

English Language Proficiency and Overall Academic Performance: A Question of Inclusive Practice in Maltese Vocational Education

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Abstract

In this paper, we explore the effects of English as a medium of instruction in Maltese further vocational education settings, in the context of inclusive educational practice. Given the existing heterogeneity of English proficiency among students in Malta, our study aimed to investigate the association between English language proficiency and overall academic performance in a local vocational education and training institution. Using a generally postpositivist approach, quantitative survey design incorporating a standardised English proficiency assessment, followed by a descriptive and inferential statistical analysis of the data, we found little evidence to support the notion that English proficiency and overall academic achievement were correlated. While students reportedly perceived certain difficulties in their studies as a result of English-medium instruction, this had no adverse effect on their grades. While our findings do suggest a proclivity for inclusive practice, we also suspect that grading practices may be favouring content knowledge over language proficiency, possibly at the expense of field-specific and general English language mastery. Further research is needed to understand the interrelationships between English proficiency and inclusive educational practices in local vocational settings.

Keywords: English language proficiency, overall academic performance, further and higher education, technical vocational education and training.

Introduction

In an ever-increasingly globalised world of linguistic and cultural diversity, many countries are using English as the main medium of instruction in their primary schools, secondary schools, and universities (Rea Dickins, Khamis & Olivero, 2013; Dearden, 2015; Blair, Haneda & Bose, 2018; Bainton, Barrett & Tikly, 2016). As “emergent bi/multilinguals study together with their English-speaking peers” (Blair, Haneda & Bose, 2018: 7), many students must rise to the challenge of grasping educational content that is not presented in their first language.

Despite a national juxtaposing of the English and Maltese languages in Malta, both of which are considered essential for communication and economic purposes, English-medium instruction remains pre-eminent, particularly in the case of further and higher education institutions (NCF, 2012). Despite such widespread use of English, according to a Cambridge English Language Assessment benchmarking study in 2015 (CELA, 2016), only approximately half of Maltese secondary school learners were regularly exposed to English at home, while the remaining half never used English to communicate with friends or family. Furthermore, a quarter of Maltese secondary school learners fell short of attaining independent-user status in English reading and writing (2016: 4-5). It is a fair concern, therefore, that the relative primacy of English-medium instruction in the Maltese educational system may be having a detrimental effect on overall academic achievement (2016: 3).

According to the Ministry of Education and Employment, knowledge of English is considered to be “indispensable” for the pursuit of tertiary education in Malta (MEE, 2012), not least due to the prevalence of written English in much of the scholarly and scientific literature with which higher education students are ultimately expected to engage (Scriha and Vassallo, 2001; 2006). So, given the linguistic diversity of modern Maltese classrooms (accentuated by globalisation as well as existing heterogeneity among local secondary students in their English proficiency), and the centrality of written English at tertiary (higher education) level, this paper focuses on the relationship between English Language Proficiency (ELP) and Overall Academic Performance (OAP) at the crucial waypoint connecting the two, namely, the post-secondary (further education) level. Specifically, our study investigated the association between ELP and OAP at a major vocational education college in Malta at Malta Qualifications Framework (MQF) levels three and four, where English is the

primary medium of instruction. We also explored the relationship between ELP and prospective educational barriers perceived by learners themselves, using a generally postpositivist stance to observing, quantifying and correlating these main operative factors.

The Literature

International insights

The Education 2030 Framework for Action (UNESCO, 2014) defined equity and inclusion as fundamental ‘underpinnings’ for the continuing advancement of quality education globally. The term equity is usually intended to primarily connote fairness and impartiality, and the apportioning of equal importance to the education of each and every individual person. Reconstructing a more equitable educational environment, therefore, requires empowerment of learners, and assurance that they have what they need to thrive in the classroom and beyond, whatever the educational context or language of instruction.

The term inclusive pedagogy is typically offered, “in the context of racial, gender, cultural, and socio-economic diversity” (Sanger, 2020: 32). This definition can be further extended, using a critical disability theory perspective, to encompass the diversity that exists also among differently-abled learners in the classroom. Such a definition of inclusion stands firmly in conflict with what has been traditionally termed the ‘deficit approach’, which engenders the need for some students to actively seek external support beyond the classroom, in the form of tutors, private teachers or assistance from guardians. Truly inclusive pedagogy instead seeks to, “embed equitable access and opportunity for success within the classroom and curriculum” (Sanger, 2020: 32), for the provision of rich learning opportunities for everyone (Florian & Black-Hawkins, 2011).

For true engagement in learning and classroom interactions according to the ideas of equity and inclusion, however, the existence of significant variability in ELP among learners in a classroom where English is the primary language of instruction, can be seen as problematic. Several international studies have shown that delivery and assessment of academic subjects in a language that is relatively unfamiliar to the learner, adversely affects achievement across a range of educational levels (Johnson, 1988; Kerstjens & Nery, 2000; Huong, 2001; Thomas & Collier, 2002; Woodrow, 2006; Morrison & Evans, 2008).

In an experimental study of secondary school classrooms in Tanzania, treatment groups were taught in the Tanzanian language of Kiswahili, while control groups were taught identical subjects in English. The findings showed that English-medium instruction hindered the students' ability to participate and assimilate information, and limited their "critical abilities and creative qualifications" (Brock-Utne, 2007). Similarly, an observational/correlational study of 120 students attending a vocational school in Nigeria found a strong relationship between students' performance in general English, and the science/technology components of their courses, concluding that, "general English is a virile factor to be considered in relation to students' achievement in vocational education courses" (Olanipekun, Garuba & Mohammed, 2014: 87). Students in the same study who had a higher competence in the English language performed better in other subjects like physics, and did not report problems with inadequate note-taking or understanding of lessons.

Adding to the existing literature on secondary and further education contexts, Morrison and Evans (2018) explored challenges faced by learning in English by learners with low ELP specifically at the higher education level, among first-year undergraduates practising their academic writing; a skill widely considered crucial for effective study at this level and, a "key academic assessment tool" (2018: 3). Many of the learners struggled to read texts set by their lecturers, describing them as "too academic", and reporting most of the readings as containing "complicated sentence structure" (2018: 12). Undergraduates elsewhere have also reported their struggle to, "understand and make themselves understood [... with a lack of] confidence and ability to complete assignments of the required quality" (Murray, 2016: 34).

Similarly, Nesi and Gardner (2012) focused on the major change experienced by first-year undergraduates when writing assignments. Undergraduates felt that the instruction they had received during compulsory secondary school had not adequately prepared them for the distinctive process of writing academically. Some of the participants in Nesi and Gardner's study found it challenging to find suitable sources for their assignments and research projects, since they lacked the ability to sufficiently comprehend difficult texts. They also described difficulties with assimilating the information and paraphrasing it in their own words.

The local context

Ventura (1991) investigated ELP specifically in relation to the science subjects at secondary education level in Malta, providing some valuable insights on the wider effects of ELP on OAP among Maltese students. Students in various secondary schools who had taken science lessons in English, were assigned to standardised groups and given identical versions of a test in either Maltese or English. It was concluded that the performance of those more able in science was independent of the language in which the test was presented. Among those less able, however, results were significantly better when taking the test in Maltese (Ventura, 1991: 17). In a later study more than two decades later, Ventura (2016) obtained similar results, and concluded that knowledge of the English language had a significant effect on academic performance, at least in science. He also found that there was a correlation between academic achievement and self-reported proficiency in the language of instruction (Ventura, 2016: 250).

While it is known that students can face difficulties when confronted with a language of instruction that is not their first, be it locally or abroad, distinctive sociocultural factors unique to the Maltese context can reasonably be expected to provide some additional nuance worth considering. The National Curriculum Framework (2012) recommended that a language-in-education policy in Malta should address learners' need to become fully proficient in both Maltese and English, in a society that is typically characterised as being, for the most part, bilingual. Only half of Maltese secondary school learners, however, were regularly exposed to English at home in 2015 (CELA, 2016: 3), challenging the notion of Malta as a largely bilingual society equally adept at both languages. Furthermore, English has been acknowledged as the first language of only a minority of the Maltese population (MEE, 2014), and sociolinguistic surveys by Scriha and Vassallo (2001; 2006) indicated that the Maltese language could be classified as the mother tongue of around 98% of the population. The validity of English as the main language of instruction in Maltese schools, therefore, has understandably been the subject of much debate.

Pedagogical problems (Farrugia, 2009), as well as detrimental effects on performance (Camilleri Grima, 2013) have been forecasted with regard to a strict English-only approach at under post-secondary levels of education. Farrugia (2009) argued that the original National Minimum Curriculum's (NMC) recommendation of a shift to English instruction made students uncomfortable, and that most, "held back from asking questions because they

were afraid that they would make mistakes, or because they were not sure how to ask the question in English” (Farrugia, 2009).

Regardless of current sentiments among stakeholders about primary languages of instruction as a matter of policy, current educational practices tend to, in practical terms, ultimately produce varied levels of ELP by the time learners in Malta reach further vocational education. We are unaware of any local studies investigating, specifically, the relationship between level of English language proficiency and general academic achievement at further education levels in Malta, given the rising importance and centrality of English in the lead up to higher educational levels. Conceptually, we frame our questions about this link in the context of the ideas of equity and inclusion. In other words, our interpretations of the literature cultivated a specific research interest in how varying levels of ELP among Maltese learners entering further education, actually influence the pursuit of truly equitable and inclusive education at this level, as evidenced by their OAP.

English proficiency and inclusion in further education in Malta

In a 2014 policy document on inclusive education, the Ministry of Education and Employment (MEE, 2019: 11), pledged a commitment to the ideas of equity and inclusion, and the four fundamental pillars outlined by UNESCO in 1996 and 2005 (learning to know, learning to do, learning to live together and learning to be). The policy embraces the “concept, values and principles” of inclusive education with an emphasis on responding positively to learner diversity (2019: 11). Specifically, the document highlights a commitment towards eliminating barriers within learning environments, such that these instead, “acknowledge, celebrate and further develop the strengths of all learners” (2019:13-14). Given that learning environments in Malta at post-secondary levels will typically involve English as the main language of instruction, significant variations of ELP among local learners meanwhile appear to undermine any meaningful and systemic commitment to the basic values and principles of equity and inclusion.

In view of the difficulties faced by learners contending with a language of instruction that is not their first, the predominant status of Maltese as a first language for a majority of local learners as they progress through the educational system, and the increasing importance of English in the transition towards higher educational levels, we asked, in the context of an explicit commitment to the values and principles of equity and inclusion in Malta:

1. Is there an association between English proficiency and academic performance among Maltese vocational learners at the further education level?
2. Does English proficiency vary among Maltese vocational learners at the further education level according to difficulties they report with regard to English as a medium instruction?

Driven by these main questions, we hypothesised that among a sample of learners attending a major vocational education college in Malta at MQF levels three and four, we would find:

- H₁) A correlation between ELP and OAP.
- H₂) A significant difference in ELP among learners who generally found their course difficult, and those who did not.
- H₃) A significant difference in ELP among learners who perceived a lack of access to course materials, and those who did not.

Methodology

Data collection

To suitably address the research aims, questions and hypotheses, we selected a quantitative correlational design, with inferential statistical analyses of online survey data. Our study was carried out at the Malta College of Arts, Science and Technology, within the infrastructure of an existing and on-going research programme on inclusive pedagogy in vocational education and training. Following institutional clearance for data collection, a convenience sampling strategy was applied among students enrolled in two separate programmes (with identical learner entry requirements) at MQF levels three and four in business, and information and communication technology (ICT). Given that the focus was on ELP and general non-subject-specific OAP as the main factors of interest, the sample group was considered to be homogeneous for the purposes of the study. We also reasoned that between levels three and four we would capture a sufficiently broad range of levels of ELP for the purpose of statistical analysis, given that students will not yet have reached higher levels of education where ELP could be expected to have increased.

Administrative clerks with access to student mailing lists were enlisted to assist in the study, and eventually succeeded in recruiting a final mixed-ability and

mixed-gendered sample of 38 consenting participants. Statistical power ($1 - \beta$) was estimated at .90, or in other words, a 90% chance of finding a correlational effect size of $r = .50$ (Banerjee, 2006) for our main hypothesis (H_1). Statistical significance for hypothesis-testing was determined using an alpha level of 5% ($\alpha = .05$). In terms of instrumentation, participants completed and submitted a Google Forms survey organised in three main sections designed to operationalise the four key variables constituting our main hypotheses, as follows:

English proficiency

Instead of taking performance in the key-skill English subject/module integral to the programmes of study investigated, which may have been compounded by the same extraneous academic factors as the remainder of the course modules representing OAP, we sought a separate measure of proficiency, and so operationalised our ELP variable according to participants' scores on the standardised multiple-choice Cambridge Assessment English placement test for schools (Cambridge English, 2020). Cambridge Assessment English tests are generally trusted as an accurate assessment of ELP across a wide range of organisations in several countries (Gu & Saville, 2016). The standardised questions constituting the test were transposed to a single section of the survey and later corrected manually.

Overall academic performance

In the second part of the survey, participants reported their latest marks achieved in selected subjects/modules excluding key-skill English, namely; Accounts, Marketing, Human Resources, Science, Maths, Entrepreneurship, Information Technology, Soft Skills, and Purchasing. In the form, participants were automatically presented with only the subjects/modules relevant to their respective course selection. The average mark for all subjects/modules except key-skill English was later calculated using a spreadsheet and defined as our OAP variable.

Perceived course difficulty and access to course materials

The third section of the survey included two straight-forward dichotomous questions. Based on the context of their ELP, participants were asked first, whether or not they perceived their course to be difficult, and second, whether or not they perceived a lack of access to course materials. These questions were

simple Yes-No questions, in an attempt to get as clear an indication as possible of response valence, and to maximise the chances of detecting any prospective statistically significant effects in the resulting data.

ELP and OAP were treated as our two main dependent variables for the purpose of all hypothesis testing. Perceived course difficulty and access to course materials were then operationalised as our independent variables specifically for H₂ and H₃. The full dataset was finally downloaded and imported to Microsoft Excel for automatic correction of the ELP assessments and OAP subject averages.

Data analysis

The prepared data were finally imported to IBM SPSS (v27) for descriptive and inferential statistical analysis. We first tested the main dependent continuous variables for normality. Following a visual inspection of the histograms for ELP and OAP (see Figure 1), as well as a comparison of their skewness and kurtosis Z-scores to Kim's (2013) cut-off of ± 1.96 , we concluded that the data were not normally distributed for both variables. We therefore selected non-parametric statistical tests for hypothesis-testing (Mishra et al, 2019), namely, Spearman correlation coefficient and Mann Whitney U tests.

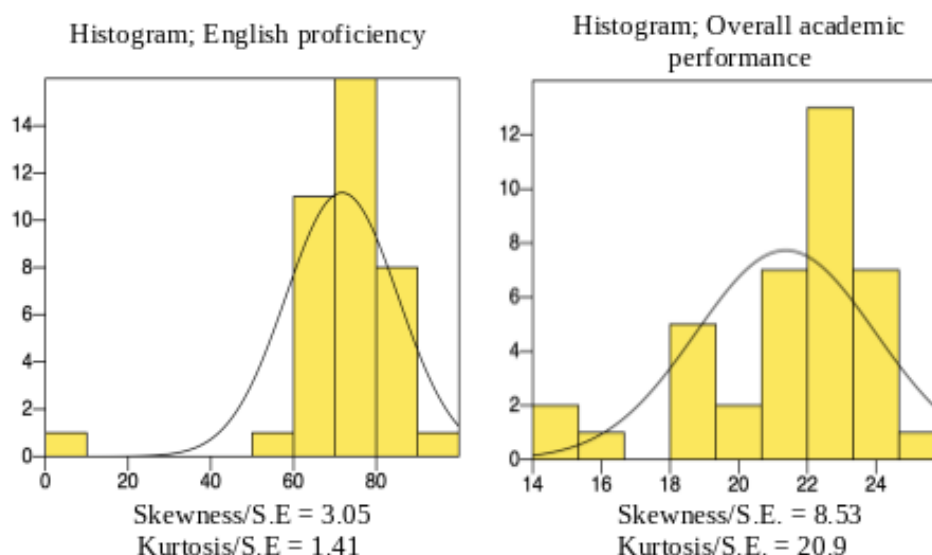


Figure 1: Histograms and Z scores for skewness and kurtosis for ELP and OAP with normal curve overlays

Results and Discussion

Overall, the participants obtained a mean score of 21.37 (SD=2.61) in their ELP assessments, and a final mean mark of 71.71 (SD=13.57) in their OAP. Given the non-normal distribution of the data, descriptive statistics including the median and interquartile range (IQR) are presented below in Table I.

Factor	Mean	SD	Median	IQR	Min	Max
ELP	21.37	2.61	22	3	14	25
OAP	71.71	13.57	72.81	12.51	5	90

Table I: Descriptive statistics for the main dependent variables ELP and OAP

With respect to the independent variables, a majority of the participants (89%, n=34) did not describe their course as difficult with respect to English as a language of instruction, and neither did 76% (n=29) perceive any lack of access to course materials. Table II (below) shows the frequency data for both these factors.

Factor	Yes	No
Course difficulty	4	34
Lack of access to materials	9	29

Table II: Counts for reported course difficulty and lack of access to course materials

Despite the primacy of Maltese as a first language among a majority of Maltese secondary school students (Scriha and Vassallo, 2001; 2006; MEE, 2014; CELA, 2016), our initial findings show that a majority of the sampled students enrolled in vocational business studies and ICT courses at the college, did not in fact experience substantial difficulties in their studies vis a vis English as the medium of instruction. Indeed, the ELP data were left skewed (Skewness=-1.16), showing that the lowest ELP scores were obtained by only a minority of the participants.

To fully address our first research question about whether or not ELP is ultimately having any significant effect on the academic achievement of students enrolled in further vocational education programmes in Malta, we proceeded to test the null hypothesis (H_0) for H_1 , that we would find no association between ELP and OAP. If students with low ELP, according to our initial findings, constitute a minority group among those enrolled in business

studies and ICT courses at the college, then the alternative (a statistically significant association between ELP and OAP) would suggest that the values and principles of equity and inclusion at the college might possibly be presently undermined.

According to the results of a Spearman correlation test, however, the evidence was not sufficient to reject the null ($r_s=.09$, $p=.61$). In other words, our findings do not in any way support the notion that there is a relationship between ELP and OAP. Even though a minority group of students in our sample were representative of low ELP, this did not appear to have any adverse effect on their grades. If ELP is not adversely affecting OAP in the local further education context, this result generally contradicts the findings of Morrison and Evans (2018) and Nesi and Gardner (2012), who reported underperformance among undergraduates with low ELP elsewhere, as well as the additional literature highlighting significant relationships between ELP and OAP across a range of educational levels (Brock-Utne, 2007; Olanipekun, Garuba & Mohammed, 2014; Ventura, 2016).

With regard to our second research question, we next tested for the effects of perceptions of course difficulty and access to course materials as our independent variables via H_2 and H_3 . We first tested the H_0 that ELP would not vary between those who reported general difficulties with the course given the language of delivery, and those who did not. According to the results of a Mann Whitney U test, the evidence was sufficient to reject the null ($U=26.5$, $p<.05$). In other words, in supporting H_2 our evidence corroborates other findings in the literature (Nesi & Gardner, 2012; Morrison & Evans, 2018), that there is a relationship between ELP and perceived difficulty, or more specifically, that students at the college with lower levels of ELP are more likely to experience difficulty in their course. Table III below shows the difference in Median ELP scores according to participants' responses to the course difficulty question.

Perceived course difficulty	Median ELP score
Yes	9.13
No	20.72

Table III: Median ELP scores by perceived course difficulty

Educators at the further education level might help mitigate some of these perceived difficulties by focusing on specific concerns highlighted elsewhere

in the literature, namely, the lack of vocabulary for summarising and paraphrasing academic texts to avoid plagiarising (Nesi and Gardner 2012), limited lexical range and less effective reading skills (Morrison & Evans, 2018) among undergraduates. Despite our finding that such difficulties do not appear to actually manifest in measurable overall performance deficits at the college, stakeholders' intent on promoting student self-efficacy in these areas may help provide additional support by tackling low competence perception among further education students.

We also tested the H_0 that ELP would not vary between those who reported a lack of access to course materials, and those who did not. According to the results of a Mann Whitney U test, the evidence for H_3 was not sufficient to reject the null ($U=79.5$, $p=.08$). Given that the alpha level for this study was set at .05, however, a p value of .08 would indicate the question is worthy of further exploration, so while our finding lacked statistical significance, we cannot altogether rule out the existence of an effect of ELP on perceived access to course materials. Table IV below shows the median ELP scores according to participants' responses to the question on access to course materials.

Perceived lack of access to course materials	Median ELP score
Yes	13.83
No	21.26

Table IV: Median ELP scores by perceived lack of access to course materials

Similar studies have found low levels of ELP among students reporting a perceived lack of access to materials and overall course difficulty due to the language of instruction (Dalton-Puffer, 2011; Doiz, Lasagaster & Sierra, 2011; Taguchi, 2014). However, these studies also found a correlation between ELP and OAP.

The present study, therefore, diverges from the literature by showing that while local vocational students with low ELP do indeed perceive general difficulties in their studies, this is not actually translating to poor academic performance. In other words, while students with low ELP are indeed experiencing greater difficulties than their peers, these difficulties are not actually having an adverse effect on their grades in the context of business studies and ICT vocational courses at the college. Incidentally, we also ran post hoc Mann Whitney U tests with OAP (as opposed to ELP) as the dependent variable. These failed to demonstrate any statistically significant differences

between those students who found their course difficult and those who did not, with regard to their actual OAP ($U=62$, $p=.78$). Neither did those students reporting a lack of access to course materials differ significantly in their actual OAP to those who did not ($U=123.5$, $p=.81$). The post hoc tests essentially reinforced the notion that there appears to be little association between students' proficiency in the language of instruction and assessment, and the overall grades they obtained in their chosen programme of study.

It could be argued that we are seeing the effects of a 'deficit approach', whereby students are having to, despite their difficulties, somehow make up the difference with extra work, or, assessors at the college are grading students' work based primarily on its vocational content, independently of the quality of the English in which it is presented. While the latter proposition may be indicative of more inclusive pedagogical and assessment practices at the college, it would raise other concerns worthy of further investigation.

Lee (2018; 2019) has argued for closer alignment between English language standards and content area standards in education. Specific technical fields for which the various programmes of study at vocational colleges cater will typically involve unique and field-specific requirements including specialised means of communication and contextualised use of language and terminology. Grading practices in vocational settings that do not take into account general ELP would, therefore, need to ensure that discipline-specific standards are not being compromised. The need for more systematic means of ensuring such standards are being effectively upheld may require further study. Similarly, given the importance of general ELP at tertiary level (Scriha & Vassallo, 2001; 2006; MEE, 2012), care should also be taken that grading practices do not deny students the opportunity to receive important formative feedback for improving their written general English, should they go on to pursue higher academic pathways in their future educational development.

Limitations and future research

Due to restrictive measures and school closures related to the COVID-19 pandemic, engagement with greater numbers of prospective participants from the targeted student population was challenging. Small sample sizes in hypothesis-testing research increase the risk of type II errors, or false negatives, resulting in erroneous failure to reject the null hypothesis. A larger sample size would have enabled both greater statistical power, and more generalisability of the findings. We therefore plan to repeat the study design with larger sample

sizes in the near future to further explore, specifically, the relationship between ELP and OAP in further and higher educational contexts further afield. Furthermore, given the sole use of internal email as the main means of recruiting participants as a result of the pandemic, the possibility of sampling bias could similarly not be eliminated in the present study. Larger and more randomised sampling using multiple modes of communication in the future would help reduce such bias.

Perceived course difficulty and lack of access to course materials were operationalised dichotomously in this study. The use of Likert scales, as opposed to Yes/No options, would have enabled participants to more accurately express a degree of magnitude in their responses (Herron & Bishop, 2015), resulting in the capture of more information and the prospect for more in-depth statistical analyses. In future research, such additional information may be used to hypothesise about the strength of the associations between perceived difficulty, OAP and ELP.

Given that our evidence did not support the existence of any correlation between ELP and OAP, and should further research also corroborate this finding, additional studies might help shed light on why this is the case, particularly with regard to closer examination of delivery and assessment strategies used in local further vocational education settings. Future research might also further explore the effects of ELP in the context of students from other EU and non-EU countries attending courses in Maltese further and higher education institutions, for whom English is a second language.

Conclusion and recommendations

Our study primarily aimed to explore the relationship between ELP and OAP in the local further vocational education setting, in the specific theoretical context of inclusive education and a basic commitment to the values and principles of equity and inclusion. We made the argument that extant variations in ELP among local students may be undermining our general commitment to the idea of inclusive education in Malta. To this effect, we hypothesised that we would find a relationship between ELP and OAP in a sample of further education students enrolled in business studies and ICT courses at a major vocational college in Malta.

Using a quantitative survey design with descriptive and inferential statistical analyses, and contrary to expectations based on our review of the literature, we

found that the evidence collected did not in any way support the notion that ELP and OAP were correlated. We also found that while students indeed reported perceiving difficulties with their courses as a result of low ELP, this ultimately had no adverse effect on their grades. This was construed as a generally positive finding, given our driving theoretical assumption that an association between ELP and OAP would undermine the values and principles of equity and inclusion.

We offer these findings as a catalyst for future research on the relationship between ELP and OAP in further as well as higher educational settings in Malta. We propose our study design, namely the testing of the hypothesised relationship between scores on Cambridge Assessment English tests as a valid measure of ELP, and average marks in remaining course subjects/modules except English as a valid measure of OAP, be replicated in other further and higher educational institutions in Malta.

Due to the technical nature of vocational education, we suspect that grading practices may be emphasising content knowledge over language proficiency. If this is the case, then further research is needed to explore whether discipline-specific language practices and communication standards are still being observed, and whether students' opportunities to develop their general ELP are not being compromised in the context of their prospective long-term higher educational development. The insights gained from this line of research may ultimately help foster more inclusive practices among educators at both further and higher education levels within the unique Maltese cultural and sociolinguistic context, as well as make a contribution to the wider literature on more effective teaching and learning of English at these levels.

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