the learners by encouraging them to think about how a business could look at the employees through the depreciation lens and ask them to explain how.

Through a short discussion outline how depreciation outside of the accounting world can be a way of thinking that could be very dangerous. Explain how some businesses might end up looking at older employees as those who are nearly fully depreciated and this might lead to unfair treatment and a negative approach towards these employees. Also outline how this notion can sometimes be present in the society as well, particularly those viewpoints which look at the elderly as those who are no longer capable of giving anything back to the society. Thus, while the application of the depreciation concept towards objects is understandable and acceptable, however this cannot be said if the depreciation notion is used in relation to human beings.

## Depreciation Lesson 8



1



### Activity – think about...

- What is depreciation?
- Does depreciation apply to all non-current assets?
- Why is it important for a business to account for depreciation?

4

The following slides shall contain the empty t-accounts to correct in-class the HW from a past paper of your choice.

2



### Activity – think about...

- What are the causes of depreciation?
- Which methods can be used to calculate depreciation?
- What are differences between these methods?

5

### Activity

Prepare in groups a sequential list of the most important points Related to this topic of Depreciation!



3



### Activity – think about...

- In which circumstances it better to use one method rather than the other?
- Which accounting concepts are closely linked with depreciation?

6



## Activity – think about...

- What is understood by disposal of non-current assets?
- How do we account for disposal?
- Why is there a need to account for disposal?

7

## Allowance for depreciation – buildings a/c

Date	Details	€	Date	Details	€
2017			2017		

10

## Activity

Prepare in groups a sequential list of the most important points Related to this topic of Depreciation!



8

## Allowance for depreciation – m. vehicles a/c

Date	Details	€	Date	Details	€
2017			2017		

11

## Exercise 16



9

## Allowance for depreciation – furniture a/c

Date	Details	€	Date	Details	€
2017			2017		

12

## M. vehicles – disposal a/c

Date	Details	€	Date	Details	€
2017			2017		

13

Depreciation  
Lesson 8

16

The following slides shall contain  
a question from past-papers to be  
worked in-class.

14

- What is your reaction?
- What message is it trying to convey?
- Do you agree? Why?



15

LESSON PLAN - 9			
Class:	Year 10	Date:	
Subject	Accounting	Time:	
Topic:	Depreciation	Duration:	80 minutes
Specific:	Concluding the topic by working further questions	Resources:	White board markers Past Papers

<i><b>Objectives</b></i>
<u>General Objectives:</u> <ul style="list-style-type: none"> <li>By the end of the lesson the learners shall be able to clarify issues related to this topic and increase their confidence in answering past papers relating to depreciation.</li> </ul>
<u>Specific Objectives:</u> <ul style="list-style-type: none"> <li>To consolidate learner's familiarisation with the theoretical aspect of depreciation</li> <li>To be able to work out questions involving different aspects of depreciation</li> <li>To foster dialogue with and amongst learners that is conducive to learning</li> <li>To encourage peer learning as an opportunity to grow and deepen one's own knowledge and comprehension</li> <li>To assist learners to remember how depreciation can be misused and hence the need to be critical of its use to identify potential unethical behaviour.</li> </ul>

<i><b>Accounting Learning Outcome Framework</b></i>
<p>During this lesson a vast majority of the learning outcomes related to depreciation and potentially to other topics such as accruals and prepayment are likely to be covered. This depends on the teacher's choice of past paper questions.</p>

<i><b>Introduction – In class interactive correction</b></i>
<p>Inform students that the question they had for HW will be corrected in class together.</p> <p>Draw on the board empty t-accounts and in turns ask different students to continue the accounts on the whiteboard (they can bring with them their task).</p>

<i><b>Development – How to proceed with the lesson</b></i>
<p>Ask students for any difficulties they might have related to this topic, as you have asked them to think about and prepare their queries in the previous lesson.</p>

If students do have queries, try to get other learners to help you tackling these questions from their peers as this could serve as a great opportunity for peer learning to take place. This could lead to some effective dialogic teaching put into practice.

Another suggestion (which doesn't exclude the previous one) is that if there are students who along the path the teacher feels that they have fallen behind in comparison with their peers, the teacher could take the opportunity to group these learners and while the others are working a question, the teacher provides these learners with additional explanation.

Irrespective of whether learners come up with difficulties or not, prepare beforehand a selection of questions, which can be taken from the suggested past papers listed at the end of the scheme of work. These questions shall be worked out in class. The suggestion is to have one question that is worked in groups or pairs and at least another question that is worked by the learners on their own.

Each question shall be corrected in class by involving the learners, similar to the introductory section. In addition, it is highly recommended to go around the class as much as possible during this lesson. While this is applicable to all lessons, in this lesson it becomes even more important as it can be beneficial, especially for those learners who are too shy to clarify their issues in front of the whole class.

### ***Closure***

As conclusion ask learners to think and discuss with a peer about pros and cons of depreciation as discussed throughout this topic.

Allow some time and then ask the learners to share their ideas with the rest of the group.

# Introduction to Depreciation

## Case Study 1

Mark bought a new electric car for €30,000 back in 2015. At that time, he thought that this car would be used for 5 years, after which the value of the car would fall to €20,000.



1) Using the above information identify the following:

Cost	Years of ownership	Value to be sold

2) By the year ending 31<sup>st</sup> December 2019, by how much would the value of the car decrease?

\_\_\_\_\_

3) What are the possible reasons why a car starts experiencing a decrease in value once the user starts making use of it? \_\_\_\_\_

### **DID YOU KNOW?**

Most of the **Non-Current Assets** decrease in value as time goes by.

Write down list of Non-Current Assets that a business is likely to have in its books and determine whether it is likely that their value **decrease** by time (depreciate) or **increase** by time (appreciate).


Non-Current Asset	Depreciate or Appreciate?



A real-life example of depreciation is related to the **car insurance service**. In fact, each and every year the car insurance company will estimate a value for your car. Does the insurance company estimate a higher or a lower value from one year to another? \_\_\_\_\_

## Case Study 2

Nikita bought a Ford Fiesta on 6<sup>th</sup> January 2014 for €14,000. She insured her new car with ABC Insurance Ltd and they send her the following information.

YEAR OF MANUFACTURE	2013	MAKE & MODEL	FORD FIESTA	
ENGINE NUMBER	BP13131	TYPE OF BODY	HATCHBACK	
ENGINE CC	1242	SEATING CAPACITY	5	
COLOUR	MOONDUST SILVER			
INSURED ESTIMATE VALUE OF THE CAR			€14,000	

The following are extracts of the insurance policy she has received every year following the first year of insurance.

<b>2015</b>	
INSURED ESTIMATE VALUE OF THE CAR	€12,500

<b>2016</b>	
INSURED ESTIMATE VALUE OF THE CAR	€11,300

<b>2017</b>	
INSURED ESTIMATE VALUE OF THE CAR	€10,200

<b>2018</b>	
INSURED ESTIMATE VALUE OF THE CAR	€9,200

<b>2019</b>	
INSURED ESTIMATE VALUE OF THE CAR	€8,400

Using the given information, fill-in the table below by calculating the **depreciation charge** (decrease in value) for each year.

2014-2015	2015-2016	2016-2017

2017-2018	2018-2019

What is the total depreciation on this car? \_\_\_\_\_

### Why do we need to account for depreciation?

#### Use these words to fill-in the blanks

Financial    usefulness    accruals    reduces    overcommitment    expense  
wages    written    estimate    rent    accounting    overstating    electricity

Depreciation is an \_\_\_\_\_ for the business. Each year we need to calculate the allowance for depreciation. The allowance for depreciation is an \_\_\_\_\_ of how much of the overall economic \_\_\_\_\_ of a non-current asset has been used up during a particular \_\_\_\_\_ period. In line with the \_\_\_\_\_ concept, depreciation is treated like other expenses incurred for items such as \_\_\_\_\_, \_\_\_\_\_ or \_\_\_\_\_. Thus, depreciation is charged to the Statement of Profit or Loss as an expense and hence it \_\_\_\_\_ the net profit.

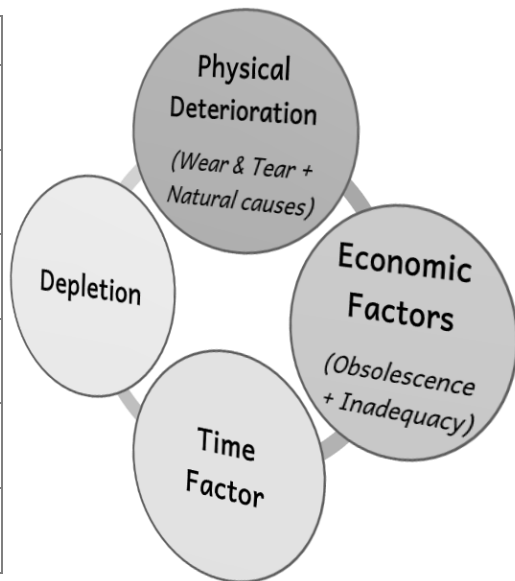
Therefore, calculating an allowance for depreciation is required to:

- The non-current asset is \_\_\_\_\_ off evenly over its useful life.
- To provide a more realistic figure by not \_\_\_\_\_ the Net Profit.
- To provide a more realistic value of the non-current asset in the Statement of \_\_\_\_\_ Position.
- To prevent \_\_\_\_\_ of funds by the business.

**What are the causes of Depreciation?**

Match the causes of depreciation with the definitions provided below:

Cause	Definition	Example
Wear & Tear		
Natural Causes		
Obsolescence		
Inadequacy		
Time Factor		
Depletion		



- Non-current assets as they are used, they start to wear out.
- Some non-current assets become out-of-date especially due to the advancements in technology.
- As time goes by, some non-current assets lose their value because they have a legal life fixed under a contract. Ex. A ten-year lease.
- Erosion, rust, rot & decay all lead to a loss in value of a non-current asset.
- Non-current assets such as oil wells & quarries suffer a decrease in their value as they are assets of a wasting character.
- Some non-current assets might be of no longer use for a business due to growth and changes in the size of the business.

**Case Study 3**

MYBOOK Ltd is a local business that operates a small souvenir and book shop. The owner decided to review the state of the business non-current assets. The business owns a small car that was previously used regularly for delivery purposes. However,



for the past two years this car was no longer being used so often following the purchase of a new larger motor van to carry out the deliveries. In addition, the printing equipment of the shop that was bought five years ago, has deteriorated over



**Straight Line Method (SLM)**

The Straight Line Method allows for an \_\_\_\_\_ amount to be charged as depreciation for each (full) year of expected use of the asset.

This method is calculated in two ways:

**Note:**

- Estimated useful life – the number of years a non-current asset is expected to contribute to operations of the business.

In some cases, rather than the '**Residual Value**', one might get '**Scrap Value**' or '**Saleable Value**'.

**What is the difference?**

- Residual Value – is the net amount receivable when a non-current asset is put out of use by the business.
- Scrap Value – is the amount that a business will get if it was to sell the non-current asset at the end of its expected useful life.

**When is it recommended to use the Straight-Line Method?**

Allowance for depreciation using the Straight Line Method can be calculated either on a full-year basis irrespective of the date and/or month of acquisition or else on a monthly basis depending on the date of acquisition and hence the start of ownership

**Exercise 1:**

C. Ronaldo bought a motor vehicle paying by cheque on 1<sup>st</sup> January 2016 for €15,500. Depreciation is charged at 10% p.a. (per annum) using a full year Straight Line method.



Required:

- Motor Vehicle A/c for the years ended 31<sup>st</sup> December 2016, 2017 & 2018.
- Allowance for depreciation on Motor Vehicle A/c for the three years.
- Extracts from the Statement of Profit or Loss for the years ended 31<sup>st</sup> December 2016, 2017 & 2018 and the Statement of Financial Position as at 31<sup>st</sup> December 2016, 2017 & 2018.

<u>Date</u>	<u>Details</u>	<u>€</u>	<u>Date</u>	<u>Details</u>	<u>€</u>

<u>Date</u>	<u>Details</u>	<u>€</u>	<u>Date</u>	<u>Details</u>	<u>€</u>

**Statement of Profit or Loss for the year ended 31<sup>st</sup> December (extracts)**

	2016		2017		2018	
	(Dr) €	(Cr) €	(Dr) €	(Cr) €	(Dr) €	(Cr) €
<u>Less Expenses:</u>						

Statement of Financial Position as at 31<sup>st</sup> December (extracts)

		Cost	Depreciation	Net Book Value
		€	€	€
2016	<u>Non-Current Assets:</u>			
2017	<u>Non-Current Assets:</u>			
2018	<u>Non-Current Assets:</u>			

Exercise 2:

L. Messi bought a machine on 1<sup>st</sup> March 2014 for €10,000 paying by his MasterCard. This machine is depreciated at 8% p.a. on cost. On 1<sup>st</sup> April 2015, another machine was bought for €17,500 paying by cheque. This machine will be kept for 5 years and then sold for an estimated figure of €5,200. L. Messi also bought some Fixture and Fittings on 1<sup>st</sup> September 2016 for €4,000 paying in cash and these are depreciated at 5% p.a. on cost. All machines and fixtures & fittings are depreciated using a full year Straight Line Method.

Required for the years ended 31<sup>st</sup> December 2014, 2015 & 2016:

- Prepare the depreciation schedule for all the non-current assets.
- The machinery a/c and the fixtures & fittings a/c.
- The allowance for depreciation on machinery a/c.
- The allowance for depreciation on fixtures & fittings a/c.



## Depreciation Schedule (SLM full year)

<u>Non-Current Asset</u>	<u>Cost</u>	<u>Depreciation</u>		
		2014	2015	2016
	€			

Name of student: \_\_\_\_\_

Depreciation Notes p. 9

<u>Date</u>	<u>Details</u>	<u>€</u>	<u>Date</u>	<u>Details</u>	<u>€</u>

<u>Date</u>	<u>Details</u>	<u>€</u>	<u>Date</u>	<u>Details</u>	<u>€</u>

<u>Date</u>	<u>Details</u>	<u>€</u>	<u>Date</u>	<u>Details</u>	<u>€</u>

<u>Date</u>	<u>Details</u>	<u>€</u>	<u>Date</u>	<u>Details</u>	<u>€</u>



**Exercise 3:**

I. Losco bought office equipment for business use on 1<sup>st</sup> April 2017 amounting to €5,600 paying in cash. A depreciation of 15% p.a. is charged using the Straight Line Method. The office equipment is to be depreciated for the proportion of the year that it is owned.



Required:

- Office equipment a/c for the years ending 31<sup>st</sup> December 2017 & 2018.
- Allowance for depreciation on office equipment A/c for the two years.
- Extracts from the Statements of Profit or Loss for the years ending 31<sup>st</sup> December 2017 & 2018 and the Statements of Financial Position as at 31<sup>st</sup> December 2017 & 2018.

<u>Date</u>	<u>Details</u>	<u>€</u>	<u>Date</u>	<u>Details</u>	<u>€</u>

<u>Date</u>	<u>Details</u>	<u>€</u>	<u>Date</u>	<u>Details</u>	<u>€</u>

Statements of Profit or Loss for the year ended 31<sup>st</sup> December (extracts)

	2017		2018	
	€	€	€	€
<u>Less Expenses:</u>				

Statements of Financial Position as at 31<sup>st</sup> December (extracts)

		Cost	Depreciation	Net Book Value
		€	€	€
2017	<u>Non-Current Assets:</u>			
2018	<u>Non-Current Assets:</u>			

Exercise 4:

The business owned by K. Law bought the following non-current assets as follows:

2016 Bought a machine costing €6,000 on 1 August, through an online payment. This machine is depreciated at 20% p.a.

2017 Bought another machine costing €15,000 on 1 March paying by cheque. It was estimated that the machine would be kept for 5 years and then sold for an estimated figure of €4,200.

2017 Bought two motor vehicles costing €10,800 each on 1 July paying by cheque. One of these motor vehicles was to be used by **his wife for her personal use**.

Motor vehicles are depreciated at 10% p.a. using a full year straight line method. Machinery is depreciated using the Straight Line Method for the proportion of the year that they are owned.

Required:

- Prepare the depreciation schedule for all the non-current assets for the years ending 31<sup>st</sup> December 2016, 2017 & 2018.
- The motor vehicle a/c for the years ending 31<sup>st</sup> December 2017 & 2018
- The machinery a/c for the years ending 31<sup>st</sup> December 2016, 2017 & 2018
- The allowance for depreciation on motor vehicle a/c for the years ending 31<sup>st</sup> December 2017 & 2018.
- The allowance for depreciation on machinery a/c for the years ending 31<sup>st</sup> December 2016, 2017 & 2018.
- Explain the accounting treatment of the motor vehicle costing €10,800, giving reasons for your answer.

Name of student: \_\_\_\_\_

Depreciation Notes p. 12

Depreciation Schedule (SLM)

<u>Non-Current Asset</u>	<u>Cost</u>	<u>Depreciation</u>		
	€	2016	2017	2018

<u>Date</u>	<u>Details</u>	<u>€</u>	<u>Date</u>	<u>Details</u>	<u>€</u>

<u>Date</u>	<u>Details</u>	<u>€</u>	<u>Date</u>	<u>Details</u>	<u>€</u>

<u>Date</u>	<u>Details</u>	<u>€</u>	<u>Date</u>	<u>Details</u>	<u>€</u>

<u>Date</u>	<u>Details</u>	<u>€</u>	<u>Date</u>	<u>Details</u>	<u>€</u>

Exercise 5:

Re-work exercise 2 (L. Messi), using Straight Line Method for the **proportion of the year that they are owned**.

Exercise 6:

The business owned by P. Pogba bought the following non-current assets as follows:

2015 Bought a machine costing €12,000 on 1 May paying by cheque. Depreciated at 10% p.a.

2016 Bought another machine costing €25,000 on 1 July paying by cheque. It was estimated that the machine would be kept for 10 years and then sold for an estimated figure of €6,500.



2016 Bought office equipment costing €8,800 on 1 July paying by card via electronic point of sale.

Office equipment is depreciated at 20% p.a. using a full year Straight Line Method. Machinery is depreciated using straight line method for the proportion of the year that they are owned.

Required:

- a) Prepare the depreciation schedule for all the non-current assets for the years ending 31<sup>st</sup> December 2015, 2016 & 2017.

- b) The office equipment a/c for the years ending 31<sup>st</sup> December 2016 & 2017
- c) The machinery a/c for the years ending 31<sup>st</sup> December 2015, 2016 & 2017
- d) The allowance for depreciation on office equipment a/c for the years ending 31<sup>st</sup> December 2016 & 2017.
- e) The allowance for depreciation on machinery a/c for the years ending 31<sup>st</sup> December 2015, 2016 & 2017

Exercise 7:

The statement of financial position of J. English at 31<sup>st</sup> December 2017 includes the following items:

	Cost	Depreciation
	€	€
Machinery	60,000	22,000
Fixtures & Fittings	18,500	7,500

During the year ended 31<sup>st</sup> December 2018, the following non-current assets transactions took place:

May 1 Bought further fixture & fittings amounting to €5,500 paying by cheque.

June 1 Bought a new machine costing €15,000 paying by cheque. Necessary installation charges of €1,500 were paid in cash. An agreement with the supplier was also reached so that annual service fee would be fixed for €800 p.a. for 3 years, starting from this year.

It is the policy of the business to calculate depreciation as follows:

Fixture & Fittings: 20% p.a. using the Straight Line Method charging depreciation for each month of ownership.

Machinery: 15% using full year Straight Line Method.

Required:

- a) The fixture and fittings a/c for the year ending 31<sup>st</sup> December 2018.
- b) The machinery a/c for the year ending 31<sup>st</sup> December 2018.
- c) The allowance for depreciation on fixture & fittings a/c for the year ending 31<sup>st</sup> December 2018.
- d) The allowance for depreciation on machinery a/c for the year ending 31<sup>st</sup> December 2018.



- e) Extract from the Statement of Profit or Loss showing the expenses section for the year ending 31<sup>st</sup> December 2018.
- f) Extract from the Statement of Financial Position as at 31<sup>st</sup> December 2018 showing the non-current assets section.

*This space can be used for workings and/or rough work*

<u>Date</u>	<u>Details</u>	<u>€</u>	<u>Date</u>	<u>Details</u>	<u>€</u>

<u>Date</u>	<u>Details</u>	<u>€</u>	<u>Date</u>	<u>Details</u>	<u>€</u>

## Allowance for depreciation – Fixtures &amp; Fittings A/c

<u>Date</u>	<u>Details</u>	<u>€</u>	<u>Date</u>	<u>Details</u>	<u>€</u>
2018			2018		
Dec 31	Balance c/d		Jan 1	Balance b/d	
			Dec 31	Profit and Loss	

## Allowance for depreciation – Machinery A/c

<u>Date</u>	<u>Details</u>	<u>€</u>	<u>Date</u>	<u>Details</u>	<u>€</u>
2018			2018		
Dec 31	Balance c/d		Jan 1	Balance b/d	
			Dec 31	Profit and Loss	

Statement of Profit or Loss for the year ended 31<sup>st</sup> December 2018 (extract)

	<u>€</u>	<u>€</u>
<u>Less Expenses:</u>		

Statement of Financial Position as at 31<sup>st</sup> December 2018 (extract)

	<u>Cost</u>	<u>Depreciation</u>	<u>Net Book Value</u>
	<u>€</u>	<u>€</u>	<u>€</u>
<u>Non-Current Assets:</u>			



**Reducing Balance Method (RBM)**

The Reducing Balance Method is calculated as a percentage of the Net Book Value (NBV) of the non-current asset.

**Net Book Value** = \_\_\_\_\_ of the Non-Current Asset - \_\_\_\_\_ depreciation to date.

Therefore, the Reducing Balance Method is calculated as follows: **% x Net Book Value**

Example: A machine was bought on 1<sup>st</sup> January 2017 for €20,000. A full year depreciation is charged at 10% p.a. using the Reducing Balance Method. Calculate the depreciation to be charged for the years 2017, 2018 & 2019.

*Use this space to answer the question above*



Note, that for each non-current asset a \_\_\_\_\_ amount of depreciation is calculated with every year that passes, since the net book value \_\_\_\_\_.

**When is it recommended to use the Reducing Balance Method?**

Allowance for depreciation using the Reducing Balance Method can be calculated either on a full-year basis irrespective of the date and/or month of acquisition or else on a monthly basis depending on the date of acquisition and hence the start of ownership. (However, in accordance with the syllabus, we shall focus only on full-year basis.)

**Exercise 8:**

W. Smith bought a machine paying by cheque on 1<sup>st</sup> March 2016 for €20,500. A full year depreciation is charged at 20% p.a. using the Reducing Balance Method.



Required:

- Machinery a/c for the years ending 31<sup>st</sup> December 2016, 2017 & 2018.
- Prepare the depreciation schedule for the years ending 31<sup>st</sup> December 2016, 2017 & 2018.
- Allowance for depreciation on machinery a/c for the years ending 31<sup>st</sup> December 2016, 2017 & 2018.
- Extracts from the Statements of Profit or Loss for the year ended 31<sup>st</sup> December 2016, 2017 & 2018 and the Statements of Financial Position as at 31<sup>st</sup> December 2016, 2017 & 2018.

<u>Date</u>	<u>Details</u>	<u>€</u>	<u>Date</u>	<u>Details</u>	<u>€</u>

**Depreciation Schedule (RBM)**

<u>Non-Current Asset</u>	<u>Cost</u>	<u>Depreciation</u>		
	<u>€</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>

## Allowance for depreciation – Machinery A/c

<u>Date</u>	<u>Details</u>	<u>€</u>	<u>Date</u>	<u>Details</u>	<u>€</u>
2016			2016		
Dec 31	Balance c/d		Dec 31	Profit and Loss	
2017			2017		
Dec 31	Balance c/d		Jan 1	Balance b/d	
			Dec 31	Profit and Loss	
2018			2018		
Dec 31	Balance c/d		Jan 1	Balance b/d	
			Dec 31	Profit and Loss	

Statements of Profit or Loss for the year ended 31<sup>st</sup> December (extracts)

	2016		2017		2018	
	€	€	€	€	€	€
<u>Less Expenses:</u>						

Statements of Financial Position as at 31<sup>st</sup> December (extracts)

		Cost	Depreciation	Net Book Value
		€	€	€
2016	<u>Non-Current Assets:</u>			
2017	<u>Non-Current Assets:</u>			
2018	<u>Non-Current Assets:</u>			

**Depreciation & Accounting Concepts**

Use these words to fill-in the blanks

Prudence Concept, Accruals Concept, Going Concern, Cost Concept, Consistency Concept

The \_\_\_\_\_ states that a business should always be consistent when using policies such as those related to the allowance for depreciation or allowance for doubtful debts.



The \_\_\_\_\_ states that all losses should be recorded immediately into the books, while profits and gains are not anticipated by writing them in the books.



The \_\_\_\_\_ states that unless it is shown otherwise in the financial statements, it is always assumed that a business will continue to operate in the near future.



The \_\_\_\_\_ states that net profit is the difference between the revenues earned and the expenses incurred in generating those revenues.



The \_\_\_\_\_ states that assets should be recorded at cost price.



Exercise 9:

The business owned by A. Grande bought the following non-current assets as follows:

2015 Bought a machine costing €40,000 on 1 August paying by cheque.

2016 Bought a motor vehicle costing €22,000 on 1 March paying by cheque.



Motor Vehicles are depreciated at 10% using the Straight Line Method for the proportion of the year that they are owned. Machinery is depreciated at 20% using a full year Reducing Balance Method.

Required:

- Prepare the depreciation schedule for all the non-current assets for the years ending 31<sup>st</sup> December 2015, 2016 & 2017.
- The motor vehicle a/c for the years ending 31<sup>st</sup> December 2016 & 2017.
- The machinery a/c for the years ending 31<sup>st</sup> December 2015, 2016 & 2017.
- The allowance for depreciation on motor vehicle a/c for the years ending 31<sup>st</sup> December 2016 & 2017
- The allowance for depreciation on machinery a/c for the years ending 31<sup>st</sup> December 2015, 2016 & 2017.

## Depreciation Schedule

<u>Non-Current Asset</u>	<u>Cost</u>	<u>Depreciation</u>		
		2015	2016	2017
	€			

Name of student: \_\_\_\_\_

Depreciation Notes p. 22

<u>Date</u>	<u>Details</u>	<u>€</u>	<u>Date</u>	<u>Details</u>	<u>€</u>

<u>Date</u>	<u>Details</u>	<u>€</u>	<u>Date</u>	<u>Details</u>	<u>€</u>

<u>Date</u>	<u>Details</u>	<u>€</u>	<u>Date</u>	<u>Details</u>	<u>€</u>

<u>Date</u>	<u>Details</u>	<u>€</u>	<u>Date</u>	<u>Details</u>	<u>€</u>

**Exercise 10:**

The statement of financial position of R. Nadal at 31<sup>st</sup> December 2015 includes the following items:

	Cost	Depreciation
	€	€
Machinery	80,000	30,000
Fixtures & Fittings	22,500	10,500

During the year ended 31<sup>st</sup> December 2016, the following non-current assets transactions took place:

Apr 15 Bought a new machine costing €18,000 paying by cheque.  
A further €800 was paid to transport the new machine to the business premises.

Aug 1 New fixtures were bought for €5,000 paying in cash.



It is the policy of the business to calculate depreciation as follows:

Machinery: 15% p.a. using the Reducing Balance Method applied to non-current assets held at the end of the financial year.

Fixture & Fittings: 20% p.a. using full-year Straight Line Method.

Required:

- The fixture and fittings a/c for the year ending 2016.
- The machinery a/c for the year ending 2016.
- The allowance for depreciation on fixture & fittings a/c for the year ending 2016.
- The allowance for depreciation on machinery a/c for the year ending 2016.
- Extract from the Statement of Profit or Loss showing the expenses section
- Extract from the Statement of Financial Position showing the non-current assets section.

*This space can be used for workings and/or rough work*

**Exercise 11:**

The statement of financial position of A. Borg at 31<sup>st</sup> December 2016 includes the following items:

	Cost	Depreciation
	€	€
Machinery	100,000	40,000
Motor Vehicles	30,200	12,500

During the year ended 31<sup>st</sup> December 2017, the following non-current assets transactions took place:

Mar 15 Bought a new machine costing €15,000 paying by cheque. A further €500 was paid to install the new machine at the business premises.

Oct 1 Another motor vehicle was bought for €8,000 through an online payment.



It is the policy of the business to calculate depreciation as follows:

Machinery: 15% p.a. using the Reducing Balance Method applied to non-current assets held at the end of the financial year.

Motor Vehicles: 10% p.a. using the Straight Line Method for the proportion of the year that the asset is owned.

Required:

- The motor vehicles a/c for the year ending 31<sup>st</sup> December 2017.
- The machinery a/c for the year ending 31<sup>st</sup> December 2017.
- The allowance for depreciation on motor vehicles a/c for the year ending 31<sup>st</sup> December 2017.
- The allowance for depreciation on machinery a/c for the year ending 31<sup>st</sup> December 2017.

*This space can be used for workings and/or rough work*

**The Disposal of Non-Current Assets**

When a non-current asset is sold, we would need to remove it from our books of accounts. As a result, we would first take out the sold non-current asset at the original cost from the asset account. We also need to eliminate the accumulated depreciation on the sold non-current asset from the allowance for depreciation account.

If the calculated depreciation has been accurate, we would end up with the sale proceeds of the asset being equal to the Net Book Value (NBV). **Having said that, this is unlikely to be the case!** Often, the sale proceeds will be either greater or less than the NBV. This difference is the actual profit or loss made on the sale of the non-current asset, which will be transferred to the Profit or Loss A/c.

The above is translated into the following accounting entries:

Dr		Step 1:	Transfer the cost of the non-current asset to the non-current asset disposal a/c
Cr			

Dr		Step 2:	Transfer the accumulated depreciation of the sold non-current asset to the non-current asset disposal a/c
Cr			

Dr		Step 3:	Enter the sales proceeds in the bank/cash/t. receivables a/c and the non-current asset disposal a/c
Cr			

	Profit on disposal	Loss on disposal		
Dr			Step 4:	Transfer the balance of the non-current Asset disposal a/c to the Profit or Loss a/c.
Cr				

**Exercise 12:**

H. Simpson had motor vehicles costing €40,000 as at 1<sup>st</sup> January 2016. Depreciation to date on these motor vehicles amounted to €12,000 as at 1<sup>st</sup> January 2016. On May 16<sup>th</sup>, H. Simpson bought a new motor vehicle costing €15,000, paying by cheque. In addition, on 1<sup>st</sup> June 2016, H. Simpson sold a motor vehicle for €6,000 by cheque. This motor vehicle had a cost of €8,000 and accumulated depreciation of €3,000.

Depreciation on motor vehicles is calculated at 10% p.a. on cost of motor vehicles. Depreciation is calculated for a full year in the year of purchase and none in the year of sale.

Required: Prepare the below for the year ended 31<sup>st</sup> December 2016

- a) The motor vehicles a/c
- b) The allowance for depreciation on motor vehicles a/c
- c) Motor vehicles disposal a/c
- d) Extract from the Statement of Profit or Loss for the year ended 31<sup>st</sup> December 2016
- e) Extract from the Statement of Financial Position as at 31<sup>st</sup> December 2016



Motor Vehicles A/c

<u>Date</u>	<u>Details</u>	<u>€</u>	<u>Date</u>	<u>Details</u>	<u>€</u>
2016			2016		
Jan 1	Balance b/d		Jun 1	Disposal	
May 16	Bank		Dec 31	Balance c/d	

Allowance for depreciation – Motor Vehicles A/c

<u>Date</u>	<u>Details</u>	<u>€</u>	<u>Date</u>	<u>Details</u>	<u>€</u>
2016			2016		
Jun 1	Disposal		Jan 1	Balance b/d	
Dec 31	Balance c/d		Dec 31	Profit & Loss	

## Motor Vehicles – Disposal A/c

<u>Date</u>	<u>Details</u>	<u>€</u>	<u>Date</u>	<u>Details</u>	<u>€</u>
2016			2016		
Jun 1	Motor Vehicles		Jun 1	Allowance for depreciation	
Dec 31	Profit & Loss		Jun 1	Bank	

Statement of Profit or Loss for the year ended 31<sup>st</sup> December 2016 (extract)

	<u>€</u>	<u>€</u>
<u>Less Expenses:</u>		

Statement of Financial Position as at 31<sup>st</sup> December 2016 (extract)

	<u>Cost</u>	<u>Depreciation</u>	<u>Net Book Value</u>
	<u>€</u>	<u>€</u>	<u>€</u>
<u>Non-Current Assets:</u>			

Exercise 13:

L. Hamilton had office equipment costing €50,000 as at 1<sup>st</sup> January 2015. Depreciation to date on office equipment amounted to €10,000 as at 1<sup>st</sup> January 2015. On 1<sup>st</sup> Aug 2015, L. Hamilton sold some office equipment for €6,000 by cheque. This office equipment had a cost of €12,000 and accumulated depreciation of €4,800.

Depreciation on office equipment is calculated at 20% p.a. using the Straight Line Method. Depreciation is calculated for a full year in the year of purchase and none in the year of sale.

Required: Prepare the below for the year ended 31<sup>st</sup> December 2015

- a) The office equipment a/c
- b) The allowance for depreciation on office equipment a/c
- c) Office equipment disposal a/c

Exercise 14:

A machine was bought by R. Ora for €20,000 on 1st January 2014. This machine has an estimated useful life of 5 years, at the end of which it is estimated to have a saleable value of €4,000. By the end of 2017, the accumulated depreciation for this machine amounted to €12,800. This machine was then sold on 1st April 2018 for 6,000 cash. Bought another machine on 1st July 2018 for €8,800 paying by card via electronic point of sale, with an estimated useful life of 5 years with no residual value.



It is the policy of the business to depreciate machinery using the Straight Line Method for each month of ownership.

Required:

- a) The machinery a/c for the year ended 31st December 2018.
- b) The allowance for depreciation on machinery a/c for the year ended 31st December 2018.
- c) Machinery disposal a/c for the year ended 31st December 2018.
- d) Extract from the Statement of Profit or Loss for the year ended 31st December 2018.

*This space can be used for workings and/or rough work*

Name of student: \_\_\_\_\_

<u>Date</u>	<u>Details</u>	<u>€</u>	<u>Date</u>	<u>Details</u>	<u>€</u>

<u>Date</u>	<u>Details</u>	<u>€</u>	<u>Date</u>	<u>Details</u>	<u>€</u>

<u>Date</u>	<u>Details</u>	<u>€</u>	<u>Date</u>	<u>Details</u>	<u>€</u>

Statement of Profit or Loss for the year ended 31<sup>st</sup> December 2018 (extract)

	<u>€</u>	<u>€</u>
<u>Less Expenses:</u>		

If you want an accounting of  
your worth, count your friends.

Mary Browne

**Exercise 15:**

The following information relates to the business of V. Rossi who commenced the business on 1st April 2015.

April 1<sup>st</sup> 2015 Bought a motor vehicle (registration no. VAN111) for €30,000 paying by cheque.

July 5<sup>th</sup> 2015 Bought another motor vehicle (registration no. VAN222) for €12,500 on credit from Zammit Auto Dealer.

October 17<sup>th</sup> 2016 Bought another motor vehicle (registration no. VAN333) for €8,000 paying in cash.

January 20<sup>th</sup> 2017 Sold motor vehicle (registration no. VAN111) for €14,000 by cheque.

The financial year of V. Rossi ends on the 31<sup>st</sup> March each year. It is the policy of the business to depreciate its motor vehicles by 12% p.a. using the Reducing Balance Method and depreciation is provided for a full year in the year of purchase and none in the year of sale. **(Note that answers shall be rounded off to the nearest euro)**

Required:

Using the above information prepare the below accounts for the years ended 31<sup>st</sup> March 2016 & 2017.

- Depreciation Schedule for the motor vehicles
- The motor vehicles a/c.
- The allowance for depreciation on motor vehicles a/c.
- Motor vehicles disposal a/c.



Depreciation Schedule (RBM full year)

<u>Motor Vehicle</u>	<u>Cost</u> €	<u>Depreciation</u>	
		2016	2017

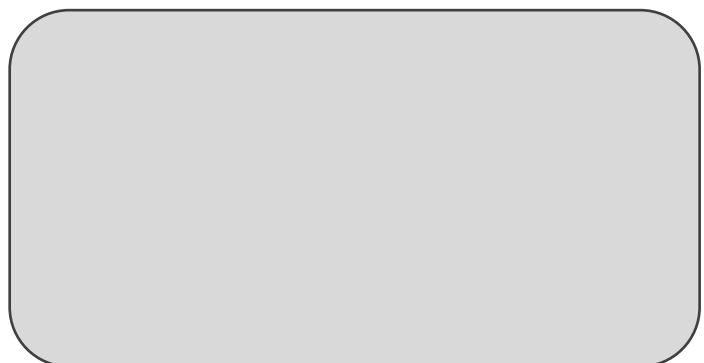
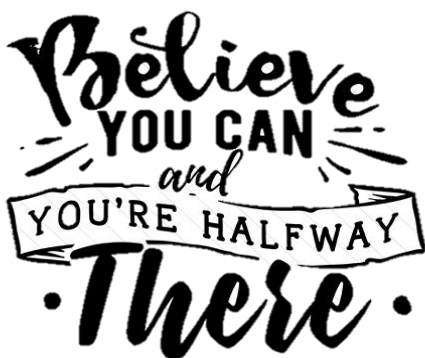
Name of student: \_\_\_\_\_

Depreciation Notes p. 31

<u>Date</u>	<u>Details</u>	<u>€</u>	<u>Date</u>	<u>Details</u>	<u>€</u>

<u>Date</u>	<u>Details</u>	<u>€</u>	<u>Date</u>	<u>Details</u>	<u>€</u>

<u>Date</u>	<u>Details</u>	<u>€</u>	<u>Date</u>	<u>Details</u>	<u>€</u>



**Exercise 16:**

The following information is an extract from R. Spiteri Statement of Financial Position as at 31<sup>st</sup> December 2016:

Non-current Asset	Cost	Accumulated Depreciation	Net Book Value
	€	€	€
Land	500,000	-	500,000
Buildings	280,000	100,000	180,000
Motor Vehicles	75,000	35,800	39,200
Furniture	32,000	14,250	17,750
<b>Totals</b>	<b>887,000</b>	<b>150,050</b>	<b>736,950</b>

The business depreciation policy is as follows:

- No depreciation is charged on land
- A full year depreciation is charged in the year of acquisition, but none in the year of disposal.
- Buildings are depreciated at 3% p.a. using the Straight Line Method.
- Motor Vehicles are depreciated using the Reducing Balance Method at an annual rate of 10%.
- Furniture is depreciated on a Straight Line basis. Estimated residual value is 3,500 and estimated useful life is 10 years

Additional Information regarding the year ended 31<sup>st</sup> December 2017:

- 1) On 1<sup>st</sup> February 2017, a motor vehicle purchased in 2014 was involved in an accident and had to be scrapped. The original cost of the motor vehicle was €8,000.
- 2) On 1<sup>st</sup> October 2017, new furniture was bought. It costed €5,000 and has an estimated residual value of €800. The new furniture is to be depreciated on the same basis as the old furniture.

Required:

Prepare the following accounts of R. Spiteri for the year ended 31<sup>st</sup> December 2017:

- a) The allowance for depreciation of buildings a/c
- b) The allowance for depreciation of motor vehicles a/c
- c) The allowance for depreciation of furniture a/c
- d) The disposal of motor vehicles a/c



Take a look at this cartoon. Think about the questions below and then write down your answer based on your reflection. (In addition, you are encouraged to take down further points that are discussed in class)

- What is your reaction to this picture?
- What message is it trying to convey?
- Do you agree? Why?

## **Appendix B: Permission Letter sent to Head of Schools**

DATE

Dear Head of School,

I am Darren Borg, a student reading for a Master in Teaching and Learning: Business Education at the University of Malta. As part of this course I will be carrying out research in order to write a dissertation. My dissertation supervisor is Ms Marie Josephine Mallia.

The title of my dissertation is “Critical Thinking and Dialogic Teaching: Assets for Accounting Education”. For this study, I will be investigating the degree of exposure to critical thinking and dialogic teaching for accounting learners.

I would be grateful if you would give me permission to conduct this research study at your school.

Should you give me permission, I would like to observe three accounting lessons held by \_\_\_\_\_ with the same class, in any of the year groups (Year 9 – Year 11). The aim behind these observation sessions would be to get a better understanding of the class context that would be useful in the preparation of the resource pack to be distributed to the teacher concerned. I would also like to carry out two distinct interviews with the accounting teacher of the observed classroom. The first interview shall focus on exploring the teacher’s views on dialogic teaching and critical thinking in the teaching of Accountancy. The second interview is aimed at getting constructive feedback on the presented resource pack from the interviewed teacher. Each interview will be carried out on school premises and shall not take more than 30 minutes. Consent from the teacher for these interviews to be audio recorded shall be sought through the consent form.

Participation is voluntary. If permission is granted, I shall forward information letters to the teacher, students and parents. A consent form shall also be distributed to the teacher, while opt-out forms will be distributed to students and parents. Throughout the whole research process, all of the participants shall not be placed under any undue pressure and their privacy and anonymity will be safeguarded. Anonymity will be maintained through the use of pseudonyms, to ensure that neither the school nor any

of the participants would be identifiable. Furthermore, all raw data will be securely stored and the data obtained will be solely used for the compilation of my dissertation.

I would like to assure you that I will abide by all the ethical guidelines issued by the University Research Ethics Committee of the University of Malta throughout the course of my research.

Should you require further information, please do not hesitate to contact me or my supervisor (please see contact details given below).

Thank you for your kind consideration.

Sincerely,

---

Mr Darren Borg  
*Researcher*

M: \_\_\_\_\_  
E: darren.borg.12@um.edu.mt

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Ms Marie Josephine Mallia  
*Supervisor*

T: \_\_\_\_\_  
E: marie.j.mallia@um.edu.mt

## **Appendix C: Information Letter for Participant Educators**

DATE

Dear Teacher,

I am Darren Borg, a business educator trainee-teacher and I am currently reading for a Master in Teaching and Learning: Business Education at the University of Malta. As part of this course, I will be conducting a research study entitled is “Critical Thinking and Dialogic Teaching: Assets for Accounting Education” under the supervision of Ms Marie Josephine Mallia.

In the course of my research, I will be investigating to what extent accounting learners are being exposed to critical thinking and dialogic teaching in the local scenario. Moreover, I am also aiming at identifying potential critical thinking and dialogic teaching possibilities within the proposed accounting Learning Outcomes Framework. Finally, another aim to produce a resource pack to be tested and evaluated by three established accounting secondary schools’ educators.

I would like to invite you to participate in my research study, which involves three stages. The first part shall involve in class observation of three accounting lessons with a specific year group (Year 9 – Year 11). These observation sessions, should not create any interferences with your scheme of work and I would only be taking down some notes without interfering with the conduct of the lesson. These observation sessions are aimed at providing me with a better understanding of the class context that would be useful in the preparation of the resource pack to be distributed to you at a later stage.

The second part of my study involves an interview which will take around 30 minutes. Should you choose to participate in the second part of the study, the interview will be held on school premises at a time that is convenient to you. The focus of the interview will be to explore your views on dialogic teaching and critical thinking in the teaching of Accountancy.

In the third part of my study, I shall provide you with a resource pack aimed at fostering dialogic teaching and critical thinking in the teaching of accounting topics. You will be

asked to kindly review the resource pack and provide evaluative feedback. A second interview which will take around 30 minutes shall be conducted. Should you choose to participate in the third part of the study, the interview will be held through an online platform. The focus of this interview will be to gather constructive feedback from you as an accounting educator on the presented resource pack.

With your signed consent, both interviews will be audio recorded as I would need to transcribe your responses in order to analyse them. However, should you prefer not to be audio-recorded, I would take notes instead. I will keep your identity, and that of the school, confidential, and your identity will be anonymised in my write-up through the use of a pseudonym.

Participation is voluntary and you are free to withdraw from the study at any time. Should you choose to withdraw, your interview data will not be used for the study, and it will be destroyed. Any notes taken and audio-recorded data will be securely stored and will be accessed only by myself. Recordings will be used for the purpose of transcription; once I have transcribed the interviews, I will destroy the audio-recording.

If you agree to participate, kindly contact me on the e-mail provided below and complete the enclosed consent form, which I shall collect personally. Furthermore, I would appreciate if you could kindly distribute the information letter and the Opt-Out form addressed to the learner's parents/guardians through the learners themselves. I will be collecting any potential signed Opt-Out forms personally from the school.

If you require further information please do not hesitate to contact me or my supervisor.

Yours sincerely,

---

Mr Darren Borg  
*Researcher*

M: \_\_\_\_\_  
E: darren.borg.12@um.edu.mt

---

Ms Marie Josephine Mallia  
*Supervisor*

T: \_\_\_\_\_  
E: marie.j.mallia@um.edu.mt

## Appendix D: Participant Educators' Consent Form

### Consent Form – Teacher

Critical Thinking and Dialogic Teaching: Assets for Accounting Education

I confirm that I have read the attached Participant Information Sheet for this study and that I have had the opportunity to ask questions and discuss the study.

On the basis of the information given, I agree to allow Mr Darren Borg to: *(please tick accordingly)*

- ☐ Observe three of my own lessons to become familiar with the classroom context.
- ☐ Take notes about my teaching strategies and use these notes as data for his study.
- ☐ conduct the first interview to gain further insight on my views regarding dialogic teaching and critical thinking in the teaching of accounting.
- ☐ Provide me with a resource pack upon which I shall provide him constructive feedback during the second interview to be held through an online platform.
- ☐ Audio-record both the first and second interview.

I also confirm that I am aware that Mr. Borg has distributed an op-out form to both students and parents/guardians.

_____ Name of Teacher	_____ Signature	_____ Contact Email
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Date: \_\_\_\_\_

\_\_\_\_\_  
Researcher's Signature

## Appendix E: Opt-Out Forms for Students and Parents/Guardians

### Opt-Out Form – Student

Critical Thinking and Dialogic Teaching: Assets for Accounting Education

I confirm that I have read the attached Participant Information Sheet and that I have had the opportunity to ask questions about the study. I understand that:

- Mr Darren Borg will be observing three accounting lessons in order to study the strategies the teacher uses while teaching.
- Mr Borg will be writing some general notes about the students' contributions to the lessons.
- Students who do not participate in Mr Borg study will take part in the accounting lessons as usual, but their contributions will not be considered as data for Mr Borg's study.

I do NOT wish to participate in this research project. I therefore do NOT wish Mr Borg to write down general notes about my contributions during the accounting lessons.

---

Student's Name

---

Student Signature

---

Date

---

Researcher's Signature

## Formola għal ‘Opt-Out’ – Student

Critical Thinking and Dialogic Teaching: Assets for Accounting Education

Jien nikkonferma li qrajt l-ittra ta’ informazzjoni għall-istudenti. Jiena nifhem li:

- Is-Sur Darren Borg ser ikun qed josserva xi lezzjonijiet tal-kontabilità (accounting) fil-klassi tagħna, sabiex ikun jista’ jistudja aħjar l-istrateġiji ta’ taġlim użati mill-għalliem/a.
- Is-Sur Borg ser ikun qed jieħu noti ġenerali dwar il-parteciċipazzjoni tal-istudenti waqt il-lezzjoni.
- Dawk l-istudenti li mhux ser jipparteċipaw fl-istudju tas-Sur Borg, xorta waħda ser ikunu qed jipparteċipaw fil-lezzjoni b’mod normali, imma l-parteciċipazzjoni tagħhom ma tkunx tiffirma parti mill-informazzjoni miġbura għall-istudju tas-Sur Borg.

Jiena ma NIXTIEQX li nipparteċipa f’din ir-riċerka. Għaldaqstant, jiena ma NIXTIEQX li s-Sur Borg jieħu noti marbuta mal-parteciċipazzjoni tiegħi waqt il-lezzjonijiet tal-kontabilità (accounting)

---

Isem tal-istudent

---

Firma tal-istudent

---

Data

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Firma tar-riċerkatur

## Opt-Out Form – Parent/Guardian

Critical Thinking and Dialogic Teaching: Assets for Accounting Education

I have read the attached Parent/Legal Guardian Information Sheet. I understand that:

- Mr Darren Borg will be observing my son's / daughter's accounting lessons in order to study the strategies the teacher uses while teaching.
- Mr Borg will be writing some general notes about the students' contributions to the lessons.
- Students who do not participate in Mr Borg study will take part in the accounting lessons as usual, but their contributions will not be considered as data for Mr Borg's study.

I do NOT wish my child to participate in this research project. I therefore do NOT wish Mr Borg to write down general notes about my son's / daughter's contributions during the accounting lessons.

---

Son's/Daughter's Name

---

Parent/Guardian's  
Name

---

Parent/Guardian's  
Signature

Date:\_\_\_\_\_

---

Researcher's Signature

## Formola għal 'Opt-Out' – Ġenitur / Gwardjan

Critical Thinking and Dialogic Teaching: Assets for Accounting Education

Jien nikkonferma li qrajt l-ittra ta' informazzjoni għall-ġenturi u l-ġwardjani. Jiena nifhem li:

- Is-Sur Darren Borg ser ikun qed josserva xi lezzjonijiet tal-kontabilità (accounting) fil-klassi tat-tifel/tifla tiegħi, sabiex ikun jista' jistudja aħjar l-istrateġiji ta' tagħlim użati mill-għalliem/a.
- Is-Sur Borg ser ikun qed jieħu noti ġenerali dwar il-partecipazzjoni tal-istudenti waqt il-lezzjoni.
- Dawk l-istudenti li mhux ser jipparteċipaw fl-istudju tas-Sur Borg, xorta waħda ser ikunu qed jipparteċipaw fil-lezzjoni b'mod normali, imma l-partecipazzjoni tagħhom ma tkunx tiffirma parti mill-informazzjoni miġbura għall-istudju tas-Sur Borg.

Jiena ma NIXTIEQX li t-tifel/tifla tiegħi tipparteċipa f'din ir-riċerka. Għaldaqstant, jiena ma NIXTIEQX li s-Sur Borg jieħu noti marbuta mal-partecipazzjoni tat-tifel/tifla tiegħi waqt il-lezzjonijiet tal-kontabilità (accounting)

---

Isem tat-tifel/tifla

---

Isem tal-ġenitur/gwardjan

---

Firma tal-ġenitur/gwardjan

Data: \_\_\_\_\_

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Firma tar-riċerkatur

**Appendix F: Information Letter distributed to Students and their  
Parents/Guardians**

**Information Letter – Student**

DATE

Dear Student,

My name is Mr Darren Borg. I am a student at the University of Malta, and I am studying to become a teacher. As part of my course, I am conducting a research study about how teachers talk and involve students during the accounting lessons.

I am inviting you to take part in my study. Your involvement will be minimal, as I am aiming to observe three accounting lessons in your class. During the lessons, I will take down notes about the strategies being used to teach accounting related topics. The focus of my observations will be to identify the type of talk and dialogue used by the teacher and the type of questions that are asked. I may also need to take down general notes about your involvement and that of your classmates during the observed lessons.

You can rest assured that all the taken down notes will be stored securely and accessed only by myself. In my dissertation, and in any future write-ups, I will use fictitious names so that your identity will be anonymised. Participation is voluntary. Should you not wish to be part of my study, you will still be able to participate in the lessons as usual, but I will not take any notes regarding your involvement during the lessons.

Should you **NOT** wish me to write down general notes about your involvement during the accounting lesson as part of my study, kindly fill in the 'Opt-out' form enclosed with this information letter and return it to the teacher of accounting, [Name of Teacher] in the sealed envelope provided by [DATE].

If you have any questions, please ask! You may e-mail me or speak to me in person when I am at your school. If you prefer, your parents can e-mail me.

Regards,

---

Mr Darren Borg  
*Researcher*  
E: darren.borg.12@um.edu.mt

## Ittra ta' informazzjoni – Student

DATA

Għażiż Student,

Jien s-Sur Darren Borg u jiena student tal-Università ta' Malta, fejn qed nistudja sabiex insir għalliem. Bħala parti minn dan il-kors, ser inkun qed nagħmel studju fejn ser ikun qed niffoka fuq il-mod ta' kif l-għalliema jikkellmu u jinvolvu lill-istudenti fil-lezzjonijiet tal-kontabilità (accounting).

Jien qed nistiednek sabiex tiegħu sehem f'din ir-riċerka. L-involviment tiegħek f'din ir-riċerka ser ikun minimu. Sabiex inkun f'pożizzjoni aħjar biex niġbor l-informazzjoni meħtieġa, ser inkun qiegħed nosserva tlett lezzjonijiet tal-kontabilità (accounting) fil-klassi tiegħek. Matul dawn il-lezzjonijiet, jiena se nkun qed nieħu xi noti dwar l-istrateġiji li jiġu wżati sabiex jiġi mgħalliem sugġett jew kuncett partikulari marbut mal-Kontabilità. Ser inkun qed niffoka fuq it-tip ta' djalogu li jintuża fil-klassi biex jiffacilita t-tagħlim u l-involviment tal-istudenti. Ser inkun qiegħed nieħu nota ta' x'tip ta' mistoqsijiet jiġu proposti mill-għalliem/a bil-għan li l-istudenti jaħsbu fuq xi aspett jew ieħor marbut ma dak li jkun qiegħed jiġi spjegat. Primarjament, jiena ser inkun qed nosserva lill-għalliem/a, madanakollu jista' jagħti l-każ li nieħu noti ġenerali rigward l-kontribut tiegħek u ta' sħabek l-istudenti magħtut l-lezzjoni.

Tista' sserraħ rasek li n-noti kollha li ser jittieħdu ser ikunu miżmuma b'mod sigur u aċċessibbli minni biss bħala r-riċerkatur. F'dan l-istudju u f'kull kitba oħra fil-futur, l-ebda isem veru mhu ser ikun qed jintuża. Minflok ismijiet fittizji ser ikunu qed jintużaw sabiex jiżguraw l-anonimità tal-iskola, l-għalliem/a u l-istudenti li ser ikunu qed jipparteċipaw. Il-parteċipazzjoni f'dan l-istudju hija waħda volontarja. Jekk inti ma tixtieqx li tkun parti minn din ir-riċerka, jiena niżgurak li inti xorta waħda ser tkun qed tipparteċipa fil-lezzjoni b'mod normali, imma jiena ma nkunx qed nieħu noti dwarek.

Jekk **MA TIXTIEQX** li nagħmel użu mill-kontribuzzjoni tiegħek waqt il-lezzjoni bħala parti mill-istudju tiegħi, jekk jogħġbok imla l-formola tal-'Opt-Out' li qed tiġi mibgħuta flimkien ma din l-ittra u irritorna lura lill-għalliem/a tal-Kontabilità, [Isem tal-għalliem/a] sa nhar [DATA].

Jekk għandek xi mistoqsijiet, tiddejjaqx tistaqsini. Tista' tagħmel dan permezz ta' e-mail jew inkella billi tkellimni meta nkun fl-iskola fejn tattendi. Jekk tixtieq, il-ġenituri jistgħu jikkuntattjawni huma permezz ta' e-mail.

Dejjem tiegħek,

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Mr Darren Borg  
*Riċerkatur*

E: darren.borg.12@um.edu.mt

## Information Letter – Parent/Guardian

DATE

Dear Parent/Guardian,

I am a student at the University of Malta and I am currently reading for Master in Teaching and Learning: Business Education. As part of this course, I will be carrying out a research study entitled “Critical Thinking and Dialogic Teaching: Assets for Accounting Education”. My study will focus on how teachers talk and involve students during the accounting lessons. My dissertation supervisor is Ms Marie Josephine Mallia.

In order to collect the data I require, I would like to carry out 3 lesson observations in the class attended by your son/daughter during accounting lessons. During the lessons, I will take down notes about the strategies being used to teach accounting related topics. The focus of my observations will be to identify the type of talk and dialogue used by the teacher and the type of questions that are posed. Although I will mainly be observing the teacher, I may also need to take down general notes regarding students’ contributions to the lesson. The notes taken will be stored securely and accessed only by myself. In my dissertation, and in any future write-ups, I will use fictitious names so that the school, and the identity of the teacher and students will be anonymised.

Participation is voluntary. Should you not wish your son/daughter to be part of my study, he/she will participate in the lessons as usual, but I will not take any notes about them. You and your child may change your minds with regard to his/her participation in the study without there being any negative consequence.

Should you **NOT** wish me to use your son/daughter’s contributions as part of my study, kindly fill in the ‘Opt-out’ form enclosed with this information letter and return it to the teacher of accounting, [Name of Teacher] in the sealed envelope provided by [DATE].

Yours sincerely,

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Mr Darren Borg  
*Researcher*

E: darren.borg.12@um.edu.mt

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Ms Marie Josephine Mallia  
*Supervisor*

T: \_\_\_\_\_  
E: marie.j.mallia@um.edu.mt

## Ittra ta' informazzjoni – Ġenitur / Gwardjan

9 ta' Jannar 2020

Għażiż Ġenitur/Gwardjan,

Jiena student tal-Università ta' Malta, f'livell ta' Master fit-Tagħlim, fl-Edukazzjoni Kummerċjali, taħt is-superviżjoni ta' Ms Marie Josephine Mallia. Bħala parti minn dan il-kors, ser inkun qed nagħmel riċerka bit-titlu: "Critical Thinking and Dialogic Teaching: Assets for Accounting Education". Dan l-istudju ser ikun qed jiffoka fuq il-mod ta' kif l-għalliema jtkellmu u jinvolvu lill-istudenti fil-lezzjonijiet tal-kontabilità (accounting).

Sabiex inkun f'pożizzjoni aħjar biex niġbor l-informazzjoni meħtieġa, ser inkun qiegħed nosserva tlett lezzjonijiet fil-klassi tat-tifel/tifla tiegħek. Matul dawn il-lezzjonijiet, jiena se nkun qed nieħu xi noti dwar l-istrategġji li jiġu wżati sabiex jiġi mgħallem sugġett jew kunċett partikulari marbut mal-Kontabilità. Ser inkun qed niffoka fuq it-tip ta' djalogu li jintuza fil-klassi biex jiffaċilita t-tagħlim u l-involviment tal-istudenti. Ser inkun qiegħed nieħu nota ta' x'tip ta' mistoqsijiet jiġu proposti mill-għalliem bil-għan li l-istudenti jaħsbu fuq xi aspett jew ieħor marbut ma dak li jkun qiegħed jiġi spjegat. Primarjament, jiena ser inkun qed nosserva lill-għalliem/a, madanakollu jista' jagħti l-każ li nieħu noti ġenerali rigward l-kontribut tal-istudenti magħtut l-lezzjoni. In-noti kollha li ser jittieħdu ser ikunu miżmuma b'mod sigur u aċċessibbli minni biss bħala r-riċerkatur. F'dan l-istudju u f'kull kitba oħra fil-futur, l-ebda isem veru mhu ser ikun qed jintuza. Minflok ismijiet fittizji ser ikunu qed jintużaw sabiex jiżguraw l-anonimità tal-iskola, l-għalliem/a u l-istudenti li ser ikunu qed jipparteċipaw.

Il-parteċipazzjoni f'dan l-istudju hija waħda volontarja. Jekk inti ma tixtieqx li t-tifel/tifla tiegħek ma jkunx parti minn din ir-riċerka, jiena niżgurak li t-tifel/tifla tiegħek ser ikunu qed jipparteċipa fil-lezzjoni b'mod normali, imma jiena ma nkunx qed nieħu noti dwaru/a.

Jekk **MA TIXTIEQX** li nagħmel użu mill-kontribuzzjoni tat-tifel/tifla tiegħek waqt il-lezzjoni bħala parti mill-istudju tiegħi, jekk jogħġbok imla l-formola tal-'Opt-Out' li qed tiġi mibgħuta flimkien ma din l-ittra u irritornha lura lill-għalliem tal-kontabilità, [Isem tal-għalliem/a] sa nhar [DATA].

Dejjem tiegħek,

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Mr Darren Borg  
*Riċerkatur*

E: darren.borg.12@um.edu.mt

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Ms Marie Josephine Mallia  
*Superviżur*

T: \_\_\_\_\_  
E: marie.j.mallia@um.edu.mt

## **Appendix G: Observation Schedule**

Observation number: \_\_\_\_\_

School: \_\_\_\_\_

Teacher: \_\_\_\_\_

Class: \_\_\_\_\_

### *Points useful during observation sessions*

1. What is/are the objective/s of the lesson?
  
2. What is the adopted seating plan for the lesson?
  
3. What language/s is/are used by the teacher and the students during the lesson?
  
4. To what extent are the following range of classroom talk observed:
  - a. Rote (chalk & talk approach)
  - b. Recitation (recall)
  - c. Instruction (explaining what to do or exposition of facts)
  - d. Discussion (Sharing of ideas to solve problems)
  - e. Dialogue (questions and discussion)
  
5. How do students react to the attempt by the teacher to make use of dialogic teaching?

6. Questioning techniques used by the teacher:

- a. How many questions refer to content of the lesson?
- b. How many questions refer to the well-being of the students?
- c. How many questions refer to tasks & instructions given by the teacher?
- d. Does the teacher try to ask questions of different levels?
- e. How many of the observed question could be classified as follows:

Eliciting information	
Checking for recall of information	
Checking understanding of concepts	
Probing students to think further	
To help students to make an argument	
To seek examples from students	
To seek an analysis from students	
Asking for interpretation	
Inviting students to make use of critical thinking	
Inviting students to come up with creative ideas	
Requesting students to apply learnt knowledge	

- f. Did the teacher ask the same question more than once?
- g. How does the teacher deal with a student who find difficulty in answering a question?
- h. How does the teacher generally ask questions? (individual student or whole class?)

7. How is the classroom climate when the teacher asks a question?

8. How do students' in this class tend to react to the teacher's questions?
  - a. Are there any particular types of questions which students tend to find most difficult to answer?
  
9. To what extent do students involve themselves out of their own initiative (such as by asking own questions)?
  
10. Apart from questioning, are there any other techniques used by the teacher to engage the students?
  
11. Rate the following statements from 1 to 5 (1 being the least)
  - a. The teacher takes into account students' prior knowledge and past experiences during the lesson
  - b. The teacher listens to and value the students' ideas
  - c. Students tend to listen and value their peers' ideas

12. Some features of a dialogic classroom<sup>1</sup>:

	Mostly	Sometimes	Never
Teacher & students tend to address a learning task together.			
Teacher & students do consider alternative viewpoints.			
Students are comfortable enough to express their idea/opinions freely.			
Students are comfortable enough to express their idea/opinions without fear.			
Teacher & student tend to build on their own & each other's ideas.			
Dialogue & discussion are carried out with a specific educational purpose.			

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<sup>1</sup> Adapted from: Alexander, R. (2008). Towards dialogic teaching: Rethinking classroom talk (4th ed.). Cambridge: Dialogos.

13. Based on the characteristics found in the table below, the observed lesson could be classified as:

Highly Interactive ☐ Moderately Interactive ☐ Non-Interactive ☐

Determinants of Interactivity within the classroom<sup>2</sup>

<b><i>Highly Interactive</i></b>	<b><i>Moderately Interactive</i></b>	<b><i>Non-Interactive</i></b>
Various learners participate in the lesson.	Same few learners participate in the lesson.	Limited/no learners participation.
More open-ended question than closed-ended question.	Majority of the questions asked are closed-ended.	Few/no use of questions. (when used they are closed-ended and often end up being answered by the teacher)
Learners are given time to think.	Learners are given some time to think.	No time for learners to think.
Teacher pays attention to non-verbal communication.	Teacher pays little attention to non-verbal communication.	Teacher pays no attention to non-verbal communication.
A mixture of <i>Teacher-Student-Teacher</i> exchanges & <i>Teacher-Student-Student</i> exchanges. (IRFRF chains)	Teacher-Student-Teacher exchanges are predominant. (IRF/IRE)	The teacher carries out most of the talk in class. (Limited space for IRF /IRE)
The teacher is keen to listen all learners reasoning, thoughts & ideas.	The teacher shows interest in learners answers, and is keen to listen what he/she wants to hear from them.	The primary focus of the teacher is on delivering the content of the lesson rather than engaging the learners in the learning process

Note:

IRFRF:	Initiation – Response – Feedback – Response- Feedback
IRF:	Initiation – Response – Feedback
IRE:	Initiation – Response – Exchanges

<sup>2</sup> Adapted from: Alexander, J. R. (2017). *Moving towards Interactive and Dialogic Approaches to Classroom Discourse*. Unpublished Master in Science Education thesis, University of Malta, Malta.

## Appendix H: Interview Schedules

### First Interview Schedule

#### Getting to know the participant

1. How would you describe your experience in teaching accounting so far?
  - a. How long have you been teaching accounting?

#### Dialogic teaching

2. How would you define dialogic teaching?
3. Do you find the teaching of accounting and the use of dialogic teaching as compatible or incompatible with each other? Why?
4. From 1 to 5 (with 5 being the highest), how often do you make use of dialogue in teaching the subject? Why?
  - a. *(if the teacher does make use of dialogic teaching ask...)*  
What pedagogical tools do you use to foster dialogue in class?
5. Are there any specific difficulties that you encounter in making use of dialogic teaching in your pedagogical approach?
6. Could you identify any potential benefits that could be sought through the use of dialogic teaching for;
  - a. You as an accounting educator
  - b. The learners

### Critical thinking

7. How would you define critical thinking?
8. Is there any relevance in fostering critical thinking skills among accounting learners? Why?
9. From 1 to 5 (with 5 being the highest), how often do you make use of critical thinking in teaching the subject? Why?
  - a. *(if the teacher does make use of critical thinking ask...)* What pedagogical tools do you use to foster critical thinking in class?
10. Are there any specific difficulties that you encounter in making use of critical thinking in your pedagogical approach?
11. Could you identify any potential benefits that could be sought through the use of critical thinking in accounting lessons for;
  - a. You as an accounting educator
  - b. The learners

### Accounting LOF

12. What role will dialogic teaching and critical thinking have in the new Accounting Learning Outcomes Framework?

### Expectations from the resource pack

13. Are there any specific accounting topics or concepts which you would like to be tackled by the researcher in the preparation of the resource pack?
14. Do you have any particular expectations with regards to the resource pack that shall be presented to you at a later stage?

## **Second Interview Schedule**

1. How would you assess the provided resource pack? Why?
2. To what extent did the resource pack reach its objective to facilitate the use of dialogic teaching and nourish critical thinking with and among accounting learners?
3. Would you recommend this resource pack to a colleague?
4. What would you have done differently if you had to prepare the resource pack yourself?
5. Would you like to add any other comments on the resource pack provided?