

**Linguistic Profiles of Students diagnosed with SpLD – An Investigation of
Maltese and English Essay writing in National Examinations.**

Edward Mazzacano D'Amato

PhD Dissertation. Institute of Linguistics and Language Technology



L-Università
ta' Malta

University of Malta Library – Electronic Thesis & Dissertations (ETD) Repository

The copyright of this thesis/dissertation belongs to the author. The author's rights in respect of this work are as defined by the Copyright Act (Chapter 415) of the Laws of Malta or as modified by any successive legislation.

Users may access this full-text thesis/dissertation and can make use of the information contained in accordance with the Copyright Act provided that the author must be properly acknowledged. Further distribution or reproduction in any format is prohibited without the prior permission of the copyright holder.

Acknowledgements

This thesis would not have been possible without the assistance and support of many throughout the past seven years.

I would first like to thank my supervisors, Professor Marie Alexander and Professor Liberato Camilleri. Their patience and dedication were invaluable in guiding me along this journey. Their continuous academic and frequent encouragement pushed me to completing this research and helped my work reach a high level.

I would like to acknowledge my colleagues from the ACCESS-Disability Support Unit (ADSU), particularly Dr Anne-Marie Callus and Professor Paul Bartolo; Staff and colleagues from the MATSEC Support Unit; Professor Albert Gatt, Professor Stavros Assimakopoulos, Dr Sarah Grech, Professor Alexandra Vella and all the staff, students and members of the Linguistic Circle at the Institute of Linguistics and Language Technology (ILLT); Dr Odette Vassallo and her team at the Corpus of Learner English in Malta (CLEM); Dr Christine Firman and her team at the SpLD Unit; Mr Stanley Zammit and the team at the School Psychological Services (SPS), Dr Ruth Falzon and Dr Victor Martinelli.

Finally, I would like to thank my wife Cathleen for her relentless support in my life; My children Alda and Alex whose frequent question, 'When will you finish the book?', was a motivation to complete the work. Thanks for sharing this experience with me; To my parents, brothers Robert and Pierre and their families, who were always in the background; All my friends who cheered me along, George Cremona, Leli Agius, Jeffrey Sciberras, Brian Muscat, Pier Giorgio Buttigieg, Fr. Paul Chetcuti SJ, Fr Ray Pace SJ, Sr. Giuliana and many others who despite the Covid restrictions and social distancing, felt right beside me whenever I needed them most.

Table of Contents

Declaration.....	ix
Glossary of Terms	x
Abstract.....	xi
Chapter 1 – Introduction	1
Chapter 2 - Literature Review	4
2.1 Introduction.....	4
2.2 The Maltese Educational Context.....	4
2.2.1 SEC English and SEC Maltese 2015-2016	5
2.2.2 Access Arrangements SEC Statistics 2015 and 2016	8
2.2.2.1 SpLD Group - SEC English Language.....	8
2.2.2.2 SpLD Group - SEC Maltese.....	9
2.3 Bilingualism – Definition	10
2.3.1 Language Interdependence	14
2.3.2 Bilingualism in Maltese Education.....	15
2.3.3 Language of Instruction in the Maltese learning community.....	17
2.3.4 The Bilingual Model in Malta.....	20
2.4 Biliteracy.....	24
2.5 Writing – a literacy skill.....	26
2.5.1 Writing in education and examinations in Malta	27
2.5.2 Writing and Learning.....	28
2.5.3 Writing throughout the Years and the Advent of Technology	29
2.5.4 The two productive skills of language – speaking and writing.....	30
2.6 Writing as a Subject of Study – the Process and the Product.....	33
2.6.1 Cognitive Theories of Writing	33
2.6.2 Different levels of Writing - Knowledge-Telling and Knowledge-Transforming	38
2.6.3 Stages of Writing Development.....	39
2.7 Dyslexia and Writing	41
2.7.1 Comprehension and writing	45
2.7.2 Bilingualism and Dyslexia	46
2.8 Writing as a Product.....	48
2.8.1 Writing as a holistic skill.....	49
2.9 Spelling and Dyslexia.....	50

2.9.1 Inconsistency	54
2.9.2 Spelling and Language Orthography.....	54
2.9.3 Spelling Errors Analysis	57
2.9.4 Holistic Analysis of Spelling	58
2.9.5 Classification Schemes	58
2.10 Cohesion	63
2.11 Coherence.....	65
2.11.1 Coherence and second language	66
2.12 Features of Good Writing.....	68
2.13 Writing does not exist in a Vacuum – The Social and Cultural Implications	69
2.14 Writing Style	73
2.15 Assessing Writing in Educational Settings.....	75
2.16 The Design of the Writing Task.....	77
2.17 The Guide to scoring Essays – Rubrics	78
2.18 Common European Framework Reference for Language (CEFR)	80
2.18.1 European Language Portfolio (ELP)	81
2.18.2 Reactions to CEFR and ELP	82
2.18.3 The need for assessment literacy	84
2.19 Examination Access Arrangements	86
2.19.1 The experience of Examination Access Arrangements	89
2.19.2 The evolving nature of EAAs and Assistive Technology.....	91
2.19.3 EAAs – concluding remarks	96
2.20 Conclusion and the Research Questions	96
Chapter 3 - Methodology	98
3.1 The Researcher and the Area of Study – Selecting the Topic.....	98
3.2 Researcher Bias	98
3.3 The aim of the study and the research questions.....	99
3.4 Data Collection – Sources and Access.....	100
3.4.1 MATSEC Support Unit - Candidates’ Data on Examination	100
3.4.2 Access Disability Support Unit (ADSU) - Candidates’ Data on Literacy	101
3.4.3 Corpus of Learner English in Malta (CLEM) - Candidates’ data on writing task.....	102
3.5 Data Analysis – The Mixed Method Research.....	105
3.5.1 The Explanatory Sequential Design	106
3.5.2 Quantitative Analysis	108
3.5.2.1 Quantitative Analysis and this Study	109
3.5.2.2 Text Inspector - Quantitative data on written scripts	110

3.5.3 Qualitative Analysis.....	113
3.5.3.1 Qualitative Analysis and this Study	114
3.5.3.2 Thematic Analysis	116
3.5.3.3 Inductive and Semantic Thematic Analysis	117
3.5.3.4 Analysis Plan, Codes and Themes.....	118
3.5.3.5 Six-Step Process.....	118
3.5 Limitations of the Research	121
Chapter 4 – Findings and Results – Quantitative Analysis	124
4.1 Introduction.....	124
4.2 Statistical Tests used	125
4.3 Overview of the Results in Secondary Education Certificate (SEC)	127
4.3.1 English and Maltese in relation to other Subjects	127
4.3.1 SEC English Language and SEC Maltese – An Overview	131
4.3.2 Literacy Scores and School Type	135
4.4 Literacy scores, language grades and essay marks	137
4.4.1 Suffolk Reading & Comprehension Test.....	139
4.4.2 NARA II Reading and Comprehension	144
4.4.3 NARA Accuracy	146
4.4.4 NARA II Reading Speed	147
4.4.5 English Spelling Test	149
4.4.6 Maltese Naqra u Nifhem Test (Maltese Reading and Comprehension Test).....	152
4.4.7 Maltese Spelling Test	154
4.4.8 General Cognitive Ability (GCA) Test and SEC English	156
4.4.9 Verbal Ability Test and SEC English	157
4.4.10 General Cognitive Ability (GCA) Test and SEC Maltese.....	158
4.4.11 Verbal Ability Test and SEC Maltese.....	159
4.5 Text Analysis and Grades and Results	160
4.5.1 Lexical Diversity – VOCD	160
4.5.2 VOCD and Access Arrangements Candidates.....	161
4.5.3 VOCD and the rest of the Candidates.....	162
4.5.4 Readability Ease	163
4.5.5 Flesch Readability Ease and Essay Mark	164
4.5.6 Spelling Errors and Essay Marks	166
4.6 Analysis of Vocabulary Scores of ‘AA’ candidates and the ‘Rest’ of the candidates	171
4.7 Predicting Aspects of Achievements in Examinations –Regression Analysis.....	173
4.8 Conclusion	175

Chapter 5 - Qualitative Results	177
5.1 Introduction.....	177
5.2 In what ways does dyslexia manifest itself in the writing task of SEC level English and Maltese at national examinations?	180
This question is answered by taking into consideration the results from the quantitative analysis in chapter 4, in particular in the areas of reading comprehension, reading accuracy, spelling, general cognitive ability, and delving deeper into the primary data itself.....	180
5.2.1 Reading Comprehension	180
5.2.2 Reading Accuracy	188
5.2.3 Spelling	190
5.2.3.1 Further observations in the spelling of AA students	197
5.2.3.2 Spelling Error Types.....	199
5.2.3.3 The Severe Spelling Errors - <70 Standard Score Group	199
5.2.3.4 The Mild Spelling Errors - >95 Standard Score Group.....	202
5.2.3.5 Comparison between the Two Groups.....	205
5.2.4 Cognitive Ability and Verbal IQ.....	207
5.2.5 Lexical Diversity and Vocabulary Levels.....	214
5.2.6 Conclusion: AA Students with SpLD/dyslexia fall on a Broad Spectrum.....	217
5.3 Are there differences between the linguistic features of writing produced under examination conditions by access arrangements students with SpLD/dyslexia and the other students without access arrangements?	218
5.3.1 Paper A and Paper B.....	219
5.3.1.1 The Top Marks and Grades	221
5.3.2 Top Essays (Paper A) – Non-AA candidates.....	222
5.3.2.1 Idiomatic expressions	227
5.3.2.2 Rich Vocabulary.....	228
5.3.2.3 Content Vocabulary from Reading Books	230
5.3.2.4 The Narrative Genre.....	232
5.3.3 Top Essays Paper A – AA scripts.....	237
5.3.3.1 Paper A – a wide range of essays and an overlap of abilities for AA and Rest Candidates	241
5.3.3.2 Paper B – More similarities between AA and non-AA scripts	246
5.3.4 Maltese as a first language	253
5.3.4.1 Language Interference	257
5.3.4.2 Maltese language Interference in English Writing.....	258
5.3.4.3 English Language Interference in Maltese Writing	264
5.3.5 Formality and Informality – Correct Style and Register.....	269

5.3.5.1 Direct Address – The Second Person Singular.....	272
5.3.5.2 The Relationship between Spoken Language Proficiency and Writing.....	275
5.3.6 Coherence - Thoughts, Ideas and Writing	276
5.3.6.1 Maturity of Thought.....	277
5.3.6.2 Coherent Text.....	278
5.3.6.3 Incoherent Text	282
5.3.6.4 Holistic Ideas – Different Shades of Grey	285
5.3.6.5 Essay Schemas	286
5.3.6.6 Contradictions	289
5.3.7 Conclusion	291
5.4 What do literacy scores tell us about the quality of writing produced by dyslexia candidates?	292
5.4.1 Literacy Profiles of Dyslexia Students	292
5.4.2.1 Below Average and Low Average Standard Scores.....	293
5.4.2.2 Average and High Average.....	298
5.4.2.3 Strong Dominance in one Language	302
5.4.3 Outliers	304
5.5 Conclusion	306
Chapter 6 - Discussion Chapter	309
6.1 In what ways does dyslexia manifest itself in the writing task of SEC level English and Maltese languages at national examinations?.....	309
6.2 Are there differences between the linguistic features of writing produced under examination conditions by access arrangements students with SpLD/dyslexia and the other students without access arrangements?	314
6.2.1 Teaching Writing	315
6.2.2 Bilingualism in Schools.....	320
6.3 What do literacy scores tell us about the quality of writing produced by dyslexia candidates?	322
6.3.1 Access arrangements	324
6.3.2 National Assessment.....	327
Chapter 7 - Conclusion	330
References:.....	335
Appendix 1 - An Overview of SEC English and SEC Maltese according to paper, gender, school type, group and marks.....	373
Appendix 2 - Levene’s test for quantitative analysis on mean number of errors.	377
Appendix 3 - Common Reference Levels: Global Scales	378
Appendix 4 – Levene’s test for quantitative analysis on vocabulary	379

Appendix 5 – Unlisted words on Textinspector	380
Appendix 6 - Qualitative analysis – Spelling Errors and actual Vocabulary Levels as classified by Textinspector:.....	383
Appendix 7 – Idiomatic expressions from SEC Maltese Paper A and Paper B from both AA and non-AA candidates.....	388

Declaration

University of Malta: Institute of Linguistics and Language Technology

Edward Mazzacano D'Amato 470379M

PhD Dissertation Linguistics and Language Technology

Title of Dissertation: *Linguistic Profiles of Students diagnosed with SpLD – an Investigation of Maltese and English Essay writing in National Examinations.*

I hereby declare that I am the legitimate author of this dissertation and that it is my original work. No portion of this work has been submitted in support of an application for another degree or qualification of this or any other university or institution of learning. Any reference to previously published or written work by other authors has been carefully referenced by proper citation.

Signature

Name

Glossary of Terms

AAs - Access Arrangements

ADSU - ACCESS-Disability Support Unit

ADSC - ACCESS-Disability Support Committee

AT - Assistive Technology

BDA - British Dyslexia Association

CEFR - Common European Framework of Reference

EAs - Exam Access Arrangements

ELP - European Language Portfolio

GCSE - General Certificate of Secondary Education

IDA - International Dyslexia Association

L1 - Language 1 (First Language)

L2 - Language 2 (Second Language)

MATSEC - Matriculation and Secondary Education Certificate Examinations Board

MDA – Malta Dyslexia Association

MQF - Malta Qualifications Framework

NARA II - Neale Analysis for Reading Ability II (Second edition)

NCF - National Curriculum Framework

NMC - National Minimum Curriculum

PISA - Programme for International Student Assessment

PIRLS - Progress in International Reading Literacy Study

QTA - Quantitative Text Analysis

SEC - Secondary Education Certificate

SpLD - Specific Learning Difficulty

TIMSS - Trends in International Mathematics and Science Study

Abstract

This research analyses a sample of 1,861 English and Maltese essays written by students during two national examination sessions 2015 and 2016 in Malta at the end of secondary school. Different qualities of writing produced by Access Arrangements (AA) students with SpLD/dyslexia and those without AAs (the Rest) were analysed and compared through mixed method research within the framework of the explanatory sequential design. The results from the quantitative analysis highlighted areas of interest that were subsequently analysed qualitatively. The aims of the study are to understand the impact of SpLD/dyslexia on writing and how texts from students with SpLD/dyslexia differ or otherwise, from the writing produced by students without AAs. The results show how the scores achieved by students who have SpLD/dyslexia in literacy assessments administered at pre-examination stage, correlate with the marks and grades achieved in their language examinations. Results in this study are consistent with the literature, showing how overall, the performance of students with SpLD/dyslexia in writing is poorer in quality, reflecting poorer marks and grades in the essays. Nevertheless, the analysis of writing belonging to the two groups reveals overlapping qualities that often point to poor bilingual development or poor proficiency in the second language. The results have various implications for education policy, including bilingual teaching and learning, assessment and the diagnosis of SpLD/dyslexia.

Chapter 1 – Introduction

I have been working in the field of education in Malta for the past twelve years. My work with the Access-Disability Support Unit (ADSU) at the University of Malta, brings me in contact with candidates who request access arrangements to sit for national examinations at the end of secondary schooling. Their reasons for the requests vary considerably, from severe to mild and moderate disabilities/impairments, medical conditions, neurodevelopmental disorders, mental health difficulties, temporary illness and injuries. Those who struggle the most are those with cognitive difficulties who find it hard to keep abreast with the curriculum. At the end of a rollercoaster experience, spanning across their formative years, they request the granting of access arrangements for examinations from the Unit. I refer here to the majority within this minority access group – the students who have dyslexia or a Specific Learning Difficulty (SpLD) (see Sections 2.2.2.1, 2.2.2.2).

One of my roles at the ADSU is to help in the processing of the applications of these candidates. The challenge in this task is the constant mitigation of the tension between two forces. On the one hand is the examination ideology with its strict and rigid rules that promotes standardisation to ensure the validity and the integrity of the whole assessment process. On the other hand, the contrasting philosophy of a student-centred approach and tailor-made assessment that respects equity and disability rights to respect the equal opportunities for all. These schools of thought need to understand each other's viewpoints and work in symbiosis to move forward and strengthen the foundations of a good-quality assessment system that ensures a place for all in a just society.

The psychological reports and literacy updates presented by the access arrangements applicants underline and confirm the academic difficulties and educational needs of each applicant. A literacy assessment belonging to candidates with dyslexia always made me wonder about the qualities of the candidates' writing. Beyond these applications are the scripts of these candidates, written during the examinations. Over the years, my curiosity to delve deeper into the content of these scripts motivated me to start this research project. I wanted to see and understand first-hand the text that these students produce during their 'moment of truth' – the end of their educational journey after eleven years of schooling. The best way to do this was to take a statistical and linguistic perspective to quantitatively and qualitatively analyse the writing tasks of the main language examinations – Maltese and English.

In the backdrop are the rest of the students who do not request access arrangements. A significant number of these also have challenges in literacy and hence, accessing the curriculum. Consistently throughout the recent past, an approximate one third of all applicants failed to get a decent passing grade (Grades 1-5) in SEC Maltese and English Language (see Section 2.2.1). A pass would make students eligible to further their studies at the post-secondary level of education. In parallel to this, young learners in Malta have trailed behind most European countries in literacy achievement measured by international assessments like Progress in International Reading Literacy Study (PIRLS: 2011, 2016) and Programme for International Student Assessment (PISA: 2009, 2015, 2018). In both tests, the Maltese results have always fallen below the centrepoint (average) in all tests, placing Maltese students amongst the lowest achieving across the European Union. Nevertheless, there have been gradual improvements along the years.

The literature review that follows in Chapter 2 presents the research on the topics surrounding this subject and that helped in formulating the main research questions. The key topics under review include literature from Malta and centre around bilingualism, dyslexia, writing, and assessment. Chapter 3 lays out the Methodology used to analyse the scripts using both the quantitative and qualitative methods. The results of quantitative analysis are presented in Chapter 4 and the findings of qualitative analysis are presented in Chapter 5. The Discussion is presented in Chapter 6 and the conclusion in Chapter 7.

Chapter 2 - Literature Review

2.1 Introduction

This chapter will review the literature on topics related to four main areas, namely bilingualism, writing and dyslexia, assessment and examination access arrangements (EAAs). Literature on the characteristics and functions of bilingualism within the local educational context will also be considered. This is a very specific area with literature that comes from the scant studies, spread across a number of years and mainly carried out by local researchers. 'Writing' will consider both the writing 'process' and the writing 'product'. Studies and theories on the writing 'process' help in the understanding of the multilevel mental and motor processes that work in tandem to produce 'writing', which is a developmental, multidimensional and very complex topic. Literature on the writing 'product' explores features and characteristics of writing that help in the understanding and analysis of writing, both for research and assessment purposes. Educational Assessment is reviewed next. This is a controversial topic, especially in the context of language assessment in high stakes national examinations. Reference is made to the Common European Framework of Reference (CEFR), which is a Europe-wide attempt at harmonising language assessment. Finally, the review will look into the issues of examination access arrangements (EAAs) and how these impact the examinations and the way they have evolved vis-à-vis writing over the past few years.

2.2 The Maltese Educational Context

Literacy is not a forte for Maltese students across primary and secondary education. Despite the huge financial investment in the Education sector, Malta's outcomes in education are

generally lower when compared to the EU average. Malta's spending on education stands at 4.9% of the gross domestic product (GDP) with a total proportion of 13.9% of public expenditure. In contrast, the EU average spending is lower at 4.6% of GDP and 10.2% total public expenditure (European Commission, 2019). In the past decade, Maltese students trailed behind in international and EU studies on language performance (PIRLS, 2011, 2016; PISA, 2009, 2015, 2018) (For more detail see Section 2.4). Alarming, a substantial proportion of secondary school learners have not progressed beyond the beginners' Common European Framework Reference (CEFR) A1/A2 levels in English, meaning that they have not become independent users of the language (26.8%, 24.7%, 17% and 9.7% for the skills of Writing, Reading, Listening and Speaking respectively) (Cambridge Language Assessment, 2015, p.54). These results are mirrored in the Secondary Education Certificate (SEC) examinations where approximately a third of the students do not get passing grades 1-5 in the two main language examinations, English and Maltese (MATSEC, 2014-2020). A passing grade 1-5 is required for continuation in post-secondary academic institutions.

2.2.1 SEC English and SEC Maltese 2015-2016

The national examinations merit a closer look, given that the content and the information about the essays of students sitting for SEC English Language and SEC Maltese are the data under analysis in this research. The tables below, taken from the MATSEC Statistical Reports 2015 and 2016, show the distribution of grades across the two Papers 2A and 2B (hereafter referred to as 'A' and 'B'). In SEC English, Paper A essays require longer texts (320-350 words) than Paper B (180-200 words) (SEC English Language Syllabus, 2015, 2016). In SEC Maltese, the essay length is the same for both Paper A and B (around 350 words) (SEC Maltese Syllabus,

2015, 2016). The passing grades for Paper A range from 1-5 and 4-7 in Paper B. Grades 6 and 7 are not considered a suitable qualification for post-secondary level. The syllabus in SEC Maltese is different to SEC English Language because it contains the literature component.

Results from the statistical reports show that more students chose to sit for Paper A than Paper B. In SEC English Language, 2015, out of the 4,733 registered candidates, 2,774 chose Paper A and 1,959 chose Paper B. It is interesting to note that, in Paper A, around 90% achieved a pass at grade 1-5 at MQF Level 3¹ and only 10% failed (U) or were absent. In contrast, only around 25% achieved a pass of 4-5 which is considered MQF Level 3², with the majority of 75% achieving grades 6-7 at MQF Level 2, U (unclassified) or absent (see Table 2.1, extracted from MATSEC Statistical Report, 2015, p.28).

Table 2.1: SEC English Language results 2015 illustrating the Paper levels and gender in numbers and percentages.

Subject	Paper IIA								Paper IIB						Total	
	1	2	3	4	5	U	Absent	Register	4	5	6	7	U	Absent		Register
English Language	187	520	648	607	444	346	22	2774	115	454	456	394	459	81	1959	4733
%	4.0	11.0	13.7	12.8	9.4	7.3	0.5	58.6	2.4	9.6	9.6	8.3	9.7	1.7	41.4	100
Males	83	224	300	292	190	149	4	1242	60	245	217	208	246	43	1019	2261
Females	104	296	348	315	254	197	18	1532	55	209	239	186	213	38	940	2472

The pattern was similar in SEC Maltese, where only around 8% of those sitting for Paper A got a failing mark (U) or were absent. 92% achieved a pass mark 1-5. In Paper B, only 37% achieved a passing grade of 4-5 and the rest, 63% achieved a 6, 7, U or were absent (see Table 2.2, extracted from MATSEC Statistical Report, 2015, p.29).

¹ MQF is Malta Qualifications Framework. Level 3 is accepted as an entry requirement to post-secondary academic institutions.

Table 2.2: SEC Maltese results 2015 illustrating the Paper levels and gender in numbers and percentages.

Subject	Paper IIA								Paper IIB							Total
	1	2	3	4	5	U	Absent	Register	4	5	6	7	U	Absent	Register	
Maltese	101	402	533	726	356	180	16	2314	294	378	293	144	636	92	1837	4151
%	2.4	9.7	12.8	17.5	8.6	4.3	0.4	55.7	7.1	9.1	7.1	3.5	15.3	2.2	44.3	100
Males	33	134	195	342	193	115	7	1019	137	185	166	85	399	43	1015	2034
Females	68	268	338	384	163	65	9	1295	157	193	127	59	237	49	822	2117

The results for SEC English Language and SEC Maltese in 2016 show a similar pattern (see Tables 2.3 and 2.4 extracted from MATSEC Statistical Report, 2016, p.29-30). Similar results have been consistent throughout the years (MATSEC, 2004-2020).

Table 2.3: SEC English Language results 2016 illustrating the Paper levels and gender in numbers and percentages.

Subject	Paper IIA								Paper IIB							Total
	1	2	3	4	5	U	Absent	Register	4	5	6	7	U	Absent	Register	
English Language	222	537	723	629	492	284	29	2916	106	314	356	348	491	80	1695	4611
%	4.8	11.6	15.7	13.6	10.7	6.2	0.6	63.2	2.3	6.8	7.7	7.5	10.6	1.7	36.8	100.0
Males	86	222	320	290	244	142	11	1315	51	137	181	175	260	38	842	2157
Females	136	315	403	339	248	142	18	1601	55	177	175	173	231	42	853	2454

Table 2.4: SEC Maltese results 2016 illustrating the Paper levels and gender in numbers and percentages.

Subject	Paper IIA								Paper IIB							Total
	1	2	3	4	5	U	Absent	Register	4	5	6	7	U	Absent	Register	
Maltese	95	417	589	684	434	244	12	2475	181	320	291	138	660	101	1691	4166
%	2.3	10.0	14.1	16.4	10.4	5.9	0.3	59.4	4.3	7.7	7.0	3.3	15.8	2.4	40.6	100.0
Males	26	150	240	302	228	153	5	1104	65	147	158	86	411	57	924	2028
Females	69	267	349	382	206	91	7	1371	116	173	133	52	249	44	767	2138

This means that overall, approximately one third of all candidates do not achieve an MQF level 3 qualification in the two languages (34.9% in 2015 and 32% in 2016 in SEC English Language; and 30.2% in 2015 and 32% in 2016 in SEC Maltese). From an educational point of view, it is alarming that one in three students does not manage to achieve a decent level of language proficiency in the two main and official languages that includes the native one, Maltese. These statistics do not include others who are part of the end-of-secondary cohort of Maltese students and who, for different reasons, do not sit for either of the two languages at SEC level for not having achieved the necessary academic level. In 2019, this figure stood

at 6% of the cohort born in 2003 (MATSEC, 2019), down from 19.5% in 2008 and 28.3% in 2001 (Ali, Farrugia & Gender Issues Committee UoM, 2013).

2.2.2 Access Arrangements SEC Statistics 2015 and 2016

In 2015, the number of candidates requesting access arrangements was 584 (9.94% of the total applicants). Most candidates who applied for access arrangements (68.1%) opted for Paper B. Those candidates with specific learning difficulties (SpLD) amounted to 350, 169 with ADHD comorbidity, and 181 with dyslexia (MATSEC, 2015). Throughout the years, the SpLD group has always been the biggest group from all access arrangements candidates (MATSEC Statistical Reports, 2004-2019).

There was a similar picture in 2016, with the number of candidates requesting access arrangements standing at 572 candidates (9.81% of the total applicants). Candidates with access arrangements were more likely to apply for Paper B (65.2%). Out of the 572, the majority had specific learning difficulties (SpLD) and/or dyslexia (205) and 179 with ADHD comorbidity (MATSEC, 2016).

2.2.2.1 SpLD Group - SEC English Language

In 2015, there was a total of 167 SpLD candidates who sat for SEC English Language. The distribution of grades is presented in Table 2.5 (taken from MATSEC Statistical Report, 2015, p.59). Notably, none of the SpLD candidates achieved a Grade 1 or 2 and only one candidate achieved a Grade 3. 35 out of 167 candidates achieved grades 1-5. The majority achieved

grades 6, 7 and U, which are not considered sufficient grades for most post-secondary academic institutions.

Table 2.5: SEC English Language results for students with SpLD, 2015

SUBJECT	Paper	1	2	3	4	5	6	7	U	Abs.	Reg.	Total
English Language	IIA	0	0	1	10	8			12	0	31	167
	IIB				2	14	33	36	49	2	136	

In 2016, the number of candidates with SpLD who applied for AAs was much bigger, but the distribution of marks followed the same pattern, as indeed happened in previous years (see Table 2.6, taken from MATSEC Statistical Report, 2016, p.59). Nevertheless, unlike the results of 2015, there were three candidates who achieved a Grade 2 and ten candidates who achieved a Grade 3. Out of a total 349, 96 students achieved grades 1-5 and the remaining 251 got grades 6,7 and U.

Table 2.6: SEC English Language results for students with SpLD, 2016

SUBJECT	Paper	1	2	3	4	5	6	7	U	Abs.	Reg.	Total
English Language	IIA	0	3	10	18	21			17	0	69	349
	IIB				9	35	52	56	126	2	280	

2.2.2.2 SpLD Group - SEC Maltese

In 2015, there was a total 151 SpLD candidates who sat for SEC Maltese. The distribution of grades is presented in the Table 2.7 (taken from MATSEC Statistical Report, 2015, p.59). There were no candidates who achieved grades 1-3 and a large number sitting for Paper B (53) did not pass.

Table 2.7: SEC Maltese results for students with SpLD, 2015

SUBJECT	Paper	1	2	3	4	5	6	7	U	Abs.	Reg.	Total
Maltese	IIA	0	0	0	10	8			6	0	24	151
	IIB				9	17	31	13	53	4	127	

In 2016, there were more candidates with SpLD who sat for SEC Maltese. Although the pattern of grade distribution was similar to 2015 and previous years, there was one candidate who achieved a Grade 2 and three candidates who achieved a Grade 3. This was an improvement on the results of 2015 (see Table 2.8, taken from MATSEC Statistical Report, 2016, p.59).

Table 2.8: SEC Maltese results for students with SpLD, 2016

SUBJECT	Paper	1	2	3	4	5	6	7	U	Abs.	Reg.	Total
Maltese	IIA	0	1	3	9	23			17	0	53	323
	IIB				13	33	51	25	145	3	270	

2.3 Bilingualism – Definition

Any definition of ‘bilingualism’ implies the notion of a speaker who uses two languages. The online Cambridge Dictionary defines it as “the fact of being able to use two languages equally well” (2017). Such a concept of bilingualism seems to suggest that the two languages exist independently and autonomously from each other, split into two separate compartments in the mind of the bilingual speaker. Over the years however, these models of bilingualism have been challenged for being too restrictive, conceptualising bilingualism as ‘monoglossic’, ‘two language solitudes’, ‘two monolinguals in one person’, and ‘one language plus a second language equals two languages’, (e.g. Grosjean 2001; Garcia, 2009; Cummins, 2008; Canagarajah, 2011; Baker, 2011). Similarly, the implication and assumption that the two languages grow alongside each other and reach equal levels of development is false and unrealistic. More often than not, bilinguals have a dominant language resulting in levels of proficiency that are unequal (Harding-Esch & Riley, 2003). As a result, the focus of attention is on the many kinds and degrees of bilingualism and bilingual

situations which exist with different degrees of proficiencies, even to the extent of minimal knowledge of a second language (Crystal, 2008).

As a result, linguists have come to realise that firstly, bilinguals exist on a continuum of different proficiencies (Valdes, as cited in Baker, 2014; Herding-Esch & Riley, 2003), and whose association with the language includes three dimensions: 1. *Expertise* – degree of proficiency in the language; 2. *Affiliation*: degree of affective attachment to the language; and 3. *Inheritance*: membership by birth of a family or community with the language tradition (Leung et al, 1997). Secondly, bilingualism is multimodal, complex and dynamic. Garcia (2009) symbolises communication to “a rough surface full of craters, ridges and gaps” for which “a moon buggy or all-terrain vehicle with different legs that attract and contract” is needed. A bicycle that perfectly balances on two wheels is not fit to travel on the rough terrain. Garcia says this in view of the need for flexibility in bilingual education with policies that allow for bilingual programmes that enable flexibility and space for languages to thrive in the classroom.

Literature on bilingualism provides different terms to describe this unique relationship between two languages: ‘*linguaging*’, ‘*translanguaging*’, ‘*code meshing*’, ‘*code switching*’ and ‘*code mixing*’. All these terms explain the complexity of two or more languages coming together in a unique form of communication that has its own identity and its unique functions. In particular, ‘*translanguaging*’ has become a salient concept in multilingual studies, in reaction to the growing number of multilingual classrooms and communities all over the world. Garcia (2009) defines ‘*translanguaging*’ as “the act performed by bilinguals of accessing different linguistic features or various modes of what are described as autonomous languages, in order to maximize communicative potential” (p.140). A typical example of

‘translanguaging’ occurs in situations where the input (listening or reading) is in one language and the output (speaking or writing) in the other (Baker, 2011, p.72). Recently, translanguaging has received scholarly attention with many linguists and educators opening up a new pathway in education in the form of ‘Translanguaging Pedagogy’ (e.g. Choy et al, 2017; Motlhaka & Makalela, 2016; Andersen, 2017; Sayer, 2013).

A good example from literature on bilingual studies that underlines the distinction between old and new practices of bilingualism in education is neatly presented in a paper about writing abilities of emergent bilinguals. This was produced by a Hispanic-American team of researchers in education. In a 5-year longitudinal study called ‘Literacy Squared’, Soltero-González et al (2012) worked with 36 bilingual teachers to explore the biliteracy development of Spanish-English emerging bilingual students. They argue that knowledge and literacy competencies in both languages support development for one another in a ‘bidirectional cross-linguistic transfer’ that facilitates biliteracy development (p.72-73). In view of this, they recommend that teachers adopt a holistic bilingual lens to better understand how students use their bilingual strategies at the word, sentence and discourse levels to enable them to work across languages. Amongst others, the authors argue that a valid evaluation of students’ writing is achieved when texts produced in the two languages are concurrently analysed.

Other researchers have echoed the same complaint about monolingual assumptions that view literacy development as a “unidirectional acquisition of competence” (Canagarajah, 2006, p.589). Elana Shohamy who is a renowned Israeli linguist campaigning against injustices in language policy around the world, harshly criticises assessments of languages. On a number of occasions she lashed out at the testing discourse used for assessing immigrant populations and raised serious doubts about the validity of international comparative tests like the PISA

(Programme for International Student Assessment), TIMSS (Trends in International Mathematics and Science Study) and PIRLS (Progress in International Reading Literacy Study) (Shohamy, 2010, 2011, 2013). Shohamy (2013) objects to monolingual policies and argues that tests are “powerful tools that play a central role in creating social classes, determining knowledge, affecting distribution of wealth, shaping language policies, and transforming teaching and learning (p.226). On similar lines, Campano (2007) accuses monolingual educational policies, claiming that “Curricula are manufactured to homogenise learning experiences and rank children on a unilinear scale, threatening to further marginalize some of our most vulnerable students” (p. 28).

On a sociological and political level, the last century saw many countries shift their language ideology from an ‘assimilationist’ to a ‘pluralist’ one. As the name implies, the assimilationist approach aims at achieving full assimilation. For this approach, national unity is a core value, and a common language is considered an important condition for achieving this unity. This approach is associated with immigrants and their integration to a new country in a way that makes them indistinguishable from the locals in their fluent use of the language. The assimilationist discourse embraces monolingualism and views linguistic and cultural diversity as a problem that leads to a divided society characterised by inefficiency, chaos and conflict (De Jong, 2011, p.16-17). Such discourse is epitomised in the famous work of political scientist Samuel P. Huntington (1993) “The Clash of Civilisations? – The Debate”. Huntington’s hypothesis states that people's cultural and religious identities will be the primary source of conflict in the post-Cold War world. This idea is typically garnered by right wing political ideology typical of the National Front in France and immigration policies like that adopted by the United States under the Republican rule of Donald Trump (2017-2021).

In contrast, pluralist approaches to bilingualism embrace cultural and linguistic diversity that are perceived as valued contributors to a society seeking variety and intrinsic enrichment. The languages of bilingual/multilingual speakers are seen as interconnected and considered an integral part of one's identity, respected holistically and in totality. From this angle, language does not merely appear as a vehicle for communication or a linguistic system that helps us make sense of the world around us. On the contrary, through language, the parents and community members socialise children into the group's values and norms and create in them a sense of belonging and identity. Therefore, denying a child access to his or her native language devalues the experiences encoded in and through that particular language (De Jong, 2011). A perfect illustration of the pluralist approach comes from the Council of Europe's promotion of quality and equity in education, with emphasis on ' plurilingual and intercultural competence'. This competence is defined as "the ability to use a plural repertoire of linguistic and cultural resources to meet communication needs or interact with people from other backgrounds and contexts, and enrich that repertoire while doing so" (Council of Europe, 2010, p.4).

2.3.1 Language Interdependence

Cummins' (1979) Developmental Interdependence Hypothesis supports the idea that "the development of competence in a second language (L2) is partially a function of the type of competence already developed in L1 at the time when intensive exposure to L2 begins" (p.222). Evidently, the emphasis is on the transfer of higher-level metacognitive strategies whereby the skills developed in children's first language (L1) can transfer and enhance learning in the second language (L2). In this way, learners take advantage of the already

developed skills and knowledge of the first language (Cummins, 2008). Conversely, the Linguistic Coding Differences Hypothesis developed by Sparks (1995) also supports cross-linguistic transfer when explaining poor second language acquisition. Sparks argues that poor performance in second language learning is the result of difficulties in the learning of the native language. The hypothesis particularly points at the inefficiencies of the phonological and syntactic codes. These two hypotheses further strengthen the notion that languages do not develop separately and independently but are reliant on each other. The diverse languages that form the repertoire of bilinguals or multilinguals are an integrated system enabling the learners to 'shuttle' between the languages (Canagarajah, 2006, 2011).

2.3.2 Bilingualism in Maltese Education

The importance of bilingualism in Maltese education has been highlighted and promoted throughout the years. On a national level, the prominence of bilingualism is underlined in the Maltese Constitution, making it a feature of the nation's identity. Apart from recognising Maltese as the national language, "the Maltese and English languages and such other language as may be prescribed by parliament ... shall be the official languages of Malta and the Administration may for all official purposes use any of such languages" (p.7). In education, the National Curriculum Framework (NCF) (2012) makes it clear that bilingualism is an essential prerequisite when declaring that, "learners who are capable of successfully developing their full potential will require the development of bilingualism" (p.33) ... And preferably (learners) learn a third and fourth language (p.58). Furthermore, the NCF lists bilingualism as one of the 'general principles' of education and names it as a core entitlement that promotes a quality education (p.32). Trickle down to the early years, a local language

policy document stresses that since subject matter is taught by means of language, “a high level of proficiency in the languages of schooling is a valuable asset” (Language Policy for the Early Years in Malta and Gozo, 2015, p.3). In essence therefore, a local student needs to be a fluent bilingual to access and fully benefit from the local educational curriculum.

With all this emphasis on bilingualism in education, it should not be a hard feat for a student in Malta to become a fluent and well-balanced bilingual. As seen above, on a policy level in education, the structure for bilingualism to flourish is laid out in favour of a more equal and balanced development of the two languages. This is further supplemented and facilitated outside the classroom where the presence of the two languages is ubiquitous. Garcia (2009) observes this about Malta and countries with a similar bilingual profile: “in some countries where bilingual education is mandated for the entire school population, such as Luxembourg, Malta, Catalonia, or the Basque country, the languages used as media of instruction are all available to the wider-out-of-school environment, thereby rendering the school’s task easier through constant extra-curricular support” (p.156). This kind of exposure to language has been defined as ‘Extramural English’ (out-of-classroom), starting before ‘meaning formation’ on a vocabulary level (Van Zeeland & Schmitt, 2013), and going on to contribute to incidental language learning through technology’s multimodality, such as Anglophone TV shows and films, digital gaming and listening to music with English lyrics (Sundqvist, 2009; Sundqvist & Wikstrom, 2015). Similarly, studies in Malta show that even in families where only one language is declared to be spoken, observations by researchers have revealed that English was nevertheless present, as was the case with nursery rhymes in the English language (Camilleri Grima, 2013).

2.3.3 Language of Instruction in the Maltese learning community

It is interesting to note that like all bilingual systems, the Maltese model has its own unique characteristics that inevitably impact on the educational system. Notably, the Maltese language predominates in the medium of speech whereas English is mostly used as the medium of writing (Vella, 2013; Pace & Borg, 2017). With reference to the curriculum and the learning environment, Camilleri Grima (2013) describes this “spoken/written distinction” as “the most conspicuous division of labour between Maltese and English in Maltese classrooms”, often resulting in the monolingual text being paraphrased bilingually (p.556). As a result, it is not uncommon to have situations where an English text is read in class and orally discussed in Maltese (with code-switching). In this way, teachers and learners are dynamic in their use of the various linguistic resources, modifying the English text into linguistic ways that are digestible for them, with the aim of assimilating the content to meet their needs, pace and ways of learning (Camilleri Grima, 2013, Mifsud & Farrugia, 2017).

This language adjustment was also found to be useful and necessary in the context of teaching the foreign language of Italian in Malta. Contrary to the advice usually given to teachers to use the target language exclusively as the ideal medium of instruction, the use of L1 (Maltese) during the Italian class (i.e. codeswitching) was found to be “a tool which renders the lesson content more accessible to students who have difficulties grasping the foreign language” (Gauci & Camilleri Grima, 2013, p.629). However, the authors conclude with a word of caution about codeswitching which they describe “as a double-edged sword” (p.629). Teachers should be aware that dependence on codeswitching could become a shortcut that lessens the time they could otherwise be using to communicate in the target language. Therefore, the

teacher has to “meticulously choose the right strategies along with the appropriate switching strategy in order to meet the learners’ needs” (p.629).

While on the subject of ‘codeswitching’, it is worthwhile having a quick glance at this important topic in bilingual studies. Code-switching is a bilingual-mode activity in which more than one language, typically speakers’ native language and their second language (L2), are used intrasententially or intersententially (Cook, 2001). In the past, code-switching was a very contentious topic in the field of education, seen as a form of language expression that pollutes and corrupts the purity of the languages. Educators feared that codeswitching could mix up students’ native language with the target language and was therefore perceived as a reflection of poor knowledge and skills in either of the languages (Park, 2013). Educational policy at the time reflected this monolingual strategy, often being very directive and prescriptive. Locally, the 1999 National Minimum Curriculum (NMC) gave recommendations and guidelines on the language of instruction in schools. The subjects Social Studies, History, Religion and PSD (Personal and Social Development) were to be taught in Maltese whereas the remaining subjects except for foreign languages were to be taught in English. The policy document would only ‘allow’ code-switching in situations where there would otherwise be “great pedagogical problems” (NMC, p.82).

Internationally, some education systems like that of Singapore reflect lack of flexibility in the interpretation of language policies even at pre-school levels. A clear emphasis is made on academic English and formal literacy skills, rather than on communicative skills or the child’s socio-emotional development. This approach is propagated by a Singaporean education system that is heavily exam oriented and already at preschool level starts gearing children to critical, analytical and academic exercises with a view to preparing them for future school and

exams (Curdt-Christiansen and Sun, 2016). A similar picture is found in the Netherlands where it is claimed that the state's majority language policy negatively affects Turkish immigrant children's cognitive and linguistic development and also ignores children's bilingual agency. The essential needs of children in terms of mother tongue development and enrichment in the early ages is under-acknowledged (Akoğlu & Yağmur, 2016).

In reaction to these rigid language policies, recent approaches are proposing more naturalistic, pragmatic and non-invasive measures to promote development of bilingualism and multilingualism in learning environments. As a matter of fact, studies show that the imposition of prescriptive language policy is hardly followed through, with teachers ending up negotiating their practices by rethinking and gradually transforming the contents of traditional models. This negotiation happens over time through teacher experience, in a process that transforms teaching into a flexible and bilingual one. An example of this is by Palviainen et al (2016) who carried out a qualitative research using thematic analysis of data from five pre-school teachers who were interviewed at three different settings that included Finland (Russian-Finnish and Finnish-Swedish contexts) and Israel (an Arabic-Hebrew context). The findings illustrate how pre-school teachers abandoned the prescribed model-centred approach and instead adopted a dynamic child-centred approach, constructed on: (a) the flexible use of two languages; (b) responsible code-switching; (c) contextual and linguistic supports; (d) adjustments for individual children; and (e) role-modelling. Such an approach is the result of heterogeneity in the children's linguistic backgrounds, the need to monitor children's progress in both languages, and the need to respond to the children's emotional, cognitive, and social needs (Schwartz & Palviainen, 2016).

In the local context, Camilleri Grima (2013) found exactly the same scenario. Bilingual teachers face a dilemma on how to negotiate between language education policies on the one hand, and on the other, the distinctive developmental needs of young children and classroom language practices. Even when teachers did their best to follow the script dictated by the policy, the reality in the classrooms was such that the teaching and learning process continued to evolve bilingually. As a result, codeswitching is now seen as a resource for enhancement of the child's linguistic and cognitive development and a key practice that promotes inclusion (Adelman Reyes & Kleyn, 2010; Salend, 2011). Baker (2000) praises this approach as one that promotes a deeper and fuller understanding of the subject matter, as well as helping the learners develop skills in their weaker language. In light of this, the update of the new local curriculum gives no directives about the language of instruction in class, but simply 'encourages and promotes' the learning of languages, giving a free hand to educators as powerful agents to decide themselves on how to implement this (National Curriculum Framework, 2011).

2.3.4 The Bilingual Model in Malta

A good starting point is to understand the dynamics of the bilingual model in Malta particularly what the speakers think and how the two languages interact in the local linguistic landscape. In a study among a sample of Maltese adolescents and youths aged 11 to 24 years, Sciriha (2001) found that their perception of language is not simply that of "an instrument for mutual understanding and communication... (But) it is used to define worldviews and construct meaning about the speakers and the geo-political reality around them" (p.23). With this perception, the respondents placed Maltese and English in first and second positions

respectively for Maltese people living in Malta (microcosmic context). However, Maltese was perceived to be the least important language from a list of seven languages when participants had to rate it on a global level – a clear realisation that it does not have the same ‘market value’ and power that English has.

This utilitarian and pragmatic perception of language puts Maltese at a clear disadvantage to English and other popular languages in a globalised world. Additionally, the absence of a written code throughout the centuries side-lined the Maltese language since the differentiation between the high culture (written) and the low culture (oral) also created a distinction between two types of employment. The written culture gave access to the esteemed administrative, academic and professional jobs, whereas the oral culture was associated with manual labour. In other words, a literary education and hence ‘writing’ (at the turn of the 20th century, in the Italian language) “created a radical distinction between the literate and illiterate elements of society” (Cassar, 2001, p.263). Therefore, for centuries leading up to 1964 when the Maltese language became the official language, it was far from being a means to accessing the high culture and furthermore the opportunity to write in Maltese standard orthography was only established in 1931.

In disappointment to those who promote and hold dear the Maltese language, this notion seems to persist in present times not only in perception, but also in practice. Vella (2013) meticulously explains the way Maltese and English mingle, often in distinctive functions, depending on the ‘domain of use’. She identifies the administration, the media and the home as the three significant communication domains. Here again, by and large, the English language stands out as the more widely used written medium and Maltese predominates as the spoken medium. For example, Vella (2013) notes that in spite of efforts on the part of

government to encourage more extensive use of written Maltese for administrative purposes, English persists as the more widely used medium in written communication. Only in the strict culturally-related activities like that within literary circles and local history authorship (Melitensia) does the Maltese written language feature extensively in a small but healthy and thriving book publishing industry (Grima, 2008).

Attempts to promote Maltese writing outside these restricted spheres have not been successful. Perhaps these attempts were not done tactically and with much effort. For example, in the formal and official written documentation like insurance and bank communication to customers, the Maltese language used is often complicated and hard-to-read (Briffa³, 2016, personal communication, 24 November). This discourages users from reading the Maltese version. It gives the impression that the translated text is sketchily produced, merely to fulfil the obligations of presenting it in the two languages. Translations with simpler, less sophisticated language and easy-to-read-and-understand text would promote and encourage people to access the Maltese version (Briffa, 2016, personal communication, 24 November). In relation to this, Brincat (2011) observes how 'Anglicised Maltese' is becoming a feature of written Maltese, standing in for words that are not formally documented or that occur more frequently than in normal Maltese speech.

From a socio-linguistic point of view, the perception, attitudes and use of both languages varies considerably despite probable outside assumptions that the tiny size of the island would facilitate homogeneity. In fact, the linguistic spectrum in Malta is a complex one

³ Profs Charles Briffa was senior lecturer at the Department of Translation Studies of the Faculty of Arts (University of Malta). He is the author of many books including: *Translation Practice for the Maltese Bilingual - English-Maltese-English: a coursebook on translation* (2009).

described by Borg (1988a) as falling on a 'continuum of speech styles' from Maltese dialects to Standard Maltese to Mixed Maltese English and finally Maltese English. This continuum also reflects a progression of social perception and influence of the mother tongue ascending from 'stigma' and 'purity' in Maltese dialects to 'esteem' and 'least interference of Maltese' at the Maltese English end (p.97).

Caruana et al (2011) observe how "the regular use of English especially as a spoken medium, is often associated whether rightly or wrongly, with families having higher socio-economic backgrounds" (p.3). This perception contrasts with the more recent findings by Azzopardi-Alexander (2017), whose analysis at the phonetic and phonological level of different speakers in formal and informal settings failed to point at one's level of education (author refers to it as 'educated Maltese-English'). In another observation, Caruana et al (2011) point at the prejudice between speakers of English and Maltese and the different varieties that include code-switching. For example, Maltese nationals who speak English are at times perceived as *tal-pepè* ('snobs') or *qżież* ('show-offs'). On the other hand, those who find difficulty expressing themselves in English can be looked down upon and categorised as 'uneducated' or pertaining to low socioeconomic classes by the English speakers (also in Borg, 1988).

Apart from the perceptions and prejudices of the speakers, linguists have identified the characteristics of Maltese English as a variety in its own right. Like any language, it is hard to encapsulate the exact features of this Maltese English variety as the phonetic variations are spread over a continuum/spectrum (Azzopardi-Alexander, 2017). Nevertheless, the awareness that MalE (as has been referred to) is instantly recognisable by a native speaker is suggestive of a degree of coherence across this continuum that is somehow giving this variation an identity (Grech, 2015). Local linguists that are studying this variation seem to

agree that MalTE is at the stage of ‘nativization’ in Schneider’s five-stage model (for example, Grech, 2015 and Vella, 2013) – the stage at which the construction of the language identity is ongoing. Others are more outright and think it is high time that after 50 years of Independence, “we need to shed our colonial overcoat and recognise that we have our natural epidermal defense”. (Azzopardi-Alexander, 2017, p.215).

2.4 Biliteracy

Studies carried out throughout the years keep pointing at a reality within the education sector that is shaped by sociological factors like social class, parenting, geographical area and school type. Such variables have a clear impact on bilingual and hence biliteracy development, particularly language exposure. For example, Mifsud et al (2005) conducted a longitudinal study to track literacy development in Maltese children. Their results clearly show that the variable characteristics for an optimal literacy profile at primary school level in Malta generically point at a girl (gender), who is older than her cohort peers (age), who has no mild to moderate special education needs (disability/impairment), who is exposed to both English and Maltese (language), who attends an independent or church school (school type) whose parents have a good level of schooling (parents’ education) and who have a good position at work (parents’ employment), and who does not come from the inner harbour region (location) (Mifsud et al, 2005).

In line with this analysis, the bilingual landscape is shaped and affected by the three types of schools in Malta – the state, the church and the independent. All schools follow the National Curriculum Framework which promotes bilingualism in education (NCF, 2011). Notably however, the results in bilingual achievement vary considerably between the three types.

Overall students attending state schools do better in Maltese than in English whereas those attending Independent schools do better in English than in Maltese (Sciriha, 1997, Firman, 2007, PIRLS, 2011, 2016). A general observation shows how students attending Church schools achieve more balanced results in the two languages (MATSEC, 2015-2020).

This bilingual disparity at the schools that creates a variability in literacy levels has also been supported by Firman (2007) who categorised Maltese children into three groups: 1. Maltese dominant, 2. English dominant and 3. nondominant. A more recent study commissioned by the Ministry for Education and Employment carried out by the reputable Cambridge English Language Assessment (2015) confirms that:

“There is evidence of high levels of exposure to English inside the classrooms and learning environments. However, there are striking differences in exposure to English in the home environment, with almost an even split between those who are constantly exposed to English at home and those who never use English for talking to family and friends, suggesting the Maltese learner population is not necessarily homogeneous in terms of English language exposure” (p.iii).

On similar lines, a comparison between the literacy (reading and comprehension) results in PIRLS (Progress in International Reading Literacy Study) in 2011 and 2016 show a significant drop in points from 477 to 452 respectively (500 is the ‘PIRLS Scale Centrepoint’). The poorer score in 2016 was attributed to the language of the main test which, contrary to 2011, was Maltese. Therefore, in real terms, when comparing the English main test (2011) with the Maltese main test (2016), “the mean reading scores of students attending state schools increased marginally by two scale points, while the mean reading scores of students attending Church schools and independent schools decreased significantly by 39 points and 130 points

respectively” (PIRLS, 2016, p.ix). These results tally with local-specific studies across the years showing how in general, students going to independent and church schools do better when reading in English than they do when reading in Maltese (for example, Martinelli, 2016). In later stages in education, this proficiency in both spoken and written English constitutes an advantage to those students who pursue their studies beyond secondary level (Sciriha, 1997; Caruana et al, 2011, 2013; Vella, 2015).

Finally, difficulties with the second language seem to persist in the post-secondary/pre-university level of education. Farrell & Ventura (1998) found that around 80% of students demonstrated poor understanding of the meaning (semantic knowledge) of several key technical and non-technical words in Physics. For example, there was poor correlation between what students ‘claimed’ to know and what they ‘actually’ knew in non-technical words like ‘outcome’, ‘qualitative’, ‘mutual’, ‘significant’, ‘spontaneous’ and ‘marked’ (clearly noticeable). The authors conclude that teachers must not assume that students who are learning subjects in their second language know all the ordinary words in the classroom and in any written material handed to them.

2.5 Writing – a literacy skill

After that review on the bilingual background in Malta, the focus turns on writing which is the key literacy skill that will be analysed in this study. An integral part of this research concerns the analyses of the essays of students who sit for national examinations. The following introduction is intended to capture the fundamentals of writing and its interconnection with who we are: “Writing is a wonderful tool, which has a unique role in our development. Through writing people communicate with each other and themselves, learn, discover

themselves and build their identities and establish roles in society” (Dockrell, 2014). Writing is a very complex skill that requires very high cognitive demands, gradually developing in the long term and improving over many years of schooling and practice. Some keep struggling to learn this skill well into their adulthood, as is the case of students who have SpLD/dyslexia. At the school level, the development of the writing skill is an important outcome and is a critical means of gaining and demonstrating knowledge in other content areas (Mccarthur & Philippakos, 2010).

Writing is a salient feature of the four main skills of literacy. Literacy is understood here as encompassing both receptive/comprehension (listening and reading) and production skills (speaking and writing) to make sense out of text, express meaning, and interact with others around texts (Soltero-Gonzalez et al, 2012; Baker, 2011; SEC English Language Syllabus, 2020; CEFR, 2007, 2018). At the same time, writing cannot be seen as an independent and isolated skill. It is intertwined with the other skills of reading, listening (comprehension) and the motor skill of handwriting/typing. These interconnected skills are equally essential in literacy as they affect each other’s development. Difficulties in reading affect the development and the quality of writing (e.g. Arfe et al, 2018) and conversely, the mastery of writing can be a path to higher reading achievement, whereby the strengthening of the writing skill consolidates the foundations of reading (Shanahan, 2015).

2.5.1 Writing in education and examinations in Malta

As with many education systems around the world, schooling and learning in Malta puts a lot of emphasis on writing development as evidenced from the assessment of writing and through writing. Writing is therefore considered an educational outcome in itself (NCF, 2012;

Mccarthur & Philippakos, 2010). This is reflected in the distribution of assessment marks for language subjects in national examinations which gives more weight to writing than to the other productive skill of speaking (See SEC English Language and SEC Maltese syllabi, 2020).

In writing, the following skills are expected:

1. Select, order and present information, ideas and opinions;
2. Express what is thought, felt or imagined;
3. Write with a sense of audience and purpose showing an awareness of style in a variety of situations. (SEC English Syllabus, pg. 2)

These assessment objectives link with the overarching aim of the syllabus that amongst others promotes the ability of using the language fluently, accurately and appropriately, with lexical and grammatical competence, socio-linguistic competence and receptive and productive skills – including writing (SEC English Language Syllabus). The same criteria apply for the language section in the SEC Maltese syllabus (SEC Maltese syllabus).

2.5.2 Writing and Learning

Writing is a skill that facilitates the recall and retention of knowledge – two skills that are fundamental to learning and success in academia. Grabowski calls this, the “Writing Superiority Effect”. Experiments show how writing reduces the cognitive load of maintaining a discourse representation, uses less cognitive resources per time unit (because it is slower), and consequently uses less cognitive resources due to reduced pressure to produce continuous output. In turn, the freed cognitive resources enable more effective planning processes and information retrieval from long-term memory (Grabowski, 2005; Fueller et al,

2013). Writing improves the distinctiveness of words and therefore is a way of enhancing memory in learning. The writer is involved in an active encoding process that makes learning in the visual modality more robust than audio processing (listening) (Mama & Icht, 2016). This however does not apply in the case of 8-9-year-old children in Grade 3 whose written performance is constrained by the demands of transcription. In the ages 10-12, between grades 4, 5, and 6, transcription becomes more automatized and planning and revision emerge (Berninger and Swanson, 1994). The orthographic and graphomotor (cognitive-motor) skills that are generally considered low-level processes, are for them, high-level processes (Grabowski, 2010). This means that before achieving a level of automaticity, writing will remain predominantly a laborious skill, taxing heavily on mental resources.

2.5.3 Writing throughout the Years and the Advent of Technology

Throughout the years, the presentation of writing has changed, taking on a variety of modes and coming through different media. The most significant changes in the recent past have been those brought about by technology. The computer and appropriate software have made spelling, handwriting and the generation of vocabulary more easily accessible to all. Writing has been digitalised, facilitating the spread of written material that is now ubiquitous, easy-to-access and readily available. As a result, literacy lives in electronic environments and learning is now happening in technology-mediated classrooms. It is essential for learners to become digitally literate (NCF, 2012). Not developing these skills has implications on inclusion and students who do not gain these skills are disadvantaged and will suffer exclusion from global literacy communities (Sutherland-Smith, 2002).

This huge impact of technology on writing has initiated three interesting arguments about the future of writing which are worth mentioning. The first argument claims that writing has become more prevalent than ever. The arrival of the Internet, tablets and smartphones has changed people's lives in a way that more people than ever are writing emails, chatting or communicating via Short Message System (SMS) (Kandel and Perret, 2015). The second argument builds on the first and claims that the increasing use of technology has popularised writing and is contributing to a change in written language. Arguably, this has brought about new rules and conventions in writing (spelling and expression) and is deteriorating written language as we knew it. Written language has become hurried, short and without giving due attention to form (Lipowicz, 2014). In contrast to these two arguments, the other argument forecasts the downfall of writing. It is argued that writing is merely a transcription or a visual representation of spoken language. In this way, writing will be delegated to speech recognition/synthesis technology, which has become increasingly accurate, efficient and more widely used. This development will see machines taking over the skill of writing and relegating it to a "peripheral activity" (Torrence et al, 2007, pg. 2).

2.5.4 The two productive skills of language – speaking and writing

The argument made at the end of Section 2.5.3, claiming that technology is increasingly merging the two language production skills together, is becoming increasingly true. Although the two skills will never become indistinguishable from each other, language communication has become so dynamic and flexible that even the understanding of 'language use' has changed over the years. The Common European Reference of Language (CEFR) whose aim is to create and classify international standards for language ability, has broadened its

conceptualisation of 'language use' to include the way people are involved in communication. The four skills of writing and speaking (production skills) and listening and reading (reception skills) now include translation and interpretation (mediation skills), and interaction, which is the spoken or written exchanges between two or more individuals (CEFR, 2007; CEFR, 2018).

This flexible approach to language is good news to persons with disability like those with dyslexia and visual disability for whom writing can be a big challenge. There is little doubt that technology has become a prevailing inclusive tool and promotes a shift from digital divide to digital empowerment (UNESCO, 2017). Nevertheless, despite being production skills in language activity, there is plenty of evidence to conclude that writing and speaking are not interchangeable skills. Writing remains an essential skill, particularly in academia. So is reading and comprehension. Consider this experiment - Participants are asked to name or write down as many European countries and capitals as they could think of. Separately, they are asked to reproduce the names of simple objects that had been visually presented in a preceding phase of the experiment. In both situations, those who wrote performed far better than those who spoke (Grabowski, 2005). This illustrates how the mental processes involved in the construction of writing are more enduring. The links and connections taking place in the brain during the act of writing makes us reflect and argue in a way that transforms our own knowledge and understanding (Bereiter and Scardamelia, 1987). Similarly, writing (and hence reading) supports the cognitive processes of re-reading and re-scanning, giving learners full control over pacing and enables them to understand and process written material especially complex text (Sperber, 2003, as cited in Torrence et al, 2007, pg.2).

Despite this evidence, some believe that speaking can be an equally effective way of processing information and knowledge in any subject and at any level of study, including

tertiary education. In support of this, some researchers who have studied college students' perceptions on assessment found that oral assessment is preferred to written assessment. These include both students with dyslexia and those without. Students argued that the preparation for oral assessment facilitates deeper and more transformative learning. They felt it was more authentic, professional, reflective of a job interview and therefore a good preparation for post-education. Oral assessment enabled a sense of fluidity and the liberty of trying things out during the interchange of the assessment, resulting in a 'social performance' that shapes students' approaches and even identities (Huxham et al, 2012). Locally, advocates for dyslexia that include parents, teachers and practitioners had presented a signed petition to parliament requesting a choice in the mode of assessment. They argued that, "a number of students are failing their national examinations due to the lack of choice offered in the medium of expression during examinations" (Times of Malta, 2014). The same criticism is made at General Certificate of Secondary Education (GCSE) in the UK by various stakeholders in education (Woods & Hipkiss, 2018).

Morello (2000) cautions that the difference between the written and oral modes of learning and assessing would require a complete paradigm shift in the way the curriculum is delivered. The change from 'writing across the curriculum' to 'speaking across the curriculum' programmes would entail rigorous preparation, especially when designing oral assessment that would require completely different outcomes to written assessment. For example, four outcomes were identified at DePauw University's Oral Communication Competency Programme: (1) listening efficiently and reflectively, (2) adapting delivery, content, and organization to a specific audience, (3) expressing a point orally and supporting it with appropriate evidence, and (4) presenting balanced descriptions of competing theories or interpretations of data (Weiss, 1990b as cited in Morello, 2000).

2.6 Writing as a Subject of Study – the Process and the Product

The study of ‘writing’ as a skill focuses on two main areas - the writing process and the writing product. In the writing process, researchers theorise on how writing happens - the mechanics of what it entails to write. It is an approach that tries to understand what goes on in the brain, in an attempt to identify writing strategies and understand cognitive processes. It is a rational philosophical and psycho-cognitive approach that has, in the recent past, been aided by technology that facilitates the analysis of combined eye movement and keystroke data of writers composing extended texts (Strömqvist et al, 2006; Wengelin et al, 2009; Leijten & Van Waes, 2020).

In contrast, the study of the writing product is more empirical, based on the analysis of the completed written material of the participants. Like this study itself, it involves the analysis of the text produced by writers. This includes the analysis of linguistic features, like vocabulary, parts of speech, spelling, structure, syntax, cohesion and coherence. The analysis relies mostly on norms of expectations for writing proficiency as assessed and judged by teachers and markers on arbitrary frameworks, such as examination rubrics and proficiency levels like the Common European Framework Reference (CEFR). With this element of subjectivity, writing can be one of the more challenging skills to assess fairly and reliably (Gunning, 2014; Hopfenbeck, 2019). The essays written during national examinations which constitute the data in this study are ‘the products’.

2.6.1 Cognitive Theories of Writing

Cognitive theories conceptualise writing as a cognitive endeavour, focusing on the processes and metacognitive knowledge involved in the production of writing, such as *planning*,

formation and *revision*. This cognitive linguistic approach derives its empirical data in a number of ways, like contact with the participants, think aloud protocols and in more recent methods, neuroscientific imaging that analyses cognitive activity in the brain. These studies have given researchers information that has been analysed into models of the mental processes involved in the production of writing. There are different models. One of the most influential models of writing is that by Flower and Hayes (1981). To this day, this model still attracts considerable attention in the literature and has been used as a starting point by other theorists who, throughout the years have continued to interpret, add and build upon this framework (Berninger et al, 1996). It must be said that the main criticism on such models is the over reliance on cognition and the failure to take adequate account of the social, political and historical contexts of writing (Prior, 2006; Hayes, 2017), and the lack of flexibility to include writers who have learning difficulties (O'Rourke et al, 2020).

The Flower and Hayes's 'Cognitive Process Model' (1981) tries to capture the more intimate, moment-by-moment intellectual processes of writing. Its significance was in moving away from the early paradigm of cognitive models that pictured the production of writing as a simplistic linear three stage model of 'Pre-Write, Write and Re-Write'. The Flower and Hayes' model deserves elaboration for it highlights the complexities of all the distinctive thinking processes that are embedded within each other. The description of the model that follows needs to be conceptualised in terms of high-level goals and supporting sub goals which embody the writer's developing sense of purpose. At times, these goals change, or new ones are created, based on what has been learned in the act of writing.

Writing involves three major elements which presented in the three units of the model: *the task environment*, *the writer's long-term memory*, and *the writing processes*. "The task

environment includes all of those things outside the writer's skin, starting with the rhetorical problem or assignment and eventually including the growing text itself. The second element is the writer's long-term memory in which the writer has stored knowledge, not only of the topic, but of the audience and of various writing plans. The third element of the model contains the writing processes themselves, specifically the basic processes of *Planning*, *Translating*, and *Reviewing*, which are under the control of a *Monitor*" (Flower & Hayes, 1981, p.369).

In the planning process writers build an internal representation of the knowledge that will be used in writing. Planning involves three subprocesses, namely *generating ideas*, *organizing ideas* and *setting goals*. The generation of ideas involves the retrieval of relevant information from long-term memory related to the writing task. These ideas are often fragmented and pass onto the next process of organisation. Organising helps the writer group ideas and form new concepts, therefore giving meaningful structure to the ideas. It also helps the writer make textual decisions about the order and presentation of the text. The final subprocess in planning is goal setting, whereby all these generated and organised ideas are given direction. Goal setting is an ongoing, moment-to-moment process that helps the writer explore new topics and areas in a creative manner.

Translating is the process of transforming ideas into writing. This process requires the input and coordination of several features in writing such as the lexical, syntactic and motor tasks. Students with dyslexia and those who are not very fluent in writing (for example L2 learners) would need to devote conscious attention to specific demands such as spelling and syntax which make it laborious on the limited working memory (Cowan et al, 2017; Wiseheart & Altmann, 2018). Similarly, the task of translating can interfere with the more global process

of planning what one wants to write. In contrast, experienced writers would have developed the fluency and automaticity that liberates them from consciously focusing on certain features while allowing them to dedicate the resources to the thinking processes (Malpique et al, 2020).

Another subprocess is *reviewing* that can occur at any time during writing and is able to interrupt any other of the processes. Reviewing helps writers to systematically evaluate and revise what they have written or help them to further plan and translate text. The monitor determines when the writer moves from one process to another.

A more recent model is that by Hayes and Berninger (2014), who also describe the mental resources that the cognitive processes can draw on. Their framework is split into three levels. The four resources that are in constant interaction at the *Resources* level are *attention*, *long-term memory*, *working memory*, and *reading*. Attention is a resource that the top-level control processes can draw on. Long-term memory is a complex resource that stores the individual's sources of knowledge that are important for competent writing. These include knowledge of facts, events, motor planning, control, executive skill, letters from access and production skills, and language (vocabulary, spelling, syntax, and discourse schema). Working memory is designed to store the required information while the cognitive operations are performed to carry out a task. Reading is an essential resource for writers who would need to read repeatedly while producing text.

At the *Process* level are the writing processes consisting of the *proposer*, *translator*, *evaluator* and *transcriber* that interact altogether. The proposer suggests several ideas for inclusion in the text. The translator takes these ideas to represent them as strings of language. For example, the translator transforms nonverbal ideas into verbal expression. The transcriber

turns into written text those grammatical strings produced by the translator. The production of accurate spelling is an important function executed by the transcriber. Finally, the *evaluator* examines the outputs of any of the other processes and judges their adequacy. The evaluation process is a skill that is often skipped by young or immature writers. The task environment is also a part of the process level and includes the social and physical factors that influence the writing processes. The social factors can be the critics, collaborators, a teacher's prompt and background conversation. The physical factors include the use of technology, the examination environment, task materials, and the text written so far. For second-language writing, task material might include a dictionary or other aides.

Finally, at the *Control* level is the *task initiator* who may be a teacher who gives an essay title or a boss who gives a writing job. This influences the *planner* in terms of the topic, the audience, or other features of the text to be written. In the case of this research, the planner is influenced by a controlled assessment environment that includes the essay title in the examination question, the time limit and word limit. Finally, *writing schemas* represent the writer's beliefs about the properties that the text should have (genre knowledge) and the beliefs about how to go about producing the text (strategic knowledge). Different writers have their own individual schemas. The strategies specified by the schemas determine the selection of the writing processes, how the writing processes operate and how the writing processes interact with each other and the text environment (Hayes and Berninger, 2014).

More recently, O'Rourke et al (2018) reanalysed the Hayes and Berninger Model from the point of view of students with SpLD who face difficulties with certain areas of cognition that inevitably affect their writing. The authors point out that the model is built on assumptions that leave out the unique difficulties that certain children with learning difficulties have. While

the cognitive models of writing are useful in identifying components of the writing process, they do not offer an understanding of how these components interact and how the interactions lead to change in writing development. In their detailed dissection of the model, they argue that the subject of 'language development' is not given its due importance but merely included under 'long-term-memory'. The model does not consider the difficulties that SpLD students typically have with oral language development (including phonology) that impacts on their spelling and writing. Other attributes of SpLD like poor vocabulary, challenges with reading and difficulties with working memory are also overlooked. Another assumption highlighted by the authors concerns translation and transcription that depend on the coordination of linguistic abilities, orthographic knowledge, fine motor skills, and the degree to which coordination of all three occurs automatically. This level of automaticity cannot be assumed in students with SpLD who do not reach the desired maturity levels and continue to demand the otherwise-freed-up cognitive resources. Consequently, SpLD students continue to struggle with literacy skills beyond the primary years (O'Rourke et al, 2018).

2.6.2 Different levels of Writing - Knowledge-Telling and Knowledge-Transforming

In a detailed analysis of the mental activities of writing, Bereiter & Scardamalia (1987) distinguish between two forms of processes/strategies in writing – knowledge-telling and knowledge-transforming strategies. Knowledge-telling is typically used by children and inexperienced writers who react to a prompt (for example, an essay title) using memory of content and genre knowledge. The writer writes down everything s/he recalls about the given topic. It is a linear process that does not involve planning and revising. Consequently, the

knowledge-telling strategy can result in more elementary lexical and syntactic choices, characterised by a general lack of global planning and text organization.

In contrast, knowledge-transforming strategies are complex writing processes in which mature writers undergo critical reflection. The experienced writers engage with both content and text form in a recursive writing practice that develops and recreates thoughts and text in an interrelated process. This process in the mind directs the writer to new knowledge and insights and to creativity in their writing. More recently, in the theory of knowledge, Bereiter (2014) admits that there is no creativity without knowledge, implying that writers need to be fluent in various aspects of language and writing before entering the realm of knowledge-transformation. This is particularly the case with second language learners who will need to be fluent users of the language before they can use it in the complex knowledge-transforming strategy.

2.6.3 Stages of Writing Development

Two influential theories on writing development are those developed by Frith (1986) and Ehri (1995, 2014). These show how literacy development progresses along the building blocks of orthography, phonology, morphology, syntax, and semantics. Both models explain how decoding is initially visually mediated through pictures/logos. Later, children begin to apply their expanding alphabetic awareness as their reading and spelling develop and mature. Ultimately, in normal development, this leads to the establishment of an orthographically-based strategy that is flexibly applied to the text at hand. These two models explain the development of reading and consequently writing.

Frith's (1986) model that precedes Ehri's is more rudimentary. It includes less detail and condenses the stages into three. First, the *Logographic* stage, in which instant word recognition takes place based on salient graphic features. In the second *Alphabetic* stage, the child starts blending in a letter-sound analysis. Finally, in the *Orthographic* stage, the child can recognise morphemic parts of words considering letter order. The letter sound mapping which can be irregular to grapheme-phoneme mapping does not confuse the learner who can decode words fluently.

Ehri's (1995, 2014) more recent model includes citations from Lane (2020): In the *Prealphabetic* phase, children lack knowledge of the writing system and rely mainly on salient visual or contextual features to read words, such as commercial logos. The stage is prealphabetic because children's reading or writing does not involve the use of letter-sound connections, although they might read words as wholes (such as their names) using context clues, pictures, and guessing strategies for identification.

The Partial Alphabetic phase involves the emerging use of letter-sound connections or grapheme-phoneme matching. Due to limited phonemic awareness, reading is fragmented. It is made up of incomplete connections, often linking the more salient letters to sounds in pronunciations. For example, only the first and final letter-sounds are sounded. Although this kind of decoding is more reliable than the prealphabetic visual cue reading, it is not mature enough to read new words in print and similarly spelt words can be easily confused.

Children advance to the *Full Alphabetic* stage when they are able to attend to orthographic symbols in the words. The acquisition of the decoding strategy enables readers to make connections between graphemes and phonemes to read words from memory. It is the stage when children segment pronunciations into phonemes, map the spellings of words onto their

pronunciations and can retain these connections in memory along with meanings. The repertoire of words grows from the initially short monosyllabic words and grows to include the longer words.

The final phase is the *Consolidated Alphabetic* phase when children move away from individual phonemes and begin to use larger spelling-sound units to decode. These word-chunks (usually morphemes) are consolidated and include word-patterns that recur in multiple vocabulary, such as 'jump', 'pump', 'bump', 'dump', 'lump'). This consolidation facilitates fluency in reading since fewer connections would need to be formed. For example, a reader would only need to use two grapho-syllabic connections to read the word 'teacher', instead of seven grapho-phonemic connections – a reading strategy that was found to help adolescent struggling readers who were taught how to fully analyse the grapho-syllabic constituents of words (Bhattacharya & Ehri, 2004). At this stage, sound encoding from reading is sufficiently developed to create a stable neural representation of sounds and hence, automaticity in phonological processing. Consequently, this frees up cognitive resources such as attention and working memory to help build an integrative reading network where reading and writing become more fluent (Lam et al, 2017).

2.7 Dyslexia and Writing

Dyslexia is a very broad subject that has been extensively studied along the years. There is no convergence in the understanding of dyslexia, the origins of the condition, the efficacy of its diagnosis, and the appropriate interventions designed to treat or 'cure' it (Elliott & Grigorenko, 2014; Reid et al, 2003). The general agreement is that dyslexia is neurodevelopmental, may be genetically inherited, falls on a continuum of abilities and

learners with dyslexia respond differently to different treatments/interventions (Peterson & Pennington, 2012; Shaywitz, 1998; Snowling, 2013; Selikowitz, 2012). Students with SpLD find challenges in general areas of learning. These include basic academic skills, namely reading, writing, spelling, arithmetic and language which are generally gauged through precise measurement of achievement using standardised tests. Beside these, there are other learning skills that are vitally important but less understood, such as persistence, organisation, impulse control, social competence and the coordination of movements. These skills do not lend themselves to accurate quantification and need to be diagnosed clinically by one or more professionals (Selikowitz, 2012, p.4).

The definition of dyslexia presented by Sir Jim Rose is widely accepted as a comprehensive explanation of the condition. It comes from his investigation on how to improve provisions for children with dyslexia. It is also adopted by the British Dyslexia Association (BDA):

Dyslexia is a learning difficulty that primarily affects the skills involved in accurate and fluent word reading and spelling. Characteristic features of dyslexia are difficulties in phonological awareness, verbal memory and verbal processing speed. Dyslexia occurs across the range of intellectual abilities. It is best thought of as a continuum, not a distinct category, and there are no clear cut-off points. Co-occurring difficulties may be seen in aspects of language, motor co-ordination, mental calculation, concentration and personal organisation, but these are not, by themselves, markers of dyslexia. A good indication of the severity and persistence of dyslexic difficulties can be gained by examining how the individual responds or has responded to well-founded intervention (Rose Report, 2009, p.10; also adopted by BDA, retrieved in 2020).

Most studies on dyslexia focus on the reading skill and less on the writing skill. There is plenty of evidence in literature confirming the consistent disadvantage that students with dyslexia have when compared to students without dyslexia. This comes as no surprise, given the challenges that the dyslexia group faces in literacy. For example, poor short-term memory results in difficulties with the transcription of a mentally composed sentence, resulting in continuous backtracking and thus disrupting the flow of thought (Berninger, 2009). In fact, planning, translating and reviewing processes compete for the common, general-purpose resource of working memory which is limited in students with dyslexia (Kellogg, 2001). In addition, the obstacle to fluent reading makes writing even more laborious and challenging (Barnett et al, 2020). Editing and revising demand extra time and stamina, two attributes that students with dyslexia often give up on after years of hardship in this area of literacy. Finally, effective writing is the result of good pre-planning and time management, which are skills that students with dyslexia find particularly challenging (Connelly et al, 2018).

The following are some examples from literature that highlight writing difficulties in learners: In a study on children with dyslexia at the mean age of 9, Sumner et al (2013, 2014) recorded their writing process on a digital recording tablet. Results showed that these learners had more hesitant spelling characterised by frequent pauses when compared to children at their chronological age (also Alamargot et al, 2020, and Lam et al, 2011 in the Chinese language). The pauses were not the result of cognitive-motor difficulties but brought about by the thinking process that focuses on the attempt to produce correct spelling. It is therefore a word-level difficulty that triggers a break down in the overall processes of writing, affecting both the quality and content. As a result, the quality of writing produced by those who have dyslexia is fragmented, characterised by fewer words in the text, poorer in the quality of ideas, contains poorer and less coherent arguments, simpler vocabulary and poor sentence

structure (Connelly, 2017). These difficulties are noticed throughout schooling and persist at higher education level when students with dyslexia make significantly more revisions to spelling during and after transcription, when compared to their peers. This means that students with dyslexia will consciously avoid using precise and technical words which they feel incompetent to spell, thus affecting the overall quality of their writing. Moreover, despite the revision of the spelling, about 80% of spelling errors go uncorrected (Sumner & Connelly, 2020).

Similar findings by Wengelin (2007) show how the writing (or typing) of the participants with dyslexia demonstrated many spelling difficulties with a high proportion of intra-word pauses and spelling-related editing when compared to the control group. The software ScriptLog was used to record all activities on the keyboard, mouse clicks, the exact screen position and their temporal distribution. The participants were Swedish adults (11 with dyslexia and 10 without) whose first language was Swedish; they had good typing skills and good educational backgrounds. These participants were also described as having equally developed oral skills characterised by the same level of lexical density and lexical diversity (Wengelin, 2007). A similar study by Morken & Helland (2013), also using keystroke logging to record the typing activity of 11-year-old children (13 with dyslexia and 28 without dyslexia), also found that the dyslexia group revised their texts as much, and largely in the same manner as the control group. Despite this, the final product took longer to produce and was poorer in quality. Hence, the authors concluded that dyslexia is generally not a matter of effort, but rather it has to do with the students' ability to detect and correct errors.

2.7.1 Comprehension and writing

The analysis in section 2.7 is substantiated by many local practitioners in the field of dyslexia who carry out literacy assessments, including local literacy expert Christine Firman. Firman (in personal conversation, in February 2019) goes deeper in her analysis to distinguish between the writing produced by those students with specific learning difficulties (SpLD) that include dyslexia, and those with general and global learning difficulties. She points at comprehension as the distinguishing factor between the two groups. Learning is generally hampered for both groups by difficulties with reading. However, the quality of writing produced by the two groups and the spelling errors are different. Those with dyslexia are advantaged with better comprehension. They can answer questions better, illustrating good knowledge of the subject matter, presenting valid arguments with sound reasoning. In contrast, those with global learning challenges have poorer understanding as reflected in their immature writing that lacks creativity and that is very factual and descriptive. Writing is characterised by repetition and arguments that ‘go around in circles’, that are poorly presented, lacking reasoning, deep thinking and inference (see also Section 2.6.2).

The study by Savage et al (2017) on French-English bilingual primary school children in Montreal, Canada, supports this analysis. They found that the development of ‘Linguistic Comprehension’ is not only related to reading development but is also a significant and unique predictor of writing. Linguistic comprehension involves general language and language-related skills, both receptive and expressive, including vocabulary and sentence formulation, as well as verbal working memory. Moreover, linguistic comprehension is both an intra- and cross- linguistic skill that posits a close developmental association between language, reading and writing (Savage et al, 2017). Linguistic comprehension is also key in

facilitating reading for dyslexia learners who have decoding challenges. In fact, dyslexia learners tend to use more contextual facilitation than the control group (normal readers) to compensate for poor decoding skills (Nation & Snowling, 1998).

2.7.2 Bilingualism and Dyslexia

Literature on Bilingualism and Dyslexia cautions about the need to have a clear conceptualisation of the two very broad constructs – bilingualism and dyslexia. Polarising the definitions of ‘monolinguals’ and ‘bilinguals’ would be narrowing the understanding of the dimensions and complexity of bilingualism (Vella, 2013). Bilingualism is not black or white and involves ‘exterior’ factors to language, like the emotional, social and cultural processes associated with becoming bilingual (see sections 2.3 and 2.32 on Bilingualism). Similarly, the definition of dyslexia would need to build upon an interactional model that is also not polarised but representing a continuum of abilities (Cline, 2000, Hedman, 2012). Dyslexia can easily be mixed with poor proficiency from second language learners. Hence, the accurate detection of dyslexia in bilingualism is more challenging for professionals, often resulting in under-identification or over-identification.

The emphasis on the correct identification of ‘bilingual’ and ‘dyslexia’ issues has many implications for education in the areas of teaching and assessment, and psychological assessment used for diagnosis. Amongst others, the medium of language in assessment materials should be the first language, especially in the case of emergent bilinguals. The items in the assessment should be culturally-sensitive and fair (Everatt et al, 2013, Jalali-Moghadam & Hedman, 2016). This is particularly a challenge in the Maltese context where different assessments, including the general cognitive ability test and some diagnostic literacy tests are

used, despite being made for monolingual/native English learners and with English norms that are interpreted locally (Firman, 2009). In addition, most of the school subjects are assessed in English, which is a second language that many students do not get enough exposure to (Cambridge Language Assessment, 2015). Moreover, the textbooks and items are likely to contain material (technical and non-technical words) that is culturally divergent to the students' and which the students understand, perceive to understand but do not, or do not understand at all (Farrell & Ventura, 1998).

Another important feature in the debate on bilingualism and dyslexia concerns the type of language orthography. This varies considerably from one language to another. Some languages have shallow/transparent orthographies that have a more direct grapheme-phoneme (spelling-sound) correspondence. In contrast, the relationship between the alphabet and sound is less direct in languages that have deep/opaque orthographies (see also section 2.9.2 on Spelling and Language Orthography). Therefore, students must learn the arbitrary or unusual pronunciations of irregular sounds (Miller et al, 2014). The two languages analysed in this study, English and Maltese, are typologically different. Maltese is considered to have a more transparent orthography compared to English. It has a relatively simple relationship between letters and sounds with two orthographic symbols 'għ' and 'h', which are notable silent or realised as silent CV as /h/ in certain contexts (Borg & Azzopardi-Alexander, 1997). In comparison, the orthography in English is opaque, where one letter can stand for several sounds. Interestingly, these two orthographies have implications on the identification of dyslexia in Maltese bilingual learners. For example, measures of phoneme identification were particularly predictive of literacy levels in the Maltese language dominant group, but rhyme-based measures were more predictive of literacy levels in the English dominant group (Firman, 2007). In view of these findings, the author suggests that literacy

and dyslexia assessment procedures may have to be varied for Maltese-English bilinguals (and other bilingual groups) compared to those used for individuals learning only one language (Firman, 2007).

In a similar reaction to the challenges brought about by bilingualism and dyslexia, there have been efforts to design assessments (particularly cognitive) that are culture-neutral, valid and reliable. Cognitive Assessments for Multilingual Learners (CAML) is an assessment suite that aims to avoid conflating language proficiency with cognitive function. This approach enables the assessment tasks to be equally accessible to all learners, regardless of their proficiency level in the second language. For example, the assessor uses observation and interviews to learn about the background and behaviour of the learners. In the area of literacy, writing is assessed in both the first and the second language. Moreover, the assessment includes tasks to test the auditory memory, visual memory, rapid automatic naming and phonological awareness. The approach is holistic and qualitative, which is preferred over the purely quantitative and statistical model (Smith, 2013).

2.8 Writing as a Product

Writing is multifactorial and therefore the study of writing as a 'product' is very vast. Writing is made up of many parts, described as a paradox by Lavelle (2007) who says, "it is perhaps both an art and a science, inspired yet routine, reflective yet directive" (p.219). This part of the review includes literature on the acquisition of the second language to understand features of writing development. It explores the holistic aspects in writing and focuses on the way dyslexia affects spelling. Different examples are given of the categorisation of spelling

errors and the way these are analysed. Other features of the writing product discussed in this section of the review are 'cohesion' and 'coherence'.

The review also presents the social and cultural influences on the writing product. The style and genre in writing is a key characteristic of essays in examinations. This is also discussed here in view of the assessment of writing that looks into the design of the writing task and the approach to marking essays in national examinations. The review also opens a brief window on the Europe-wide attempt by the Common European Framework of Reference for Languages (CEFR) at classifying and harmonising language proficiency levels that remain versatile and controversial. This exploration of the 'writing product' reminds us of the complex dynamism of language where "no taxonomy can do more than partially represent a fuzzy reality" and "the imposition of discrete categories on the fluidity of actual language use inevitably conceals multifunctionality" (Hyland & Tse, 2004, p.175).

2.8.1 Writing as a holistic skill

Text is a complex multidimensional structure. We segment text into different areas to analyse, assess, teach and understand it. Ultimately, a composition is always the final unified text. Perhaps the best way to describe this unison of written text is by borrowing a phrase written over 2000 years ago by Aristotle, a giant in philosophy, who said that, 'the whole is something besides its parts'. Recently, this has been adapted differently in different contexts, such as in science and mathematics: 'the whole is greater than the sum of its parts'. Such a framework may also be applied to the analysis of written text. The different linguistic parts that make up a written text (lexical, syntactic, semantic, discourse) cannot be viewed as developing independently from each other. They cannot be simply stitched together to make up a unified

and harmonious whole. On the contrary, as most research on writing suggests, the linguistic units need to be integrated and interconnected to produce a unified coherent written text.

Danzak (2011) strengthens the argument that writing is a unified product with his study on bilingual writing. He sees writing as the result of an interaction among the three different linguistic areas – the lexical, syntactic, and discourse features. His study analysed expository and narrative writing produced by adolescent English language learners in the US. It confirms that discourse quality suffers when sentence construction is poor (syntax) and when lexical variety is limited. Therefore, language learning, and hence writing, cannot ignore the synergy among the linguistic levels. Language instruction needs to address the interaction of vocabulary, morphosyntax and text-level structures.

In a similar line of thought, McCarthy and Carter (1994;174 as cited in Bax et al, 2019) argue that “linguistic competence cannot be separated from discourse competence”, pointing at several elements of language that help in structuring discourse. Moreover, Danzak (2011) found that this interaction among these linguistic levels was similar across the two languages (L1 and L2), implying that there is a transference of skills. In line with Cummins’ (1978) Linguistic Interdependence Hypothesis, learners demonstrate a common underlying proficiency which is applied to the two languages. Therefore, knowledge in the first language is transferred and utilised when acquiring the second language (see Section 2.3.1).

2.9 Spelling and Dyslexia

A review of spelling is presented here. Spelling accuracy is the most conspicuous feature of writing and the one that practitioners focus on. Miscue analysis is popularly used as a running record to help in diagnosing and identifying students' specific difficulties. Students with

dyslexia have difficulties with the lexical level of processing. These limitations will pose challenges for holding in mind complex conjunctions of symbols. In turn, this leads to other difficulties in recalling digits and sequencing (Miles, 1983). As a result, spelling errors arise from the fact that students cannot easily build up representations in their 'lexicon' of words – both the short, familiar and high frequency words and especially the less familiar, often long, low frequency ones. Similarly, the spoken language system, how aware the child is of language and the components of language, influence the development of spelling. It follows therefore that children with dyslexia who have difficulties with the language system, particularly phonological awareness, and the relationship between sound and symbol, will find it hard to spell correctly (Reid, 2016).

Spelling problems, like reading problems, originate primarily from language learning weaknesses that include the underlying skill of visual memory necessary for spelling that is closely "wired in" to the language processing networks in the brain (Ochsner & Kosslyn, 2013). In fact, poor spellers find it challenging to notice, remember and recall the features of language that letters represent. This impacts on the ability to process the individual sounds (phonemes) in the words, syllables and morphemes. These weaknesses occur in both spoken and written language (International Dyslexia Association, 2021). Consequently, phoneme segmentation and letter-sound knowledge are strong precursor skills of early phonological spelling ability. In later years, a foundation in phonological transcoding ability enables the formation of orthographic representations (Caravolas et al, 2001).

These explanations form the basis of the 'phonological deficit hypothesis'. This hypothesis attributes reading difficulties to a core deficit in manipulating linguistic information. This happens at the phonological level, such as phonological awareness and phonological fluency,

or the ability to determine the constituent sounds which comprise spoken words (Goswami, 2000; Ramus et al., 2013). The deficit leads to difficulties in learning grapheme-phoneme correspondences in the early years, and later, difficulties in learning, decoding skills and spelling (Snowling, 2000; Vellutino et al, 2004; Boada & Pennington, 2006) (see Section 2.9.3 on Spelling Error Analysis).

In general, the studies that analyse dyslexia spelling errors (for example Bourassa & Treiman (2003), Aloudat (2017)) use small samples of participants. Nevertheless, as expected, the results consistently point at the same error patterns. The spelling accuracy of second language (L2) learners with dyslexia is poorer, manifesting inaccuracies in both disyllabic and trisyllabic words (short and long words). The errors are mainly phonological errors, with more 'phonologically' implausible errors across the text when compared to the control group and the group of English learners who have challenges. These errors made by students with dyslexia include high-frequency and highly familiar words (Palladino et al, 2016, Suárez-Coalla et al, 2016). As expected, low frequency, word length and inconsistent words posed a bigger challenge for learners with dyslexia who spend more in-air pen duration (within word pauses) than the control group (Suárez-Coalla et al, 2020; Alfonso et al, 2020). Studies like these suggest that in addition to spelling challenges, learners with dyslexia have graphomotor challenges arising from a spelling-motor interaction that affects handwriting production (Alamargot et al, 2020; Gosse & Van Reybroeck, 2020).

Finally, although both reading and spelling are weaknesses for learners with dyslexia, spelling remains the more challenging for it needs to be accurate and does not rely on the context in the way reading does. Therefore, reading is easier than spelling because children with dyslexia can utilise compensatory strategies better than for spelling (Snowling, 2000). Moreover, the

relationship between the two skills is not as interdependent as it appears. It is true that reading text constantly exposes the reader to spelling, and in the process, the reader may pick up good orthography. However, reading on its own is not enough for efficient spelling to develop. Other factors come into play, such as phonological awareness, knowledge of syntax and the syntactic function of the words and meaning have a role to play in the development of spelling skills (Snowling, 2000).

This is more so in the case of students with dyslexia who rely more on contextual reading than phonological decoding of words and therefore do not take advantage of learning to spell through reading. Sadik (2014) argues that persons with dyslexia are logical learners who need logical spelling rules before they are able to memorise the spelling of words. Therefore, teaching spelling rules in an explicit manner and consolidating them through 'spelling dictation' can be a useful learning tool despite reactions against it for being viewed as a traditional and controversial method of learning. Nevertheless, practitioners in dyslexia still believe that dictation is a good educational tool when carried out strategically. They argue that the traditional way of doing dictation through memory might need to be reviewed. It is the method of how it is done that needs to be restructured not whether it should be done. Dictation can be an opportunity to teach rules of spelling by for example clustering words that follow similar grammatical rules (Stanley Zammit⁴ personal communication, February, 2021). Sadik (2014) insists that learning the rules of spelling and slowing down to process words when writing mitigates dyslexia difficulties in spelling and writing.

⁴ Stanley Zammit is an experienced psychology practitioner who has been working in the field of psychology for over 30 years in different schools and colleges across Malta.

2.9.1 Inconsistency

Inconsistency is a conspicuous characteristic in dyslexic writing. Inconsistency is metaphorically described by Klein (1993) as “electrical impulses which sometimes connect and sometimes do not” (p.10). Inconsistent spelling gives the impression that the writer is encoding (processing the word) for the first time, and every single time s/he spells it, they are doing it afresh. In so doing, some might be using a writing strategy by spelling the same word differently several times with the aim of getting it right at least once. Others who are unsure about the correct spelling use more cunning and cheeky strategies by deliberately handwriting similarly shaped letters unclearly. For example, different consonants and vowels can be handwritten in a way that makes them look strikingly similar for the examiner to distinguish the correct from the incorrect (personal communication with parent of a child with dyslexia, November, 2019). Another strategy used by students with dyslexia is to make use of words that are within their spelling competence and deselect the ones that they are not confident to spell. This strategy may help with spelling accuracy but limits the range and variety of vocabulary.

2.9.2 Spelling and Language Orthography

Research also shows that spelling errors are not the sole responsibility of the individual level of competence but may strongly depend on the language-specific orthographic system. In deep orthographies where phoneme-grapheme correspondence is irregular, mapping sound to letter is harder, making spelling more challenging. English, which has a deep orthography, has 42 sounds (phonemes) to 26 letters (graphemes), with a mix of alphabet sounds (one sound corresponds to one letter), digraphs (one sound corresponds to two letters, for

example 'th', 'sh', 'ai' and 'ue') and inconsistent correspondence between particular letters and sounds. In contrast, shallow orthographies have more regular letter-sound correspondence. The Finnish language is one example with 23 letters and one 2-letter grapheme, which represent the 24 phonemes (Richardson et al, 2011). Most Finnish children can decode short unknown words and read short stories from their reading books by the end of the first grade (Korkemaki & Dreher, 1993).

Maltese orthography is shallower than English, nevertheless, students tend to find the rules of the language challenging (SEC Examiners' report, 2015, 2016). Common errors include morphological encoding such as 'ta' (he gave) and 'taha' (he gave to her) which have the same pronunciation. Errors of omissions and additions to morphemes are also common errors that Maltese bilingual children make in their end-of-primary years (grade 4, 5 and 6) (Agius et al, 2018). These errors in Maltese are predominantly Arabic morphological formations that are attached to words that have Romance and English origins (Hoberman & Aronoff, 2003). In addition, Agius et al (2018) categorised four further types of errors that are common amongst Maltese students: 1. Errors that include the irregular orthographic features, the silent 'gh' and 'h'; 2. The phonetic errors where the correct sounds in a word are represented with the incorrect use of letters ('hobs' for 'hobz'); 3. Errors due to incorrect phoneme-grapheme correspondence, resulting in "consonant, vowel and syllable omissions, additions and substitutions, metathesis, L2 influences, duplications and geminate reductions, vowel lengthening and reductions" (Agius et al, 2018, p.34); 4. Other less significant errors included those in Maltese orthographic conventions, such as the omission of the dot in ċ, ġ and ż (Agius et al, 2018) (see section 2.9.5).

The underlying phonological challenges for learners with dyslexia seem to be a perseverant characteristic. Difficulties in phonological processing demonstrate a cross-linguistic similarity in its neurobiological and neurocognitive bases, affecting reading and spelling across languages with different levels of orthographic consistencies (Peterson & Pennington, 2012, McCardle et al, 2011, Everatt et al, 2000). Phonological processing and decoding skills were also the key factors in identifying literacy weaknesses among the varying bilingual groups in Malta (Firman, 2007). This was confirmed by Pinto Navas et al (2014) who carried out a systematic review of 187 articles analysing different writing systems over a period of ten years (2004-2014). Their study strengthens the universal validity of the phonological deficit hypothesis confirming that even in transparent orthographies, dyslexia learners are slower in writing and reading, even when their reading is generally accurate and spelling is error-free.

In contrast, fewer instances in literature indicate that phonological deficits in dyslexia were not always so evident. For example, Cassar et al (2005) found that the phonological skills of second-grade spelling level dyslexic and younger non-dyslexic children performed similarly on all tasks. The tasks given were a phoneme counting and nonword spelling tasks, together with a spelling choice task. In the most part, both groups of 25 participants had difficulties in the same linguistic structures. Bourassa & Treiman (2003) also found similar results in that spelling results of children with dyslexia did not rank lower in phonological accuracy and higher in orthographic accuracy than the spelling of younger children without dyslexia. These findings show that children with dyslexia lag behind typically developing children in learning to spell, but they show the same general patterns of performance and make similar kinds of errors. Despite this, students without dyslexia do not find it as challenging to improve in later years.

2.9.3 Spelling Errors Analysis

The most conspicuous quality in dyslexic writing is spelling. Spelling error analysis can help address the difficulties with spelling and inform teaching. Klein (1993) argues that a large discrepancy between the level of reading and that of spelling can be an indicator of dyslexia. In particular, dyslexia is manifested when the types of errors show persistent difficulty in acquiring sounds, letter patterns and/or the conventions of English spelling. The first step in the analysis of spelling errors is the distinction between 'bizarre' or 'plausible' spelling. A word can be spelt wrongly but shows "some conformity with some sort of rule or principle which makes such a spelling possible" (Miles, 1983, p.64). This can also be called an 'orthographic error' where the correct pronunciation is maintained but the written representation is changed through substitution of alternative graphemes for the same phonemes (Protopapas et al, 2013). Examples of these are: because, indipendint, conviniant, offise.

In contrast, in bizarre spelling, many of the rules and principles are highly idiosyncratic, and the knowledge of letter-sound correspondences is much less sophisticated. In these 'phonological errors', the word's phonological form is altered in a way that the written word is pronounced differently from the one intended (Protopapas et al, 2013). This shows that the speller has failed to understand elements of the grapheme-to-phoneme rules and the understanding that words are composed of syllables, with each syllable containing at least one vowel (Miles, 1983). It therefore follows that according to the phonological deficit hypothesis, children with dyslexia produce a higher proportion of these bizarre/phonological errors. In fact, a large body of research on dyslexia and reading provides reasonably strong support for the idea that people/children with dyslexia have poor phonological skills. In compensation, they tend to use orthographic knowledge and word-specific memory.

2.9.4 Holistic Analysis of Spelling

It is not always straightforward to categorise spelling errors. Practitioners who analyse spelling errors agree that often words can fall into different categories. Seen in isolation, it is hard to decipher the origin of the error. It is therefore recommended to analyse errors holistically in the text as this gives a better understanding of what the writer wants to express and why such a word was selected. For example, it is not clear whether single-grapheme deletions are theoretically different from insertions, as both may indicate difficulties at the level of grapheme-phoneme correspondence (e.g. studens and studdents) (Stanley Zammit in personal communication, February, 2021).

Some researchers are not happy with the spelling categories 'correct' vs 'incorrect'. As a result, they have tried to analyse the degree of phoneme violation by giving a scoring of 'phoneme distance' and thereby giving credit for partially correct responses. Consider the errors 'efford' and 'efor' for the word 'afford'. Both are incorrect, but 'efford' is more sophisticated than 'efor' since it represents more of the target word. In a composite measure that allows for finer discrimination, 'efford' gains more points. In one particular study, this consideration and rescoreing significantly dropped the error rate from 76% to 26% in English and 63% to 15% in German (Landerl & Wimmer, 2000).

2.9.5 Classification Schemes

Spelling errors have been classified into different categories and subcategories. The list that follows in this section 2.9.5 is a presentation of these categories as defined by some

practitioners in the field of dyslexia (Elliot & Johnson, 2008). These categories might not be exhaustive and some categories have overlapping features.

Logical phonetic alternatives include words which are near to the correct spelling or seem to be possible 'alternative spellings'. They show that students are close to learning appropriate combinations of letters and to integrating 'rules' for generalising English spelling patterns. If most of the errors fall under this category, students understand spelling conventions and with practice are probably on the way to becoming successful spellers. Nevertheless, if these sorts of errors persist and students continue to make large numbers of errors (frequency), they may have poor visual memory. Overcoming this, they may need to develop auditory and other strategies for remembering. Examples of these errors would be 'serfirce' for 'surface', 'groops' for 'groups', 'resently' for 'recently' (Klein, 1993). Elliot and Johnson (2008) include in this category, homonyms like 'greatful' for 'grateful' and phoneme-grapheme mismatch like 'paitients' for 'patients' (see Tables 2.9). Miles (1983) calls these spelling errors, Phonetic Attempt Misfired (PAM).

Amongst these errors, there are sound-based errors. Articulation/pronunciation helps with spelling especially when there is grapheme-phoneme correspondence, as with words that come from a transparent/shallow orthography (see Section 2.7.2). However, there are instances when this can misguide poor spellers, especially those who are beginners, inexperienced or those who have phonological processing difficulties. This may lead to writing words in the way that they are pronounced. Consider the following sound-based errors made by candidates sitting for GCSE: everythink, nothink ('g' pronounced as 'k'); looket ('d' pronounced as 't'); pup (pub) ('b' pronounced as 'p') (Elliot & Johnson, 2008).

Spelling errors can easily be influenced by the second language or the writer's language variation. For example, common spelling errors made by Arab learners of English included the following: sheaper – cheaper; broblem – problem; cilebrat – celebrate; advenchar – adventure; nesassry - necessary (Aloudat, 2017). Even British monolingual speakers make errors that reveal pronunciation patterns typical of their dialect. For example, it was found that speakers with rhotic Scottish accents make fewer mistakes when spelling 'er' in words like 'player' and 'footballer', than those coming from areas in London. This is because speakers with a rhotic accent such as Scottish speakers will pronounce the 'r' in words like 'player', 'footballer' (Reid, 2016).

Visual Sequential Errors usually include two letters out of order, as in Britian for Britain, claer for clear and dose for does. These errors indicate that the student has difficulty remembering or revisualising the sequence of the letters correctly. These errors are therefore of visual memory rather than auditory memory (Klein, 1993). Here, the student draws largely on memory that certain letters are needed but does not know and cannot deduce the order in which they should occur (Miles, 1983). These kinds of errors can overlap with missequenced errors.

Rule Based Errors include those that are unacceptable phonetic alternatives. These show lack of awareness of spelling rules. The student may be making a phonetic attempt and fails to follow English spelling convention. This could be due to difficulties assimilating and generalising rules. For example, 'copyes' for 'copies', 'jocked' for 'joked', 'pocet' for 'pocket' ('c' followed by 'e' would be pronounced 'poset'), 'stashun' for 'station' (the sound 'shun' is

not spelled that way as a suffix), 'imediately' for 'immediately' (Klein, 1993). Elliot and Johnson (2008) add more examples, like 'allways' (double consonant instead of single), 'spliting' (single for double consonant), and mobile text influenced words like 'u' for 'you' and 'thankx' for 'thanks' (see Tables 2.10). Separate words written as compound words can also fall under this category. Miles (1983) calls these 'wrong boundaries' between words e.g. bestfriend.

In relation to these errors, practitioners challenge the idea of teaching that tries to move away from 'studying dictation'. They believe that dictation is not a poor educational strategy and can be a great learning tool if done correctly. The traditional way of doing dictation by simple memorising might need to be reviewed. Dictation can be an opportunity to cluster words that follow similar grammatical rules and demonstrate to learners the patterns of spelling rules in word formation (Stanley Zammit personal communication, February, 2021).

Sounds missing, misheard or missequenced. Sometimes words can be very disordered. Most of these errors show difficulty in matching sounds with appropriate letters. Students who make these errors may have difficulty discriminating or segmenting sounds, or 'holding' sounds in short-term auditory memory. Examples are 'wising' for 'whistling', 'kinf' for 'knife', 'scelve' for 'scarcely', 'sepate' for 'separate', 'volient' for 'violent' (Klein, 1993). This category includes errors with intrusive vowels, such as 'sowollos' for 'swallows' (Miles, 1983). Such mistakes have been categorised as omissions, commissions and transpositions (see Tables 2.10). This category can include 'rember' for 'remember' which is 'haplography' (the failure to write the same combination of letters twice over when this is needed) and 'animimals' for 'animals' which is 'dittography' (writing twice over when this is not needed) (Miles, 1983).

Motor errors may take the form of handwriting errors, repetition or omission of letters, telescoping or perseverating. “Examples of telescoping would be ‘beging’ for ‘beginning’ and ‘presion’ for ‘precision’. Telescoping is visual-motor rather than auditory when the missing letters are not significant sounds, but rather repeated or similar looking and sounding letters; it shows a lack of eye-hand coordination. An example of perseveration would be ‘machinine’ for ‘machine’ where the hand repeats a letter pattern. Another type of motor error is when one word is substituted for another. The hand ‘takes over’ and writes another word than the one intended, as in the word ‘particular’ for ‘peculiar’. Nevertheless, such substitutions are not always motor. Students with auditory processing weaknesses will sometimes substitute another word because it ‘looks right’ without being able to discriminate between similar sounding words. Examples of such errors are ‘disguise’ for ‘discuss’ and ‘serious’ for ‘series’” (Klein, 1993, p.33-34).

Tables 2.9 The tables below illustrate categories and a few examples of spelling errors taken from Elliot and Johnson (2008).

Sound-based Errors		
Homophones	Single consonant confused with another	Phoneme-grapheme mismatch
<i>greatful</i> for grateful	<i>reseption</i> for reception	<i>docters</i> for doctors
<i>piecefully</i> for peacefully	<i>glanze</i> for glance	<i>servey</i> for survey
<i>there</i> for their	<i>warking</i> for walking	<i>tomarto</i> for tomato

Rules-based Errors			
Suffix Rules	Doubled consonants where should be single	Single consonants where should be doubled	Text influenced
<i>slowley</i> for slowly	<i>accross</i> for across	<i>acident</i> for accident	<i>thankx</i> for thanks
<i>luckly</i> for luckily	<i>allways</i> for always	<i>asortment</i> for assortment	<i>u</i> for you
<i>hopeing</i> for hoping	<i>openned</i> for opened	<i>sufering</i> for suffering	

Errors of Omission, Commission and Transposition		
Single letter omitted	Unnecessary letter inserted	2 letters reversed
<i>assiting</i> for assisting	<i>otheir</i> for other	<i>brian</i> for brain
<i>complant</i> for complaint	<i>whant</i> for want	<i>frist</i> for first
<i>stroger</i> for stronger	<i>minuites</i> for minutes	<i>thier</i> for their

Writing	
Spacing/writing two words as one or vice-versa	End of word missing
<i>alot</i> for a lot	<i>befor</i> for before
<i>ever</i> for every	<i>tong</i> for tongue
<i>though</i> for thought	<i>of</i> for off

Multiple			
Two 'Simple' Errors	Part of word missing, severely misspelled	3 or more mistakes	Extreme phonetic errors
<i>abound</i> for about	<i>appment</i> for appointment	<i>handon</i> for handsome	<i>ant shagt</i> for anxious
<i>behide</i> for behind	<i>apoched</i> for approached	<i>solisters</i> for solisitors	<i>corried door</i> for corridor
<i>be for</i> for before	<i>canures</i> for cancerous	<i>alla</i> for all of	<i>nufse</i> for nervous

2.10 Cohesion

In this study, cohesion is one of the features of writing that is qualitatively analysed. Although many consider 'cohesion' as part and parcel of 'coherence' (see section 2.11), these two features are best treated separately. There is enough evidence in literature to suggest that they are distinct despite being closely connected. Cohesion and coherence compare to each

other in a way that cohesion can be a pointer of coherence but not necessarily its cause or result. The proper use of cohesion can unify text and manifest certain aspects of coherence. Both interact to a great deal and both contribute to the quality of written text. However, not all texts that have cohesive sentences necessarily produce a coherent text (Alotaibi, 2015; Hellman, 1995).

Cohesion is a broad topic and the analysis of cohesion in essays would merit a thesis in itself. Therefore, while it is given its due space and respectful attention, it is not the aim of this research to go into great depth when analysing cohesion. A general overview is given here of the cohesive devices that are primarily cited from the seminal work of Halliday and Hassan, whose 1976 book, 'Cohesion in English', has served as a reference point for the many publications on the subject. In so doing, the authors have managed to define the concerns of cohesive analysis and establish terminology related to cohesion (Bernhardt, 1980).

Cohesion can enhance or weaken the writing quality. It is significant in writing because it provides the semantic links among the words, phrases and sentences for the interpretation of meanings within the text, thereby improving the readers' comprehension (Janjua, 2012). At the sentence level, cohesion gives continuity in text, creates ties between clauses, facilitates connectedness and links to make interpretation and reader understanding possible (Collins, 2011). This makes up the texture of the text and transforms it into a piece of discourse. Cohesion is what distinguishes a unified whole (text) from a collection of unrelated sentences (Halliday and Hassan, 2013). According to these authors, cohesion is realised by five types of relations: References, substitutions, ellipses and conjunction which are grammatical relations, and lexical cohesion which is non-grammatical (see Halliday and Hassan, 2013).

2.11 Coherence

Coherence in writing is both the result of text-based and reader-based processes. Text based coherence is defined by features internal to the text, in terms of how language structures comprehension and use. This particularly refers to the linking of sentences that results in cohesive text, and unity that is achieved by 'sticking to the point'. Reader-based cohesion is a psycho-cognitive approach that focuses on the reader-writer dialogue, specifically how the reader and writer recognise text structures that have functional purposes (genres, register and frames of discourse that organise textual information) (Johns, 1986). This definition conceptualises reading as a twofold process – bottom-up that is text-based, and top-bottom that originates in the reader's prior knowledge and expectations (Grabe, 2000).

Deeper analyses of coherence go beyond text-level cohesion. In fact, improving cohesive devices at the sentence level or targeting other syntactical components will not automatically result in better quality essays (Sarzhoska-Georgievska, 2016). High-quality text should include elements of semantic and pragmatic coherence which have deeper implications in the achievement of meaning. A well-formed text that achieves 'total coherence' must combine both semantic coherence as well as sufficient signals of surface cohesion to enable the receiver to capture the coherence (Enkvist, 1978).

For this reason, teaching learners how to improve coherence has been the subject of much debate and exploration. It is not a straightforward linguistic concept as it is hard to clearly identify, quantify and describe. This is the reason why teachers hone in on errors of form but tend to underreport challenges with cohesion and coherence (Collins, 2011). Researchers have tried to conceptualise coherence to help learners understand how to achieve it in their writing. The following are a few recommendations given to learners: Coherence suffers when

the text does not state and maintain one clear thought in every paragraph and does not follow the typical three-step paragraph structure (or similar), built upon: 1. A clear topic sentence or main idea (either at the beginning or end of the paragraph), 2. Supporting sentences with supporting ideas/details and 3. A concluding sentence. Moreover, the quality of the text will further deteriorate when it does not use the proper transition signals (cohesion) and is overall poor in spelling and punctuation (Faradhibah & Nur, 2017). In addition, coherence is subject to conditions that include the author's purpose in his/her writing, the expectations of the audience and the transmission of the intended message (Sarzhoska-Georgievska, 2016).

2.11.1 Coherence and second language

An interesting study that is worth quoting due to its deep analysis of text is that by Flecken (2011). In her study of language attainment in bilingual texts, she concludes that there are subtle though systemic differences across the two typologically similar Dutch and German (V2 verb second) languages. She was analysing 'information structure' which is rightly considered an advanced level of attainment in narrative writing. Information structure is essentially narrative coherence, made up of three key areas: information selection (deciding what to say); organization of the temporal frame used to shift the story line (for example, "and then..."), and the means used in reference to person (reference introduction, reference maintenance and topic assignment). Flecken (2011) argues that 'information structure in writing' is a complex task/skill that uses a set of linguistic principles that are interrelated and contributes to the creation of coherence on a large scale. It is in fact hard for second language learners to acquire the preferred patterns of information structure. Often, second language learners who do not use accurate information structure produce texts that do not read native-

like despite being error free, accurate in grammar and demonstrate lexical knowledge. Flecken (2011) concludes by reminding us that, monolingual children would need a long period of time to acquire this linguistic knowledge (up to 13-14 years).

On similar lines, Leo (2012) points to the specific needs of Canadian-born Chinese ESL (English as a Second Language) students whose language development and needs are different from the traditional ESL foreign-born students. In a qualitative and quantitative analysis of cohesion and coherence in expository writing, the author concludes that this group of students (known as Generation 1.5) need further and specific instruction to achieve discourse-production strategies in their academic writing that is a prerequisite to success at University. Similarly, in a study on cohesion and meaning (coherence), Janjua (2012) found that “in Pakistan, most of the learners have the knowledge of the theoretical structure (i.e. grammar) of the English language, but they are deficient in the functional usage of this knowledge with semantic patterning” (p.152). She goes on to suggest teaching principles of cohesion with a focus on lexicogrammar. Learners need to be helped with understanding, identifying and applying the correct vocabulary and grammar to write good English. In addition, Fitzgerald (2006) who carried out a meta-analysis of fifteen studies on multilingual writing, reports that difficulties in writing encountered by L2 learners are not in the language-specific factors like vocabulary and syntax but, rather, in difficulties with composing processes like paragraph, text structure and text organization in both their languages. Once again, this points at cognitive processes, at the level of meaning and coherence.

2.12 Features of Good Writing

The elements of good writing are not set in stone. In a study by Nauman et al (2011), different experts/assessors, including publishing authors, were asked to define what good writing means. Results show that there are different perspectives and a noteworthy conclusion comes from one group perspective that considers good text when it reflects thinking. They value writing that is creative, demonstrates a sense of audience and shows elements of personality (like humour, wit, ideals, values). They disagree with correct conventions, tolerate incomplete sentences and value the element of surprise that challenges reader expectations. They conclude that good writing is more about communicating thoughts and ideas to readers than mastering a defined set of traits that limit creativity.

Similarly, Schuster (2006) analysed fifty essays written by proficient authors, published between 2001 and 2003 and reprinted in *The Best American Essays*. He found that these texts contained written techniques that English teachers would teach against. Amongst others, he found single sentence paragraphs, comma splice, rambling sentences and a total of 505 sentence fragments. In his analysis, the researcher justifies sentence fragmentation and what are considered 'text irregularities' by saying that they are acceptable when used effectively and when authors illustrate syntactic knowledge. Schuster (2006) affirms that these 'irregularities' are still in line with rhetorical frameworks. In fact, he insists that most fragments "disappear" whenever reading is for effectiveness and meaning, and the text becomes acceptable even for many conservative English teachers. One example given by the author is the following sentence: "Sweet sixteen. Ahhhh... driver's licence, car, new found freedom and independence" – the writer of this was thinking in terms of effectiveness rather than grammar".

This does not exclude more conventional forms of writing with established criteria. Some approaches give structure to writing that are especially useful for teaching. These include definitions of what constitutes good writing. For example, the 6 + 1 Traits model is a research-tested definition of good writing offering an instructional and assessment tool to writing, creating consistency in the teaching approach across the different levels (Culham, 2003; Spandel, 2013). The 6+1 Traits Model is made up of Voice, Ideas, Presentation, Conventions, Organization, Word Choice, and Sentence Fluency.

2.13 Writing does not exist in a Vacuum – The Social and Cultural Implications

Despite being guided by rules, writing - like language - is pragmatic, multifunctional and very fluid. Writers are very individual in their expression and style, while at the same time, they cannot ignore anticipating the needs of the readers/audience, both when following an exposition and when participating in a written dialogue. In line with the area of Systemic Functional Linguistics (SFL), language can be viewed from a functional point of view and considered as a social semiotic system or 'meaning' as created and interpreted within the social dimensions. This theory of language highlights the relationship between language, text and context (Eggins, 2004; Bartlett & O'Grady, 2017; Endarto, 2017). As a result, writing becomes intimately linked to the norms and expectations of a particular culture or community. Socio-linguistic studies confirm how children need to attune to a new set of language registers which they encounter for the first time on arrival at school. Through these registers, children learn and participate in class as they progress along the school. The reality is that not all children come to school prepared in the same way to engage in these new contexts and registers. Thus, parents who themselves already control these registers often

socialise their children into 'schooled' ways of language use, even before they begin preschool and kindergarten (Schleppegrell, 2012). In later years, learners would need to acquire academic literacies that give them the right registers to produce effective writing in line with the subject or genre needed (Coffin & Donohoe, 2011).

In view of this, the interaction between writing and reading becomes a *transaction* and a languaging process in which the text is transformed by the reader, and the reader in turn is transformed by the text (Gerot, 2000). In literature, this transaction is seen both as top-down and bottom-up processes. In top-down, the reader applies prior knowledge when encountering new text. Conversely, in bottom-up, the language is understood at the most basic unit of text, such as the meaning of isolated words and grammatical features. Hence, reading and writing is also a personal activity whereby each brings "a unique blend of background, ability, perspective, interests, and proficiency" with which we ultimately interpret a text in the light of who we are and what we know (Gunning, 2014, p.10).

Mature, effective and sophisticated writing will include a strong development of writer-audience relationship in the form of a meaningful dialogue. To achieve this, the 'writer self' would need to use language that is meaningful and purposeful to its audience. A good writer does not select words in their neutral, dictionary form, but uses a system of language that is social, in an interindividual context and coming mainly from other utterances that are kindred to the readers in genre - theme, composition and style. This kind of writing is embedded in a chain of ongoing cultural and political movements making the word become more than the concept or the symbol it represents (Kumamoto from Bahktin, 2002).

A mature writer requires a development of a clear concept and awareness of 'self'. In view of this, the notion of the 'writing self' should not be seen as the "I-for-myself" that presents a

fixed, determinate and isolated self. This would create an unreliable sense of identity. In contrast, the "I-for-the-other" presents an "eloquent 'I'" in writing, that is shared by all, and serves as an amalgamation of the way in which others view the self (Kumamoto on Bahktin, 2002). Even when writing one's own story autobiographically, the voice of the writer most often "is not direct experience or memory but a narrator with an imagined others' values and intonations" (Morson and Emerson, 1990, p.217). In view of this, the 'writing self' entails a cognitive development that goes beyond the production of text through the mechanical motions of writing. Such cognitive development is a process of self-discovery, particularly the discovery of oneself within a community.

This same framework is at the heart of Gee's theory of 'Discourse/discourse' (D/discourse) which invites us to see language as a social connection that transcends talking, listening, writing and reading (Gee, 2001). Instead, Discourse (capital D) is viewed as "a socially accepted association among ways of using language, other symbolic expressions, and artefacts, of thinking, feeling, believing, valuing and acting that can be used to identify oneself as a member of a socially meaningful group or 'social network'" (Gee, 1996, p. 131). Therefore, Discourse becomes a subculture, integrating many forms of life, like acting, interacting, believing, valuing, and feeling into patterns associated with a recognisable social network, or affinity to a particular group. In this way, Discourse becomes an 'identity kit' and takes many forms, such as psychology, punk, cellular biology, business, nursing, language and literacy, and many others (Gee, 1996, 2001).

A similar philosophy based on interindividuality that impacts on language acquisition and ultimately writing is the notion underlying Language Attachment theory. Language attachment theory is a psycho-linguistic theory that explains how human bonding is central

to language acquisition in both infants and adults (Vidrine-Isbell, 2017). The emotional experiences and social engagements in one's L2 stimulate the biochemistry of memory formation by activating complex neural networks and developing resilience of learning. This embodied cognition illustrates how emotional, social and cultural engagements facilitate connectedness and attachment to a language (Attachment theory in Ainsworth, 1968; Bowlby, 1969). Apart from infant language development, this approach has been applied to explain learning in a second language.

The opposite effect of language attachment is sometimes the case in second language learning when exposure is oriented only to test achievement with methods such as textbook memorization and cram schools that emphasize grammar over communication. Moreover, students in EFL contexts often lack the opportunities for direct contact with English in cross-cultural communication. All this results in poor emotional connectivity to second language, difficulty in understanding the social and cultural context of language and many reported that their early English learning environments were "stressful," "pressured," or even "traumatizing" (Vidrine-Isbell, 2017). McKay (2003) confirms this when applying Gee's D/discourse theory and concludes that schools should encourage the development of intercultural Discourse to facilitate learning in class. Thus, the Discourse needs to become inclusive of the values and identities that newcomers bring into class and teaching needs to be "versatile, open-minded, empathetic and explicit" (Leo, 2012).

It is hard to imagine that some students following a bilingual curriculum in Maltese schools become alienated from the English language, even if this happened in the past when certain schools adopted a one-language policy and punished whoever spoke in Maltese (Caruana et al, 2011). Nevertheless, there is evidence that high percentages of secondary students remain

lower-level learners of English. These students have not managed to obtain the necessary level of English needed for adequate access to education and their knowledge of English remains in the beginners' CEFR A1/A2 levels (26.8%, 24.7%, 17% and 9.7% for the skills of Writing, Reading, Listening and Speaking respectively) (Cambridge Language Assessment, 2015, p.54; see also Section 2.2). This is evidence of poor attachment to English learning environments particularly if syllabi are exam-focused without focus on the experiential value of learning.

2.14 Writing Style

Writing style is another topic that has attracted attention in research. Writing has its own rules and structures that are not rigid and are affected by different variables. For example, writing about the day's events in a diary uses different language, style and structure than that used for writing academic text. In addition, the generativity of language is one way of conveying individual differences in composing essays (Stewart et al, 2013). Students at the end of secondary school need to choose between three essay types – narrative, argumentative and descriptive (MATSEC Syllabus). This implies that they need to have the meta-linguistic knowledge to choose the right kind of title for which they can demonstrate their strengths while avoiding the genre and style in which they can have weaknesses. One particular view to *Approaches to Writing* is the Inventory of Processes in College Composition (IPIC) developed by Lavelle (1993). The IPIC classifies approaches to writing into five factors and distinguishes between deep and surface writing depending on the intentions of the writer and the strategies of writing (Lavelle, 2007). The factors are adapted and listed as follows:

Deep Writing

Reflective-Revision: The writing approach is transformative, based on a sophisticated understanding of revising and remaking one's thinking processes. The focus is on making meaning in writing. This includes the writing of multiple drafts.

Elaborative: writing is viewed as symbolic, searching for personal meaning and self-investment. Writing is self-engaging and there is an emphasis on managing the macro constraints such as audience and voice.

Surface Writing

Procedural: There is minimal personal involvement in writing and the writer sticks rigidly to the given rules. This is a methodical approach, showing lack of personal engagement and creativity.

Spontaneous Impulsive: There is no planning or preparation and involvement is kept to a minimum. Writing is a one-step procedure and it happens in an impulsive way.

Low Self-Efficacy: Writing is perceived as a slow and painful task. It is not engaging for the writer and motivation to write is very low. Progress can only be achieved with the acquisition of micro skills and teacher encouragement.

These approaches to writing need to be understood in the context of the texts analysed in this study. One important consideration is whether the student's dominant language is English or Maltese – first language (L1) or second language (L2). In a study on bilingual university students in Turkey using this same IPIC, Karabinar (2013) found that the deep approach is more frequent than the surface approach in both L1 and L2. However, the deep approach scores in L1 was higher than in L2. This finding might have implications on the

students' writing approach when sitting for the examination in their L2. Another consideration concerns the controlled conditions of the assessment as demanded by national examinations procedures. These are considered as a straitjacket to free and creative writing and do not give a complete picture of the student's writing skill. Olinghouse et al (2012) argue that a single-occasion, single-genre and holistically scored examination (the latter is not the case in SEC examinations) cannot be considered an accountable measure of mastery in academic content standards. Hence, this method of assessment cannot infer a broad representation of the student's writing skills because it does not cover the representation of all genres. This implies that a wider repertoire of writing would provide a more complete picture of the students' writing skill.

2.15 Assessing Writing in Educational Settings

The review of the writing task in national examinations cannot be complete without reference to the assessment process. Writing is a broad construct and its assessment inevitably relies on human judgement, which makes it a controversial subject. Pierre Bourdieu (1930–2002) reminds us that assessment is essentially a 'cultural activity' and not a neutral scientific enterprise (Sullivan, 2002, on Bourdieu's 'Habitus'). Ruairc (2009) criticises standardised assessment and says it should be "rigorously critiqued and debated at policy formation and implementation levels in order to limit the negative consequences of this form of assessment for particular groups of children in our schools" (p.48). There are important and controversial decisions at all steps of the way along the course assessment. These include the design of the writing task prompt (title and genre), the approach used in scoring/rating the essays (rubrics), and the standardisation in marking essays to help eliminate rater variability which can be a

significant source of measurement error and a potential threat to validity and reliability (Zhang, 2016). These topics will be briefly reviewed in this section to demonstrate the complexity of judging and rating writing.

Assessment is guided by the two fundamental principles of 'reliability' and 'validity'. Validity means that an assessment measures what it says it measures, such as vocabulary diversity, comprehension, rate of reading (Gunning, 2014). A reliable assessment "is one that yields consistent results. If a student retook the test, they would get approximately the same score" (Gunning, 2014, p.72). In relation to these two principles, an argument cited from literature in educational assessment and relevant to the topics under study in this research is presented here: Overall validity, accuracy and fairness of educational assessment have often been queried in culturally diverse contexts where students are assessed in their second language in which they have plenty of challenges. Possibly this applies to a portion of the Maltese student population who find it hard to display the academic content knowledge due to the language demands. This has often been referred to as the 'academic achievement gap' or 'linguistic gap' (Dutro, 2006). The academic achievement gap is not due to student's lack of content knowledge but to the content assessment's inability to accurately measure that knowledge in view of insufficient language proficiency (Bailey & Carroll, 2015). Hence, the proficiency level of a student for example may not be up to the level required to understand the language of Mathematics. In that case the assessment may be measuring the language construct and not the mathematics construct.

2.16 The Design of the Writing Task

The application of validity and reliability starts from the design of the assessment and carries through the whole process. For example, the choice of topics in examination essays is essential to engage and reliably measure the examinee's writing abilities. During the paper-setting process, test developers need to be sensitive to the needs of the students and adopt a socio-cognitive perspective. The socio-cognitive framework views the use of language in performing tasks as a social rather than a purely linguistic phenomenon and thereby promotes a more 'person-oriented' rather than an 'instrument-oriented' view of testing/assessment (Shaw & Weir, 2007). The socio-cognitive perspective is more relevant because it engages students in critical literacy that is meaningful in relation to talking, reading and writing the world. Contemporary topics like migration, climate change, terrorism (and now, the pandemic) cannot be excluded from educational spheres to teach students in global citizenship competencies (Luke, 2012; Byker, 2013). On similar lines, Nieto (2014) argues that the impact of globalization on curriculum and pedagogy has not been understood and as a result, several curricula (in the US) "are seriously out of tune with current reality" (p.3).

Shaw and Weir (2007) also warn about the importance of measuring the relevant underlying writing abilities or 'constructs' in particular when both local and foreign populations are being assessed on the same language abilities. Notably a distinction is made between candidates tested for a language that is their L1 and those whose language under assessment is their L2. Any language testing activity has to consist of a triangular relationship between three crucial components: 1. the test taker's cognitive abilities; 2. the context in which the task is performed and; 3. the scoring process. Similarly, the design of the writing task in large-scale

assessments must be targeted at a potentially broad target language use (TLU) keeping in mind heterogeneous groups of students (Weigle, 2002).

2.17 The Guide to scoring Essays – Rubrics

Rubrics are a hallmark to standardised assessment because they provide the framework to standardisation, giving security and peace of mind to the markers. In defence of rubrics, Spandel (2006) explains that rubrics capture the essence of performance at different levels. The creation of rubrics is an opportunity for teachers to think in the process of crafting them thoughtfully, leading to their use with discretion and understanding. Hence, they can be among the most useful instructional tools that teachers have (Spandel, 2006). The marking of essays follows two main trajectories - the analytic scoring and the holistic scoring.

Multiple Trait Scoring/Analytic Scoring: This method classifies essays into ordered categories intended to indicate increasing levels of writing quality, looking for trait scores, each of which depicts the quality of an aspect/component of writing (e.g. mechanics, organisation, development and voice) (Lai et al, 2015). This rubric's aim is to identify exactly the quality of every piece of writing (Hamp-Lyons, 2016a, 2016b). Such a comprehensive assessment tool helps teachers better understand how they will assess for specific properties according to specific criterion and how to distribute scoring (Beyreli & Ali, 2009).

Holistic Rubrics: These rubrics assess student work as a whole. The rater is required to make a holistic judgement by jointly considering all relevant aspects of the essay in arriving at a single score of the overall quality of the writing (Lai et al, 2015). The different characteristics

that constitute writing are combined and the different levels of performance are not clearly defined. Raters get affected by the whole text rather than the different elements of it (Beyrelî & Ali, 2009).

Both rubrics have a place in authentic assessment. Both have advantages and disadvantages. The best way to utilise these assessment tools effectively is to consider the situation at hand and in particular, the students and the teachers. Holistic rubrics make assessments easier and faster as they require the assignment of a single score for the whole writing. As a matter of fact, the development of holistic rubrics was a reaction to mass education that demanded quicker means of assessing writing (Hamp-Lyons, 2016a). Holistic rubrics tend to be more suited for younger students as they have less detail to analyse and therefore the items are easier to integrate into the schema of essay writing (<https://www.teachervision.com>).

However, some argue that holistic rubrics have limited capability to obtain complete and correct data from students. It is not a useful method when assessing students with low or medium level performance (Martin-Kniep, 2000). When the essay is holistically marked, some characteristics may become prominent and consequently raters might reward a piece of not-so-good writing with a high score under the influence of these properties (Beyrelî & Ali, 2009). In contrast, a detailed analytic rubric would give a better guide to raters by emphasising the same criteria especially when teachers have different ideas about what constitutes acceptable criteria. The extra detail in the analytic rubric will help in the classification of scoring. (<https://www.teachervision.com>).

2.18 Common European Framework Reference for Language (CEFR)

An important tool that has influenced language learning and language assessment in educational settings is the Common European Framework Reference (CEFR). The CEFR document was commissioned by the Council of Europe with the aim to promote democratic citizenship by “improv(ing) the quality of communication among Europeans of different language and cultural backgrounds”. From a pedagogical point of view, the Council supports “methods of learning and teaching which help young people and indeed older learners to build up the attitudes, knowledge and skills they need to become more independent in thought and action, and also more responsible and cooperative in relation to other people” (CEFR, 2001).

The following definition of the CEFR comes from the first paragraph of the document itself:

“The Common European Framework provides a common basis for the elaboration of language syllabuses, curriculum guidelines, examinations, textbooks, etc. across Europe. It describes in a comprehensive way what language learners have to learn to do in order to use a language for communication and what knowledge and skills they have to develop so as to be able to act effectively. The description also covers the cultural context in which language is set. The Framework also defines levels of proficiency which allow learners’ progress to be measured at each stage of learning and on a life-long basis” (CEFR, 2001, p.1).

The relevance of this document to this study is by way of analysing the vocabulary levels of the text produced by the students during Maltese national examinations. The CEFR categorises level descriptors on three levels that language learners have been traditionally classified: Beginner (Basic User), Intermediate (Independent User) and Advanced (Proficient User). Each of the three levels is further subdivided, giving a total of six CEFR levels as follows,

in order of progression: Breakthrough, Waystage, Threshold, Vantage, Effective Operational Proficiency and Mastery (See figure 1.1 as presented in CEFR, p.23 and Appendix 3 for a detailed explanation of the levels).

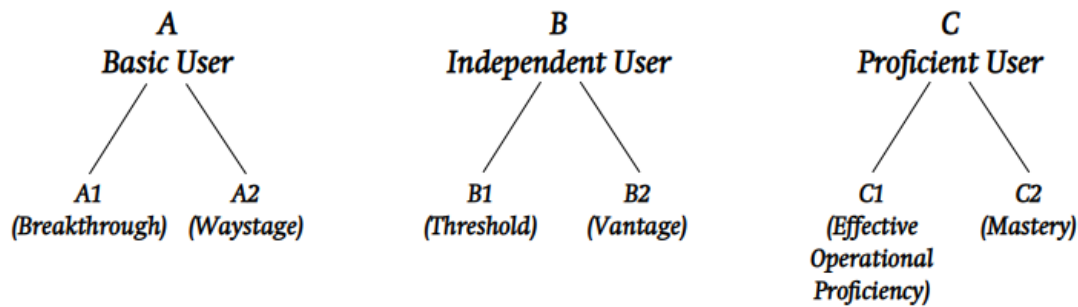


Figure 2.1: The six CEFR levels

2.18.1 European Language Portfolio (ELP)

In parallel and complementary to the CEFR, the Council of Europe produced another document that had a strong impact on language classrooms (Little, 2007). Like the CEFR, the European Language Portfolio (ELP) was also launched in 2001 – The European Year of Languages. The ELP is described as “a document in which those who are learning or have learned one or more languages can record and reflect on their language learning and intercultural experiences”, both within and outside formal education (Council of Europe Portal - website). This approach situates the learner in a central role, following on the adage that ‘language cannot be taught but can only be learnt’.

The ELP has two functions – the Pedagogical function and the Reporting function. From the Pedagogical point of view, the ELP is designed to make the language learning process more apparent to the learner and foster the development of learner autonomy. This follows on the

Council of Europe's commitment to education and lifelong learning whose aim is for users to develop reflective and critical thinking. On the other hand, the reporting function is intended to provide practical evidence of second language proficiency and intercultural experience with the aim of making language qualifications transparent across member states (Little, 2019).

2.18.2 Reactions to CEFR and ELP

Unlike the CEFR, there is no single ELP, as each (member) state develops ELPs for their own context, based on Council of Europe guidelines and templates. Consequently, there is a wide variety of Portfolios for different languages, target groups and ages (European Language Portfolio website). As a result, throughout the years, there have been mixed reactions, mostly in attempting to interpret and implement the content of these documents especially in language teaching. A number of other documents have been published along the years to address the gaps (for example, Companion Volume with new Descriptors, 2018). Overall however, "the CEFR was developed to contribute to reform and innovation and to encourage networking; it is certainly not a harmonisation project", and "must be interpreted in a manner appropriate to the context and further elaborated into a specification for testing and teaching" (North, 2014, p.229-230). A summary of advantages and disadvantages is gathered from the literature and presented below to further illustrate how language proficiency is a fluid construct that cannot be rigidly and firmly classified:

Advantages:

- Through its language scale/level descriptors CEFR provides a potential ‘common language’ upon which curricula, pedagogy and examinations can be designed. This standardisation makes language proficiency more transparent and facilitates the mobility of students and labour across the continent.
- Gives direction to learning, teaching and assessment.
- Makes education certificates more credible as they are aligned and pegged with clear levels. This gives common currency in language education (Alderson, 2007).
- It seeks to promote awareness of a European identity based on shared values and cutting across different cultures (Little, 2007).
- Assumes learning in formal educational contexts is socially situated and collaborative as well as individual.
- Defines language proficiency in definite, clear, brief and independent terms of what the individual user-learner can do (“I can” descriptors) as an autonomous social agent.
- Empowers the learner and promotes autonomy and metacognitive skills by means of monitoring one’s progress in language proficiency (Little & Gudrun, 2015).
- Views learners in their totality – situated in the real world, with their needs and within a context that includes the personal, social and cultural factors and away from the traditional focus of the four skills and three elements of grammatical accuracy, vocabulary range and pronunciation (North, 2014).

Disadvantages:

- Limitations in terminology, leaving gaps, ambiguities, overlaps and inconsistencies. So much so that supplements were published along the years to explain the language scales.
- No reference to specific languages, assuming comparable level of proficiency from language to language (Little, 2007).
- Lack of empirical research to support validity in its application.
- Does not take into consideration the development of language proficiency over time.
- CEFR English version document is not reader-friendly (Andlerson, 2007).
- Situating learners, courses and examinations on a scale of levels is not a straightforward job (North, 2014).
- It has not managed to assert equal influence on curriculum, learning/teaching and assessment. Often, it has been taken up by language-testing agencies, consequently moving away from asserting the intended interdependence of curriculum, pedagogy and assessment (Little & Gudrun, 2015).

2.18.3 The need for assessment literacy

Further to the challenges of a comprehensive and coherent CEFR, the practice of assessment of writing and language brings with it many challenges, as confirmed by teachers themselves. In an extensive study, Crusan et al (2016) explored the themes of knowledge, beliefs, and practices in relation to teachers and writing assessment literacy. A total 702 second language writing instructors from tertiary institutions participated in the survey. Over half of them taught writing for more than 10 years and one third of the respondents had earned PhDs.

Although about 80% of the sample responded that they had training in writing assessment, “a considerable number of teachers wrote responses expressing frustration and challenges in assessing writing” (p.50). DelleBovi (2012) also comments on this lack of instruction that focuses on writing assessment when researching about the training course of teachers seeking secondary (7–12) certification in content area instruction. She voices her concern at the trainees’ feeling of unpreparedness to assess students’ writing skills in a “writing-across-the-curriculum” system:

“They often begin their careers without knowing how to respond to students’ writing, craft rubrics and assign grades. Grading students’ written work is frequently viewed by many as not only time consuming, but an act of uncertainty: Am I grading consistently? Fairly? How should I use a rubric? I haven’t kept current with the latest views on best practices. Oh well, I’ll just do what I think others do and hope for the best” (p.272).

Similarly, such frustration has been identified by the so-called ‘accountability movement’ in the United States indicating that the lack of assessment competency in schools is a result of limited assessment education that is potentially misaligned to assessment standards and classroom practices (DeLuca & Bellara, 2013). Therefore, “it is essential for teachers to know how to create fair assessments that provide information about their students’ writing abilities. They need to know how to develop scoring rubrics and assessment criteria. Bad assessment practices can have a potent effect on students. The consequences of uninformed assessment may result in losses for students in time, money, motivation, and confidence” (Crusan et al, 2016, p 43). Locally, there is no research on this subject, however, the general perception amongst teachers is similar.

2.19 Examination Access Arrangements

Examination Access Arrangements (EAAs) aim to remove barriers for students with disability during examinations without affecting the validity of the assessment (UM Guidelines, 2015; State Examinations Commission, 2017; JCQ, 2018). Requests for EAAs have increased over the years and are now considered to be an essential feature of inclusive assessment. This growth in demand for EAAs did not develop without its fair share of controversy. The topic of EAAs remains a contentious one characterised by ongoing tensions between stakeholders advocating for more access on one side and those safeguarding and upholding examination standards on the other (AEA Conference, 2018; Lovett & Lewandowski, 2015). Although it is safe to declare that there is general agreement about the rationale and principles in favour of 'Access' for students with disabilities, there is clearly lack of agreement concerning the *methods and criteria* used to decide who merits EAAs and *how* these are implemented (Ghirxi, 2013; Farrugia, 2017; Woods, 2007; Woods & Hipkiss, 2018).

Despite the good intentions, it is often the case that national and international guidelines and legislation on disability create ambiguity and inconsistencies with their legalese which is generic and therefore leaves room for different interpretations (Taylor and Khalifa, 2013). For example, it is not uncommon to have laws obliging educational institutions to “adopt assessment measures that are appropriate for testing students with SpLD”... and to “formulate assessment that focuses on the content rather than the form” (Legge Gelmini, Articolo 6). Similarly, case laws with conclusions like those using the legal principle of administering an examination that *best ensures* that the results of the examination accurately reflect the individual’s ability, rather than the individual’s disability still leave room for interpretation (Mattinson, 2012). This flexibility puts a lot of responsibility on the examining

commission whose discretion it is to decide on the appropriate instruments used in examinations (D'Este and Ludbrook, 2013).

Another example concerns the fundamental principle in EAAs of 'reasonable adjustment'. Once again, the term 'reasonable' is a flexible term that can carry different meanings and interpretations. The definition of 'reasonableness' ties with 'competence standards' as defined by the UK Quality Assurance Agency (QAA) for Higher Education:

"... in defining 'reasonableness', institutions are not required to compromise 'competence standards' of the courses in question. Within the Act 'competence standards' are defined as the 'academic, medical or other standard[s] applied for the purpose of determining whether or not a person has a particular level of competence or ability'. A competence standard must not in itself be unlawfully discriminatory. It must therefore apply equally to all students, be genuinely relevant to the course, and be a proportionate means of achieving a legitimate aim" (QAA, Code of Practice (7), p.2, 2014).

On their part, international assessment organisations like Cambridge University and International Baccalaureate justify their deliberate adoption of loose and generic EAA regulations by arguing that their lack of direct interference is a way of respecting the cultural and diverse student profile spectrum that their assessments cater for (International Baccalaureate, 2010; Cambridge International, 2017). Nevertheless, even where regulations are more prescriptive and detailed (e.g. JCQ, 2018; UM Guidelines, 2015), litigations still arise, reminding us that 'Access' is a broad topic that is contextual, with different players

(institutions, professionals, disability associations, parents and candidates) advocating from different points of view.

Mislevy et al. (2013) criticise the design of EAAs because often these are made to fit an already established standardised assessment. They describe the application of access arrangements in assessment as happening “after-the-fact” and “retro-fitted in an ad hoc manner” (p.122). The authors argue that for an assessment or any other educational task to be inclusive, it has to be designed with a purpose of inclusion from the start. In line with this reasoning, the educational institutions designing assessment have an ‘anticipatory duty’, looking to ensure, where possible, that alterations to policies, practices and procedures have been made in advance to prevent disabled students suffering substantial disadvantage. This of course is a big challenge for national assessments where assessment flexibility is not always possible to achieve.

Beyond legislation, regulations and guidelines, the value of EAAs is redeemed on a personal level by the candidates who use EAAs during examinations. Students are always reminded to make use of the arrangements with a view of sustainability. It is essential that reasonable accommodations should support students to become more independent in their learning (Maynooth, DAWN, p.6). Students who apply for EAAs are advised to “be strategic” and that college years are “a pre cursor to (your) working years and any supports that are put in place for (your) college years might then need to be translated into supports that are possible in the workplace” (Trinity College Disability Service website, 2016). An example is given with the skill of ‘writing’. Students are encouraged to improve their note-taking skills with the aid of assistive technology/software. This is “more strategically feasible for the future” as “after all, when (you) find yourself in a meeting or conference at work you might need to rely on those

skills” (Trinity College Disability Service website, 2016). In addition, sustainability is also ensured with constant review of arrangements. Trinity University obliges students to review their arrangements with a disability officer to ensure that the supports “will continue to enable students appropriately” (Trinity College Disability Service website, 2016).

2.19.1 The experience of Examination Access Arrangements

Interesting findings by long-time researcher of EAAs Kevin Woods reveal how, in a period of around ten years spanning from 2007 to 2018, the process of EAAs for General Certificate of Secondary Education (GCSE) still elicits many concerns from its administrators (participants were mainly SENCOs and specialist assessors). These findings are particularly relevant to this study since the local EAA regulations were initially adopted and developed from the Joint Council for Qualifications (JCQ) of the UK (UM Guidelines, 2007). Moreover, the UK education system is also close to home since Malta’s national assessment protocols are very similar to those of the UK.

The list that follows presents findings from Woods’ study analysing 263 responses. Only the points relevant to this study are presented:

- The majority of those involved in some aspect of managing EAAs do not consider the system to be equally fair to all students (2018).
- Notwithstanding resource constraints, the majority consider some extension of EAAs to be appropriate.
- The cost of directed specialist tests is an issue of concern.
- The identification of needs is unreliable, particularly for ‘borderline’ students.

- Concern of rising levels of use of EAAs while on the other hand students' needs are not identified because of resource deficits.
- A dense assessment regime effectively 'creates' student assessment needs.
- The system for obtaining EAAs may be susceptible to manipulation (for example, parental pressure or resources) especially since it is resource-led and limited, rather than needs-led and flexibly provisioned. In contrast, other reports suggested that increased use of EAAs reflects improved school processes for identification and provisioning (Woods, 1998).
- The current format of GCSE examinations is considered to have high reading fluency and comprehension demands. Writing penalises many pupils whether on paper or word processor. EAAs should be extended to include oral presentation as well as written, and everyone is given the choice (citations from Woods and Hipkiss, 2018; Woods, 2007; Woods 1998).

All this feedback resonates with the feedback from local professionals who sent their open-ended reactions in preparation to the revision of the Guidelines for EAAs (ADSU, 2015; ADSU, 2018). Similarly, extensive feedback was gathered from different stakeholders organising EAAs in 144 authorised Cambridge English Language Assessment examination centres based in Europe, Asia and America. The conclusions were the following:

“... the challenge of meeting the often unique configuration of assessment needs of each test taker with a disability in a manner that is reliable, valid and equitable... special arrangements can entail considerable extra work, inconvenience and extra expense for centres, as well as present test developers and examiners with significant challenges. However, it is encouraging to hear that all of

these stakeholder groups confirm the positive impact of test accommodations in terms of benefits to learners, their teachers and families” (Taylor and Khalifa, 2013, p.247).

It is also encouraging to hear from local students sitting for SEC (Secondary Education Certificate) that the majority of access arrangements were “used and helpful” or “used and very helpful”, particularly extra time and accommodation in a room with few candidates. Moreover, 82.5% of the 97 respondents (in 2017) and 86.6% of the 134 respondents (in 2018) agreed that EAAs were fair (Zahra, 2017; Zahra, 2018). Despite this, earlier studies on the use of EAAs reveal how these are underutilized. Extra time was not used in 35% of the examination sittings and the arrangement of a reader was seldom used (Mazzacano D’Amato, 2011). In Zahra’s (2018) study, respondents reaffirm this when confessing that the arrangements of prompter, reader and supervised rest breaks were not used at all by 35.7%, 20.0% and 34.3% of the respondents respectively (p.24). Ewing (2018) explains that it is a matter of confidence not competence that discourages teenage students from requesting the assistance of a reader during examinations. Moreover, Ewing argues that extra time is still a useful arrangement even when it is not used because it gives the peace of mind to candidates who otherwise feel anxious and under pressure to perform. Wilkins (2018) agrees and advocates for extra time for all candidates irrespective of disability since time is not an assessment objective in the majority of examinations.

2.19.2 The evolving nature of EAAs and Assistive Technology

Like inclusive education, EAAs have been constantly evolving, responding to new legislations, changes in assessments and educational policy, developments in the field of disability and advances in technology. There is a sensitive balance in allowing fair access to those who

deserve it while ensuring that the validity of the assessment is not compromised. This can only be upheld through ongoing research that investigates whether or not unfair advantages or disadvantages result from EAAs (Shaw and Wier, 2007; Kormos, 2013; Woods and Hipkiss, 2018).

One area that has transformed EAAs and indeed the lives of those with a disability has been assistive technology⁵. Technology is a tool that provides access to information and knowledge, facilitates learning and teaching, cultural expression and employment, as well as building an enabling environment and opportunities for self-realisation within the context of the implementation of UNCRPD and the sustainable development goals (SDGs). In addition, scientific and technological progress is providing new opportunities to access multilingual information and knowledge, using inclusive ICTs (Information and Communications Technology) and enabling full expression through culture and arts that ensures full participation in society. As a result, ICT has become an instrument that bridges the divides between the young and the elderly; children, women and men; speakers of lesser-used languages; those who live in remote and urban areas; as well as those who are differently abled (UNESCO Conference, 2017).

In the field of dyslexia, the concept of *lecture capture* at university level has become a very useful means of access. With the help of technological methods that record lectures and provide digital notes (for example powerpoint slides), students with SpLD can control the flow of information and revisit materials at a pace, and in a way, that matches their learning style. Lecture capture also gives access to students who cannot always attend lectures, such as those with a chronic health condition (Imperial College, Access, 2020). Moreover, “good

⁵ Assistive Technology is "any use of technology that helps you perform a task more easily" (Trinity College Dublin, 2019).

accessible provision is universal provision” (Imperial College, Access, 2020) – a principle founded upon Universal Design for Learning⁶, whereby the arguments in favour of assistive technology can broadly be applied to the advantage of all learners irrespective of disability and access.

‘Digital empowerment’ for the student population has become an initiative promoted by different local education and employment services (e.g. Access to Communication Technology Unit (ACTU), Foundation for Information Technology Accessibility (FITA)). FITA’s (2019) aim is to minimise the digital divide, acting as the principal advocate and coordinator for making Information Communications Technology (ICT) accessible to disabled people. The National Curriculum Framework (NCF) considers ‘Digital Literacy’ as “a general competence which contributes to establishing the foundations for lifelong learning” and gives it the esteemed position of a cross-curricular theme in learning (NCF, 2012, p.34). As of 2014, the ‘One Tablet Per Child’ (OTPC) scheme was launched to ensure that all children in Maltese schools who are in fourth year primary school are “given a fair and equal opportunity to be closer to technology” (Malta Digital Education Portal website).

In view of these initiatives within the field of education, the use of assistive technology has influenced EAAs considerably both in Malta and elsewhere. As a result, policies, guidelines and regulations are being re-written. Two major changes affecting SpLD/dysexia students are worth commenting on. Firstly, a computer reader is allowed as a substitute to the arrangement of a *human reader* even in sections of language papers that test reading (JCQ, 2018). Secondly, the use of speech recognition technology is accepted as a way of

⁶ “Universal design” means the design of products, environments, programmes and services to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design. “Universal design” shall not exclude assistive devices for particular groups of persons with disabilities where this is needed (UNCRPD, Article 2).

independently producing text “since it allows the candidate to independently meet the requirements of the writing standards” (JCQ, 2017, p.51).

These recently-introduced-arrangements are deemed legitimate because of the way assistive technology has transformed the notion and definition of *independent access*, giving us a new understanding of ‘independence’. In line with this reasoning, the production of ‘Text’ is defined as “materials that include the use of words that are written, printed, on-screen or presented using Braille and which are presented in a way that is accessible for the intended audience” (JCQ, p.51). Therefore the ‘independent construction of text’ can be made on-screen through speech-to-text software, by the author who dictates to the speech synthesiser, without going through the motions of writing. In view of this, writing simply becomes “a mechanical way of presenting content/knowledge” (Rose Ryan⁷, 2014, personal communication) with its limitations.

In the same way, the process and skill of reading can be carried out by the computer reader. The JCQ Regulations (2017) describe this arrangement as ‘independent’ and distinguishes it from human help as follows:

"A computer reader and a reader do not interpret text in the same way. A reader can add a layer of vocal interpretation (nuance and meaning). This could affect a candidate’s response and therefore compromise the reliability of the qualification. A computer reader is an acceptable arrangement since it allows the candidate to independently meet the requirements of the reading standards”. (JCQ, 2018, p.38, point 5.5.5).

⁷ Rose Ryan is Director of Access at Maynooth University

Using the same logic, a scribe (aka amanuensis) that assists students with dyslexia is not allowed in language subjects as it “does not meet the requirement for independence” but speech-to-text software is (JCQ, 2017, p.51). Along this approach, the JCQ Regulations allow the use of the Reading Pen in GCSE languages - a device which has been promoted locally as ‘a handy and portable tool that helps students with dyslexia who require occasional words or phrases to be read to them (Malta Dyslexia Association, 2018).

Therefore, the production of speech and text by means of assistive technology has become the replacement of the reader and the scribe respectively. Human decoding and encoding needed for reading and writing become a function that the computer can do on our behalf in exactly the same way that mathematical computations are done by a calculator and spelling errors are identified by the spell check function on a word processor.

Despite the good news that assistive technology brings to the field of disability, it should not be perceived as a panacea for all the challenges in the area of access. The mastering of any form of access/support/assistance is a skill in itself with its own learning curve. Assistive technology does not always enable full independence or the degree of independence that one desires (Mazzacano & Pirotta, 2015). There are limitations in the technology itself. To date, there exists no commercial speech-to-text software that produces Maltese text. The English speech-to-text software is not able to accurately convert into text certain variations of language. Moreover, it does not recognise certain colloquial language or terminology. In addition to the skills needed to operate the technology, the user must possess a level of ability in literacy to direct and correct his/her own work. In continuation of the example given above, the user needs to know how to detect and correct the inaccurate conversion of speech into

text, must know the correct use of a word to benefit from the spell check function and must be able to understand the language to benefit from a screen reader or reading pen.

2.19.3 EAAs – concluding remarks

As seen from this short review, since the beginning, EAAs have treaded on a bumpy yet dynamic path characterised by changes aimed at making them more widespread, effective and inclusive. Despite the facilitation of assistive technology and more liberal regulations, EAAs remain as controversial as high-stakes examinations themselves. The service-users perceive EAAs as fair and praise their usefulness, even if they do not always make use of them. The ongoing tension between the stakeholders is the lively debate for producing fair and balanced regulations that must ultimately “guarantee equal opportunities to all, not equal outcomes for all” (D’Este & Ludbrook, 2013, p.184). A balanced approach meets the needs of all stakeholders involved in the testing process. Any approach necessitates flexibility and sensitivity in applying the Guidelines on a case-by-case basis with principled application of legislation (D’Este & Ludbrook, 2013). With all good intentions however, when discussing the state of EAAs, the overall sentiment remains: “Good: Could be Better” (Farrugia, 2017).

2.20 Conclusion and the Research Questions

This literature review explored topics related to the data that is analysed in this thesis – the English and Maltese writing tasks written by mainstream candidates and those with SpLD/dyslexia who had access arrangements during national examinations. It gave an overview of how Maltese bilingualism affects the education system in terms of literacy development and how this is affected by the school type (state, church or independent).

Within this context, national examination performance outcomes were presented. Topics around the skill of 'writing' were reviewed from two main perspectives, namely the process of writing and the product of writing. Reviews on the impact of bilingualism and dyslexia on the writing process were presented, showing the complex nature of two elements that affect the Maltese student population some of whom some still struggle with acquiring a decent proficiency level. The controversial topic of assessing and classifying proficiency levels in languages was also discussed, illustrating how fluid and subjective the judgement on languages can be. Finally, the evolving nature of examination access arrangements was reviewed in the context of students with SpLD/dyslexia and the advent of technology in helping these students access the curriculum and the language assessment. In view of all this, this research will focus on the skill of 'writing' and will be answering the following questions:

1. In what ways does dyslexia manifest itself in the writing task of SEC level English and Maltese languages at national examinations?
2. Are there differences between the linguistic features of writing produced under examination conditions by access arrangements students with SpLD/dyslexia and the other students without access arrangements?
3. What do literacy scores tell us about the quality of writing produced by dyslexia candidates?

Chapter 3 - Methodology

3.1 The Researcher and the Area of Study – Selecting the Topic

My interest in the area of this research comes from my work in the field of education, particularly assessment, disability and inclusion. I work at the Access Disability Support Unit (ADSU) within the University of Malta. I work with secondary, post-secondary and tertiary students who have a disability/impairment/condition and who apply for examination access arrangements (EAAs) and university course arrangements. Amongst others, I coordinate the processing of applications for the examination access arrangements, oversee their implementation and coordinate the writing of policy related to these arrangements. In particular, during the past ten years, I have been working with secondary school students who sit for high stakes national examinations at Secondary Education Certificate (SEC) level. These high stakes examinations are organised by the University of Malta which is the main university in the country. Success at SEC level leads to post-secondary and tertiary level education (Education Act, Admissions Regulations, point 12 (1a), p.6). The essays are produced by candidates who are typically fifteen or sixteen years old and who sit for SEC examinations in Year 11.

3.2 Researcher Bias

My role is therefore intimately related to the topic under investigation. From a practical point of view, my first-hand experience of the topic gives me good exposure to the topic under study and a head start. It facilitates my access to data and information related to SpLD on a

local level. The flip side to this is inevitable bias, *sine qua non* to any researcher's relationship with the topic of study. To mention but one example, Pierre Bourdieu observed how working in an (educational) institution will inevitably find one's identity intricately connected with the institution, protecting and legitimising it without probably realising that assessment is essentially a 'cultural activity' not a neutral scientific enterprise (Sullivan, 2002, on Bourdieu's 'Habitus').

3.3 The aim of the study and the research questions

The focus of the study is the student group that presents with SpLD/dyslexia. SpLD students have consistently made up the biggest number of applicants for examination access arrangements in all levels of examinations. Students with dyslexia find it particularly hard to access the language examinations which demand a level of reading, comprehension, and writing that they often find too challenging. It is therefore not surprising that their performance in national examinations trails behind their peers' (see Sections 2.2.2 to 2.2.2.2). Moreover, the exposure to two languages is often a double setback for bilingual students with dyslexia whose scripts, together with those of other students are analysed in this study. These are expected to have a good level of proficiency in both languages, particularly in English, which is used extensively in schooling, and which is the second language for the majority of students (Cambridge Language Assessment, 2015).

To date, there has never been a close-up investigation into the quality of writing produced during national examinations by students with dyslexia, particularly the writing task in both English and Maltese. This knowledge gap has elicited many assumptions, curiosities and

questions by those who work in education, particularly in the area of SpLD/dyslexia. In view of this, the aim of this research is to address the following questions (see also Section 2.20).

1. In what ways does dyslexia manifest itself in the writing task of SEC level English and Maltese languages at national examinations?
2. Are there differences between the linguistic features of writing produced under examination conditions by access arrangements students with SpLD/dyslexia and the other students without access arrangements?
3. What do literacy scores tell us about the quality of writing produced by dyslexia candidates?

3.4 Data Collection – Sources and Access

A broad range of data was gathered from three different sources – The MATSEC Support Unit, Access Disability Support Unit (ADSU) and Corpus of Learner English in Malta (CLEM). The type of data was both numerical and written. The data gave direction to the choice of methodology used that was mixed and hence used both quantitative and qualitative. The data type and sources are listed and explained in detail below:

3.4.1 MATSEC Support Unit - Candidates' Data on Examination

All data related to candidates' information and corresponding examinations was provided by the MATSEC Support Unit. Information on candidates included the corresponding school type,

the candidates' disability status (if any), the paper type chosen (whether Paper A or Paper B), the grades achieved in all the subjects and the raw marks of the writing task in the SEC language subjects of English and Maltese. This information pertained to the registrations of May 2015 and May 2016 examination sessions. In accordance with ethical considerations, the data did not include any link to the identity of the candidate. The office number which is a computer-generated conversion of the candidate's index number was the only reference linking to the candidate, whose anonymity was kept throughout the processing of the data. The office number is also what the examiners are presented with when marking examination script.

3.4.2 Access Disability Support Unit (ADSU) - Candidates' Data on Literacy

Data taken from the Access Disability Support Unit (ADSU) consisted of scores from the literacy reports and applications made by candidates who requested EAAs in 2015 and 2016. These were manually extracted, inputted and organised into a spreadsheet. Only the data from applicants who had a diagnosis of a Specific Learning Difficulty (SpLD) was included. This sample included those candidates categorised under SpLD/Dyslexia and those with SpLD and comorbid with other conditions/disabilities such as attention difficulties (ADHD). The data of those applicants who had a diagnosis of SpLD but whose request was refused for different reasons was not included. Therefore, only the literacy scores of those who were granted access arrangements during the examinations were included.

In normal circumstances, the standard EAAs granted to candidates who have SpLD is extra time amounting to 25% of the examination time and a reader on request. However, the

arrangement of a reader is not given during any of the language subjects and neither was it given in the form of assistive technology at the time when the compositions used in this data were produced. In the case of candidates with SpLD/ADHD, supervised rest breaks and a room with few students were also granted as EAAs (MATSEC Guidelines, 2019). Other arrangements might have applied for other conditions/disabilities.

The literacy data scores consisted of 16 entries that included both the reading age and standard score of the Suffolk Reading and Comprehension test; reading age and standard score of the *Naqra u Nifhem* (Maltese Reading and Comprehension test); spelling age and standard score of the English Spelling Test; spelling age and standard score of the Maltese Spelling Test; the age score for the reading speed, comprehension and accuracy derived from the Neale Analysis of Reading Ability (NARA); handwriting speed at words per minute; and the full Cognitive Ability Test score and the three subtest scores of Verbal, Non Verbal, and Performance or Spatial.

3.4.3 Corpus of Learner English in Malta (CLEM) - Candidates' data on writing task

Another source of data in this study came from the local 'Corpus of Learner English in Malta' (CLEM). The CLEM is a project carried out by the Institute of Linguistics and Language Technology in collaboration with the Centre for English Language Proficiency. CLEM is a corpus of circa 1 million tokens consisting of English and Maltese essays in different genres written by students who sit for SEC and Matriculation level examinations over a period of years (CLEM, 2021). Amongst others, the purpose for compiling a learner corpus was "(1) to determine what Maltese learners of English achieve by the end of their compulsory schooling and at pre-tertiary level, and (2) to identify types of learner errors" (Vassallo, 2015). All essays

in the corpus were manually transcribed from hard-copy scripts by dedicated full-time inputters. This was a lengthy process that took two fluent typists one year to input the sampled data of an examination session. 'Notepad' in Microsoft Windows was the medium used for transcription. Notepad is a simple text editor that enables the processing of text without the interference of formatting and spell check. For the purposes of CLEM scripts, this ensured that the transcribed texts were faithful and authentic to the original scripts.

Not all essays belonging to the cohort of candidates are included in the corpus. CLEM uses stratified sampling, extracting a random 10% of the available scripts for each of the eight grades, 1-7 and U (Unclassified). In contrast, all the available 2015 and 2016 essays belonging to Access Arrangements (AA) candidates were transcribed in a sub corpus. For the purpose of this study, the scripts of AA candidates are those belonging to candidates who apply for and receive access arrangements for Specific Learning Difficulties (SpLD). Nearly half of the candidates have SpLD and comorbid Attention Deficit Hyperactivity Disorder (ADHD)⁸.

Users of CLEM from the general public are requested to register online for access to the corpus. These are given access to samples of text from the different grade categories. This access is restricted to snippets of text in the form of one or a few sentences. Such access was not enough for the purposes of this study because the aim was to analyse the individual scripts in their entirety. The coordinators of CLEM gave the researcher permission to access the full and individual scripts, identifiable only by office numbers, thereby ensuring the anonymity of the candidates. Without this access, the depth and width of the analysis in this study could not have been possible. It should be noted that the sub corpus for essays written

⁸ In 2015, 181 candidates were registered as SpLD/Dyslexia and 169 candidates were registered as SpLD/ADHD (MATSEC Statistical Report 2015, p.21). In 2016, 205 candidates were registered as SpLD/Dyslexia and 179 candidates were registered as SpLD/ADHD (MATSEC Statistical Report 2016, p.22).

by AA candidates was created for the purpose of this study. Before 2015-2016, CLEM did not distinguish between AA candidates and the rest of the candidates.

As can be seen in Table 3.1, there is a great disparity in the candidate sample sizes. There are more AA candidates choosing Paper B than mainstream candidates. Conversely, fewer AA candidates opt for Paper A. This unequal distribution is expected since candidates with SpLD/dyslexia have challenges with studying language subjects and therefore prefer Paper B which has a shorter writing task and less demanding questions. Table 3.1 also gives details on the genre of the writing task. Overall, the least preferred writing task genre was the 'Article' for both Paper A or Paper B candidates. The most preferred writing task genre amongst the Paper 2A candidates was the 'Argumentative'. In contrast, the 'Narrative' was the most preferred genre for the Paper 2B candidates.

The quantitative analysis was carried out on two sets of data – 2015 and 2016 data. Both data gave similar results and therefore it was decided that the findings of one year will be presented in this study – 2015. As for the data, a total of 671 writing task exercises were processed with textinspector (see Section 3.5.3.2). 366 scripts belonged to SpLD candidates and 406 scripts belonged to non SpLD candidates. Table 3.1 illustrates the distribution of the scripts according to the Paper type and the essay genre.

Essay Genre	AA Candidates (P2A)	Rest Candidates (P2A)	AA Candidates (P2B)	Rest Candidates (P2B)
Narrative	27	94	195	90
Argumentative	45	148	67	23
Article	11	38	21	13
Total	83	280	283	126

Table 3.1: The choice of essay type presented according to paper level and candidate type.

3.5 Data Analysis – The Mixed Method Research

Mixed Methods Research (MMR) combines “elements of qualitative and quantitative research approaches (e. g., use of qualitative and quantitative viewpoints, data collection, analysis, inference techniques) for the broad purposes of breadth and depth of understanding and corroboration” (Johnson et al. 2007, p. 123). In recent years, the Mixed Methods approach (also called ‘Triangulation’) has become increasingly popular as a third way paradigm in the behavioural and human sciences. It synthesises the two contrasting methods of quantitative and qualitative, expanding and strengthening the overall research design because the strengths of one approach offsets the weaknesses of the other (Creswell & Plano Clark, 2011). Various researchers prefer to call it a ‘combined’ and ‘integrated’ method, challenging the forced dichotomy between ‘subjective’ and ‘objective’ while arguing that there is no such thing as ‘completely objective’ and ‘completely subjective’. The shuttle between various frames of reference draws out a more pragmatic, intersubjective approach admitting that there is a single “real world” and each individual holds an own unique interpretation of that world (Morgan, 2007).

The mixed method approach is commonly associated with the paradigm of pragmatism. In this study however, the epistemological position will not follow on pragmatism. MMR will not

be used as is often the case within pragmatism, but more as a synthesis that includes ideas from both the qualitative and the quantitative methodological orientations. The challenge with using MMR is that merging the two methods can prove to be a complex endeavour. It takes more time and resources to plan and carry out the research. Researchers need to thread carefully at the point of integration - this involves careful planning and implementation between the second method after drawing on the findings of the first method. Finally, the interpretation of findings from the two methods might also be time consuming and can give rise to unresolved discrepancies, with a difficulty to synthesise a coherent conclusion. This dilemma has been eloquently captured by Freshwater (2007) as follows:

“Even though it (MMR) integrates a paradigm that locates meaning as being unique, that is, constructivist, it still falls into the trap of wanting to concretise that unique meaning into some literal, generalisable, and replicable meaning” (p.137).

3.5.1 The Explanatory Sequential Design

The quantitative and qualitative methods in this study (presented in that order of sequence) are used to answer the three main research questions (see Section 2.20 and Section 3.3). This approach follows the *explanatory sequential design* with a focus on the quantitative, with numerically based results. The explanatory sequential design is generally used to qualitatively examine closely the quantitative results for unexplained differences. Creswell (2015) describes this approach as best used for “following up on participants with certain demographics, expanding the investigation to explain important variables (or variables that surprisingly turned out to be non-significant), and looking closely at outlier cases from the quantitative analysis” (p. 38). Creswell intended this sequential design to apply for in-depth-

interviews and warned that this approach brings challenges to the researcher, including decisions about which quantitative results are to be picked up for qualitative analysis and the amount of time required to conduct the two analyses.

In contrast to the design proposed by Creswell (2015), the Explanatory Sequential Design used in this study differs on two grounds:

1. The qualitative analysis is extended to include all data (texts). It is not limited to analysing the single cases, although this is done *as a result of* the process and not because it is *the* process itself. True to the challenges proposed by Creswell, the mixed method analysis is time-consuming. However, this was a thesis project with sufficient length of time that made both analyses achievable goals. Moreover, the data in this study is not the lengthy in-depth interviews that Creswell had in mind, but readily-transcribed texts that made it possible to analyse.
2. There is a further dimension of 'independence' that Creswell leaves out, but that is relevant to the framework of this study. "Independence is when their (qualitative and quantitative) implementation does not depend on the results of data analysis in the other component" (Schoonenboom & Johnson, p.17, 2017). In the case of this study, dependence between the two methods is arguably partial because one is not contingent upon the other. It is 'partial' because the quantitative analysis gives a direction as to what to look out for in an already gathered/available data. However, this does not make it 'dependent' to the degree that the quantitative method informs the researcher on how to design the qualitative method. As a matter of fact, the

qualitative data was gathered *a priori* and the criteria used to analyse it was mostly pre-determined (linguistic aspects).

In summary, the aim of the sequential explanatory design used in this study is to understand, corroborate and substantiate the qualitative data in its entirety. It is not there to single out and explain the solitary cases that defy quantitative generalisability. Neither was the criteria for qualitative data completely dependent upon the outcome of the quantitative results. Therefore, the dependency between the two methods is not a strong one and arguably both can be separate standalone studies. The following Section 3.5.3 will briefly outline elements and criticism of quantitative analysis and qualitative analysis, and how these have been applied to analyse the data in this research.

3.5.2 Quantitative Analysis

Quantitative analysis is known as the scientific research paradigm because it is empirical in nature and uses inferential, experimental and simulation approaches (Ochieng, 2009). Its methods of analysis can handle the study of big populations and uses/processes direct, numerical and measurable data. The quantitative method uses big sample sizes, making results generalisable on the population at hand. The quantitative method has three levels of analysis: *Descriptive*: this is simple statistics that simply describes a given population; *Explanatory*: understands why things happen as they do, how reliable that understanding is, or whether there are other explanations; *Predictive*: provides a model of future outcomes and explores how well it works (Bacon-Shone, 2015).

One strong criticism of the quantitative methodology is directed at the way data is gathered. There is limited or no connection between the researcher and the participant. Data is generally gathered by means of controlled research instruments that are given to participants to self-administer. This assumes that all participants interpret the questions in the same way. Examples of these research tools include surveys, questionnaires, structured interviews and highly controlled situations to determine effects. These instruments are detached from people's real-life experiences and cannot genuinely delve into the how and why of the research question in the same manner as the qualitative research can. The 'measured' results are also leaving out essential experiences that are part of the real-life story (Almeida et al, 2017).

3.5.2.1 Quantitative Analysis and this Study

The quantitative analysis in this study was carried out on the numerical data gathered from the MATSEC Support Unit, the ADSU and the data processed by the website www.textinspector.com (see Section 3.5.2.2). All this data was collected and organised with Microsoft Excel Sheet. The statistical analysis was carried out with the software Statistical Package for the Social Sciences (SPSS). Different statistical computations were made mainly using Pearson Correlation, Chi Square and One-Way Anova (see Section 4.3). These computations were divided into three broad categories mostly exploring the relationship between two sets of data: Literacy scores with language grades and essay marks; text analysis with grades and results; and the analysis of vocabulary scores of 'AA' candidates and the 'Rest' of the candidates (see all Sections 4.4, 4.5 and 4.6).

3.5.2.2 Text Inspector - Quantitative data on written scripts

The online website www.textinspector.com was used to carry out an automated quantitative analysis of each individual writing task (essay). Quantitative Text Analysis (QTA) is a research design that uses methods for drawing statistical inferences from text populations (Roberts, 2000). It can process volumes of text easily and cheaply while removing the necessity for heavy human intervention. QTA relies on computerised coding schemes and algorithms that match texts to coding dictionaries. It is objective and treats words unequivocally as data (Laver et al, 2003). The researcher paid a subscription fee to have access to functions in the 'advanced options' in the website that are only open to subscribers. Each writing task was copy-pasted onto the website for a thorough text analysis, from which a number of scores were generated. A selected number of scores were considered useful for analysis. These had to be carefully considered with thoughtful justification that had to determine what to include and what to leave out.

Textinspector gives access to analysis from four different corpus data, namely the English Vocabulary Profile (EVP), British National Corpus (BNC), Corpus of Contemporary American English (COCA) and Academic Word List (AWL). Each of the corpora was researched to identify its strengths and weakness vis-à-vis the data of this study. At the end, it was decided that for the purposes of this research, the EVP corpus was the most suitable. The English Vocabulary Profile is based on extensive research using the Cambridge Learner Corpus (CLC). This is a collection of several hundred thousand examination scripts written by learners of English from all over the world that is updated annually. Combined with evidence of use from many other sources related to general English, such as examination vocabulary lists and classroom materials, the CLC lists what learners can and cannot do at each level (EVP website, 2020).

The EVP data in Textinspector was used to analyse the vocabulary level of proficiency of the data in this study. The EVP classifies words and phrases, in both British and American English, that learners of English around the world know at each of the six proficiency levels - A1 to C2 - of the CEFR. Levels A1 to C2 are arbitrary categories of proficiency levels starting from beginners to advanced (see Sections 2.18 to 2.18.2). These categories are not set in stone and the level of proficiency can vary for certain words that carry a cultural meaning. For example, the word 'granaries' is a low frequency word that features in the advanced levels of proficiency. However, for Maltese learners of English, this was a familiar word used in one of the essays where candidates had to describe Maltese summers. Many candidates referred to the 'Granaries in Floriana' when mentioning the Isle of MTV international concert that is hosted in Malta every summer. Similarly, the words 'roof' (C2 word) and 'feast' (C1) are considered advanced on the EVP, but these were commonly used in the SEC English essays. Moreover, it should be noted that a sizeable number of words are not listed in the textinspector lexicon, making this a limitation in the processing of the data (see Appendix 5 for a list of words categorised as 'unlisted').

All the essays were inputted into textinspector as received from CLEM, without any corrections or modifications. Therefore, while the automated quantitative analysis of this data could not have been completely accurate, it was up to the qualitative investigation to pick up these inaccuracies and analyse them further. Proper nouns, like names of persons and places that were not recognised by Textinspector were either not listed under the CEFR proficiency classifications or wrongly categorised as errors. Appendix 6 illustrates a sample of spelling errors or words that were incorrectly used by candidates. As a result, these received incorrect CEFR proficiency level classifications in the textinspector data analysis. Most errors were not identified by the software and simply categorised as 'unlisted'. For example,

'deepdown', 'everytime', 'alot', 'greatful' and 'thoughts' were common errors. If written correctly, these words would have given more accurate statistical value to the data. These errors could be found across all types of essays and proficiency levels. These are a few examples from the advanced levels: vulnerable (C2) written as vunerable; frantic (C2) written as franctic; adolescents (C2) written as adolscentes; criteria (C1) written as critieria; obstacles (C1) written as obsticles.

Other spelling mistakes were identified by the automated text analysis as different words and given a lower classification. For example, 'whenever' which is a B1 word was commonly spelt as 'when' (A1) and 'ever' (A2). Some misspelt words relegated the proficiency level significantly. For example, 'alongside' and 'somewhat' are compound words at C1 level, which in some instances, were written as two separate beginners' level words 'along' and 'side' (both A1), and 'some' and 'what' (both A2). Another interesting example of an incorrectly spelt word was 'out way' (both A2) for 'outweigh' (C1). In other fewer instances, the misspelt or incorrectly used word gave a higher proficiency level classification. For example, 'flesh' (C2) instead of 'flash' (C1), hearth (B2) for heart (A2), hole (B1) for whole (A2), loose (B1) for lose (A2).

Some words written in British English, as taught in Maltese schools, were not given a categorisation and marked as 'unlisted', while their American version was given a proficiency level categorisation, for example organization (B1) for organisation; realize (B1) for realise; specialize (B2) for specialise; globalization (C1) for globalisation. In contrast, some words were only given the categorisation in the British version and not the American e.g. colour (A1) for color; neighbour (A2) for neighbor. The words marginalise – marginalize were both unlisted (see Appendix 6).

Another consideration that had a bearing on the textinspector categorisation of the vocabulary level of proficiency had to do with annotations of words. Vocabulary that have more than one possibility of use, could be categorised differently under different proficiency levels. For example, the word 'understanding' (noun) is pegged at B2 level and the verb is A1. The word 'degree' comes in three different meanings under three different proficiency levels: A2 (noun - temperature); B1 (noun - qualification); B2 (amount – measure). In this research, the default categorisation was used for data entry in the quantitative analysis. It would have been an impossible and a never-ending job to correct all the individual essays in order to put the words under the correct categorisations to achieve a more accurate quantitative analysis.

Apart from the six EVP proficiency level categorisations (A1 – C2 levels) representing the different vocabulary levels at A1, A2, B1, B2, C1 and C2, the other quantitative data taken from textinspector consisted of six scores, namely: Lexical diversity measures with the two distinct indices of 'Measure of Textual Lexical Diversity' (MTLD) and 'vocd-D'; Reading ease measures of the Flesch Readability Score, Flesch Kincaid and the Gunning Fox Index; a score representing the number of errors in the text.

3.5.3 Qualitative Analysis

Unlike the quantitative research, qualitative analysis is not concerned with numerical representativity, but with the deepening of understanding of a given problem. The concern in qualitative analysis is to look at aspects of reality that cannot be quantified, directing the focus on understanding and explaining. Therefore, the researcher aims at understanding the various dimensions of the problem under analysis by producing in-depth and illustrative information (Almeida et al, 2017). Types of qualitative research may include Narrative, Case

study, Phenomenological, Ethnography, Historical and Grounded Theory. The method of data collection is usually through interviews (in-depth and semi-structured), observations, documents and active participation (Heaton, 2004).

In the history of qualitative methodology, a recurrent criticism centres around the question: “How far can we expect and should we wish to formalise qualitative data analysis?” (Flick, 2013, p.12). There are two sides to this dimension. One is to agree on a specific formal method of analysis. This is precisely what Braun & Clarke (2006, 2013) attempt to do with Thematic Analysis (see Section 3.5.3.2). On the opposite end is an approach that proposes no formalisation. This entails the absence of methodological rules and the application of the ‘just do it’ approach (Flick, 2013). This method (or lack thereof) involves the complete immersion in the data and the discovery of what is interesting about it. Grounded theory by Glaser and Strauss (1967) is one such example.

3.5.3.1 Qualitative Analysis and this Study

The qualitative analysis was carried out on the texts (scripts/writing task/essays) gathered from the Corpus of Learner English in Malta (CLEM). The computer software package NVivo 12 was used to carry out this analysis. NVivo 12 enabled the handling of the large volume of data processed in this study. This software helped in organising the data (both English and Maltese essays) by facilitating its organisation, categorisation, coding and presentation of results (see Section 3.5.3.4).

It is worth pointing out a few considerations related to the analysis of the essays. Firstly, the texts analysed were produced during high-stakes examinations which are highly controlled

assessments. The examination environment, selected essay genres and titles, and time pressure were all impositions and restrictions on free and creative writing. Secondly, the texts were produced by fifteen- and sixteen-year olds. This reflects a particular level of writing maturity from students who are potentially on a progressive journey to better proficiency. Thirdly, the essays were produced by bilinguals whose writing is expected to have different qualities to that produced by monolinguals.

In SEC Maltese, the essay component is in Paper 1, which is a core paper that is compulsory for all candidates (see Section 2.2.1 for more details about the SEC English and Maltese examinations). This made it easier to compare the quality of writing produced by Paper A candidates with that of Paper B since all candidates were presented with the same prompt and writing task conditions – the same genres and titles and the same essay length (350 words). In contrast, in SEC English, the conditions were different since the writing task is not in core Paper 1, but in Paper 2 which can be either A or B. Paper A has more demanding questions than Paper B. Candidates who chose Paper A were given different essay titles and were requested to write longer text (320-350 words) than those who chose paper B (180-200 words). This difference in data did not facilitate comparison between the two groups in SEC English essays.

The sample of texts in this study was large (1,861 essays – 1,442 English and 419 Maltese out of a total 9132 English essays and 8096 Maltese essays). This was representative of a broad spectrum of writing proficiency levels in both languages. Essays ranged from the very poor to the outstanding. In this respect, writing is not a fixed construct in the way it is constructed and produced, making it hard to categorise and define objectively and conclusively (see Section 2.8). Therefore, the aim of the qualitative analysis was to further define the findings

from the quantitative analysis and draw out themes that reflect patterns of general qualities and characteristics of writing. This is in line with the characteristics of qualitative analysis with results that are not generalisable in the way quantitative results are. A wide range of relevant text was extracted during the process of thematic analysis via coding (see Section 3.5.3.4). The coded text extracts (hereafter called 'samples') presented in Chapter 5 are only the selected few of the many texts coded from the essays. These texts were carefully chosen as the best prototypes representing the arguments made. The Maltese texts appear with a translation to English in as much detail as possible. Parts or words within the text were selectively italicised to illustrate a point being made, such as to show spelling errors or idiomatic expressions.

3.5.3.2 Thematic Analysis

The method used to analyse the texts qualitatively was Thematic Analysis. Drawing on the framework of Braun and Clarke (2006, 2013), Thematic Analysis is the process of identifying patterns or themes within qualitative data that are important or interesting and that address the research or say something about an issue (Maguire & Delahunt, 2017). It is described as “a poorly demarcated, rarely-acknowledged, yet widely-used qualitative analytic method” and “a useful and flexible method for qualitative research in and beyond psychology” (Braun and Clarke, 2006, p.77). There are many ways of doing Thematic Analysis. It is a flexible methodology as it is “independent of theory and epistemology, and can be applied across a range of theoretical and epistemological approaches” (Braun and Clarke, 2006, p. 78). The approach to analysis used in this study is inductive and semantic and follows a 6-step process.

3.5.3.3 Inductive and Semantic Thematic Analysis

The inductive approach is data-driven, bottom-up approach that builds themes directly from the data under investigation. In contrast to the theoretical approach in Thematic Analysis, there were no prior theoretical frameworks, pre-existing coding frame, analytic preconceptions or typologies that guided the research project (Allen, 2017; Braun & Clarke, 2006). In the case of this research, the inductive approach was considered the better approach because there was no prior research on this topic. Nevertheless, this should not imply that the researcher is a blank slate and completely neutral. Data is never coded in an “epistemological vacuum”, keeping in mind that the researcher can never be free from “theoretical and epistemological commitments” (Braun & Clarke, 2006, p.89).

Themes are identified at a ‘semantic’ level of analysis which enables the identification of the explicit or surface meanings of the data (Braun and Clarke, 2006). This approach complements the type of data at hand (essays) as well as the aim of the analysis, which is the linguistic patterns/features of writing. The researcher was not looking for underlying meanings beyond the linguistic features and the language used in the writing task. In contrast, the ‘latent’ level of analysis that is usually associated with in-depth interviews, examines the underlying ideas, assumptions, and conceptualisations. This distinction between the semantic and latent levels of analysis does not exclude a progression from the level of description to a deeper level of interpretation. This progression starts from the organisation of data and pattern formation of the semantic content (coding), leading to an attempt to give a deeper significance to those patterns and their implications from previous literature (Braun & Clarke, 2006).

3.5.3.4 Analysis Plan, Codes and Themes

Although thematic analysis is characterised by flexibility that facilitates fluid and dynamic analysis, it is still a framework governed by structure and direction. Thematic analysis is a methodology guided by thoughtful enterprise and is not an ad hoc process. For this reason, an analysis plan was used to take into consideration the timeline and the number of separate analysis (Guest et al, 2012). These layers of analyses meant that the same texts were revisited at least three times, every time looking for something different, following the direction given by the research questions. The first analysis studied the patterns, features and characteristics of the texts. The second analysis looked out for any differences between texts produced by AA candidates and the non-AA candidates. The third layer of study targeted bilingualism and looked at the English and Maltese scripts written by individual candidates. This analytic method was not applied rigidly and anything worth considering in the analysis was included in the coding.

3.5.3.5 Six-Step Process

The six-step thematic analysis process described below was proposed by Braun and Clarke (2006, 2013). This process is ongoing, cyclical and iterative in which each of the phases can be revisited a number of times:

- 1. Familiarisation with the data:** This involved the 'immersion' in the data by reading and re-reading the essays. This enabled familiarity with the depth and breadth of the data content. Repeated reading of the data was essential, especially because the data was readily available and the opportunity to process through transcription was

skipped. Reading the essays was therefore done in an active way by searching for meanings and early patterns. This was a time-consuming exercise. Nevertheless, notes and marking of ideas were made along the process, even if this was an early stage in the analysis. The notes helped as foundations for the later stages in coding the data.

- 2. Generating Initial Codes:** This step involved the organisation of data in a systemic and meaningful way. Coding is an interpretive act and not a precise science. The process of coding in this research was not about reducing the data but involved summarising, distilling and condensing data. A code in qualitative inquiry was often a word or short phrase that symbolically assigned a summative, salient, essence-capturing, and/or evocative attribute for a portion of language-based data (Saldana, 2013). The entire data was given full and equal attention, identifying interesting aspects that rose to the surface as relevant. This coding process was not simply labelling but linking and making sense of the data. The NVivo 12 was used in this process to organise and categorise the big amount of data (see Section 3.5.4.1).

- 3. Searching for Themes:** This step (also called ‘codifying’ and ‘categorising’) involved the sorting of the different codes into potential themes and collated all the relevant coded data extracts within the identified themes. This process involved the coding of patterns which were repetitive, regular, and consistent occurrences of action/data that appeared more than twice (Saldana, 2013). This was an analytic step that raised the conceptual level of the analysis from description to a more abstract theoretical level (Charmaz, 2006). Here again, the NVivo software was used to facilitate the search

for themes that involved the sorting of the different codes and a re-focus of the analysis to a broader level of themes.

- 4. Reviewing Themes:** a process of refinement of the themes. This was essentially an editing process in which some themes were made redundant while others were collapsed into a single theme. Some themes that were not coherent or appeared to overlap had to be renamed and reframed to come across as coherent and clearly identifiable. Another important exercise in this stage was the verification of the individual themes to the data set. Fitting all coded data into the themes was an essential step that needed a firm structural framework and research discipline. This is because the coding of data and the generation of themes could go on ad infinitum (Braun & Clarke, 2006).
- 5. Defining and Naming Themes:** This was a process of 'defining and refining'. The essence of each theme was identified and the aspects of the data that were captured by each theme were determined. The collated data extracts for each theme were organised into a coherent and consistent account. Each theme was considered on its own and in relation to others. This process led to a clear definition of each theme. The names chosen were short and direct in order to give the reader a sense of what the theme was about.
- 6. Producing the Report:** The findings of the qualitative analysis were presented after the data that verified the quantitative analysis was presented (see Section 3.5.2 on the Explanatory Sequential Design). Many of data extracts were embedded within the

analytic presentation of the findings. These samples were carefully chosen from the many examples in the data as a way of showing the prevalence of the themes. The write-up included analytic claims within the themes that, although grounded in the data, were given a semantic level analysis, by linking them to the literature where relevant (Braun & Clarke, 2006).

3.5 Limitations of the Research

Apart from the researcher's bias, already mentioned in Section 3.2, there were a number of limitations that are highlighted in this section. Given that the study is on texts that were written by examination candidates under fixed and standardised conditions, there were variables that could not be controlled for. The title and genre of the writing task was a limiting factor on creative writing. In fact, narrative essays contain more diverse vocabulary than the other types of essays (Olinghouse & Wilson, 2013) and single-occasion, single-genre essays is not an ideal snapshot of a learner's quality of writing (Olinghouse et al, 2012) (see Section 2.14).

Another limitation concerns the level of essays in English. Paper A comprises longer writing tasks than Paper B (see Section 2.2.1). Although this distinction was accounted for during data analysis and Paper A essays were analysed separately from Paper B essays, the parity of assessment task was not the same. Similarly, although candidates were instructed to adhere to specific text length (320-350 words in paper A and 180-200 words in Paper B) and cautioned that they would be penalised if they did not (SEC English Language May Exam Papers, 2015 & 2016), there were inevitable word count variations that went over or under the word limit.

This variation could have affected the results in the quantitative analysis such as lexical variety and frequency of spelling errors.

The unequal sample sizes was another notable limitation. The number of texts written by candidates without AAs was bigger than the number of texts written by candidates with AAs in paper A. Conversely, the sample size of texts written by candidates with AAs that chose Paper B was bigger. This inevitable disparity is the result of the choices that different students make based on their level of proficiency in the languages. In their majority, AA candidates tend to choose Paper B (see Section 2.2.2.1).

The automated text analysis is very useful for big data like that used in this study. However, the software counts all instances of vocabulary regardless of its appropriacy. The annotations given for some words can vary, depending on whether it is a verb, noun or other. For the purposes of this research, it was practically impossible to select or amend each annotation for each word. Therefore, in the case of proficiency levels for vocabulary, the default function was used and consequently, a few words could have been categorised under the incorrect proficiency level (see section 3.5.2.2 for more details on Textinspector). Similarly, there were many words that were not categorised under a proficiency level (see Appendix 5) and misspelt words that were placed in the wrong category of proficiency level by the software (see Appendix 6).

Finally, the qualitative research part included the judgement of the researcher towards many aspects of writing such as the proficiency levels in writing. This is a very subjective topic open to many interpretations. Therefore, the comments and views of the researcher are not absolute or exclusive. Other viewpoints and approaches may offer different opinions and perspectives.

Chapter 4 – Findings and Results – Quantitative Analysis

4.1 Introduction

The Findings and Results are presented in two Chapters, 4 and 5. The quantitative analysis is presented in this Chapter 4 and the qualitative analysis is presented in Chapter 5. This follows the chronological way in which the two analyses were carried out. Both analyses helped in the interpretation and understanding of the data at hand which are samples of scripts written by candidates who sat for SEC English and SEC Maltese in 2015 and 2016 (see Methodology Chapter 3).

The quantitative analysis consists of a number of statistical analyses, presented in this chapter in the following order:

1. an overview of the results in the Secondary Education Certificate (SEC) (Section 4.4).
2. Literacy scores, language grades and essay marks (Section 4.5).
3. Text Analysis and Grades and Results (Section 4.6)
4. Analysis of Vocabulary Scores of 'AA' candidates and the 'Rest' of the candidates (Section 4.7).

The different analyses carried out on English scripts is richer than the analyses on Maltese scripts. The reason is because there are far more tools available to analyse the English language than the Maltese language. This was particularly the case for section (4.3) because the analytic tools are specific to English, and particularly the last section (4.6), since no tools are available to carry out analysis on Maltese vocabulary at the level of proficiency. The analytic tool which was a computer programme used to detect the frequency of errors in

Maltese was specifically developed for this study by Professor Albert Gatt⁹ in order to analyse the Maltese sampled scripts.

4.2 Statistical Tests used

The quantitative analysis was carried out using the following statistical tests:

The Shapiro Wilk test was used to determine whether the marks distribution was normal or skewed. The null hypothesis specifies that the marks distribution is normal and is accepted if the p-value exceeds the 0.05 level of significance. The alternative hypothesis specifies that the marks distribution is skewed and is accepted if the p-value is less than the 0.05 criterion.

This test reveals that some marks distribution satisfy the normality assumption while others violated it. For this reason, both parametric and non parametric tests were used to analyse the data.

Other statistical tests were used to make a number of inferences about student attainment in SEC language exams. These include the Chi Squared test, Mann Whitney and Independent samples t-tests, Kruskal Wallis and One-Way ANOVA tests, and Pearson and Spearman correlation tests.

The Chi-Square test was used to determine whether there exists a significant association between two categorical variables in a two-way contingency table. This test was used to determine whether the associations between grade variables and categorized literacy variables are significant. The null hypothesis specifies that there is no association between the two variables and is accepted if the P-value exceeds the 0.05 level of significance.

⁹ Professor Albert Gatt is a computational linguist. He was Director of the Institute of Linguistics and Language Technology

The Independent samples t-test and Mann Whitney test was used to compare the mean marks of the SEC English Language writing task (essays) and some literacy test scores between two groups. The former test is used when the score distribution satisfied the normality assumption, while the latter is used when this assumption is violated. For both tests, the null hypothesis specifies that the actual mean marks and literacy scores vary marginally between the groups and is accepted if the p-value exceeds the 0.05 level of significance. The alternative hypothesis specifies the converse and is accepted if the p-value is less than the 0.05 criterion.

The One-way ANOVA test and Kruskal Wallis test was used to compare the mean marks of the SEC English Language writing task (essays) and some literacy test scores between three or more groups. The former test is used when the score distribution satisfies the normality assumption, while the latter is used when this assumption is violated. For both tests, the null hypothesis specifies that the actual mean marks and literacy scores vary marginally between the groups and is accepted if the p-value exceeds the 0.05 level of significance. The alternative hypothesis specifies the converse and is accepted if the p-value is less than the 0.05 criterion.

The Pearson and Spearman correlation coefficients measure the strength of the relationship between two continuous variables and range from -1 to 1. The former test is used when the score distribution satisfies the normality assumption, while the latter is used when this assumption is violated. For both tests, the null hypothesis specifies that there is no relationship between the two variables (correlation coefficient = 0) and is accepted if the p-value exceeds the 0.05 level of significance. The alternative hypothesis specifies the converse and is accepted if the p-value is less than the 0.05 criterion.

4.3 Overview of the Results in Secondary Education Certificate (SEC)

In this first part of this analysis, a correlation study is carried out between the results in the two main languages SEC English and SEC Maltese, and other subjects. The second part shows details of the essay marks achieved in the two languages vis-à-vis the Paper level, gender, access arrangements and school type. This is followed by an analysis of the literacy scores and school types. The final analysis in this section consists of the literacy scores achieved by access arrangements students attending the different school types.

4.3.1 English and Maltese in relation to other Subjects

Tables 4.1 and 4.2 illustrate 16 Spearman correlation tests between different subjects, protagonists being the SEC English and SEC Maltese subjects. Every correlation between two subjects was carried out twice, one for the Access Arrangements group (AA Group) and one for the Rest of the candidates (Rest). This was done to identify whether there exists a link between language and subject achievement. English is the predominant language of the textbooks in several areas including sciences, mathematics and most of the humanities subjects. On the other hand, the Maltese language in textbooks is a feature of locally based subjects, namely Environmental Studies, Religion and local Geography and local History. Despite this, candidates have a choice to answer in either language when sitting for these examinations.

The subjects selected for this section in the study were SEC level English, Maltese, Maths, Physics, English Literature, Home Economics, Religion and Italian. These subjects are the most popular choice for a reasonable number of candidates that constitute statistically sound

values. Nevertheless, from a statistical point of view, the correlation results could have been more accurate had the global raw marks been made available. However, global raw exam marks are never given by the MATSEC Support Unit as these can be sensitive to grade boundary information. Grade boundaries are internally calculated and never made public. For statistical analysis, the 'U' grade given to candidates who failed a subject was recoded to '8', to follow the sequence of grades 1-7 and to have ordinaly scaled variables (See section 2.2.1 for an explanation on the value of grades).

The correlation tests in Tables 4.1 and 4.2 aim to explore the argument that language is a tool with which a learner accesses other subjects and therefore whether candidates who do well in a language are likely to do well in the subjects taught in that same language. Similarly, this would support Cummins' Threshold Hypothesis (1979) that proposes that "there may be threshold levels of linguistic competence which a bilingual child must attain both in order to avoid cognitive disadvantages and allow the potentially beneficial aspects of bilingualism to influence his cognitive and academic functioning" (p.222). In application to this study, the Threshold Hypothesis would predict that candidates who achieve a good grade in the languages and therefore have 'good levels of linguistic competence beyond the threshold' will achieve good grades in the subjects that are being assessed with the same language.

The correlation test results in Table 4.1 show that indeed for both the 'AA' and 'Rest' groups there is a positive relationship between the grades attained by the candidates in the two languages tested. Although one can immediately notice that in all the pairwise comparisons tested, the strength of the positive relationship between the two sets of grades was always weaker for the AA group compared to the Rest of the candidates.

The only relationship that was not found to be significant was the one relating the English with the Italian grades of candidates in the AA group. This clearly demonstrates that language achievement is indeed an impediment for students with Specific Learning Difficulties (SpLD) who already have difficulties with acquiring the two languages, Maltese and English.

Table 4.1: Correlation between SEC English Grade and grades in other Subjects

Access Arrangements Candidates			The Rest of the Candidates		
English Grade & Maths Grade:			English Grade & Maths Grade:		
		Maths Grade			Maths Grade
English Grade	Spearman Correlation	.566**	English Grade	Spearman Correlation	.738**
	P-Value	.000		P-Value	.000
	Sample Size	264		Sample Size	3699
**. Correlation is significant at the 0.01 level (2-tailed).			**. Correlation is significant at the 0.01 level (2-tailed).		
English Grade & Physics Grade:			English Grade & Physics Grade:		
		Physics Grade			Physics Grade
English Grade	Spearman Correlation	.515**	English Grade	Spearman Correlation	.724**
	P-Value	.000		P-Value	.000
	Sample Size	184		Sample Size	3076
**. Correlation is significant at the 0.01 level (2-tailed).			**. Correlation is significant at the 0.01 level (2-tailed).		
English Grade & Eng Literature Grade:			English Grade & Eng Literature Grade:		
		Eng Literature			Eng Literature
English Grade	Spearman Correlation	.560**	English Grade	Spearman Correlation	.716**
	P-Value	.000		P-Value	.000
	Sample Size	91		Sample Size	2462
**. Correlation is significant at the 0.01 level (2-tailed).			**. Correlation is significant at the 0.01 level (2-tailed).		
English Grade & Home Economics Grade:			English Grade & Home Economics Grade:		
		Home E. Grade			Home E. Grade
English Grade	Spearman Correlation	.578**	English Grade	Spearman Correlation	.667**
	P-Value	.000		P-Value	.000
	Sample Size	76		Sample Size	701
**. Correlation is significant at the 0.01 level (2-tailed).			**. Correlation is significant at the 0.01 level (2-tailed).		
English Grade & Religion Grade:			English Grade & Religion Grade:		
		Religion Grade			Religion Grade
English Grade	Spearman Correlation	.504**	English grade	Spearman Coefficient	.663**
	P-Value	.000		Sig. (2-tailed)	.000
	Sample Size	186		N	3143
**. Correlation is significant at the 0.01 level (2-tailed).			**. Correlation is significant at the 0.01 level (2-tailed).		
English Grade & Italian Grade:			English Grade & Italian Grade:		
		Italian Grade			Italian Grade
English Grade	Spearman Correlation	.144**	English Grade	Spearman Correlation	.494**
	P-Value	.139		P-Value	.000
	Sample Size	107		Sample Size	1654
**. Correlation is significant at the 0.01 level (2-tailed).			**. Correlation is significant at the 0.01 level (2-tailed).		

Table 4.2: Correlation between SEC Maltese Grade and grades in other Subjects

Access Arrangements Candidates			The Rest of the Candidates		
Maltese Grade & Religion Grade:			Maltese Grade & Religion Grade:		
		Religion Grade			Religion Grade
Maltese Grade	Spearman Correlation	.643**	Maltese Grade	Spearman Correlation	.780**
	P-Value	.000		P-Value	.000
	Sample Size	180		Sample Size	3083
**. Correlation is significant at the 0.01 level (2-tailed).			**. Correlation is significant at the 0.01 level (2-tailed).		
Maltese Grade & Italian Grade:			Maltese Grade & Italian Grade:		
		Italian Grade			Italian Grade
Maltese Grade	Spearman Correlation	.239**	Maltese Grade	Spearman Correlation	.516**
	P-Value	.014		P-Value	.000
	Sample Size	104		Sample Size	1611
**. Correlation is significant at the 0.01 level (2-tailed).			**. Correlation is significant at the 0.01 level (2-tailed).		

4.3.1 SEC English Language and SEC Maltese – An Overview

The analyses in this section give a general overview of the main language examinations, SEC Maltese and SEC English in the Secondary Education Certificate (SEC), in relation to candidate group, type of school, gender and mean essay mark. As shown in the literature review, these variables contribute to the linguistic profile of students in the Maltese context (see Section 2.3.2). As illustrated in Tables 4.3 and 4.4, AA candidates consistently achieve lower marks than the rest. Moreover, both males and female, with or without access arrangements (AAs), who attend church schools and independent schools, achieve the best mean essay marks in SEC English Language. Both AA Candidates and the rest of the candidates who attend state schools trail behind in both Paper A and Paper B. The same results taken from different angles are presented in Appendix 1.

Table 4.3: SEC English – an Overview of the paper level, group, school type, gender and mark

SEC English

Paper	Group	School	Gender	Mean Mark	Std. Dev.	Sample size	P-value
A	Access Arrangement	State	Male	14.93	4.736	20	.877
			Female	15.25	3.298	6	
		Church	Male	16.40	4.081	10	.864
			Female	16.11	2.998	9	
		Independent	Male	8.50	.	1	.187
			Female	20.50	5.268	3	
	Post-Secondary/Private	Male	13.83	6.007	3	.901	
		Female	14.30	4.324	5		
	Rest	State	Male	20.20	4.303	317	.000
			Female	21.93	4.609	649	
		Church	Male	22.59	4.990	657	.567
			Female	22.75	4.870	577	
		Independent	Male	23.46	4.094	156	.112
			Female	24.26	4.485	141	
Post-Secondary/Private		Male	17.91	6.350	64	.938	
		Female	17.83	5.896	107		
B	Access Arrangement	State	Male	12.73	4.654	113	.202
			Female	13.72	5.403	65	
		Church	Male	13.89	3.950	19	.795
			Female	14.31	5.518	18	
		Independent	Male	14.63	4.095	8	.852
			Female	14.20	3.511	5	
	Post-Secondary/Private	Male	16.39	2.881	9	.247	
		Female	18.58	4.164	6		
	Rest	State	Male	16.37	4.946	452	.009
			Female	17.30	5.092	356	
		Church	Male	17.75	5.118	79	.493
			Female	18.28	4.062	70	
		Independent	Male	18.07	3.799	36	.101
			Female	20.50	4.967	10	
Post-Secondary/Private		Male	16.31	4.316	232	.000	
		Female	17.76	4.710	343		

The situation is similar in Paper A in SEC Maltese, with the marks in the church and independent schools emerging as the better ones (except for the access arrangements group where the sample size was very small). In Paper B, the situation is in reverse. Results from the essays produced by private candidates and those coming from state schools are better than the marks achieved by candidates in the church and independent schools.

However, overall, these results from the two languages confirm past studies on the literacy landscape in Malta in which the performance of candidates in English and Maltese who attend church and independent schools is better than the performance of students who attend state schools (Martinelli, 2016; Mifsud et al, 2005; Firman, 2007) (See also Section 2.4).

Table 4.4: SEC Maltese – an Overview of the paper level, group, school type, gender and mark

SEC Maltese

Paper	Group	School	Gender	Mean Mark	Std. Dev.	Sample size	P-value	
A	Access Arrangement	State	Male	5.89	4.137	9	.028	
			Female	9.27	2.102	11		
		Church	Male	6.63	3.420	8	.152	
			Female	10.20	5.020	5		
		Independent	Male	2.00	.	1	.	
			Female	15.00	.	1		
	Post-Secondary/Private	Male	.	.	0	.		
		Female	8.00	2.828	2			
	Rest	State	Male	9.02	3.986	242	.000	
			Female	11.24	4.151	610		
		Church	Male	10.73	4.285	645	.001	
			Female	11.59	4.170	510		
		Independent	Male	9.70	4.222	84	.014	
			Female	11.26	4.175	95		
Post-Secondary/Private		Male	7.90	4.460	21	.056		
		Female	10.13	4.315	48			
B		Access Arrangement	State	Male	5.25	3.775	122	.750
				Female	5.43	3.605	60	
			Church	Male	4.17	3.854	18	.824
				Female	3.90	3.434	21	
	Independent		Male	5.20	4.712	5	.815	
			Female	4.40	5.683	5		
	Post-Secondary/Private	Male	3.00	1.414	2	.087		
		Female	11.50	3.536	2			
	Rest	State	Male	6.48	4.316	502	.000	
			Female	7.62	4.338	388		
		Church	Male	6.07	3.660	88	.026	
			Female	7.33	4.352	135		
		Independent	Male	5.60	4.091	70	.924	
			Female	5.52	2.622	27		
Post-Secondary/Private		Male	7.25	4.510	151	.807		
		Female	7.11	4.758	116			

4.3.2 Literacy Scores and School Type

Table 4.5 presents the English language essay mark and the standard scores in the four different English literacy test scores achieved by AA candidates in the different school streams. The results show statistical significance between the average marks achieved in the different school streams.

The best mean essay mark was achieved by the post-secondary/private candidates, followed by the other three groups in the following order: Independent, Church and State schools. The results are somewhat different in the literacy standard scores. Generally, candidates from the church schools have the highest mean standard scores in all tests except for the NARA Comprehension test. In contrast, candidates from the state schools, not only achieve the lower essay marks, but consistently score poorer in all literacy tests. These results are consistent with results from local research and results from international studies such as PIRLS and PISA (see Section 2.4).

Table 4.5: English Essay mark and Literacy Scores and School Type

School Type	Sample size	Mean	Std. Deviation	Sample Size	P-Value
English Essay mark	State	204	13.33	4.912	0.010
	Church	56	14.83	4.434	
	Independent	17	15.18	4.737	
	Post-Secondary/ Private	23	16.17	4.097	
Suffolk SS	State	209	84.49	10.570	0.000
	Church	57	93.00	13.650	
	Independent	17	86.59	7.575	
	Post-Secondary/ Private	21	88.05	10.897	
English Spelling SS	State	209	73.09	10.640	0.043
	Church	58	77.24	12.321	
	Independent	17	75.76	10.034	
	Post-Secondary/ Private	21	76.86	9.687	
NARA Comprehension	State	211	9.23	2.068	0.000
	Church	58	10.23	2.053	
	Independent	17	9.30	1.588	
	Post-Secondary/ Private	23	10.74	1.878	
NARA Accuracy	State	211	8.59	1.688	0.028
	Church	57	9.30	2.083	
	Independent	17	9.06	1.325	
	Post-Secondary/ Private	22	9.20	1.519	

There was no significant difference between the mean marks achieved in the Maltese essays by AA candidates attending the four different school streams (Table 4.6). On the contrary, there was a significant difference in the scores of the two Maltese literacy tests. In both the comprehension test Naqra u Nifhem and the Maltese spelling test, post-secondary and private AA candidates achieved the highest standard scores. It is interesting to note that the lowest literacy scores were achieved by AA candidates from the independent schools. Although the sample here does not include those sitting the examinations without access arrangements, this result confirms what has been found in local research (see Section 2.4).

Table 4.6: Maltese Essay mark and Literacy Scores and School Type

	School Type	Sample size	Mean	Std. Deviation	P-value
Maltese Essay mark	State	202	5.55	3.758	0.500
	Church	52	5.02	4.118	
	Independent	12	5.42	5.452	
	Private candidate	6	7.50	4.370	
Naqra u Nifhem SS	State	205	86.16	12.734	0.000
	Church	53	87.72	11.687	
	Independent	12	71.50	13.853	
	Post-Secondary/ Private	6	96.33	8.824	
Maltese Spelling SS	State	206	70.37	11.568	0.000
	Church	53	76.62	13.009	
	Independent	12	68.42	8.857	
	Post-Secondary/ Private	6	84.33	8.238	

4.4 Literacy scores, language grades and essay marks

The quantitative analysis in this section aims at studying whether there exists a relationship between a number of literacy test scores and the Grades achieved by SpLD (Specific Learning Difficulties) students with access arrangements during their examinations in the language subjects of SEC Maltese and SEC English. Candidates with SpLD who apply for access arrangements have to undergo a battery of literacy tests made up of at least five tests. The tests include the locally standardised Suffolk Reading and Comprehension test (2012), the English spelling test (2012), the Naqra u Nifhem Maltese Reading and Comprehension test (2012), the Maltese Spelling Test (2012) and the Neale Analysis of Reading Ability II (NARA II, 1997). The NARA II measures three different skills in reading that include reading and comprehension, reading speed and reading accuracy. In addition, the criteria for application requests the presentation of a General Cognitive Ability test carried out at any stage during the candidate's educational career.

Literacy test scores are presented in three different formats: age scores, standardised scores and percentile scores. For the purposes of this study, the percentage score will not be used. In a number of cases, scores fall outside the 'assessment score zone', either below the basal level or beyond the ceiling level of the test. These scores are presented as simply <11 years or >16 years which makes the scale of measurement a categorical one. In contrast, the scores that fall between the basal level and the ceiling level give a continuous scale of measurement. These variables with mixed scales (partly continuous and partly categorical) could not be analysed statistically unless they were modified. It was therefore decided to group the continuous data into categories by arbitrarily clustering scores into ranges, for example standard scores 70-84 ($70 \leq X < 85$). The categories were devised to ensure that the sample size in each group was adequate.

The test scores were manually extracted from the application forms presented by students requesting access arrangements. This data was inputted into a spreadsheet using Microsoft Excel for organisational purposes and later was exported into the SPSS programme (Version 25) for statistical analysis. The total number of scores available often varies marginally from one analysis to another depending on the information available. Sometimes scores were missing from the application form. This could be due to an incomplete literacy assessment abandoned by the assessor after realising that the student would not qualify for access arrangements under the criteria for eligibility or an assessment without the age scores carried out on a student above the ceiling. Statistical inference (generalisation) is conducted using three statistical tests, including the Chi Squared Test, One-Way ANOVA test and the Pearson correlation test (see Section 4.2 for more detail). The headings in the section that follows refer to the main analysis of the tests followed by the findings and an interpretation of these findings.

4.4.1 Suffolk Reading & Comprehension Test

Examination results are graded by the MATSEC Examination Board into eight categories ranging from 1 to 7 and U (Unclassified) with 1 being the highest grade and U the lowest. In this analysis, the grades were further split into three categories. The category 1-5 represents the group of candidates who achieved an MQF level 3 qualification (Malta Qualifications Framework - <https://ncfhe.gov.mt/en/Pages/MQF.aspx>) that is recognised by many post-secondary institutions as an acceptable pass mark for further education. The category 6-7 represents those who achieved an MQF level 2 qualification which is not considered a valid qualification for entry to most post-secondary institutions. Those who got U are unclassified and therefore not considered to be a level of qualification. This Grade categorisation was maintained throughout all the analyses that follow.

The second variable is the Suffolk Reading and Comprehension age score. It is interesting to note that scores falling below the basal and above the ceiling levels amount to more than half the data (174 out of 307). This further justifies the decision made to categorise the scores. The scores can be interpreted as evidence of the relationship between the reading and comprehension age scores and the grade achieved. The higher the age score on the Reading and Comprehension Test, the higher the grade in the SEC English examination and vice versa (see Table 4.7).

Table 4.7: Suffolk Reading and Comprehension (Suffolk) – Age and Grade

		Suffolk Reading and Comprehension (Suffolk) - Age				Total	
		X < 11	11 ≤ X < 13	13 ≤ X < 16	≥ 16		
Grade	1-5	Count	10	12	25	19	66
		Percentage	6.9%	17.4%	39.1%	63.3%	21.5%
	6-7	Count	40	25	25	8	98
		Percentage	27.8%	36.2%	39.1%	26.7%	31.9%
	U	Count	94	32	14	3	143
		Percentage	65.3%	46.4%	21.9%	10.0%	46.6%
Total		Count	144	69	64	30	307
		Percentage	100.0%	100.0%	100.0%	100.0%	100.0%

$X^2(6) = 78.61, p < 0.001$

In a similar analysis, Table 4.8 illustrates the relationship between scores from the same literacy test – Suffolk Reading and Comprehension Test – and grades achieved by students with SpLD. This time, however, standard scores were used instead of reading age scores. Once again, the standard scores were categorized because a number of them fell below the basal level (<63). As expected, the results show a similar pattern clearly indicating that the higher the score on the Suffolk Test, the higher the grade in the SEC English examination and vice versa.

Table 4.8: English Reading and Comprehension (Suffolk) - Standard Score and SEC Grade

		English Reading and Comprehension (Suffolk) - Standard Score				Total	
		X < 70	70 ≤ X < 85	85 ≤ X < 100	≥ 100		
Grade	1-5	Count	2	11	25	25	63
		Percentage	12.5%	7.7%	25.0%	59.5%	21.0%
	6-7	Count	2	42	41	11	96
		Percentage	12.5%	29.6%	41.0%	26.2%	32.0%
	U	Count	12	89	34	6	141
		Percentage	75.0%	62.7%	34.0%	14.3%	47.0%
Total		Count	16	142	100	42	300
		Percentage	100.0%	100.0%	100.0%	100.0%	100.0%

$X^2(6) = 71.26, p < 0.001$

Since the number of standard scores falling below the basal level (<63) was small and none of them exceeded the ceiling level (>84), an alternative approach was to recode all scores below the basal level to 63. Moreover, the One-Way ANOVA test was used to compare the mean standard scores between the three grade levels given that the score distribution was fairly normal. Similar to other results, Table 4.9 illustrates a steady increase in the mean standard score that corresponds to an increase in the grade category. The Error Bar Graph (Figure 4.1) clearly shows that the 95% confidence intervals of the actual mean standard scores for the three grade levels do not overlap indicating that the mean standard scores vary significantly between any pair of grades.

Table 4.9: Mean Suffolk Standard Score and SEC Grade

Grade	Sample Size	Mean Suffolk Standard Score	Std. Deviation	Std. Error	95% Conf. Int. for Mean	
					Lower Bound	Upper Bound
1-5	63	96.86	12.928	1.629	93.60	100.11
6-7	97	87.71	8.792	0.893	85.94	89.48
U	141	80.82	10.419	0.877	79.08	82.55

$F(2, 298) = 51.743, p < 0.001$

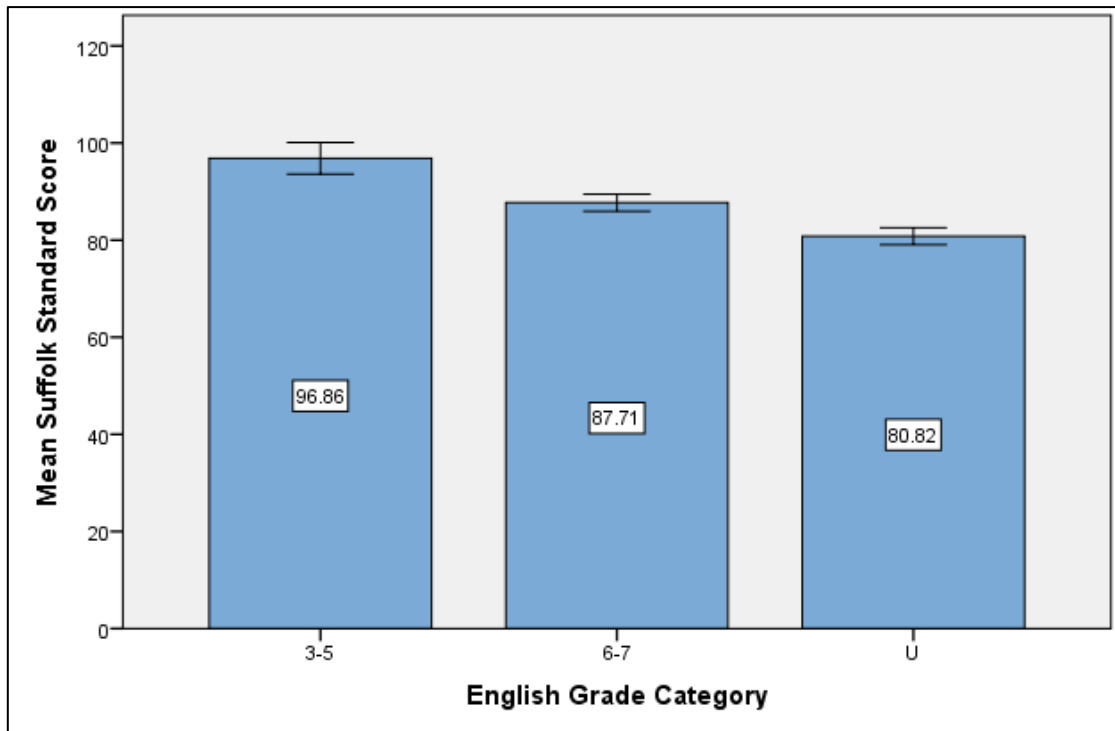


Figure 4.1: Error bar graph displaying 95% confidence intervals of mean Suffolk Standard score

Further analysis was carried out to assess the association between the Suffolk Reading and Comprehension standard scores with the mean essay marks. The Suffolk standard scores are categorised into four categories, where the cut off points fall within one and two standard deviations from the mean. Table 4.10 illustrates the mean essay mark for each category of the Suffolk standard scores. Candidates who get a high score in the writing task are more likely to achieve a good grade in the examination and vice versa. Table 4.11 illustrates the mean essay mark for each SEC grade and displays a similar pattern as Table 4.10.

Table 4.10: Mean Essay Mark and Suffolk Standard Score

Suffolk Standard Score	Sample Size	Mean Essay Mark	Std. Deviation	Std. Error	95% Conf. Int. for Mean	
					Lower Bound	Upper Bound
$X < 70$	144	12.15	5.582	0.4651	11.233	13.072
$70 \leq X < 85$	69	13.30	5.322	0.6407	12.019	14.576
$85 \leq X < 100$	64	15.38	4.449	0.5561	14.264	16.486
≥ 100	30	15.95	4.145	0.7567	14.402	17.498

$F(3, 303) = 8.31, p < 0.001$

Table 4.11: Mean Essay Mark and SEC Grade

Grade	Sample Size	Mean Essay Mark	Std. Deviation	Std. Error	95% Conf. Int. for Mean	
					Lower Bound	Upper Bound
1-5	66	17.42	3.749	0.4615	16.503	18.346
6-7	98	15.89	3.704	0.3741	15.150	16.635
U	143	9.95	4.724	0.3951	9.167	10.729

$F(2, 304) = 94.94, p < 0.001$

Table 4.12 and Figure 4.2 illustrate the positive significant relationship between the Suffolk Standard score and the English Writing Task mark, indicating that students who are performing well in one test tend to do well in the other test and vice versa.

Table 4.12: Correlation between the English Writing Task Mark and Suffolk Standard Score

		English Writing Task Mark
Suffolk Standard Score	Pearson Correlation	0.362
	P-value	0.000
	Sample Size	299



Figure 4.2: Scatterplot displaying the relationship between English Writing Task Mark and Suffolk Standard Score

4.4.2 NARA II Reading and Comprehension

Another Reading and Comprehension test used to assess candidates with SpLD is the Neale Analysis of Reading Ability 2nd Edition (NARA II). Although both the NARA II and the Suffolk test assess the literacy skill of Reading and Comprehension, their format is different and they have different characteristics in terms of exercises and scoring. The Suffolk test has been standardised on the Maltese student population (2012) with a basal age level of 11 years 3 months and leading up to a ceiling age level of 16 years. In contrast, the NARA II is a UK based test with a basal age level of 6 years and a ceiling age level of 12 years 10 months. Given that the NARA II test was standardised on a UK population whose first language is English, the interpretation of the results on the local population needs to be taken into consideration. By and large, a discrepancy of two reading years are estimated. A local student lags behind by two years when compared to a native student in the UK (Grech, 2011 as cited in Everatt et al, 2013).

Apart from the different populations, the format of the tests is different. The NARA II comprehension text is long with some complex questions that require inference skills to answer. On the contrary, the Suffolk is a multiple-choice question test. Each question consists of one sentence with a missing word that has to be selected from five possible one-word answers.

Despite assessing the reading and comprehension skill from different angles, the statistical analysis illustrates a strong link between the two types of tests as illustrated in Table 4.13. It is however worthy to note that there were a number of candidates with contrasting scores on the tests. There is a larger percentage of students scoring above the upper threshold of the NARA II test (21.5%) compared to the Suffolk test (9.8%). On the other hand, there is a larger percentage of students scoring below the lower threshold of the Suffolk test (47.6%)

compared to the NARA II test (22.5%). This is contrary to general perception that views NARA II as the harder test due to its long passage reading and inferential answers. The comparison in this analysis suggests that Suffolk’s multiple-choice questions are demanding and the deliberation for the answer is not as straight forward as one might assume.

In conclusion, the statistical significance gives enough grounds to conclude that both the Suffolk and the NARA II reading and comprehension tests are measuring the similar skill of reading and comprehension, where the majority students either perform well or perform badly in both tests.

Table 4.13: NARA II Reading & Comprehension Test with Suffolk Reading Age

			NARA II Reading & Comprehension Age				
			< 8	8 ≤ X < 10	10 ≤ X < 12	≥ 12	Total
Suffolk Reading Age	X < 11	Count	61	54	24	7	146
		Percentage	88.4%	58.7%	30.0%	10.6%	47.6%
	11 ≤ X < 13	Count	7	24	28	9	68
		Percentage	10.1%	26.1%	35.0%	13.6%	22.1%
	13 ≤ X < 16	Count	1	11	23	28	63
		Percentage	1.4%	12.0%	28.7%	42.4%	20.5%
	≥ 16	Count	0	3	5	22	30
		Percentage	0.0%	3.3%	6.3%	33.3%	9.8%
Total	Count		69	92	80	66	307
	Percentage		100.0%	100.0%	100.0%	100.0%	100.0%

$\chi^2(9) = 146.83, p < 0.001$

In view of the overall similarity between the two reading and comprehension tests, there is also a significant relationship between the NARA II Comprehension test and the grade achieved in SEC English Language (Table 4.14) as well as the NARA II and the essay mark (Table 4.15). The higher the score on the NARA II Comprehension Test, the higher the essay mark and grade.

Table 4.14: NARA II Reading & Comprehension Age and SEC Grade

		NARA II Reading & Comprehension Age				Total
		< 8	8 ≤ X < 10	10 ≤ X < 12	≥ 12	
Grade 1-5	Count	2	11	24	29	66
	Percentage	3.0%	11.8%	30.0%	43.9%	21.6%
6-7	Count	11	32	31	23	97
	Percentage	16.4%	34.4%	38.8%	34.8%	31.7%
U	Count	54	50	25	14	143
	Percentage	80.6%	53.8%	31.3%	21.2%	46.7%
Total	Count	67	93	80	66	306
	Percentage	100.0%	100.0%	100.0%	100.0%	100.0%

$\chi^2(6) = 70.11, p < 0.001$

Table 4.15: Mean Essay Mark and NARA II Reading & Comprehension Age

NARA Reading & Comprehension Age	Sample Size	Mean Essay Mark	Std. Deviation	Std. Error	95% Conf. Int. for Mean	
					Lower Bound	Upper Bound
< 8	67	9.64	4.733	0.5782	8.487	10.796
8 ≤ X < 10	93	13.20	5.177	0.5368	12.133	14.265
10 ≤ X < 12	80	14.83	5.035	0.5629	13.705	15.945
≥ 12	66	16.02	4.442	0.5468	14.931	17.115

$F(3, 302) = 21.80, p < 0.001$

4.4.3 NARA Accuracy

The NARA II has another sub test that measures the skill of reading accuracy. According to the phonological deficit hypothesis theory, lack of accuracy in reading is a strong marker of the presence of dyslexia. This follows on a body of research that strongly supports the idea that phonological awareness and phonological processing skills are powerful predictors of later reading ability. These skills enable a reader to be sensitive and capable to manipulate the speech sound segments of words (for example, Snowling, 2000; Ramus et al., 2013) (See Section 2.9). The results indicate that there is indeed a significant relationship between the reading accuracy score and the grade achieved (Table 4.16) and likewise the reading accuracy

score and the writing task mark (Table 4.17). Therefore, based on these findings it is reasonable to speculate that these findings support the phonological deficit hypothesis.

Table 4.16: NARA II Reading Accuracy Age and SEC Grade

			NARA II Reading Accuracy Age				Total
			< 8	8 ≤ X < 10	10 ≤ X < 12	≥ 12	
Grade	1-5	Count	5	24	22	15	66
		Percentage	5.6%	19.5%	34.9%	50.0%	21.6%
	6-7	Count	19	47	21	10	97
		Percentage	21.3%	38.2%	33.3%	33.3%	31.8%
U	Count	65	52	20	5	142	
	Percentage	73.0%	42.3%	31.7%	16.7%	46.6%	
Total	Count	89	123	63	30	305	
	Percentage	100.0%	100.0%	100.0%	100.0%	100.0%	

$\chi^2(6) = 54.43, p < 0.001$

Table 4.17: NARA II Reading Accuracy Age and Mean Essay Mark

	N	Mean Essay Mark	Std. Deviation	Std. Error	95% Conf. Int. for Mean	
					Lower Bound	Upper Bound
< 8	89	10.75	4.858	0.5150	9.724	11.771
8 ≤ X < 10	123	13.82	5.247	0.4731	12.881	14.754
10 ≤ X < 12	63	14.87	4.930	0.6211	13.624	16.107
≥ 12	30	16.93	4.867	0.8885	15.116	18.751

$F(3, 301) = 15.22, p < 0.001$

4.4.4 NARA II Reading Speed

Reading speed is another skill measured in the NARA II test. The reading speed is a skill of reading automaticity and therefore fluency that facilitates one's ability to read quickly through a text. It is interesting to observe that the relationship between the speed of reading score and the grades (Table 4.18) is significant but not as strong as with the other NARA II sub

tests (reading & comprehension and accuracy) with Grades. A substantial number of candidates (26 out of 65) who have a low reading speed age score below the 10-year level have managed to achieve a 1-5 SEC Grade. On the other end of the scale, half of those who achieved a reading speed age score above 10 years (71 out of 143) did not pass the examination.

Table 4.18: NARA II Reading Speed Age and SEC Grade

			NARA II Reading Speed Age				Total
			< 8	8 ≤ X < 10	10 ≤ X < 12	≥ 12	
Grade	1-5	Count	7	19	20	19	65
		Percentage	18.4%	17.8%	23.8%	25.0%	21.3%
	6-7	Count	6	41	32	18	97
		Percentage	15.8%	38.3%	38.1%	23.7%	31.8%
	U	Count	25	47	32	39	143
		Percentage	65.8%	43.9%	38.1%	51.3%	46.9%
Total		Count	38	107	84	76	305
		Percentage	100.0%	100.0%	100.0%	100.0%	100.0%

$X^2(6) = 13.43, p = 0.037$

It is also interesting to note that the relationship between the speed of reading age score and the mean essay marks is significant but not as strongly as the other two reading markers on the NARA II test – comprehension and accuracy (See table 4.19). In this case, the significance comes from the stark distinction between the mean essay mark in the group with a below 8-year level score and that of the above 8-year groups. The Tukey Post Hoc test shows that the three categories of candidates achieving a reading speed age score of at least 8 years have similar mean essay marks (13.83, 14.48 and 13.02), whereas those with a score below 8 years have a mean essay mark of 10.79 which is significantly lower.

Table 4.19: NARA II Reading Speed Age and Mean Essay Mark

NARA II reading speed age	Sample Size	Mean Essay Mark	Std. Deviation	Std. Error	95% Conf. Int. for Mean	
					Lower Bound	Upper Bound
Below 8	38	10.79	5.322	0.8633	9.040	12.539
between 8 and 9.9	107	13.83	4.919	0.4755	12.889	14.775
between 10 and 11.9	84	14.48	5.182	0.5654	13.352	15.601
Above 12	76	13.02	5.776	0.6625	11.700	14.339

$F(3, 301) = 4.65, p = 0.003$

In view of these result, one can conclude that unless reading speed is really slow (below 8 years), it is not a good predictor of the essay mark. Slow reading can be mitigated by the access arrangement of extra time that facilitates candidates with enough time to process print in their own tempo. Nevertheless, according to the results of this study and in line with research on this topic, the processing of print relies on reading accuracy and reading & comprehension. In conclusion, therefore, accurate reading and comprehension are far better predictors of success in the SEC English Language examination than speed of reading.

4.4.5 English Spelling Test

Spelling is an essential skill in the writing task that also features as an assessment criterion in the marking scheme. This is confirmed by the analyses carried out that show significant associations between the spelling test score, the essay mark and the SEC grade. Candidates with higher spelling scores/spelling age achieved a higher essay mark and higher grade than those whose spelling score/spelling age was low (see Tables 4.20 – 4.23).

A closer observation of the findings reveals some interesting points. Candidates in the two middle standard score categories achieved a similar average mark (see Table 4.21). In contrast, those whose spelling standard score was below 70 had a substantially lower average

mark in the essay and those with a standard score above 90 had a substantially higher average mark (Table 4.21). Despite this, the analysis of the standard score in spelling and grade shows an interesting detail. Table 4.22 displays a large percentage of candidates (23.5%) who achieved ≥ 90 in the spelling test and yet failed to get a pass in the SEC examination. On the other hand, 14.4% who achieved a poor score in the spelling test passed the SEC examination. This indicates that good quality writing may not necessarily be related to good quality spelling, where good writers may be poor spellers and poor writers may be good spellers.

The analysis involving the spelling age was categorised into four groups (Tables 4.20 and 4.23). However, categorisation was not straightforward like other test scales. In the spelling test, the assessor psychologists/dyslexia specialists can make use of two scales (standard score and percentile rank) when deriving the spelling age and other scores. The Primary test is designed for elementary spellers and has a test ceiling of 11 years 3 months (11.25years). The Secondary test is for more advanced spellers and has a basal reading age score of 11 years 3 months and a ceiling age of 16 years.

As a matter of practice, some psychologists do not use the Primary test table but always refer to the Secondary test table since students are typically fifteen-year-olds at the time of assessment. Therefore, any of these students who achieve poorer scores below 11 years 3 months are simply given the score < 11.25 . In the sample used for this study, there were 91 such scores and these were included in the $10 \leq X < 12$ category. This affected the results, giving a mean raw mark for essays similar to that of the < 8 category (Table 4.20).

Table 4.20: English Spelling Age and Mean Essay Mark

English Spelling Age	Sample Size	Mean Essay Mark	Std. Deviation	Std. Error	95% Conf. Int. for Mean	
					Lower Bound	Upper Bound
< 8	53	11.25	5.121	0.7035	9.834	12.657
$8 \leq X < 10$	103	14.41	4.703	0.4634	13.493	15.332
$10 \leq X < 12$	107	12.30	5.765	0.5573	11.194	13.404
≥ 12	43	16.76	4.045	0.6168	15.511	18.001

F(3, 302) = 12.40, p < 0.001

Table 4.21: English Spelling Standard Score and Mean Essay Mark

English Spelling SS	Sample Size	Mean Essay Mark	Std. Deviation	Std. Error	95% Conf. Int. for Mean	
					Lower Bound	Upper Bound
< 70	104	10.74	5.361	0.5257	9.698	11.783
$70 \leq X < 80$	87	14.18	4.960	0.5318	13.121	15.235
$80 \leq X < 90$	94	14.85	4.600	0.4744	13.904	15.788
≥ 90	17	18.38	3.967	0.9621	16.343	20.422

F(3, 298) = 19.15, p < 0.001

Table 4.22: English Spelling Standard Score and SEC Grade

Grade		English Spelling Standard Score				Total
		< 70	$70 \leq X < 80$	$80 \leq X < 90$	≥ 90	
1-5	Count	15	18	26	6	65
	Percentage	14.4%	20.7%	27.7%	35.3%	21.5%
6-7	Count	21	35	33	7	96
	Percentage	20.2%	40.2%	35.1%	41.2%	31.8%
U	Count	68	34	35	4	141
	Percentage	65.4%	39.1%	37.2%	23.5%	46.7%
Total	Count	104	87	94	17	302
	Percentage	100.0%	100.0%	100.0%	100.0%	100.0%

$\chi^2(6) = 25.37, p < 0.001$

Table 4.23: English Spelling Age and SEC Grade

		English Spelling Age				Total	
		< 8	$8 \leq X < 10$	$10 \leq X < 12$	≥ 12		
Grade	1-5	Count	8	24	21	13	66
		Percentage	15.1%	23.3%	19.6%	30.2%	21.6%
	6-7	Count	15	41	22	19	97
		Percentage	28.3%	39.8%	20.6%	44.2%	31.7%
U		Count	30	38	64	11	143
		Percentage	56.6%	36.9%	59.8%	25.6%	46.7%
Total		Count	53	103	107	43	306
		Percentage	100.0%	100.0%	100.0%	100.0%	100.0%

$\chi^2(6) = 22.76, p < 0.001$

4.4.6 Maltese Naqra u Nifhem Test (Maltese Reading and Comprehension Test)

The Maltese reading and comprehension test 'Naqra u Nifhem' (see Tables 4.24 – 4.27) display similar patterns to the English Suffolk test results. The analyses show a significant association between the Maltese reading and comprehension test scores, the grade and essay mean mark achieved. The higher the test score, the higher the achievement in the examination. A noteworthy observation concerns the analysis in Table 4.25 where the difference in mean essay mark is most prominent in the lowest category of the reading and comprehension age when compared to the other categories (<11 reading and comprehension age).

Table 4.24: Naqra u Nifhem Reading Age and SEC Grade

			Naqra u Nifhem Reading Age				Total
			< 11	11 ≤ X < 13	13 ≤ X < 16	≥ 16	
Maltese Grade	1-5	Count	18	21	17	14	70
		Percentage	15.5%	28.0%	29.8%	50.0%	25.4%
	6-7	Count	24	20	20	7	71
		Percentage	20.7%	26.7%	35.1%	25.0%	25.7%
	U	Count	74	34	20	7	135
		Percentage	63.8%	45.3%	35.1%	25.0%	48.9%
Total	Count	116	75	57	28	276	
	Percentage	100.0%	100.0%	100.0%	100.0%	100.0%	

$\chi^2(6) = 25.85, p < 0.001$

Table 4.25: Naqra u Nifhem Reading Age and Mean Essay Mark

	Sample Size	Mean Raw Mark (Essay)	Std. Deviation	Std. Error	95% Conf. Int. for Mean	
					Lower Bound	Upper Bound
< 11	116	4.12	3.634	0.337	3.45	4.79
11 ≤ X < 13	75	6.17	3.923	0.453	5.27	7.08
13 ≤ X < 16	57	6.05	4.055	0.537	4.98	7.13
≥ 16	28	6.79	3.775	0.713	5.32	8.25

$F(3, 272) = 7.14, p < 0.001$

Table 4.26: Naqra u Nifhem Standard Score and SEC Grade

			Naqra u Nifhem Standard Score				Total
			< 70	70 ≤ X < 85	85 ≤ X < 100	≥ 100	
Maltese Grade	1-5	Count	3	10	38	18	69
		Percentage	8.3%	14.3%	30.2%	45.0%	25.4%
	6-7	Count	7	17	36	10	70
		Percentage	19.4%	24.3%	28.6%	25.0%	25.7%
	U	Count	26	43	52	12	133
		Percentage	72.2%	61.4%	41.3%	30.0%	48.9%
Total	Count	36	70	126	40	272	
	Percentage	100.0%	100.0%	100.0%	100.0%	100.0%	

$\chi^2(6) = 26.41, p < 0.001$

Table 4.27: Naqra u Nifhem Standard Score and Mean Essay Mark

	Sample Size	Mean Essay Mark	Std. Deviation	Std. Error	95% Conf. Int. for Mean	
					Lower Bound	Upper Bound
< 70	36	3.00	3.260	0.543	1.90	4.10
$70 \leq X < 85$	70	4.83	3.718	0.444	3.94	5.72
$85 \leq X < 100$	126	6.00	4.010	0.357	5.29	6.71
≥ 100	40	6.43	3.928	0.621	5.17	7.68

$F(3, 268) = 7.20, p < 0.001$

4.4.7 Maltese Spelling Test

The results in the spelling test confirm that there is an association between spelling age/standard score, grade and essay mark achieved in SEC Maltese. The higher the score in the spelling test and the higher the spelling age, the better the grade and the essay mark (Tables 4.28 3.22 – 4.31). Same as in SEC English, the most prominent differences in the mean writing task mark occur in the top and bottom spelling age categories (Table 4.31). The mean marks in the middle categories are similar and do not differ significantly (Tables 4.29 and 4.31).

Tables 4.28 and 4.30 display a number of candidates whose spelling age/score falls in the top spelling age category and yet failed to get a pass grade in the SEC examination and a number of candidates with poor spelling scores achieving a pass grade. Once again, this indicates that there is a number of poor spellers who do well in Maltese and good spellers who fail in this subject. From an assessment point of view, this illustrates that examiners tend to reward the candidates' good writing qualities despite their weak spelling.

Table 4.28: Maltese Spelling Age and SEC Grade

			Maltese Spelling Age				Total
			< 8	$8 \leq X < 10$	$10 \leq X < 12$	≥ 12	
Maltese Grade	1-5	Count	3	34	23	10	70
		Percentage	7.1%	30.9%	22.8%	45.5%	25.5%
	6-7	Count	7	32	26	6	71
		Percentage	16.7%	29.1%	25.7%	27.3%	25.8%
	U	Count	32	44	52	6	134
		Percentage	76.2%	40.0%	51.5%	27.3%	48.7%
Total	Count		42	110	101	22	275
	Percentage		100.0%	100.0%	100.0%	100.0%	100.0%

$X^2(6) = 22.85, p < 0.001$

Table 4.29: Maltese Spelling Age and Essay Mark

Spelling age	Sample Size	Mean Essay Mark	Std. Deviation	Std. Error	95% Conf. Int. for Mean	
					Lower Bound	Upper Bound
< 8	42	3.79	3.220	0.497	2.78	4.79
$8 \leq X < 10$	110	5.84	3.765	0.359	5.12	6.55
$10 \leq X < 12$	101	4.69	3.841	0.382	3.93	5.45
≥ 12	22	8.55	4.217	0.899	6.68	10.42

$F(3, 271) = 9.39, p < 0.001$

Table 4.30: Maltese Spelling Standard Score and SEC Grade

			Maltese Spelling Standard Score				Total
			< 60	$60 \leq X < 75$	$75 \leq X < 90$	≥ 90	
Maltese Grade	1-5	Count	5	21	30	12	68
		Percentage	6.4%	21.6%	41.7%	50.0%	25.1%
	6-7	Count	15	29	20	7	71
		Percentage	19.2%	29.9%	27.8%	29.2%	26.2%
	U	Count	58	47	22	5	132
		Percentage	74.4%	48.5%	30.6%	20.8%	48.7%
Total	Count		78	97	72	24	271
	Percentage		100.0%	100.0%	100.0%	100.0%	100.0%

$X^2(6) = 46.46, p < 0.001$

Table 4.31: Maltese Spelling Standard Score and Essay Mark

Standard Score	Sample Size	Mean Raw Mark (Essay)	Std. Deviation	Std. Error	95% Conf. Int. for Mean	
					Lower Bound	Upper Bound
< 60	78	3.55	3.206	0.363	2.83	4.27
$60 \leq X < 75$	97	5.22	3.798	0.386	4.45	5.98
$75 \leq X < 90$	72	6.24	3.785	0.446	5.35	7.13
≥ 90	24	8.58	4.085	0.834	6.86	10.31

$F(3, 267) = 13.96, p < 0.001$

4.4.8 General Cognitive Ability (GCA) Test and SEC English

There is a significant relationship between the candidates' mean General Cognitive Ability (GCA) score and the grade achieved in SEC English (see Tables 4.32, 4.33). This relationship is visually clearer when the Grades are categorised into the three main grade groups (see Table 4.33). The most prominent difference in the mean GCA scores is in the topmost and bottommost Grades (see Table 4.32), although one needs to take into consideration the decrease in the sample size as the Grade improves, particularly in the case of only two candidates achieving a Grade 3 level.

Table 4.32: Mean General Cognitive Ability Score and SEC English Grade

Grade	N	Mean GCA scores	Std. Deviation	Std. Error	95% Conf. Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
3	2	101.00	5.657	4.000	50.18	151.82	97	105
4	15	95.87	17.517	4.523	86.17	105.57	50	126
5	45	96.58	8.833	1.317	93.92	99.23	78	117
6	46	93.09	12.830	1.892	89.28	96.90	56	123
7	48	95.13	8.026	1.158	92.79	97.46	79	111
U	128	87.96	12.234	1.081	85.82	90.10	53	121

$F(5, 278) = 5.88, p < 0.001$

Table 4.33: Mean General Cognitive Ability Score and categorised SEC English Grade

Grade	Sample Size	Mean GCA Score	Std. Deviation	Std. Error	95% Confidence Int. for Mean	
					Lower Bound	Upper Bound
3-5	62	96.55	11.313	1.437	93.68	99.42
6-7	94	94.13	10.642	1.098	91.95	96.31
U	128	87.96	12.234	1.081	85.82	90.10

$F(2, 281) = 14.27, p < 0.001$

4.4.9 Verbal Ability Test and SEC English

The association between the mean verbal ability test score and the SEC English Grade is statistically significant (see Tables 4.34, 4.35). As in previous test scores, the significant gap in mean score between those who got the lowest and highest grades compared to the rest with a middling grade. In this test, this gap is also significant between those candidates who got at least a Grade 5 and those who got a 6 or 7 Grade. This result comes as no surprise since the verbal ability test in the GCA is the test domain that assesses language-based reasoning.

Table 4.34: Mean Verbal Ability Score and SEC English Grade

Grade	N	Mean Verbal score	Std. Deviation	Std. Error	95% Conf. Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
3	2	103.00	9.899	7.000	14.06	191.94	96	110
4	15	97.47	13.325	3.440	90.09	104.85	70	125
5	44	97.48	9.133	1.377	94.70	100.25	78	116
6	42	92.21	10.772	1.662	88.86	95.57	67	114
7	48	92.44	8.832	1.275	89.87	95.00	71	115
U	124	87.16	10.512	.944	85.29	89.03	59	118

$F(5, 269) = 9.05, p < 0.001$

Table 4.35: Mean Verbal Ability Score and SEC English Grade

Grade	Sample Size	Mean Verbal Scores	Std. Deviation	Std. Error	95% Confidence Int. for Mean	
					Lower Bound	Upper Bound
3-5	61	97.66	10.190	1.305	95.05	100.27
6-7	90	92.33	9.729	1.026	90.30	94.37
U	124	87.16	10.512	0.944	85.29	89.03

$F(2, 272) = 22.54, p < 0.001$

4.4.10 General Cognitive Ability (GCA) Test and SEC Maltese

Unlike the SEC English results, the relationship between the overall mean GCA score and the Grades is not statistically significant for SEC Maltese (Tables 4.36, 4.37). The language of the test is a confounding factor because there exists an English version of the GCA test but not a Maltese version. Nevertheless, one can still note that candidates getting 1-5 pass grades had a higher mean GCA score (Table 4.37).

Table 4.36: Mean General Cognitive Ability Score and SEC Maltese Grade

Grade	Sample Size	Mean GCA Scores	Std. Deviation	Std. Error	95% Conf./ Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
2	1	94.00	.	.	.	.	94	94
3	2	95.50	7.778	5.500	25.62	165.38	90	101
4	26	95.54	13.923	2.731	89.91	101.16	50	126
5	36	92.89	11.191	1.865	89.10	96.68	71	116
6	45	91.22	11.981	1.786	87.62	94.82	64	121
7	24	89.67	12.229	2.496	84.50	94.83	67	123
U	121	91.28	11.910	1.083	89.14	93.42	53	120

$F(6, 248) = 0.68, p = 0.664$

Table 4.37: Mean General Cognitive Ability Score and categorised SEC Maltese Grade

Grade	Sample Size	Mean GCA Scores	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
1-5	65	94.05	12.120	1.503	91.04	97.05
6-7	69	90.68	12.001	1.445	87.80	93.56
U	121	91.28	11.910	1.083	89.14	93.42

$F(2, 252) = 1.55, p = 0.213$

4.4.11 Verbal Ability Test and SEC Maltese

Table 4.39 shows that the mean verbal scores vary significantly between the three SEC grade levels, where students getting a 1-5 pass grade are scoring significantly higher in the verbal test than their counterparts with lower SEC grades. Once again, one has to keep in mind that the test items are in English and the test is administered in English. In view of this, the link between verbal ability scores and achievement in Maltese could be a result of the test's assessment of the general language-based reasoning.

Table 4.38: Mean Verbal Ability Score and SEC Maltese Grade

Grade	Sample Size	Mean Verbal scores	Std. Deviation	Std. Error	95% Conf. Int. for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
2	1	116.00	.	.	.	.	116	116
3	2	96.50	19.092	13.500	-75.03	268.03	83	110
4	26	95.92	11.041	2.165	91.46	100.38	70	125
5	35	92.43	11.163	1.887	88.59	96.26	67	115
6	42	91.24	10.768	1.661	87.88	94.59	67	118
7	24	88.83	13.193	2.693	83.26	94.40	64	114
U	117	90.09	10.726	.992	88.12	92.05	59	112

$F(6, 240) = 2.13, p = 0.051$

Table 4.39: Mean Verbal Ability Score and SEC Maltese Grade

Grade	Sample Size	Mean Verbal scores	Std. Deviation	Std. Error	95% Conf. Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
1-5	64	94.34	11.492	1.437	91.47	97.21	67	125
6-7	66	90.36	11.665	1.436	87.50	93.23	64	118
U	117	90.09	10.726	.992	88.12	92.05	59	112

$F(2, 244) = 3.29, p = 0.039$

4.5 Text Analysis and Grades and Results

This section of the quantitative analysis is more detailed, zooming into the qualities and characteristics of the writing task (essays) in the SEC English paper. The data from the writing task was processed with the analytic software 'Text Inspector', found in the website www.textinspector.com (see Section 3.5.3.2). This data includes measures and scores of Lexical Diversity, Reading Ease, number of spelling errors, and vocabulary categories according to CEFR levels. This software is not suitable for analysing the Maltese language, therefore this part of the analysis only includes the English language.

4.5.1 Lexical Diversity – VOCD

Lexical Diversity is a measure of vocabulary richness. Text Inspector offers two measures of lexical diversity - VOCD (Vocabulary Diversity) and MTLT (Measure of Textual Lexical Diversity). Results from both measures were taken for each of the scripts and correlated (Table 4.40). The correlation is very strong substantiating findings from literature (McCarthy & Jarvis, 2010) and therefore it was decided to use only one of the measures – VOCD.

Table 4.40: VOCD and MTLD

		MTLD1
VOCD1	Pearson Correlation	0.894
	P-value	0.000
	Sample size	659

4.5.2 VOCD and Access Arrangements Candidates

There is a statistically significant relationship between the VOCD score and the mark in the writing task of candidates who get access arrangements (see Table 4.41). The higher the essay mark, the higher is the mean VOCD score. Similarly, the higher the mean VOCD score, the better the grade obtained (see Table 4.42).

Table 4.41: VOCD and AA Candidates Essay Marks

Essay Mark Category	Sample Size	Mean VOCD	Std. Deviation	Std. Error	95% Confidence Int. for Mean	
					Lower Bound	Upper Bound
< 10	53	55.76	15.092	2.073	51.604	59.924
$10 \leq X < 15$	99	65.91	15.154	1.523	62.893	68.938
$15 \leq X < 20$	73	66.85	15.547	1.819	63.223	70.478
≥ 20	31	75.12	10.504	1.886	71.263	78.969

$F(3, 252) = 12.23, p < 0.001$

Table 4.42: VOCD and AA Candidates Grades

Grade	Sample Size	Mean VOCD	Std. Deviation	Std. Error	95% Confidence Int. for Mean	
					Lower Bound	Upper Bound
1-5	54	72.84	12.056	1.641	69.551	76.132
6-7	81	68.05	15.836	1.759	64.550	71.553
U	121	59.87	15.291	1.390	57.117	62.622

$F(2, 253) = 16.43, p < 0.001$

4.5.3 VOCD and the rest of the Candidates

A very similar pattern to the AA candidates was found for the VOCD scores in relation to the mean essay mark belonging to the rest of the candidates. The lower the VOCD score, the lower was the mean essay mark and vice versa (Table 4.43). The same applies for the SEC grades. The higher the grades, the higher were the mean VOCD scores (Tables 4.44, 4.45).

Although the pattern of results pertaining to AA candidates and the rest of the candidates was similar and moved in the same direction, the mean VOCD for the essays and grades was always lower for the AA candidates (Tables 4.41 vs 4.43 and Tables 4.42 vs 4.44, 4.45).

Moreover, the interpretation of this analysis needs to take into consideration three confounding factors. Firstly, spelling mistakes were not corrected in any of the scripts and so two or more differently misspelt versions of the same word could potentially increase the VOCD score. Secondly, the English A and B examination papers requested different levels of attainment, where Paper A requested longer essays than Paper B, with 320-350 and 180-200 words respectively. Although this should not be an issue in terms of the measure D, some researchers insist that word-length affects the measure (McCarthy & Jarvis, 2007). Thirdly, the choice of essay titles in Paper A differs from the titles in Paper B. The genre of titles in Paper A tend to request more creative writing which demands a richer vocabulary that potentially increases the value of D (McCarthy & Jarvis, 2007). According to this analysis, overall one can conclude that the higher the lexical diversity in writing, the better the essay quality (and mark) and the better the grade.

Table 4.43: VOCD and AA Candidates Essay Marks

Essay Mark Category	Sample Size	Mean VOCD	Std. Deviation	Std. Error	95% Confidence Int. for Mean	
					Lower Bound	Upper Bound
< 10	12	66.02	16.328	4.714	55.648	76.396
$10 \leq X < 15$	42	69.40	19.961	3.080	63.184	75.625
$15 \leq X < 20$	107	75.22	16.390	1.584	72.075	78.358
$20 \leq X < 25$	147	81.08	16.217	1.337	78.438	83.725
$25 \leq X < 30$	81	87.27	17.805	1.978	83.329	91.203
≥ 30	14	90.05	16.275	4.349	80.651	99.444

$F(5, 397) = 10.52, p < 0.00$

Table 4.44: VOCD and Rest Candidates Grades

Grade	Sample Size	Mean VOCD	Std. Deviation	Std. Error	95% Confidence Int. for Mean	
					Lower Bound	Upper Bound
1	21	92.80	15.665	3.418	85.664	99.926
2	55	89.00	15.035	2.027	84.936	93.066
3	70	85.41	17.653	2.110	81.204	89.623
4	77	80.62	15.883	1.810	77.018	84.228
5	77	76.50	16.522	1.883	72.751	80.251
6	29	69.49	17.261	3.205	62.924	76.056
7	27	71.35	15.091	2.904	65.376	77.316
U	47	66.82	16.943	2.471	61.849	71.798

$F(7, 395) = 12.86, p < 0.001$

Table 4.45: VOCD and Rest Candidates Grades in categories

Grade	Sample Size	Mean VOCD	Std. Deviation	Std. Error	95% Confidence Int. for Mean	
					Lower Bound	Upper Bound
1-3	146	87.83	16.530	1.36804	85.123	90.531
4-5	154	78.56	16.285	1.31226	75.970	81.155
6-7	56	70.39	16.131	2.15564	66.065	74.705
U	47	66.82	16.943	2.47144	61.849	71.798

$F(3, 399) = 27.73, p < 0.001$

4.5.4 Readability Ease

Textinspector gives three different measures of reading ease – Flesch, Flesch-Kincaid and Gunning Fox. Scores from these three gauges were extracted for each script. The analysis

shows that all three give similar readings that represent different approaches to generating the same essential measure. Therefore, apart from being separate operationalisations of the same construct, they are mathematically related metrics that are generating slightly different values for the same data brought about by minor differences in sampling and statistical summary (Table 4.46). In view of this, only the Flesch measure is used.

Table 4.46: Correlation between all Readability Ease Measures

		Flesch 1	Flesch Kincaid 1	Gunning Fox 1
Flesch 1	Pearson Correlation	1	-0.900	-0.899
	P-value		0.000	0.000
	Sample Size	660	660	660
Flesch Kincaid 1	Pearson Correlation	-0.900	1	0.993
	P-value	0.000		0.000
	Sample Size	660	660	660
Gunning Fox 1	Pearson Correlation	-0.899	0.993	1
	P-value	0.000	0.000	
	Sample Size	660	660	660

4.5.5 Flesch Readability Ease and Essay Mark

Scores on the Flesch Reading Ease fall on a scale range from 1 to 100. The easier the text the higher is the score, and the more complex it is the lower the score. American standards specify that academic text produced by a graduate typically scores in the range 0-30, while simple and plain English written by a student in grade 8-9 scores in the range 60-70. Readability Ease standardised scores do not exist for the local population, which makes it hard to gauge the level of a bilingual Maltese student sitting for the SEC English Language examination. Tables 4.49 and 4.50 show that the mean Flesch Reading Ease score for a Grade 11 Maltese student

is in the range 60-80, which is 10-20 points higher than the expected Flesch score (50-60) for a US student of the same age.

Tables 4.47 and 4.48 display a significant positive relationship between the raw essay mark and the Flesch Reading Ease score for the 'AA' group, which does not conform to what is expected. Evidently, the Flesch score is not a true reflection of a reliable measure that gauges language-writing qualities. Moreover, tables 4.49 and 4.50 display no relationship between the essay mark and Flesch Reading score for the 'Rest' of the candidates. The Flesch Readability Ease calculation considers the average length of the sentences (measured by the number of words) and the average number of syllables per word in an equation. This purely quantitative approach does not consider the qualities of the text like the content of the writing, the vocabulary and the flow of the text. In some cases, poor essays that have similar quantitative characteristics as higher-level texts may achieve a good score on the Flesch Index. Yet the poor texts may contain longer sentences not because they have content of value but because the candidate did not use punctuation properly or did not use punctuation at all. In fact, it is common practice for examiners to read the text more than once or translate the text to Maltese to interpret the sense of the essay.

Table 4.47: Correlation between Flesch and AA Candidates' Essay Mark

		Flesch
English Essay Mark (AA) Candidates	Pearson Correlation	0.214
	P-value	0.001
	Sample Size	257

Table 4.48: Correlation between Flesch and Rest of Candidates' Essay Mark

		Flesch 1
English Essay Mark (Rest)	Pearson Correlation	-0.086
Rest Candidates	P-value	0.086
	Sample Size	403

Table 4.49: Flesch and AA Candidates' Essay Mark

Essay Mark Category	Sample size	Mean Flesch Score	Std. Deviation	Std. Error	95% Confidence Int. for Mean	
					Lower Bound	Upper Bound
< 10	53	62.96	45.151	6.20198	50.5112	75.4016
10 ≤ X < 15	99	73.66	12.106	1.21668	71.2421	76.0710
15 ≤ X < 20	74	73.77	10.859	1.26234	71.2547	76.2864
≥ 20	31	78.99	7.591	1.36339	76.2036	81.7725

F(3, 253) = 4.10, p = 0.007

Table 4.50: Flesch and Rest of Candidates' Essay Mark

Essay Mark Category	Sample size	Mean Flesch Score	Std. Deviation	Std. Error	95% Confidence Int. for Mean	
					Lower Bound	Upper Bound
< 10	12	74.48	6.172	1.78172	70.5618	78.4049
10 ≤ X < 15	42	71.01	10.840	1.67270	67.6360	74.3921
15 ≤ X < 20	107	68.70	13.663	1.32089	66.0805	71.3180
20 ≤ X < 25	147	69.09	13.153	1.08482	66.9462	71.2342
25 ≤ X < 30	81	67.66	14.856	1.65067	64.3794	70.9493
≥ 30	14	68.21	15.469	4.13433	59.2733	77.1367

F(5, 397) = 0.777, p = 0.567

4.5.6 Spelling Errors and Essay Marks

As illustrated earlier in this chapter, there exists a significant positive relationship between the English spelling (literacy) test score, the essay marks and overall SEC grades. The same trends were observed for Maltese spelling and its effect on essay marks and grades. The higher the literacy spelling score, the higher the essay marks and the better the grades.

In the analyses that follow, spelling is analysed from a different perspective through the frequency of spelling errors occurring in essays. The interpretation of these findings needs to take into consideration the fact that those sitting for Paper A have a longer writing task (320-350 words) than those sitting for Paper B (180-200 words) and therefore increase the chances of making spelling errors. Moreover, the textinspector software used to measure the number of spelling does not discriminate between the types of spelling errors. If the same word is misspelt twice it will be recorded twice. Moreover, there is no distinction between the typo errors and other errors like homophones used in the wrong context (for example 'where' instead of 'were').

The importance of spelling as a key factor affecting the essay mark is confirmed in these analyses for both 'AA' students and those who do not have AAs. Figure 4.3, Tables 4.51 and 4.52 display a significant negative relationship between the English essay mark and spelling errors, which conforms to what is expected. Tables 4.53 and 4.54 respectively provide the mean spelling errors of each categorised essay mark for both AA candidates and non-AA (Rest) candidates. The 'Rest' group have two further essay mark categories because overall, they have higher marks (see Table 4.54).

Figure 4.3 shows a few outliers who produce good essays despite making a considerable number of spelling mistakes and others with few spelling errors but low essay marks.

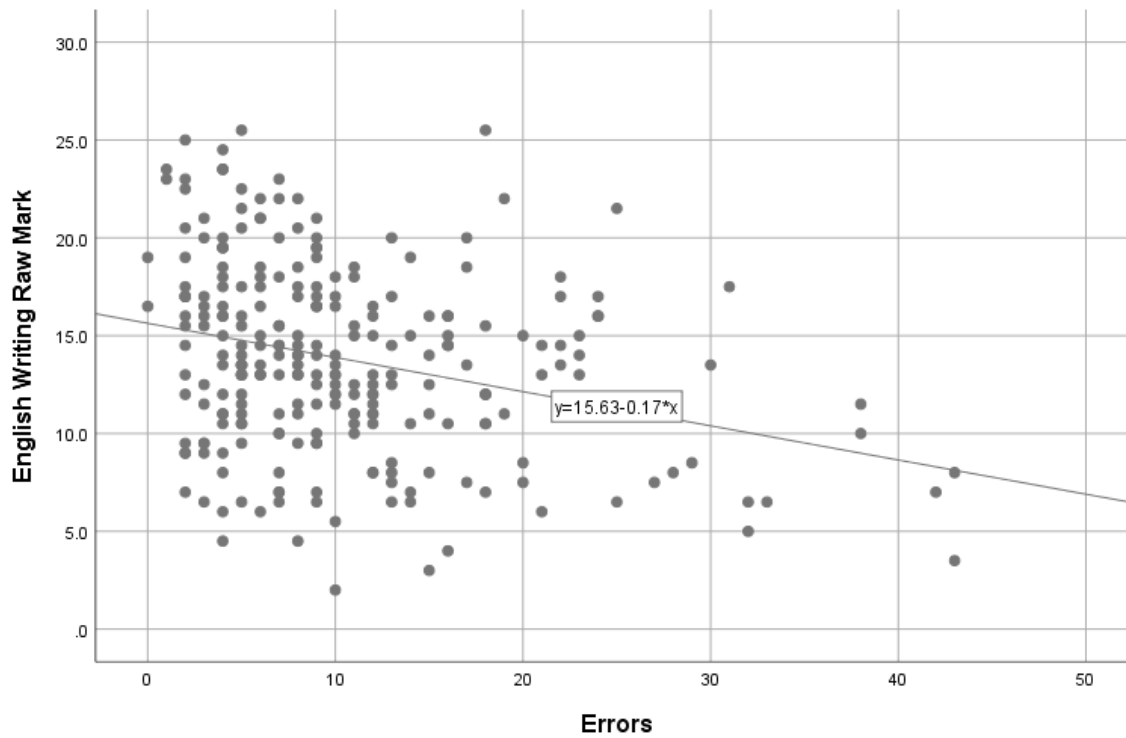


Figure 4.3: Scatterplot displaying the relationship between English Writing Task Mark and number of Spelling Errors

Table 4.51: AA Candidates' English Essay Mark and Spelling Errors

		Errors
English Writing Essay Mark AA	Pearson Correlation	-0.294
	P-value	0.000
	Sample Size	255

Table 4.52: 'Rest' Candidates' English Essay Mark and Spelling Errors

		Errors
English Writing Essay Mark Rest	Pearson Correlation	-0.347
	P-value	0.000
	Sample size	403

Table 4.53: 'AA' Candidates' English Essay Mark and mean number of Spelling Errors

Raw Essay Mark Category	Sample Size	Mean number of Errors	Std. Deviation	Std. Error	95% Confidence Int. for Mean	
					Lower Bound	Upper Bound
< 10	53	13.81	11.124	1.528	10.75	16.88
$10 \leq X < 15$	99	11.46	8.487	.853	9.77	13.16
$15 \leq X < 20$	74	9.89	8.686	1.010	7.88	11.90
≥ 20	31	7.00	5.756	1.034	4.89	9.11

$F(3, 253) = 4.33, p = 0.005$

Table 4.54: 'Rest' Candidates' English Essay Mark and mean number of Spelling Errors

	Sample Size	Mean number of Errors	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
< 10	12	11.92	7.902	2.281	6.90	16.94
$10 \leq X < 15$	42	8.40	4.191	.647	7.10	9.71
$15 \leq X < 20$	107	6.46	3.478	.336	5.79	7.12
$20 \leq X < 25$	147	5.69	3.458	.285	5.12	6.25
$25 \leq X < 30$	81	5.00	2.655	.295	4.41	5.59
≥ 30	14	4.43	3.251	.869	2.55	6.31

$F(5, 397) = 12.41, p = 0.005$

In the subsequent analyses, the Independent sample t-test is used to compare mean number of errors in the essay between two independent groups ('Access Arrangements' and 'Rest'), where the students will be grouped by their essay mark categories. A 0.05 level of significance is adopted, similar to other tests (see also tables 4.71 and 4.72 in Appendix 4 for Levene's test).

Table 4.55 to Table 4.58 display the mean number of errors made by the 'AA' and the 'Rest' groups (see also Tables 4.67 to 4.70 in Appendix 2 for Levene's test). The difference in the mean number of errors is not significant between the two groups when the essay mark is less than 10 or more than 20 (Tables 4.55 and 4.58). It should be noted, however, that the sample

sizes of 'AA' and 'Rest' students varied considerably in these essay mark categories. In contrast, tables 4.56 and 4.57 show that the mean number of errors made by the 'AA' and the 'Rest' groups varied significantly in the middle essay mark categories ($10 \leq X < 15$ and $15 \leq X < 20$). In view of this, one can confirm that overall AA candidates have more spelling errors in their essays than their counterparts, particularly in the middle-mark ranges ($10 \leq X < 20$).

Table 4.55: Mean number of Errors in Essays with <10 marks

Groups	Sample Size	Mean Errors in Essay	Std. Deviation	Std. Error
Access Arrangements	53	13.81	11.123	1.528
Rest	12	11.92	7.902	2.281

T(63) = 0.557, p = 0.579

Table 4.56: Mean number of Errors in Essays with marks $10 \leq X < 15$

Groups	Sample Size	Mean Errors in Essay	Std. Deviation	Std. Error
Access Arrangements	99	11.47	8.487	0.853
Rest	42	8.41	4.191	0.647

T(139) = 2.22, p = 0.005

Table 4.57: Mean number of Errors in Essays with marks $15 \leq X < 20$

Group	Sample Size	Mean Errors in Essay	Std. Deviation	Std. Error Mean
Access Arrangements	73	9.23	6.7264	.7873
Rest	107	6.46	3.4785	.3363

T(178) = 3.63, p = 0.002

Table 4.58: Mean number of Errors in Essays with marks $20 \leq X < 25$

Group	Sample Size	Mean Errors in Essay	Std. Deviation	Std. Error Mean
Access Arrangements	28	6.86	5.5891	1.0562
Rest	147	5.69	3.4578	.2852

T(173) = 1.46, p = 0.293

4.6 Analysis of Vocabulary Scores of 'AA' candidates and the 'Rest' of the candidates

In this section, the scripts are compared in terms of the level of vocabulary used as defined by the CEFR (Common European Framework of Reference for Languages) between the 'AA' and the 'Rest' groups. The comparison is carried out by using the Independent Sample T-Test using a 0.05 level of significance.

Since the writing task in Paper A is longer (320-350 words) than the writing task in Paper B (180-200 words), the scripts were split into two groups for all analyses. The number of samples are also typically disproportionate with more AA candidates choosing Paper B than Paper A (209 and 48 respectively) and the other way around for the rest of the candidates (271 for Paper A and 132 for Paper B).

The CEFR Vocabulary level is divided into 6 broad categories A1, A2, B1, B2, C1 and C2 (see Figure 2.1, Section 2.16 and CEFR Table in Appendix 3). Level A is the Basic User level with A1 'Breakthrough' and A2 'Waystage'. Level B represents Independent Users with level B1 'Threshold' and B2 'Vantage'. Proficient Users fall at Level C with C1 having 'Effective Operational Proficiency' and C2 having achieved 'Mastery' use of the language (CEFR, 2019). Level A words are considered elementary and easy vocabulary and therefore appear more frequently than vocabulary in the other two levels. Level C vocabulary is the most complex type of vocabulary that is used by the proficient users of the language. Table 4.59 and table 4.60 display the mean number of vocabulary used by the 'AA' and 'Rest' student groups in Paper A and Paper B respectively, categorised by the CEFR levels (see also Table 4.73 in Appendix 4 for the mean number of vocabulary words in essays for both AA and Rest Groups in both Paper A and B together).

The results consistently show a lower mean in the number of vocabulary used by the ‘AA’ group in both Paper A and Paper B with only a few exceptions (Level A1 in Paper A and Levels C1 and C2 in Paper B). These differences in the mean number of vocabulary are statistically significant and therefore one can comfortably conclude that candidates with SpLD do have significant limitations in the variety of vocabulary used at all levels except in the proficient stage. Some researchers have found an explanation for this, arguing that students with SpLD might have a strong bank of vocabulary but refrain from using it thoroughly for fear of being penalised when their spelling is incorrect (Sumner et al, 2016, Berninger et al, 2008). They feel it is safer using familiar easy-to-spell words and avoid experimenting with harder-to-spell words that form part of their vocabulary bank anyway.

Table 4.59: **Paper A:** Vocabulary CEFRL Levels and Mean number of Vocabulary: ‘AA’ and ‘Rest’ Groups:

CEFRL Levels	Group Paper A	Sample Size	Mean number of Vocabulary	Std. Deviation	P-value
A1	Access Arrangement	48	90.17	17.702	0.257
	Rest	271	93.34	17.888	
A2	Access Arrangement	48	29.35	9.971	0.005
	Rest	271	33.12	8.341	
B1	Access Arrangement	48	17.44	12.100	0.000
	Rest	271	21.85	6.996	
B2	Access Arrangement	48	7.71	4.042	0.000
	Rest	271	11.64	5.306	
C1	Access Arrangement	48	1.69	1.339	0.000
	Rest	271	2.58	2.253	
C2	Access Arrangement	48	1.00	1.052	0.008
	Rest	271	1.49	1.666	

Table 4.60: **Paper B:** Vocabulary CEFR Levels and Mean number of Vocabulary: 'AA' and 'Rest' Groups:

CEFR Levels	Group Paper B	Sample Size	Mean number of Vocabulary	Std. Deviation	P-value
A1	Access Arrangement	209	66.76	13.413	0.001
	Rest	132	71.61	11.373	
A2	Access Arrangement	209	15.00	6.030	0.001
	Rest	132	17.18	5.916	
B1	Access Arrangement	209	4.93	3.519	0.000
	Rest	132	6.55	3.957	
B2	Access Arrangement	209	1.93	1.638	0.008
	Rest	132	2.51	2.110	
C1	Access Arrangement	209	0.60	.883	0.208
	Rest	132	0.72	.841	
C2	Access Arrangement	209	0.22	.480	0.190
	Rest	132	0.30	.617	

4.7 Predicting Aspects of Achievements in Examinations –Regression Analysis

The merit of using regression analysis is that a dependent variable can be related to several predictors collectively. In this way, the impact of each predictor on the dependent variable can be assessed in comparison with other predictors.

The regression model which relates the Maltese essay mark to the Maltese spelling standard score (MS) and Naqra u Nifhem standard score (N&N) identifies both predictors as significant since their P values are less than the 0.05 level of significance. The regression coefficients indicate that for every one unit increase in the N&N standard score, the Maltese essay mark is expected to increase by 0.046. Moreover, for every unit increase in the Maltese spelling standard score, the Maltese essay mark is expected to increase by 0.101 (See Table 4.61).

Table 4.61: Regression Analysis: Naqra u Nifhem and Maltese Spelling

Model	Unstandardized Coefficients		Std. Coefficients	t	P-value
	B	Std. Error	Beta		
Constant	-5.801	1.697		-3.419	0.001
Naqra u Nifhem SS	0.046	0.019	.152	2.473	0.014
Maltese Spelling SS	0.101	0.020	.315	5.126	0.000

Below is the formula and two illustrations, both predicting the examination essay marks of two hypothetical candidates achieving different standard scores in their Maltese reading and comprehension, and their spelling tests:

$$\text{Maltese essay mark} = 0.101 \text{ MS score} + 0.046 \text{ N\&N score} - 5.801$$

Suppose MS score = 85 and N&N score = 80 then

$$\text{Maltese essay mark} = 0.101(85) \text{ MS score} + 0.046 \text{ N\&N score (80)} - 5.801 = 6.46$$

Suppose MS score = 105 and N&N score = 110 then

$$\text{Maltese essay mark} = 0.101(105) \text{ MS score} + 0.046 \text{ N\&N score (110)} - 5.801 = 9.86$$

Similarly, in English, the regression model which relates the essay mark to the reading and comprehension test Suffolk standard score and English spelling (ES) identifies both predictors as significant since their P values are less than the 0.05 level of significance. The regression coefficients indicate that for every one unit increase in the Suffolk standard score, the English essay mark is expected to increase by 0.097. Moreover, for every unit increase in the English spelling standard score, the English essay mark is expected to increase by 0.154 (see Table 4.62).

Table 4.62: Regression Analysis:

Model	Unstandardized Coefficients		Std. Coefficients		P-value
	B	Std. Error	Beta	t	
Constant	-5.953	2.292		-2.597	.010
Suffolk SS	.097	.023	.228	4.211	.000
English Spelling SS	.154	.024	.350	6.465	.000

The two illustrations below show the formula that predicts the examination essay marks of two hypothetical candidates achieving different standard scores in their English reading and comprehension, and their spelling tests:

$$\text{English essay mark} = 0.154 \text{ ES score} + 0.097 \text{ Suffolk score} - 5.953$$

Suppose ES score = 85 and Suffolk score = 80 then

$$\text{English essay mark} = 0.154(85) + 0.097(80) - 5.953 = 14.89$$

Suppose ES score = 105 and Suffolk score = 110 then

$$\text{English essay mark} = 0.154(105) + 0.097(110) - 5.953 = 20.89$$

4.8 Conclusion

This chapter presented the results of the quantitative analysis. In summary, these results confirm that overall, students with SpLD/dyslexia who request access arrangements achieve overall poorer grades in national examinations when compared to their peers. The lower grades in English and Maltese have an impact on the achievement in the other subjects. The overall poor scores achieved by SpLD students in the literacy tests of reading and

comprehension, reading accuracy, reading speed, spelling, and general cognitive ability and verbal ability scales, affect the outcome of SEC examinations. As expected, AA students are disadvantaged in essay writing too. The analyses on texts shows that AA students do poorly on lexical diversity, make more spelling errors and use less advanced vocabulary than students without SpLD/dyslexia. In the next chapter, these text qualities will be closely analysed qualitatively, bringing to light the exact qualities of the results that were presented in this chapter.

Chapter 5 - Qualitative Results

5.1 Introduction

This chapter presents the qualitative analysis of examination scripts in both English and Maltese. The analysis follows on the results presented in Chapter 4 which includes correlations between qualities of writing and essay marks and grades, and comparisons made on the quality of the texts of AA candidates and non-AA candidates. The qualitative analysis set out to provide a better understanding of this result and in addition, through thematic analysis, the more concrete answers to the three research questions (see Section 3.5.3.2 about Thematic Analysis):

1. In what ways does dyslexia manifest itself in the writing task of SEC level English and Maltese at national examinations?
2. Are there differences between the linguistic features of writing produced under examination conditions by access arrangements students with SpLD/dyslexia and the other students without access arrangements?
3. What do literacy scores tell us about the quality of writing produced by candidates with dyslexia? (See also Chapter 4)

Before moving on to the analysis, it is worth noting a few considerations. The definition of dyslexia and SpLD is still the subject of huge debate. The conceptualisation of SpLD/dyslexia remains very loose. In a study on higher education students with SpLD, Ryder & Norwich

(2018) conclude that 'the complexity and diversity within the research field makes dyslexia difficult to operationalize consistently for the purposes of identification and formal diagnostic assessment' (p.110). They found that "30% and 50% of participants were either unsure or lacked confidence in some aspects of their assessment practice and in the diagnostic conclusions that emanated from it" (Ryder & Norwich, 2018, p.121). An interesting observation by 80% of 118 practicing assessor participants agreed that environmental factors alone could not cause dyslexia but that they could exacerbate existing difficulties or present as dyslexia. The bilingual environment in Malta can be such a trigger.

In light of this, the definition of SpLD/dyslexia becomes more confounded when the diagnosis includes other factors such as comorbidity with ADHD, autism and dyspraxia to mention but a few of the conditions that impact the development of literacy. Hence, the diagnostic detail is not given importance in this study as it is considered peripheral when compared to the outcome literacy production which is writing itself.

The aim of this research was not to engage in the dyslexia debate, despite the terms 'dyslexic features' and 'dyslexia type' being used to point at certain writing features, particularly in spelling. The analysis here is not intended to identify dyslexia 'diagnostically' in the way dyslexia specialists do in their practice. A diagnostic approach would need to have more detailed qualitative and quantitative information on the other aspects of literacy skills (reading fluency and accuracy, comprehension and speed) that are analysed in detail in one-to-one clinical/educational interactions and testing. This was not done here. Therefore, although information on the AA student profile is often used, the main distinction in the analysis is primarily made between the candidates who qualified for access arrangements for

literacy difficulties (AA candidates) and those who did not apply for access arrangements (non-AA candidates or the 'Rest') (see Section 2.7).

Another important feature that was constantly apparent throughout the analysis was the stark difference between the two languages under study. Maltese and English are typologically different. Maltese is a Semitic language characterised by rich morphology. At the same time, it has the most elaborate and deeply embedded influence from the Romance languages (Sicilian and Italian) (Hoberman, 2007; Mifsud, 1995). Its rich morphology gives Maltese more flexible syntax, significantly free movement of sentence components. In this way, more can be communicated in fewer words. In contrast, English syntax is more restrained because the order of the words in the formation of noun phrases and verb phrases is governed by strict syntactic rules. Maltese has obligatory distinctions between gender in adjectives. Hence, the purpose of the translation was not always to achieve smoothness but to highlight morphological errors and others.

Writing is a form of language expression that, by its nature, is very fluid and can be used creatively in many different ways. There is no single correct way of expression and inevitably, there can be different markers and criteria for judging and examining its qualities. It is not the purpose of this research to apply an exam rubric that language examiners use to standardise marking. Therefore, while keeping proficiency criteria in perspective (particularly CEFR – See Sections 2.18, 2.18.1, 2.18.2), this study acknowledges the contrasting sociolinguistic perspective that views bilingualism (and hence, bilingual features of writing) as a pragmatic and functional way of communicating. Hence, the use of statements like 'language interference', 'good quality writing', 'poor quality text' and 'native-like' point towards an

arbitrary standard to be attained, but is not intended to diminish the unique stature of bilingual communication.

Finally, it must be said that without any preconceived framework in hand, the themes in this analysis led into many unexpected areas of writing, often making it hard for the analysis to have complete control of all the qualities of writing. Thus, this study is a very broad and exploratory research of the general texts from where one could take a lead to explore in more depth any particular area of writing in the future.

5.2 In what ways does dyslexia manifest itself in the writing task of SEC level English and Maltese at national examinations?

This question is answered by taking into consideration the results from the quantitative analysis in chapter 4, in particular in the areas of reading comprehension, reading accuracy, spelling, general cognitive ability, and delving deeper into the primary data itself.

5.2.1 Reading Comprehension

The analysis concerns reading and comprehension. Comprehension together with phonological analysis and synthesis have often been considered subskills to reading (Tonnessen et al, 2015) which for many students with dyslexia is a challenge due to literacy difficulties in these areas. Moreover, together with spelling and reading accuracy, the scores on the reading and comprehension tests are fundamental to the decision made on qualifying for access arrangements (MATSEC, 2019). The analysis that follows confirms what has already been illustrated in the quantitative analysis. Scores on the comprehension tests in both

English and Maltese affect the overall marks and grades of the languages (see Section 4.4.1, Tables 4.7 to 4.11 and Figure 4.1). A pattern of good quality texts was noted in essays written by students who achieved high scores on both the Suffolk reading comprehension and the NARA comprehension tests for English and 'Naqra u Nifhem' (N&N) for Maltese. The six samples (1) – (6) from the English and Maltese texts show extracts from essays of AA students who scored at different comprehension levels – high (*above average* standardised scores on the Suffolk of 110+ or NARA comprehension scores that have reached the ceiling age of >12 years, 10 months), middle (*average* Suffolk score of 85-109 and NARA comprehension score of around 10 years) and low (*below average* Suffolk score of <70 and NARA comprehension score of around 7 years). Likewise, the scores for the Maltese N&N have the same ranges.

Sample (1) is from an AA student who achieved good comprehension scores of 117 on the Suffolk test and >12.10 years on the NARA comprehension. The student wrote a good quality argumentative essay with good punctuation, cohesive sentences and excellent syntactic structure. The argumentation and ideas are coherent, reflecting a good understanding of the issues that youths face nowadays. In this extract, the student is explaining the disadvantages that progress can bring to present day youths when compared to youths in previous generations. The challenges of this reality are presented with clear and detailed examples that integrate the sub-themes of obesity that is linked with sedentary life, cyber-bullying and Internet exposure, and the pressures in education for a successful career.

The student's standard score of 90 in spelling falls on the low side of the average range, demonstrating a few spelling errors typical of dyslexia. The errors (in italics) are in words that are mostly of low frequency: 'tecknology' for 'technology'; 'werent' for 'weren't'; 'dremt' for 'dreamt'; 'chating' for 'chatting'; 'worsth' for 'worst'; 'senarios' for 'scenarios'; 'sucessfull' and

'sucess full' for successful. The last two spelling errors are also typical of students with dyslexia whose spelling can be inconsistent.

(1) On the other hand, some people argue that life today is much more complex than it was in the past. It is true that *tecknology* also created new problems which *werent* even *dremt* of in the past. People are staying inside *chating* or playing videogames too much causing obesity and other related problems and even in some *worst* case *senarios*, cyber bullying. The advance in education also helped in making more students *sucessfull* in their careers, but even this had its downsides. Students get too much stress from exams, tests and even, in some cases, stress from parents who want their children to be *sucess full* just like their siblings and friends (1927/16).

Sample (2) is taken from a text by an AA student whose standard score in reading and comprehension is 90, considered as an average score for a typical student in Malta, albeit on the low side. The two arguments presented are sound, namely that youths should learn how to cook and that their parents should take responsibility in teaching them the skill of cooking. Nevertheless, the student lacks knowledge of the organisational pattern when presenting the two arguments. The arguments are restricted and repeated. In fact, the first and second sentence are echoed again in the fourth sentence (in green), and the idea in the third sentence repeated in the fifth. The student scored 78 in the spelling test, reflected in a few spelling errors in high frequency words that include 'theach' for 'teach'; 'thec' for 'teach'; 'ther' for 'their' and 'responsability' for 'responsibility'.

(2) Young people shuold at least know how to cook something easy like an egg. It is important to know how to cook something because If your parents won't be able to cook you need to cook something for yourself. I think that it

is important that the parents *theach ther* kids how to cook if they don't know how to cook. *young people need to be independent to grow up because when they grow up they are not going to have their parents doing everything for them.* It is important that the parents take some *responsability to theach* their kids how to cook and simple things that *thechers* won't *thec* them at school (6142/16).

The text in sample (3) was written by a student who has a typical profile of someone who has difficulties in language and struggles in all literacy skills. The comprehension standard score was <62 on the Suffolk and the equivalent of 6 years 7 months level on the NARA comprehension test. The standard score in spelling was <64. The literacy scores in Maltese were also below the average (N&N 87 and Maltese spelling <63). The student chose a descriptive essay entitled, 'The ideal school'. The text is generally incoherent, presenting arguments that are disjointed without an effective logical structure. The reader would need to read and reread closely to decipher the text and understand the meaning of the content. Punctuation is poorly used, and there is no grammatical control of the text. There are repeated words and phrases within the same sentence (see 2nd paragraph). The spelling errors are of a severe nature, even in high frequency words: 'bacues' for 'because'; 'mor' for 'more'; 'frends' for 'friends'; 'tichers' for 'teachers'. The errors 'doring' for 'boring' and 'bifrerent' for 'different' show a severe type of dyslexia with difficulties of letter formation in 'd' that is mixed with 'b'. 'Consetrejt' for 'concentrate' shows the influence of Maltese in the sound of 'j'.

(3) For me the *idieal* school is no *examse*. *Bacues* is *doring* and not *helpas* *consetrejt* for the *futer*.

The ideal school is *givas mor* time to playing with our *friends* and the school *helpas meat owor friends* in the school the *lesins* became *mor intristing* and the *tichers* organise *mor outhings* for us the school *nomore then* 100 people in the school.

duing bifrerent tings example 100 *intristing lesins* and *partisipate ina* sports event and *organise fotball* and *baskit ball leacs* to *helpus* to become *mor rith* and. Important do some *tris* in the school to *pelpus* trace the *coliti ear* in the school (5911/16).

Spelling Corrected: *For me the ideal school is no exams. Because is boring and not help us concentrate for the future.*

The ideal school is gives more time to playing with out friends and the school helps us meet our friends in the school the lessons became more interesting and the teachers organise more outings for us the school no more than 100 people in the school.

Doing different things example 100 *interesting lessons* and *participants in a sport even* and *organise football* and *basketball leagues* to *help us become more right* and. Important do some *trees* in the school to *help us trace the quality of air* in the school.

The same pattern of correlation results was found between literacy scores in reading comprehension and essay marks and grades in the Maltese essays written by AA candidates (See Section 4.4.6, Tables 4.24 to 4.27). Sample (4) presents a text written by a student whose reading and comprehension standard score in Maltese was 106, and 78 in spelling. Although there are a few difficulties with the spelling of morphological formations¹⁰ ('wiċċa'

¹⁰ Morpheme for feminine + possessive words ending with 'ha' where 'h' is silent

for 'wiċċha' [her face]; 'missiera' for 'missierha' [her father]; 'qalba' for 'qalbha' [her heart]), the writing is coherent and well structured, giving a linear description of a close friend that is congruent to the genre. The writer has overall good writing management, makes use of proper grammar and overall good punctuation, except for two missing commas (inserted in brackets) that would have made the text better read.

(4) Katrina kienet sena ikbar minni iżda kienet *irrepetit* sena skolastika u *nistgħa* ngħid imnalla ġara hekk għaliex inqattgħu iktar ħin flimkien hekk. Il-ġenituri tagħna huma ħbieb kbar (,) missieri u *missiera* kienu skola flimkien bħalna u ommi u ommha saru ħbieb minħabba missierijietna. Katrina kienet tifla simpatika (,) dejjem b'daħka fuq *wiċċa* lesta biex tgħin lil kulhadd anke lil dawk li qatt ma kienu ridulha ġid. Kienet tifla li lesta tilqa kull sfida b'kull heġġa u qatt ma taqta' *qalba* (,) kienet tifla li kulhadd kien jixtieq li kien hi għaliex tista' tgħid li kellha kollox. Jiena kont tifla furtunata ħafna u *kellihi* lil Katrina bħala l-ikbar ħabiba tiegħi (6488/15).

(4a) Katrina was a year older than me but she had repeated a scholastic year and I can say thank God it happened because we spend more time together like this. Our parents are great friends my dad and her dad were at school together like us and my mum and her mum became friends because of our fathers. Katrina was a likeable girl always with a smile on her face ready to help everyone even those who never cared for her. She was a girl ready to take every challenge and she never gives up. Everyone wanted to be like her because you can say she had everything. I was very fortunate and I had Katrina as my best friend.

Sample (5) is taken from an essay produced by a student who achieved a reading comprehension standard score of 86, and 82 in spelling. This is considered a borderline

average score. The text is well written with syntactic accuracy, good use of punctuation and a good presentation of connected and coherent arguments about 'friendship'. There are two grammatical errors related to the use of the article in 'il-hajja' (the life) instead of 'fil-hajja' (in life); and the use of singular instead of plural in 'ħbiberija ħżiena' (many bad friendship) instead of 'ħbiberija ħżina' (a bad friendship).

(5) Fil-ħajja nsibu wkoll il-ħbieb ħżiena. Dawn niltaqgħu magħhom matul il-ħajja. Meta ħabib ikun ħżin, jfisser li ma jkunx leali *lejl u* ma tħossokx komda aktar taqsam *l-esperejnzi* u ħwejjeg oħra li niltaqgħu magħhom *il-ħajja*. *Għawn* min ukoll, li minħabba ħbiberija ħżiena li kellu fil-passat, jidhol f'xi vizzji ħżiena tant kemm ikun iddispjaċut u mwegġa minħabba li jkun ġara bejniethom (1853/15).

(5a) In life we also find bad friends. These we meet throughout life. When a friend is bad, it means that he is not loyal to you and you don't feel comfortable anymore sharing experiences and other things that we come across in life. There are those who, because of bad friendship that he had in the past, gets into bad habits because he is so sorry and hurt due to that which happened between them.

In Sample (6), the writing is typical of below average literacy scores. The text is produced by a student whose standard score on the Maltese reading comprehension test is 70 and spelling is 74. At times, the language used is colloquial with repeated arguments that often do not connect and go against the argumentative tone required for this genre of essay. The relationship between ideas is weak and does not help the reader to stay focused. For example, the argument about how the computer affects the writer personally is suddenly interrupted with an explanation of how computers affect society at large. Spelling errors are

frequent and include high frequency words like 'għawn' for 'hawn' (here); 'tkunn' for 'tkun' (to be) and 'mandiex' for 'm'għandix' (I do not have). Despite this, contrary to essays coming from the same low-score-categories of literacy in English, the Maltese language used is more proficient, demonstrating a richer lexical repertoire with better spelling and better syntactic structure. This is evidence that Maltese is the first language for the majority of the students sitting for SEC in Malta.

(6) Jiena lanqas nimmaġina ħajti mingħajr il-kompjuter, kieku ħajti hija ħafna differenti għaliex eżempju in-nies kollha li naf biċċiet minnhom sirt nafhom biss saħħa tal-kompjuter. Naħseb jiena kieku *anka bħalla* livell ta' edukazzjoni kienet tipspicċa tonqos. Għal ċertu nies pero jista' *ikunn* ta' vantaġġ kif ukoll *żvantaġ* dan għaliex ċertu nies jużaw *l-kompjuter* b'mod ħażin u hemm *minn* juża *l-kompjuter* b'mod tajjeb. Ħajti mingħajr *l-kompjuter* tista' *tkunn għal l-għar*. Jiena naħseb li *l-kompjuter nuża* b'mod tajjeb pero *inqatta* wisq ħin fuqu. Li kieku ma kienx li *kompjuter* jiena *minniex* l-istess persuna u *imnalla għawn l-edukazzjoni* li biha *tagħlimt* kif tuża *l-kompjuter għaliex l-kompjuter* sar parti kbira fis-*soċjeta tal-llum* għaliex jagħmlilna *ħajitna* faċli aktar komda u aħjar. Jien *ma' naraniex* ħajti *listess* li kieku *mandiex* *l-kompjuter għaliex* jiena *l-kompjuter nuża* għal ħafna affarijiet u *tagħlimt* ħafna minnhu. Ħajti *tkunn* differenti għaliex kieku tista tneħħi dak kollu u *tagħlimt mill* *kompjuter* kieku *minniex* fl-istess livell ta' edukazzjoni bħall *ma'* jiena (5600/15).

(6a) I do not imagine my life without a computer, otherwise my life is very different because for example all people that I know some of them I got to know because of the computer. I think that even the level of education would have decreased. For some people however, it can be an advantage as well as

a disadvantage this because certain people use the computer in a wrong way and there are those who use it in a good way. My life without a computer can be worse. I think I use the computer in a good way but I spend too much time on it. If it were not the computer, I am not the same person and thank God there is education with which I learnt how to use the computer because the computer has become a big part of today's society because it makes our lives more comfortable and better. I do not see my life the same if I were not to have the computer because I use the computer for many things and I learnt a lot from it. My life would be different because if you can remove everything and all that I learnt from the computer I would not be in the same level of education like I am.

In conclusion, this analysis confirms that reading comprehension directly affects writing, particularly the level of reasoning. As exhibited in the samples 1-6, in both languages, the overall proficiency, ideas and particularly coherence in writing were far better when reading and comprehension scores were high. In contrast, the writing proficiency levels were poorer when reading and comprehension scores were low. It was however noted that the writing management was far better in the Maltese essays than the English ones. The vocabulary repertoire was better, the syntax was more accurate, reflected in more coherent text.

5.2.2 Reading Accuracy

This part of the analysis was only made on English essays since the Maltese single word reading test was not part of the literacy battery. From this qualitative analysis, there was a clear pattern in the texts showing a strong link between the reading accuracy score and accurate writing (spelling). As seen in Samples (7) and (8) from candidates who score 6.03

years and 12 years respectively, the frequency and accuracy of spelling errors is affected by the score in the reading accuracy of the NARA test. This substantiates the findings in the quantitative analysis (See Section 4.4.3, Tables 4.16, 4.17). Such results are testimony to the importance of phonological processing for accurately writing text. This is a key characteristic in dyslexia where many researchers support the Phonological Processing hypothesis which attributes the origins of dyslexia to reading deficits coming from the difficulties in manipulating linguistic information at the phonological level (see section 2.9).

Sample (7) is from a student whose reading accuracy score is the equivalent of a student at 12 years on the NARA test and the standard score in spelling is 84. Spelling errors are less frequent and less severe than those in Sample (8): 'maybe' for 'may be'; 'contries' for 'countries'; 'reletives' for 'relatives'; 'beach's' for 'beaches'. Nevertheless, there are grammatical errors that are not expected of students at this level. For example, in the first sentence of the second paragraph, the preposition 'to' should be used instead of 'than'; articles are omitted or used incorrectly as in 'most of Maltese' instead of 'most of the Maltese'; and the pronoun 'which' is used instead of 'who'.

(7) Summer in Malta *maybe* different than summer in other *contries*. This because the summer *tempreture* in Malta be *hoter* than other countries.

Maltese people look forward than summer more than they do to winter. This because in Malta there are more things to do in summer than winter such as feasts. Most of Maltese people in summer they go abroad for a vacation or to see *reletives* who live abroad. Another common thing that *maltese* people do in summer is to go to Gozo *who* is still part of Malta but a little bit different. Maltese island is surrounded with *beach's* so it's more easy to go to beach than some countries which are in the North (5129/15).

The student who wrote Sample (8) had a reading accuracy of 6 years 3 months and a standard spelling score of <62. The text is poor with marked spelling errors that make reading laborious. There are phonological difficulties that manifest in the spelling that often borrows from Maltese pronunciation. For example, “we eraved egzektle befor the plajn weft” instead of “We arrived exactly before the plane left”. Furthermore, the text demonstrates a high number of spelling errors in high frequency words that include: ‘wen’ for ‘when’; ‘paking’ for ‘packing’; ‘kudnot’ for ‘could not’; ‘sawe’ for ‘so’; ‘erav’ for ‘arrive’; ‘wasint’ for ‘wasn’t’.

(8) It was Septeber twelft wen may Brother and I dizided to book qawer flajt to sisely for my Bothers birthday.

The Day after booking the flajt we started to pake qawer klots sins we wer speding the night in a logeshejis hotel. after paking qawer klots we went to slip. My Brother kudnot fall eslip with the exitment bout I sleps like e babby. that najn in the morning I woke up we eraved egzektle befor the plajn weft. It hed not taken sawe long to erav only a fju miets. the hotel wasint sow far away from the air port and we disated to wake to the Hotel. I was amazed have klin and frash it smeled (5027/15).

5.2.3 Spelling

This section takes into consideration the two quantitative analyses coming from two sources of data – the spelling scores from the spelling tests in the battery of literacy and the frequency of spelling errors from the quantitative text analysis. Both these data are strongly and significantly correlated with the essay marks and grades (see Tables 4.20 - 4.23). The higher the spelling score, the better the mark in the essay and the better the overall grade.

Therefore, in general, good and accurate spelling has a significant impact on the quality of writing. The qualitative analysis gave the opportunity not only to look at the frequency but also at the quality of spelling errors. It was observed that in general, the more severe the spelling errors, the poorer the quality of writing and vice versa – the less severe the spelling errors, the better the flow of writing.

Spelling errors constitute the starkest feature in writing that can interrupt the flow of reading. In this analysis, the frequency and type of errors often determined whether such mistakes were strikingly noticeable or whether they were isolated and irregular, masked by the rest of the error-free text. Spelling errors in some poor-quality texts amounted to more than a quarter of the total words in the essay. This made reading and understanding more laborious. Samples (9) and (10) illustrate these differences. They are taken from two descriptive essays that contain errors of a different kind. (9) is written by a candidate who achieved a standard score in spelling of <63. The text contains more severe spelling errors that include errors in high frequency words (oder - other; didnt - didn't; girle - girl; my – me; ther - there). (10) is written by a candidate who achieved a spelling score of 85. In comparison, the spelling errors are fewer and less severe, mostly from low frequency words with the words still recognisable (instalision – installation; destention – destination; numirous – numerous; ammount - amount)

(9) On the bus ther wherit a lot of pepoel arouned my but ther was som particular peppol like to tow ladies on the front of the bus sins they got on the bus they didnt stop takeing about that one and the oder But an they onw evrey one at the back ther was 2 boys and 1 girle the tow boy's thrad to take the girle but she did not take to them maybe she dont like them. I give her a

point few *seest* in front of *my ther* was a young teenager he *gan* on the bus
befor my sins i was on the bus he *didint stopet lisingig* music (6486/15).

(10) During your ride to the *awaitted destention* you would *constently* hear a loud clattering sound at the back of the bus and besides the chatting of multiple people around you, you would also hear the sound of the vibrating glass due to the *instalision* of the windows which would have been done incorrectly. Also you could hear the *nosie* of the creaking for the old worn out chairs which would have heard *numirous ammount* of stories over the years (5432/15).

In contrast to the two samples (9) and (10), sample (11) contains no spelling errors. This is typical of students whose spelling standard score falls in the average range at 101. Arguably, the vocabulary used is not complex and therefore does not pose a spelling challenge to the student. The story comes across as well structured with good grammar, cohesive sentences and overall good coherence.

(11) It was on a weekend, when my parents usually take me to my grandma's house from the morning till late. I was eating my breakfast when my grandma told me that for that day I was going to be left alone in the house. It did not bother me as I always thought that I knew that house and so I was not afraid. Long after breakfast, I was playing in the garden with a ball. At a particular time the ball hit a cloth on the floor, Underneath this cloth was a small wooden door with a white dusty foot print on top (1017/15).

Sample (12) is from a Maltese text with severe spelling errors that makes it hard to read. The text is by a student whose standard score in the Maltese spelling test is <63. Errors in high frequency words (for example, 'jina' for 'jiena' [I]; 'gwera' for 'gwerra' [war]; 'hima' for 'imma')

[but]) also include common words containing the silent letters ‘h’ and ‘għ’ (‘amlu’ for ‘għamlu’ [they made]; ‘mahom’ for ‘magħhom’ [with them]; ‘ghaw’ for ‘hawn’ [here]). Other errors mostly include omissions related to phonological errors in geminate (‘inkela’ for ‘inkella’ [otherwise]; ‘tajeb’ for ‘tajjeb’ [good]; ‘irid’ for ‘irrid’ [I want]) and the omission of the article (‘likbar’ for ‘l-ikbar’ [the biggest]; ‘lahjar’ for ‘l-ahjar’ [the best]). Beside the spelling challenges, there are other writing challenges related to difficulties in punctuation, cohesion and coherence.

(12) Il-kompjuter huwa *likbar oġet fħajitna inkela* kif *nistaw nitkellmu ma* ħbieb jew *nithlu* fuq facebook. il-kompjuter kien hareġ fil-90s *lewel* kompjuter kien il-windows 95 il-qadim *is aw* il-windows 8 *lahjar* kompjuter li *għaw*. Meta kien *għaw* il-logħob *is amlu* gaming *kompatibl* li tista *tilab lob minajr* ma teħel *hima* trid *bala* flus biex tixtri *komputer tajeb alek jina irid komputer* tajjeb biex *nitkelem* ma ħbieb u *nilab mahom*. *Lahjar* fuq il kompjuter hija li tista tara il-wiki *xgara fil-gwera xgara* Martin Luter King Junior *għalek għali* missieri biex aħna *x’haga* fuq il *wikij* biex *titale* il-kompjuter ukoll tista *tamel* il-ecdl *tal-exam* (6503/16).

(12a) Translation: The computer is the biggest object in our lives otherwise how can we speak with friends or get onto Facebook. The computer was out in the 90s the first computer was the old windows 95 now there is windows 8 the best computer around. When there were games now they made gaming compatible that can be played without being charged lumps of money to buy a good computer so I want a good computer to speak with friends and play with them. The best on computer is that you can see wiki to see what happened during war what happened Martin Luter King Junior so

that's why my father told me so that something on wiki to learn the computer
you may as well do the ecdl of the exam.

The student who wrote sample (13) achieved a borderline standard score of 85 which falls exactly on the average side. The spelling mistakes are not as severe as those in sample (12), and are mostly phonological and/or omission errors in di-syllabic words involving geminated consonants such as 'daħalt' for 'daħħalt' (I put in), 'ċapa' for 'ċappa' (pitch [dark]), and 'iżomm' for 'iżzomm' (she used to keep). Once again, the silent 'għ' posed a challenge to this student in the word 'motti' (for 'mghotti' [covered]). The spelling error 'indawara' is a rule-based morphological error that should include a silent 'h' to specify that the pronoun '-ha' (for her): 'indawwar (I turn) + lilha (her) = indawwarha (I turn her)'. These two texts (12) and (13) illustrate different abilities in spelling with more phonological errors and errors involving morphological rules in the text of the more severe speller (12).

(13) Kif *daħalt* iċ-ċavetta fil-bieb u bdejt *indawara* bdejt nisma li d-dar kienet vojta. Kif ftaħt ħasejt dak il-frisk ta' meta *ximkien* ikun *illu* ma jinfetaħ. Dħalt, kulimkien dlam *ċapa*, kollox *motti*, komplejt dieħla fis-*salot* u mort quddiem gradenza fejn kienet *iżomm* ir-ritratti ftaħt kexxun u sibt ir-ritratti ta' meta konna *sar* u bdejt niftakar xi *grajit* fejn kien hemm in-nanna magħna (5053/15).

As soon as I put the key in the door and turned it I could hear that the house was empty. As I entered I felt the coolness of when a place has long been unopened. I went in, everywhere pitch dark, everything covered, I kept going into the living room and went in front of the chest of drawers where she kept photos I opened the drawer and found the photos of when we were young and thought of that time when grandma was with us.

In contrast to (12) and (13), sample (14) is free from spelling errors. The text comes from a Paper A essay written by a student whose standard score in spelling is 113. There is only one rule-based spelling error in the final sentence which could be a typo, 'nużha' instead of 'nużaha'. Complementing this correct orthography is a well organised text with ideas that are coherent and well structured, exploring the reasons in a linear manner as to why technology is important for the writer.

(14) Il-kompjuter huwa importanti ħafna għalina għal bosta raġunijiet! Waħda mir-raġunijiet hi li sfortunatament, għalina iż-żagħżagħ hija l-inqas ħaġa huwa għar-riċerka. Ir-riċerka hija ta' għajnuna jekk trid x tfitte x xi ħaġa dwar xi ħaġa jew xi ħadd. Għalija r-riċerka hija bżonnjuża ħafna għaliex jekk ikollok xi dubji dwar xi ħaġa jew xi ħadd mal-ewwel issib it-twegiba tiegħek minn fuq il-kompjuter. Raġuni oħra għaliex huwa importanti għalija huwa l-mezz ta' komunikazzjoni ma' sħabi jew membri tal-familja permezz tal-ittri elettronici, skype fejn mhux biss tikteb iżda titkellem permezz tal-'camera' u il-famuż 'facebook' li l-iżjed nuża, sfortunatament. Il-kompjuter huwa essenzjali wkoll fil-ħin liberu li jkolli għax mhux biss inkun nista nikkomunika ma' sħabi iżda wkoll inkun nista nisma id-diski filwaqt li nilgħab xi logħba, allavolja xi kultant minn nofs siegħa nispiċċa nagħmel sagħtejn sħaħ! Din twassalni biex inqassam il-ħin sew u nkun responsabbli iżda għalija, din insiba diffiċli. Il-kompjuter nużah ukoll biex jekk ikolli bżonn nikteb xi ħaġa fuq dokumenti jew inżomm xi ritratt partikolari, nagħmel dan fuqu għaliex b'hekk ma nitlef xejn u faċli nsibhom fuq il-kompjuter. Din it-tip ta' teknoloġija *nużha* l-aktar għal-mezz ta' komunikazzjoni (776/15).

(14a) The computer is very important for us for many different reasons! One of the reason is that unfortunately, for us young people is the least thing is

for research. Research is of help if you want to look up something about something or someone. For me research is very important because if you have doubts about something or someone you will find the answer on the computer instantly. Another reason why it is important for me is that it is a means of communication with friends or members of the family through electronic mail, skype where you not only write but speak with the camera and the famous 'facebook that I use the most, unfortunately. The computer is also essential in my free time because not only can I communicate with my friends but also I can listen to songs while I play a game, even though sometimes from half an hour I end up doing two whole hours! This leads me to spend time well and be responsible but for me, I find this difficult. I use the computer as well so that if I need to write something on a document or keep a particular photo, I do this on it because like that I lose nothing and it is easy to find them on the computer. This type of technology I use the most as a means of communication (776/15).

In review of the spelling samples (8) to (14), typical of their corresponding standard scores, it was noted that orthographic knowledge has a close relation to the overall proficiency of the text. The level of spelling seems to correlate with the same level of writing qualities in the rest of the text. This is compatible with studies that support the idea that a break down at the word level affects overall writing (Sumner et al, 2013 and 2016) and that it is generally the case that good spelling was present in text that had good punctuation, good structure, syntactic accuracy, and good coherence (see section 2.8.1 on holistic writing).

5.2.3.1 Further observations in the spelling of AA students

A conspicuous characteristic in poor quality text produced by AA candidates was inconsistent spelling. Inconsistency in spelling gives the impression that the writer is encoding the word for the first time. In so doing, some might be using a writing strategy by spelling the same word differently several times with the aim of getting it correct at least once. In some cases, inconsistency in spelling might have been the result of fast writing against time constraints or, simply, carelessness and not allocating time at the end to revise the essay. Although inconsistent spelling is a typical feature of SpLD/Dyslexia (see Section 2.9.1), this was noticed in both Paper A and B texts produced by AA candidates and non-AA candidates. Generally, inconsistent spelling was a feature of poor-quality essays, but it was not uncommon to be found in good quality texts as well. (15) gives a list of common words written differently within the same text. All examples were taken from different AA candidates:

(15) adventiges/adventages; leaves/leavs; walter/wolter (water);
grupp/gropps; exprances/expreance; cerecture/cercture (character);
special/specail; indipendint/intipends/intipendint; frends/frind;
house/hous; village/villige; additions/addictions/adictions.

Logħb/lob (*games*); nilqu/nilqaw (*we receive*); waqaw/waqgħu (*they fell*);
jiġieled/jiġġielet (*he fights*); waqat/waqgħet (*she fell*); sijat/sijjat (*hours*);
mandekx/mgħandekx (*you don't have*); amilna/agħmilna (*we did*);
qijad/qiegħed (*he is*); jidevertu/jiddevertu (*they enjoy themselves*);
jgħati/jagħti (*he gives*); žagħzagħ/žgħazagħ (*youths*).

Another typical feature that was noticed in essays belonging to AA candidates was inaccurate copying. Words that featured in essay titles like 'queue', 'footprint', 'spiral', 'staircase',

'taught', 'cook', 'friend', 'kompjuter' (computer), 'mingħajru' (without him), 'noqgħod' (I stay) and 'ħbiberija' (friendship) were copied incorrectly and sometimes spelt as 'que' 'foot print', 'sypral', 'stair case', 'tought', 'coock', 'frind/frend', 'komputer', 'minajru', 'noqod' and 'ħbieberija' by different AA candidates in both Papers A and B. One candidate misspelt all the inflections and derivatives of the word 'cook' as: 'coocking', 'coocked', 'coocker', 'cockering' and 'coockery' (6448/16). Such errors were made by AA candidates and to a lesser degree by non-AA candidates, strengthening the argument that difficulties in bilingual development can be mistaken for those typically associated with SpLD/dyslexia (see bilingualism).

Mistakes in homophones such as 'there/their', 'were/where', 'knew/new' and 'piece/peace' were common errors across the board. Nevertheless, these were generally conspicuously absent in the poor essays, where the spelling was more rudimentary and the errors more severe (see Section 5.2.3.3). In these essays, 'there' was often spelt as 'ther', 'where' as 'wer', and 'when' as 'wen'. This illustrates that the spelling of high frequency words was a challenge to these students who had general difficulties with language and who found it hard to express themselves in writing.

Other samples of notable spelling errors included the wrongly spelt name 'Metthew', described as a close friend in the essay on friendship (5213/16) and the incorrectly copied 'footstep' instead of 'footprint' in at least two essays at Paper A level. The word 'footprint' featured in the title. It was not clear whether the candidates copied it incorrectly, whether the word was mixed up or whether this reflected poor working memory which is also a feature of SpLD/Dyslexia.

5.2.3.2 Spelling Error Types

The analysis of spelling errors highlighted distinctions in the type and severity of mistakes across the different texts. These differences are documented in tables 5.1 and 5.2 from samples of spelling errors taken from texts written by two different groups of AA candidates – those with ‘severe’ errors and those with ‘mild’ errors. The errors are defined by the categories of literacy scores in spelling, namely the <70 and the >95. Literacy scores for non-AA candidates are not available since these do not apply for examination access arrangements and therefore do not undergo a literacy assessment prior to examinations.

5.2.3.3 The Severe Spelling Errors - <70 Standard Score Group

Tables 5.1 and 5.2 list spelling errors that were taken from English and Maltese essays respectively, written by candidates whose literacy scores in spelling fell below the standard score of 70. These errors are considered the most severe type, since scores below two standard deviations fall well under the average of the student population. The spelling mistakes were varied, but were mostly phonological (sound-based), rule-based (errors in the grammar rules) and visual sequential errors (error in the sequence of letters in the words). These types of errors appeared in both languages and included high frequency and low frequency words.

Table 5.1: English spelling errors made by candidates whose spelling score is <70:

Spelling Error	Correction	Spelling Error	Correction
impornant	important	momm	mum
tink	think	everione	everyone
promlem	problem	caer	care
abuot	about	grend father	grandfather
tolk	talk	frend	friend
whant	want	yung	young
heven	heaven	alwes	always
everthing/ avery things	everything	didin't	didn't
Ly	lie	thout	thought
becouse/becous	because	skool	school
gruon up	grown up	terrebly	terribly
brothere	brother	sumer	summer
hous	house	wosint	wasn't
shoping	shopping	showted	shouted
sum	some	grendson	grandson
aroud	around	fites	fight
betwen	between	sad	said
cuntries	countries	whie	why
pepel	people	spess	space
dont	don't	weking	waking
homwork	homework	basned	basement
feald	field	scareast	scariest
nois	noise	raining	running
lernerd	learned	distrect	distract
hart broking	heart breaking	beck	back
ther	there	nuting	nothing
remov	remove	hapnd	happened
apperd	appeared	treid	tried
opend	opened	them selfs	themselves
traviling	travelling	restorant	restaurant
breakfast	breakfast	salds	salads
dosen't	doesn't	somthing	something
gardian	guardian		

Table 5.2: Maltese spelling errors made by candidates whose spelling score is <70:

Spelling Error	Correction	Spelling Error	Correction
noz	ngħozz (I treasure)	sijjat	siegħat (hours)
fterrmod	f'terremod (In an earthquake)	bek	b'hekk (like that)
qebda	ebda (neither)	jipsu	jilbsu (they wear/put on)
misbla	miżbla (dump)	mghalart	mal-art (on the floor/ground)
imodi	imgħoddi (past)	qumbgħad	imbagħad (then)
qilu/qillu	ilu (ago)	jajtu	jgħajtu (they shout)
Ġiemgħa	Ġimgħa (Friday)	mebuħa	mirbuħa (conquered/won)
qajad	għajjatt (shouting)	bagħtit	batiet (she suffered)
l-ambulanza	l-ambulanza (the ambulance)	għalura	allura (so/so what)
setex	setgħatx/setgħetx (she could not)	hijlek	ilek (you have been)
umbad/qumbad	imbagħad (then)	tegħejx	tgħix (she lives)
kenix	kellniex ([we] did not have)	madix	m'għandix (I don't have)
hekk ma konex xaġa	jekk ma jkollniex xi ħaġa (if we don't have something)	namel	nagħmel (I do)
ħbib	ħbieb (friends)	andu	għandu (he has)
fantik	fl-antik (in the olden times/past)	tiaw	tiegħu (his)
jexu	jgħixu (they live)	nejdu	ngħidu (we say)
inqatu	inqattgħu (we spend)	jiqpu	jibqgħu (they remain)
zajra	zgħira (small [f])	bmot	b'mod (in a way)
bizejet	bizżejjet (enough)	fkas	f'każ (in case)
jisawlvaw	isawlvaw (they rescue)	jikunaw	ikun hawn (there will be)
jiguwx	jigux (don't come)	qawi	qawwi (strong)
kumddijiet	kumditajiet (comforts)	maqbibqax	ma tibqax (you don't remain)
titale	titgħallem (you learn)	manel	ma nagħmel (I do not)
alija	għalija (for me)	vantaċċ	vantaġġ (advantage)
mijarju	mingħajru (without him)	mannies	man-nies (with people)
amilt	għamilt (I did)	nibsa	nibza (i fear)
f'taħna	ftaħna (we opened)	qed nilom	għednielhom (we told them)
jistaqna	jisraqna (He robs/steals us)	ogettij	oġġetti (objects)
flaxija	filgħaxija (evening)	tiek	tiegħek (yours)
zighajra	zgħira (small [f])	lemm	'l hemm (there/away)

5.2.3.4 The Mild Spelling Errors - >95 Standard Score Group

Tables 5.3 and 5.4 show spelling errors made in SEC English and SEC Maltese respectively by those who achieved a standard score in the literacy spelling test of above 95. Given that the average standard score is 100, these errors can be considered typical of average fifteen and sixteen-year-old students in Malta. These scores are considered 'borderline' in terms of SpLD/dyslexia. Just like the severe cases, the mild errors were varied. These were also mostly phonological (sound-based), rule-based and visual sequential errors.

Table 5.3: English spelling errors made by candidates whose spelling score is >95:

Spelling Error	Correction	Spelling Error	Correction
excist	exist	memorable	memorable
alot	a lot	shoud	should
loose	lose	bestfriend	best friend
embarrise	embarrass	any one	anyone
its	it's	ingriedents	ingredients
can not	cannot	quater	quarter
enviourment	environment	every day	everyday
some thing	something	aswell	as well
Awstralia	Australia	cellphones	cell phones
my self	myself	immaedetly	immediately
your	you're	precactions	precautions
clishé	cliché	practises	practices
launch	lunch	rarley	rarely
occasinally	occasionally	prefering	preferring
definatly	definitely	thats	that's
suprising	surprising	neverended	never ended
infact	in fact	politness	politeness
disiplence	discipline	distractions	distractions
to	too	price	prize
recently	recently	taoght	taught
formost	foremost	through out	throughout
prefered	preferred	choose	choice
priveligerd	privileged	nowaday	nowadays
backround	background	olevel	o'level
word	world	then	than
excepted	accepted	dimmm	dim
where ever	wherever	pleasent	pleasant
transperent	transparent	subconsius	subconscious
presuimed	presumed	bestfriend	best friend
liquified	liquified	vegetation	vegetation
live	life	thirtys	thirties
assay	essay	librery	library
tecnological	technological	discoveries	discoveries
equallity	equality	sociaty	society
rites	rights	racicm	racism
there	their	succesful	successful
rispect	respect	recieves	receives
occurring	occurring	were	where
quit	quite	quite	quiet
eventhough	even though	mantain	maintain
oppinion	opinion	counsilless	counsellors
altough	although	futurewise	future wise
appearence	appearance	paycheck	pay cheque

Table 5.4: Maltese spelling errors made by candidates whose spelling score is >95:

Spelling Error	Correction	Spelling Error	Correction
mingħarhom	mingħajrhom (without them)	nużha	nużaha (i use it)
mal-ewwel	mill-ewwel (straight away)	għal-mezz	għall-mezz (for the mode)
tqassamomx	tqassamhomx (do not give them out)	uġieġh	uġieġ (pain)
liskola	l-iskola (the school)	kemmxejn	kemxejn (somewhat)
taghla	taqla' (to withstand)	tħalna	dħalna (we entered)
qeghda (nghix)	qieġheda (i am [living])	tefa	tefa' (he threw)
filfat	filfatt (in fact)	ferita'	ferita (wound)
bzonjuza	bżonnjuza (needed)	għal hekk	għalhekk (therefore)
min	minn (from)	għeqdem	eqdem (older)
insiba	insibha (i find her)	għada	għadha (she still is)
jbieġh	jbieġh (he sells)	ħabieb	ħabib (friend)
konna	konna (we were)	tellaw	tellgħu (they lifted/raised)
lil-ommi	lil ommi (to my mum)	imweġġajn	imweġġgħin (they are hurt)
baqa	baqa' (he remained)	jaqtawlu	jaqtgħulu (they cut for him)
fimthom	fhimthom (i understood them)	kollhu	kollu (all [m])
jistawx	jistgħux (couldn't they)	sippost	suppost (supposedly)
taħhom	tagħhom (theirs)	idaħlu	idaħħlu (he puts in/inserts)
xħin	x'ħin (when)	lofferta	l-offerta (the offer)
miftema	miftiehma (it is understood)	irnexielhom	irnexxielhom (they managed)
l-komissarju	l-kummissarju (commissioner)	kolla	kollha (all)
ta	ta' (of)	rċievejt	rċevejt (i received)
faqqatt	faqqat (it cracked)	saqsini	staqsieni (he asked me)
nqattgħa	nqattà (i tear)	naraħa	naraha (i see her)
naqa	naqra (a little)	derewhom	darrewhom (they made them get used to)
mistednin	mistednin (invited)	igiefiri	jigiefiri (therefore)
f'kelma	f'kelma (in a word)	tghajjix	tghajjiex (don't get tired)
disspjaci	dispjaci (regret)	bijhom	bihom (with them)
prezzjuza	prezzjuza (precious)	jirabjaw	jirrabjaw (they are angry)
ngħidilom	ngħidilhom (i tell them)	jeddu	jheddu (they threaten)
għal karita	għall-karità (for charity)	positiv	pożittiv (positive)
jindaħlek	jindaħallek (to be nosy)	mill-lejl	mil-lejl (from the night)
titlifomx	titlifhomx (do not lose them)		

5.2.3.5 Comparison between the Two Groups

Both the <70 and the >95 groups demonstrate a variety of different spelling error types. Texts in both groups contain spelling errors that were phonological, visual sequential and rule-based (refer to Section 2.9.5 for a definition of spelling error types). Nevertheless, the pattern, frequency and severity of the mistakes are different. The distribution of errors from the group with the more severe errors (<70) had misspelled more high frequency words than the group with mild spelling errors (>95). For example, 'hous'; 'ther'; 'beck'; 'sumer'; 'skool'; 'frend', were typical phonetic and rule-based errors from the (<70) group. There were similar challenges in Maltese, despite the language having a shallower orthography than English. For example, words like 'jiguwx' (they do not come), 'alijja' (for me), 'tiaw' (his), 'jajtu' (they shout), 'tiek' (hers), 'namel' (I make) are also spelling errors in high frequency words in Maltese. Many of these errors in the <70 category were the result of challenges in understanding the graphophoneme rules of the language, particularly the knowledge of morphological rules. Another observed feature is the repeated omission of the silent 'għ' and 'h' as well as the lack of separation of the article from the noun by a hyphen '-'. Arguably, these difficulties confirm that these candidates are still in the partial alphabetic stage in the reading developmental stages (Ehri, 1995: see Section 2.6.3). In fact, many candidates had difficulties with distinguishing between certain letters that appear similar but have distinct corresponding phonological sounds, like z and ž; h and ħ; and g and ġ. The usually silent 'għ' and 'h' in Maltese also constituted a big challenge to many candidates in this group (see Tables 5.3 and 5.4).

In contrast, the errors made by the borderline group (>95) were mostly in low frequency words, for example, 'transparant'; 'distractions'; 'background'; 'priveliged'; 'quater';

'memorable'. These phonological errors generally followed a more regular spelling structure, making them of a less severe type than the <70 type errors. This made the errors appear less erratic. The errors in compound words illustrate this. Words like 'where ever' and 'can not' were incorrectly separated. Conversely, some words were incorrectly joined into compound words: 'bestfriend'; 'cellphones'; 'neverended'; 'aswell'; 'alot'; 'infact'. The other errors were mostly homophones and errors of omissions (deletion), commission (insertion) or transposition (substitution). The following are a few examples: 'then' for 'than'; 'there' for 'their'; 'were' for 'where'; 'equality'; 'supricing'; 'although'; 'succesful'; 'recieves'. The pattern of spelling errors was the same for Maltese. In general, most of the spelling errors in Maltese were rule-based errors. This is a persistent problem in all the Maltese essays, as confirmed in the examiners' report. For example *insiba - insibha* ('*insib* (I find) + *lilha* (her)') becomes '*insib+ha*', taking the silent 'h'); *għal karita - għall-karita`* (because the article is suffixed to the preposition '*għal*' to become '*għall-*'); *Jindañalek – jindañallek* ('*lek*' is the preposition '*li*' + second person object pronoun '*-ek*' suffixed to the verb, becoming '*-lek*' instead of '*lilek*' - this could also be a sound-based error). Other errors were not severe, with a few only omitting the apostrophe: '*ta*' for '*ta'*'; or accents: '*karita* for '*karità*'; '*tefa*' for '*tefà*'.

Other noteworthy spelling errors in Maltese were the dialectal errors. These were sound-based errors, related to articulation influenced by dialects. For example, the following are from two essays demonstrating spelling errors that are typical dialectal errors: *intellew* (*intellgħu* [we put up]); *sridek* (*sriedak* [cocks]); *nirrangüwa* (*nirrangaha* [I arrange it - feminine]); *qeltli* (*qaltli* [she told me]); *viduta* (*veduta* [view]); *edejali* (*ideali* [ideal]); *migewha* (*migugħa* [in pain - feminine]); *minnmendu* (*minn mindu* [since]); *tafeta* (*tefgħatha* [she threw it]); *delwaqt* (*dalwaqt* [soon]); *mijew* (*miegħu* [with him]); *naruwa* (*naraha* [I see her]); *ħarest*

(ħarist [I looked]); namil (nagħmel [I make]). Similarly, the two sentences in (16) demonstrate such errors:

(16) “Fix-xur tas-sajt nifthu bhal hanut zghir fid-dar tan-nanna fejn hemm *inbijew* hxxejjex friski mil-ghalqa taghna *Bhul Tadam* Dullih u *bittih*. meta konna zaghar jin u kugin konnu nieħdu gost ħafna meta *nirqdu* ma xurxin go dar tan-nanna Inanna kella *sidda* ghalina it tnejn u meta irridu konna imorru noqrud għanda” (6770/15).

(16a) Translation: In the summer months we open a shop in grandma’s house where we sell fresh vegetables from our field Like tomatoes watermelon and melons. when we were young a cousin and I used to enjoy it when we slept together in grandma’s house Grandma had a bed for us two and when we wanted we went to sleep at her place.

It is interesting to note that the text with dialectal errors contained some lexical differences. Examples are: *il-pinuri* (*il-pilloli*) which is a word used only in Gozo for ‘pills’. Others are less localised and are used to different degrees in certain localities: *Fejnhom/fejnh*a (for *ħdejn* or *maġenb* [near]); *ma’ xulxin* (for *flimkien* [together]); “*kull meta kienu jiġu żżuru lin-nanna Rita kienu jinxteħtu* (*joqogħdu*) *f’din il-kamra jilagħbu*” (6742/15).

5.2.4 Cognitive Ability and Verbal IQ

Another association found in the quantitative analysis concerned the significant correlation between the scores of the General Cognitive Ability (GCA) and verbal IQ, and essay marks and exam grades (see Section 4.4.8, Tables 4.32, 4.33). The link between cognitive ability and literacy has often been the subject of controversial debate since it supports the discrepancy

model, stipulating that dyslexia is the result of a learner profile characterised by strong cognitive ability but poor literacy skills. It is not the aim of this research to fuel this debate, but neither to silence it. In the context of this study, it would be an oversight not to study the link between verbal intelligence (VI) and writing, especially since VI typically measures verbal reasoning, verbal concept formation, knowledge of words and their application, and attention to verbal materials – skills which are expected to contribute positively to writing. Even when the cognitive ability scores in this data were taken from past reports, with some dating from the student’s childhood years, they still gave an indication of the link between the two.

Generally, the AA students who achieved high scores on the GCA test demonstrated better proficiency levels of writing than those who had low scores, especially in terms of ideas and reasoning. Sample (17) is a text from a student who had an above average GCA score of 126 and an equally high VI score of 125. This sample is a typical text of someone who fits the discrepancy model. The standard score on the Suffolk reading comprehension age was 102 and the student achieved the uppermost score on the NARA comprehension test that has a ceiling age of 12 years 11 months. Nevertheless, the accuracy on the NARA was 10 years 2 months and spelling in English was unexpectedly low at a standard score of 72. Sample (17) is taken from an argumentative essay explaining how technology helps youths become more creative. The paragraph comes across as coherent. However, the three long sentences could have been shortened to read better. Moreover, the student does not demonstrate a solid command of a broad lexical repertoire that gives more accurate explanations and enriches the arguments used. For example, ‘skills’ is a better word for ‘capabilities’; ‘exposed to hearing’ is more precise than ‘prone of hearing’ and the use of the word ‘comparison’ fits neater in the sentence: “... and what differences then is from thier lives and oter teenagers

live's". Spelling errors are few and varied, including one sequential error ('hleped') and two omission errors (oter, televiion), which are typical of dyslexia.

(17) In a way we could say that, yes technology had made the younger *peopulation* more creative because with all the sites that people post pictures on, teenagers can *immagine* what other people are going through and what differences then is from thier lives and *oter teenagers live's*. Even people who haven't found their talent are being *hleped* through technology because on the internet you could find all kinds of capabilities and this could *enspire* someone to do the same thing. With the invention of television most of the teenagers are capable of speaking in a very good way because with all kind of *televiion* programs they are given a bit of knowledge about everything and this could not be done in times were the only language you are prone of hearing is that of your family (1184/15).

Sample (18) is another example of a student who achieved a high score of 121 in GCA and 118 in VI and who evidently finds it hard to write down thoughts correctly. The comprehension standard scores are average in both English and Maltese reading comprehension at 102 and 108 respectively. However, the NARA accuracy age is 8 years 2 months showing evidence of difficulties with reading. Spelling is equally challenging with standard scores of 65 in English and 66 in Maltese. This is a typical example of a student who has a good level of reasoning and understanding which does not match the expected level of literacy for the student's age. The reasoning and ideas are developed systematically in a logical and coherent way, presented in a paragraph that follows a previous one in which the other side of the argument (the disadvantages) was presented. However, the writer has some restrictions in presenting these ideas accurately through the vehicle of writing. Spelling errors are frequent and varied.

In the rule-based errors 'themselves', 'opportunities' and 'technologies', the student shows inconsistencies in the application of the plural rule. The spelling errors 'satisfide' and 'satisfaction' could be the result of using the voiced 'd' from the Maltese lexical equivalent 'sodisfazzjon'.

(18) Not in all of *technologyies* creations there is a bad thing but in most of the time it makes young people brighter, it opens a whole new world of *oportunitys* showing what is right and what is wrong. The technology takes young people *in to* a new and *invated* world *were* all that they *imagen* is *avalable*. The working industry which is changing as well *opining* new doors *were* hundreds of new jobs. Art *were* young people express *themselves* in the most *elaborit* way as possible. The technical design, and video *edding* makes a person feel as if he is a creator of his own world he could make trees talk and people fly and an imagination come true. The videos that they do can go out *in to* the internet and reach other young people which might be in hospital trying to fight cancer. this is a way how people can comunicate with each other. Young People are more creative and *satisfide* by something that takes hard work and determination in which *finaly* shows their artistic and creative personality in a whole new level of *satisfaction* (2257/15).

Sample (19) comes from an essay of a student who scored 100 on the GCA test and 101 on the VI. The standard spelling score was 77. The language used in this text is effective and not complex. It is coherent, well organised in three short paragraphs and leads the reader to understand why the writer enjoys taking selfies. However, the text exhibits difficulties with the spelling of high frequency words like 'takeing' for 'taking', 'off' for 'of', 'viseted' for

'visited' and 'maybe' for 'maybe'. There is inconsistent capitalisation of words and at times, punctuation is not accurate.

(19) So from a year ago I started *takeing* selfies *every where* I go. Not on the *unecicary* stuff like going to the groceries. But on life events that I always want to keep a memory *off*.

I started doing this since I was 14 years old. I have selfies from every important event in my life. I went to *london*, Slovenia, Austria, and Venice and I have *dossen* of selfies from each and every country I *viseted*.

You *maybe* wondering, Why Selfies and not Just normal Landscape Photos. I chose to take Selfies Instead so that when I grow up I can remember my young face and I'll have photos of me growing up day by day (5667/15).

In stark contrast, samples (20) and (21), were produced by candidates whose GCA and VI scores are below average. (20) is taken from Paper B and written by a student who achieved a GCA of 75 and a VI of 81. Both scores are below average, signifying difficulties in cognitive ability. The standard score in spelling was 70. Although the text has only two spelling errors ('Im' for 'I'm' and 'hart' for 'heart'), it lacks coherence and evidently it is writing produced by a student who has difficulties with language expression. The text lacks proper punctuation, connectors and cohesive devices. The text has omissions of the article, prepositions and often verbs. The hesitations in writing are also the result of a poor repertoire of vocabulary which limits proper expression. Consequently, the syntactic structure is affected and reading can be laborious.

(20) Andrea if you can help me send me email if no send me email. *Im* sorry ask you to help me but it is surprise party to my friend and if *i* ask some

friends to help the surprise party come normal party. I would to help me I know your *hart* is like a golden *hart* because *i* know when some people need help. the people come to talk to you and see what is won't from you. I have a special cousin you made me happy if you can help me (6004/15).

Sample (21) was written by a student whose GCA score is 83 and VI score is 81. The spelling score was 81. This part of the essay presents arguments in favour of technology vis-à-vis the life of youths. The text demonstrates poor proficiency. It has plenty of spelling errors, grammatical inaccuracies, poor punctuation and overall poor coherence. Some arguments are repeated and not expanded well. The reader would need to reread the text to eliminate the ambiguity in the message. Spelling errors include omissions in some high frequency words such as: 'lean' for 'learn', 'insted' for 'instead'; and insertion errors such as: 'yousing' for 'using', 'whille' for 'while', as well as one transposition/sequential error typical of dyslexia: 'limiltes' for 'limitless'.

(21) The good thing about young people that they can *lean* like in our school. *Insted* of *yousing* a white board use an Interactive white board. Where they can use the internet to help them *Studs* and when *thes* are young they can find the Subjects so they will *lean* more *whille* on the computer at the same time. When young people can search *ue* book that they want to read *in stead* of a book and turning the page they don't need because they can *lisition* to the book being read to them. before they go to sleep like the young people like guys may like sport football, rugby, and hocky anything may be girls like read about their *favourit* Store from where they buy clothes the technology given to young people is *limiltes* on phones they can listen to music while running or when they are in the gym when they need help from *triend* they just send a message *instently* (607/15).

As confirmed in the quantitative analysis, the exam marks and language grades in Maltese did not correlate with the GCA score (see Section 4.4.10, Tables 4.36, 4.37). There were many texts demonstrating good proficiency level produced by students who did not achieve high GCA scores. Sample (22) is a typical example from an essay produced by a student whose GCA was 74 and VI 78. Although the essay exhibits many spelling errors that include high frequency words, the overall vocabulary, grammar, expression of ideas and presentation of arguments are far better than essays written by students with the equivalent GCA and VI scores in English. Clearly, Maltese was the first language for most of the students who could therefore express themselves better in Maltese, even if their writing still demonstrated challenges. Another reason for the mismatch between the GCA and VI score, and the essay mark is likely to be in the language of the IQ test which is English and therefore standardised on a UK population. Moreover, some test items carry knowledge constructs that are unfamiliar to Maltese students who have a different cultural background.

(22) #ajt minghajr il-kompjuter tkun diffiċli #afna g#ax jiena drajt *biss* sistema tal-lum biex jekk *ikkoli* b#onn xi g#ajnuna *jejni* il-kompjuter. U anke biex nitkellem *mal*-familja *ta* barra mill-pajji# tieg#i. Huwa ukoll komdu b#ala *uzu*, g#ax tista *tuzag#* x#in trid u kif *jog#bok*.

Nahseb li jekk naqtg#u dan il-kompjuter, nibda nipprova affarijjet godda b#al sports jew *sfin* etc *alissa jejni bxi* studju jew xog#ol tad-dar, fejn *ikkolhi* b#onn *nuzag#*. Huwa ukoll tajjeb g#had-diski biex tisma il-*musika*, jew fil-*po#isjoni* tieg#i to#loq il-*musika bxi* programmi differenti (5049/15).

(22a) My life without a computer would be very difficult because I got used to today's system so that if I need any help the computer will help me. And

even to speak with my family who live outside my country. It is also comfortable for use, because you can use it when you want and as you wish.

I think that if I stop using the computer, I will start to try new things like sports or dance etc for now it helps me with study or homework, where I need to use it. It is also good for songs to listen to music, or in my position to create music with different programmes.

5.2.5 Lexical Diversity and Vocabulary Levels

Lexical diversity and vocabulary levels were also key qualities that distinguished the AA group from the non-AA group. Many AA students, particularly those choosing Paper B demonstrated poor proficiency levels in their second language which was reflected clearly in the repertoire of vocabulary used (see Section 4.6, Tables 4.59, 4.60). It is argued that candidates with SpLD/dyslexia are conscious about their difficulties with spelling and deliberately avoid using words that they are not confident in spelling (Sumner et al, 2016). While this might be the case, there was still evidence of limits in the repertoire of vocabulary available to students, pointing at the limitations in the knowledge of the second language. This supports the idea that what might appear as SpLD/Dyslexia is in fact the result of weak second language development, in an education system that demands better proficiency in bilingualism.

Samples (23) and (24) taken from Paper B put this point into perspective. In (23), the text is somewhat understood, but the expression is very poor, in particular, the choice of vocabulary (some words are mixed up, for example: rounded - surrounded; populated - popular; collect – get together). There are also difficulties with conjugation ('Malta have' instead of 'has'), the incorrect use of demonstratives ('this' instead of 'these'), and syntax. The student achieved a

spelling score of 83 and a Suffolk standard score of 85 NARA comprehension with the equivalent to 8 years 6 months and a standard spelling score of 75.

(23) Malta have the hottest place and we all are rounded by the sea so the Maltese people will be their to spend a lot of time in the beaches. Another thing that Malta is populated most is for the feasts that we have. Many turist can to see this beutiful things but Maltese people use this week of the feast to collect the country to be together not be country but the family also. In our houses we have the roof so we can collect our family to see the fireworks and to make BBQ to eat something (5034/14).

Sample (24) is from an essay about a plan for a birthday party. It is an email communication between two organisers. There are challenges with the use of language to explain the plan. It is direct and imperative. The sentences are truncated and the writing instills no sense of excitement. This also shows lack of ideas. The party plan comes across as a dull itinerary that lists the chores and actions needed for each day leading up to the weekend. The sample has plenty of errors at the basic level of writing, including the incorrect use (or lack) of prepositions, the wrong use of tenses, poor lexical variety, and poor cohesion between sentences. The student's standard spelling score was 78. The Suffolk test score was 75, and 7 years 1 month in the NARA Comprehension.

(24) After we go my house to make bookmark for every people who came to the party. Wednesday we go to see the farmhouse where we are going to make it. Then we put things there to be ready for Sunday. Wednesday we have Sleepover with maria and others friend and we are going to tell her that 'we must go weekend in a farmhouse' and watch a movie. Thursday we go check the foods and cakes. Friday we go a buy drinks and some snacks.

Saturday we go Rabat for cake and food, then we go put it in the farmhouse's fridge then we go out. That night at Ku I tell her that we are going to sleep at my uncles's farmhouse. When we woke up we through her floor and eggs to wake up. Then help her to wash the hair. We call friends to come party at 1.30pm to celebration" (6731/14).

Sample (25) is an essay from an AA student that stood out. It comes from Paper A and was judged to be a good essay by examiners. The text exhibits a broad lexical variety, containing high level vocabulary and makes interesting reading. The student had a Suffolk standard score of 94, NARA comprehension score of 12 years 1 month and a spelling standard score of 84. It is interesting to note that the difficulties were not in the variety of vocabulary but in the spelling. Words like 'bedlamite' are very specific and low frequency. 'Nuck and krany' for 'nook and cranny' is an expression from low frequency words and used in the right context, but misspelt by the student.

(25) I thought to myself how strange that is, he had no shoes. And I was wondering why that is. Was he a bedlamite? I hadn't a clue watsoever. So I had to go find some.

I needed to go to the home I left years prior. When I was young I use to love that house. I use to explore every nuck and krany but when I saw it, it looked like a dump. There was nothing you couldn't find dirty in what use to be my home. When that damp air rushed itself into my lungs, I almost vomited on the spot (1601/15).

Maltese essays were different. Texts from students with AAs demonstrated strong lexical diversity and very rich vocabulary. For example, the use of idiomatic expressions was more prevalent in the Maltese essays than in the English essays (see Appendix 7). Students had

better control of many linguistic features, such as syntax, and the writing was more coherent. It was clear that they had better exposure to the language.

5.2.6 Conclusion: AA Students with SpLD/dyslexia fall on a Broad Spectrum

The criteria for eligibility for MATSEC SpLD examination access arrangements includes all those whose scores in literacy assessment fall below the average in measures of spelling, reading comprehension, and reading accuracy. These eligibility criteria are inclusive of a broad range of abilities in the below-average-category. These criteria do not discriminate between those falling well below the average cut off point, such as those who score below two standard deviations (with standard scores below 75) and those closer to the average range, such as those who achieve borderline scores (at standard scores around 85). As a result, the definition of Specific Learning Difficulties (SpLD) in view of access arrangements eligibility becomes very broad and moves away from the exact definition that includes those whose ongoing difficulties are not only limited and 'specific' to one of the three areas, reading, writing and maths (American Psychiatric Association, 2020). Consequently, even those who have global developmental learning difficulties that affect all areas of learning are eligible for AAs and make part of this group.

Therefore, in reaction to the first question in this research (see Section 5.1), SpLD/dyslexia as identified in students requesting access arrangements in Maltese national examinations manifests in a broad range of literacy abilities in the two languages. As shown in samples (1) – (22), different AA students present with different literacy and cognitive profiles. These profiles reflect a range of abilities in reading and comprehension, reading accuracy, general cognitive ability, spelling and vocabulary which are all contributors to the quality of writing.

Generally, high scores in cognitive ability and literacy markers are an indication of high proficiency levels in writing. In conclusion therefore, writing is a key skill that reflects cognitive ability and other literacy skills.

5.3 Are there differences between the linguistic features of writing produced under examination conditions by access arrangements students with SpLD/dyslexia and the other students without access arrangements?

The quantitative analyses illustrate how students with AAs consistently achieved lower average essay marks and examination grades in the language subjects when compared to the rest of the candidates. This was also the case with all comparable linguistic items in the essays where AA students had more spelling errors, lower levels of proficiency in vocabulary and poorer reading ease scores (see Sections 4.5, 4.6). These findings directed the qualitative analysis to look deeper at the qualities of the texts produced by the two groups and to search for any qualitative distinctions. This was not an easy task because writing is a broad construct. The qualitative method ‘thematic analysis’ was used to structure the study of essays that often led into many unexpected areas in writing (see Section 3.5.3.2). This method made it easier for the analysis to have an element of control over the extensive qualities of texts and focus on the general features of students’ writing in national examinations. In this respect, the findings presented here may lead to further in-depth exploration in future research.

The answer explains the distinction between Paper A and B, showing how AA candidates seldom achieve the top marks in Paper A essays. The qualities of the best essays written by non-AA candidates will be presented. These include idiomatic expressions and rich vocabulary

which are sometimes borrowed from books. The narrative essays stood out for being the genre chosen by the non-AA students who wrote good-proficiency essays. This is followed by presenting the good quality essays written by AA students and the other Paper A essays that show a continuum of abilities for both AA and non-AA students. Similarly, an overview of Paper B essays is also presented with samples from both AA and non-AA students, which show very similar patterns of writing. The Maltese language and its influence on English are also presented as a feature of writing by Maltese students at SEC level. Other features of texts include an analysis of the style and written register which, in low proficiency essays, came across as informal and conversational and coherent.

5.3.1 Paper A and Paper B

There were remarkable differences between the writing qualities produced by candidates sitting for Paper A and those sitting for Paper B in both SEC English Language and SEC Maltese. In both languages, students who chose Paper A had by far better proficiency levels of writing and therefore better-quality essays than those who chose Paper B. This difference was observed in all qualities of writing, from vocabulary to grammar, syntactic accuracy, cohesion and coherence. The overall grade statistics for 2015 and 2016 illustrate these differences in the percentage number of candidates passing the examinations (see Tables 5.5 and 5.6).

The SEC English essay carried 40 marks out of 100 in Paper 2 (20% of the global mark) and the SEC Maltese essay carried 25 marks out of 100 in Paper 1 (12.5% of the global mark). The passing grades for Paper A range from 1 to 5 and in Paper B from 4 to 7. A pass at MQF level

3¹¹ is a grade ranging from the highest 1 to the lowest 5. This qualification is necessary for further studies at post-secondary level in academia. Tables 5.5 and 5.6 further illustrate the percentage of those who achieved a Grade 3 or better, which is considered a good result at the top range of MQF level 3. Overall, in 2016, candidates achieved far better results in SEC English Language than in 2015. The percentages were very similar in Maltese for the two years.

Table 5.5: Percentage of candidates who achieve an MQF Level 3 pass at grades 1-5 in both languages and in both papers in 2015 (MATSEC Statistical Report, 2015).

2015	SEC English Language	SEC Maltese
Paper A	86%	92%
Paper B	12%	36%
Grade 3 or better	28%	25%

Table 5.6: Percentage of candidates who achieve an MQF Level 3 pass at grades 1-5 in both languages and in both papers in 2016 (MATSEC Statistical Report, 2016).

2016	SEC English Language	SEC Maltese
Paper A	89%	90%
Paper B	25%	12%
Grade 3 or better	32%	26%

It was therefore expected for AA students to have lower average marks and grades since, in their majority, these candidates chose Paper B (see tables 5.7 and 5.8). Conversely, the majority of the Rest of the candidates chose the more demanding level Paper A over Paper B. Hence, as a whole, AA students had weaker writing skills than the rest of the student population. On average, there were quantitative differences between the two groups, especially in the top grades achieved by students who sit for Paper A (Tables 5.9, 5.10).

¹¹ Malta Qualifications Framework.

Nevertheless, from a qualitative point of view, the challenges that AA students face are the same as those shared by many of the rest of the students. This will be illustrated by examples throughout the answer to this section.

Table 5.7: 2015: number of AA candidates sitting for SEC English and SEC Maltese Papers A and B (MATSEC Statistical Report, 2015).

2015	English Paper A	English Paper B	Maltese Paper A	Maltese Paper B
AA Candidates	57	255	107	384
Rest	2774	1959	2314	1837

Table 5.8: 2016: number of AA candidates sitting for SEC English and SEC Maltese Papers A and B (MATSEC Statistical Report, 2016).

2016	English Paper A	English Paper B	Maltese Paper A	Maltese Paper B
AA candidates	67	283	69	298
Rest	2916	1695	2475	1691

5.3.1.1 The Top Marks and Grades

The most striking distinction between AA students and the Rest was in Paper A, particularly in the grades 1-3, with grade 1 being the highest grade. Only a handful of AA students reached this level (see Tables 5.9 and 5.10). The lack of these top-ranking grades contributes to AA students' overall low average marks and grades, when compared to the Rest of the candidates (cross reference). For example, in 2015, no AA students achieved Grades 1 or 2 and only three achieved a Grade 3 in English. 2016 was better, with two students achieving Grade 2 and thirteen achieving Grade 3 in English. In both years, AA students did not fare well in Maltese with only two students achieving Grade 3 in 2015 and none achieving levels 1-3 in 2016.

Table 5.9: 2015: The top 3 Grades 1-3 for both SEC English and Maltese (MATSEC Statistical Report, 2015).

2015 English	Grade 1	Grade 2	Grade 3
AA Candidates	0	0	3
Rest	187	520	648
2015 Maltese	Grade 1	Grade 2	Grade 3
AA Candidates	0	0	2
Rest	101	402	533

Table 5.10: 2016: The top 3 Grades 1-3 for both SEC English and Maltese (MATSEC Statistical Report, 2015).

2016 English	Grade 1	Grade 2	Grade 3
AA Candidates	0	2	13
Rest	222	537	723
2016 Maltese	Grade 1	Grade 2	Grade 3
AA Candidates	0	0	0
Rest	95	417	589

5.3.2 Top Essays (Paper A) – Non-AA candidates

The extracts that follow are taken from good quality SEC English Language essays, most of which achieved grades 1-3. It should be noted however, that in a few cases, students achieved high marks in the essays but this did not reflect in the overall grade. This was due to a poor performance in the rest of the components of the examination such as the comprehension. The samples in this section are all written by non-AA candidates. On many counts, these essays exhibited a range of qualities that were not found in the essays written by AA candidates. As will be shown in the samples that follow, the range of language and vocabulary used present clear argumentation, narratives and descriptions. Writers could express their viewpoints comprehensibly on most general topics using complex sentences and without

leaving any ambiguity. Texts are creatively and elegantly written demonstrating how these students have been very successful learners of the language/s.

Sample (26) is taken from an argumentative essay on youth, technology and creativity and (27) is taken from an article on young people's participation in events they organise. Both make good use of language with an appropriate opening that puts the reader in context and gives a sense of anticipation. Sample (26) demonstrates the ability to introduce a question raised in the introduction and that will be answered in the rest of the essay:

(26) Technology can be found everywhere, and few can confidently deny that technology, be it in the form of a smartphone, tablet or gadget, does not affect young people. However, has technology made young people more creative? (101/15).

Sample (27) is an introduction presented with a strong tone. The teenage writer takes a clear position from the start of the article to defend youths (his/her generation). This is done with the use of sophisticated vocabulary like 'aphorism' and 'stereotype' in a fluent repertoire of discourse. Writing is characterised by precision in the choice of words, appropriateness and ease in the use of language. The student uses a tinge of sarcasm before going on to say (in the body) that young people are enthusiastic, worthy and talented at organising and participating in events. This kind of introduction grabs the attention of the reader who would want to read on.

(27) The general aphorism that the older and supposedly more experienced people have is that young people are lazy. The stereotypical view is that all teenagers do, is shirk responsibility and lack the cultural know-how that one should have (111/15).

(28) is a sample taken from a descriptive essay, recounted by someone waiting in a queue. The writer gives a detailed account of the experience and the feelings, reactions and emotions elicited. Attention is given to visual and auditory details and how these are affecting the writer. In so doing, the writer demonstrates the ability to sustain a description that develops in a consistent way. Good expression is used with plenty of appropriate adjectives that enrich the text:

(28) As we were waiting in the queue, I began to look around me. All I could see were impatient people huffing and puffing, tapping away at their phones. Outside, I could hear the noise of cars driving by and people shouting. But it was the obnoxious sound of a child who had his mother's tablet taken away, throwing a tantrum a few times back, that unnerved me the most (1187/15).

The good quality essays from SEC Maltese Paper A also demonstrated a respectable level of proficiency in all areas of writing. The three chosen samples (29) - (31) also come from essays that received good marks and illustrate good proficiency in writing. The first example gives a description of the village/town square. The text has a few spelling errors and inaccuracies in grammar that does not interrupt readability. Nevertheless, in two paragraphs of three sentences each, the writer manages to create a good flow with varied language and sentence length. The good use of vocabulary woven into sound syntax describes in a simple and effective way, the surroundings and activities in the village square - the different buildings, the function and purpose of their presence, and a personal reflection. It is a coherent piece of text:

(29) Vicin tal-knisja wiehed isib il-bandli fejn *ġeneturi* jistgħu *jeħdu* t-tfal għal naqra divertiment. Kemm il-mużew tas-subien, kemm dak tal-bniet jinsabu ħdejn xulxin, kif ukoll iċ-ċentru taż-*żagħżagħ*, xi ħaġa li sal-lum il-ġurnata

għadni nattendi. Fil-pjazza stess hemm klabb tal-futbol, li nhar ta' Sibt filgħaxija ikun mimli nies, jaraw xi partita taħraq, u fl-istess ħin, jgħidu kelma.

Xi ħaġa li ħafna nies, ma jarawx bħala *neċesita'* hi, l-furnar li kuljum tkun tista' xxom ir-riħa tal-ħobż frisk, tkun fejn tkun, fil-pjazza. Sfortunatament affarijiet bħal dawn *qedin* jintesew mill-ġenerazzjonijiet tal-lum. Fil-jiem tal-festa, ċ-ċentru tal-pjazza ikun mimli b'xogħlijiet tan-nar, u l-ġnub trakkijiet ibiġħu ikel u ġugarelli għat-tfal.

(29a) Close to the church one finds the swing park where parents can take their children for some entertainment. Both the boy's *mużew* (catechism classes), and that of the girls are near each other, as is the youth centre, something that to this day I still attend. In the square there is a football club, which is full of people every Saturday evening, watching a hot (controversial) match, and at the same time, chatting.

Something that many people, do not see as a necessity is, the baker that everyday you can smell the fresh bread, wherever you are, in the square. Unfortunately things like these are being forgotten by today's generations. In the days of the feast, the centre of the square is full of fireworks, and trucks at the sides sell food and toys for the children.

(30) is another sample of good text taken from Paper 2A in SEC Maltese, despite a few spelling mistakes (in italics). It is an introduction to an essay about 'a photo to be treasured'. The first part of the introduction describes the moment when the memorable photo of two inseparable friends was taken. It is a moment of elevation that suddenly turns sour and becomes the past. A twist in the story and a description of a sombre mood and darkness brought a sudden interruption to the friendship. The reason could be anything bad and tragic

to be discovered later in the essay. An anti-climax in the introduction prompts the reader to read on with curiosity. The writer can construct developed descriptions in an assured and natural style using short sentences effectively. The writer is demonstrating the ability to tell an engrossing story in the style that is appropriate to the narrative genre.

(30) Ir-ritratt li ħadna dakinhar għadni ngħożżu sal-lum. *Isu* ħadnih *il-bieraħ*. Niftakar kemm konna dħakna u għajjatna bil-liberta li fl-aħħar kellna. Konna jien u hi kontra d-dinja. Inseparabbli konna. Dak iż-żmien għadda u *tmermet* issa. Id-dinja riedet xi ħaġa oħra minnha. Firditna u *waqatli* dalma sewda fuqi, *isni qeda* f'ħolma ħażina li qatt ma trid tispicċa. U naf biċ-ċert li *mijjex* ħa tispicċa (226/16).

(30a) Translation: To this day, I still treasure the photo we took that day. It feels like it was taken yesterday. I remember how much we laughed and shouted in the freedom that we finally had. It was she and I against the world. We were inseparable. That time has passed and fizzled away. The world wanted something else from her. It separated us and a black darkness has fallen on me, as though I am in a bad dream without an end. And I know for certain that it will not end.

Sample (31) is a conclusion to the narrative essay about 'a photo to be treasured'. The use of a mix of adjectives contribute to a good description of a mystical painting and the author's experience of its discovery. The sample of text has only two spelling errors, 'sabiēha' and 'rajnieha', instead of 'sabiħa' and 'rajniha', both using the elongated 'ie' instead of 'i'.

(31) Eżatt kif għaddejna mill-bieb rajna spettaklu. Il-ħitan tal-kamra kienu miksijin b'pittura waħda ġiganteska, antika u *sabiēha*. Kienet ħafna isbaħ mill-pitturi li konna rajna f'Ruma kollha, u bqajt skantat b'kem kienet kbira.

Ix-xogħol kien astratt, imma xorta kien jesprimi ħafna emozzjonijiet. Irringrazzajna lir-raġel ta' din l-esperjenza u hu qalilna li aħna u żewġ familji oħra biss konna *rajnieha* minħabba li hu kien ilu qed jiġġieled il-kanċer u ma kinex ilu li rebbħilha.

Ir-raġel offra li jieħu ritratt tagħna u wara qalilna xi stejjer sbieħ dwar din il-kamra mistika. Jien bqajt ngħid din l-istorja lil kull min irid jisma' għax vera kienet impressjonatni u r-ritratt li ħadna dakinhar għadni ngħożzu sal-lum (526/16).

(31a) As soon as we went through the door we saw a spectacle. The walls of the room were covered in one gigantic painting, antique and beautiful. It was far more beautiful than all the paintings we had seen in the whole of Rome, and I was surprised how big it was. The work was abstract, but it still expressed a lot of emotions. We thanked the man for this experience and he told us that only we and two other families had seen this because he had long been battling cancer and it was not long before he had won over it.

The man offered to take a photo for us and after he told us some beautiful stories about this mystical room. I kept on telling this story to whoever wanted to listen because it was truly impressive and the photo that we took that day I still treasure.

5.3.2.1 Idiomatic expressions

Samples (32) to (39) are also taken from very good quality Paper A essays written by non-AA students, showing idiomatic expressions. The students have a good command of idiomatic

expressions and the connotative level of meaning. In particular, (32) and (33) were creative expressions invented by the writers:

(32) This is my way of turning black and white into a kaleidoscope (100/15).

(33) It was now or never. I turned back quickly and ran as fast as my noodle-like legs could take me (2607/16).

(34) ...life isn't as sugar coated to teenagers as much as most adults claim it to be (2893/16).

(35) The woman was the spitting image of my late grandmother (1526/16).

(36) This can be put to the test at school; Since others only see the tip of the iceberg when it comes to young people's lives (2895/16).

(37) It looked just like any other in town, but yet it felt a ghost-like chill (2607/16).

(38) It sounded unnatural, it had a high pitch but it still somehow rumbled as if two mountains were pushing each other. The words it said are still seared into my head (2652/16).

(39) He was an intelligent but socially-awkward person. He loved to solve puzzles to test his intellect and spent most of his days reading. (1535/16).

5.3.2.2 Rich Vocabulary

The top essays written by non-AA candidates also stood out for the rich vocabulary used which had more C1 and C2 level words than the essays written by AA students (see Section 4.6, Table 4.59, 4.60). The list of vocabulary in (40) is taken from essays written by students

who did not have access arrangements. The list is divided into nouns, verbs, adjectives and adverbs. The words are selected from very good narrative Paper A essays about the Staircase, to which most candidates reacted with a story about mystery, horror and adventure. This rich and diverse vocabulary was used to describe characters or scenes around the event that was happening.

(40) Nouns: banister, dungeon, hallway, dwelling, lullaby, chimes, lantern, rod, shutters, backbone, railing, superstition, prank, crows, Halloween, revolver, doorknob, dents, wizards, willow, crater, vampire, attic, barrel, hinges, tiles, mythology, drunkard, freak, lust, eternity, damnation, flock, torrents, dusk, phobia, morsel, lodge, rodents, homestead, fictitious, clasp, demise, artwork, carpenter, cramp, oblivion, numbness, atrocious, distraught, waxed, barricade, glimmer, creepers, maroon, decorations, cockroach, contraption, coven, dragon, heists, beacon, incantations, beast, dagger, stench, trapdoor, archaeologist, whimpers, anguish, shortcut, gunshot, markings, stench, pistol, growls, footprint, gown, eternal, loot, perpetrator, persecution, ebony, plank, tumble, flashlight, halt, catcher, adrenaline, restoration, cloakroom, tragical, hoody, raspy, couch, wreck.

Verbs: pierce, lurked, spiralling, flipping, sauntering, loitering, jerked, panting, swirling, chanting, peeked, rumbled, shattering, bristling, chirping, dripping, intrigued, numbing, darkening, busted, taped, tumbling, dusting, flared, gobble, revolve, nailed, thumping, scenting, welded, dripping, adorned gaping, seared, enraged, coursed.

Adjectives: creepy, eerie, horrid, hazy, blacked, blinding, jagged, gloomy, gory, docile, screeching, queer, shrieking, frosty, gigantic, sunless, crazed, infamous, dumbfounded, sceptic, pristine, blurry, mystical, ravenous, eerie,

tempered, clumsily, hunched, sinful, walled, paranoid, bewildered, tainted, smudged, curious, skinned, towering, cursed, carpeted, colossal, unruly, pointy, picky, pickled, subdued, gobsmacked, clammy.

Adverbs: frantically, circularly, agonizingly, breathlessly, magically.

5.3.2.3 Content Vocabulary from Reading Books

Good narratives written by non-AA candidates who chose Paper A were backed by good ideas and well-structured use of language. As supported in the literature (Shanahanan, 2006, 2015; See also Section 2.5), there was evidence that this specific skill of writing was developed from reading a range of books, including classics. The content vocabulary used and sometimes the plot itself in the text made explicit the origins of the ideas and the story. For example, a few essays on the narrative 'The Spiral Staircase' could be traced to the story of *Alice in Wonderland*, that mentions a spiral staircase. These candidates went on to adopt a cluster of words that were either the same or strikingly similar to those used in Lewis Carroll's classic. One essay used the vocabulary and phrases presented in (41):

(41) let my imagination run wild; white bunny with long whiskers; wonderland; themed attic; pocket clock; little pigtails; imaginary place; imaginary friend; empty shoebox; a land of make believe (2449/16).

Another example of content specific vocabulary (42) comes from another good quality essay about the Spiral Staircase that is oriented around a pirate story.

(42) island; the great Ponce de Leon; vast treasure; a Spanish privateer, he raided ships belonging to the East India trading company; Crew; isle; anchored the ship and went ashore; a wrecked ship on the coast; Queen

Anne's Revenge; creaking (sound of broken deck); wind blew right through her jagged black masts; beach; cliff; climb; rock; captain; forest; ashy volcano fumes; temple; map; X marks (on map); (captain's) grim smile; stench of death inside (the temple); full of webs and dirt (temple floor); trapdoor; Spain; looting; boats; skeleton; chests (219/16).

(43) is taken from another narrative about the Staircase. This clearly derives from Anne Frank's story, describing a family hiding in a house during the war, in fear of being captured and imprisoned in a concentration camp. The candidate described in detail the plan of the house and the secret hideout within.

(43) It's been three years. Three years of being locked up in the same 3 rooms, staring at the same four walls and the spiraling staircase that lead to our freedom. The staircase which was hidden behind a door and that door was hidden behind a bookshelf... I dreamt the day I get to run down that staircase, knowing that my people are once again free to live life the way they want to. The day where I could run outside again and feel the sun on my face (1548/16).

Similarly, sample (44) written by the same author presents content vocabulary coming from the same essay relating to the war and the experience of the family hiding inside the house.

(44) Outside the war still rages on, countries fighting for the rights of my people; persecution of my people; "we'll live through this"; soldiers barricading; death camps; hope; our allies will win; my freedom; tortured in a concentration camp; Hours turn into days, days turn into weeks and weeks turn into months; survived the war; I finally got to run down the spiralling

staircase and scream out in happiness; spiralling stair case which hid us from the hands of evil for such a long time (1548/16).

The use of content vocabulary was not limited to narrative essays. Other types of essays made use of words that are specific to particular topics. For example, (45) illustrates vocabulary that was used in an argumentative essay to explain and argue how life has changed over the years for the young generations. Possibly, this content vocabulary was borrowed from other subjects like Commerce and Economics, showing good transference skills of knowledge.

(45) job security, work-life balance, employment, e-commerce, companies, globalisation, multinationals, organisations, social and business developments (2078/16).

5.3.2.4 The Narrative Genre

The essays that stood out the most were those that achieved the top marks. Narrative essays require specific skills in terms of organising the storyline around a plot, characters and temporal frames. Amongst others, a narrative needs a specific knowledge of register together with a variety of vocabulary constructs, showing diversity (breadth), maturity (sophistication) and content (domain-specific) vocabulary. In contrast, argumentative and descriptive essays need less abstract and more factual and functional language. In view of this, several candidates would have made a better choice had they chosen the argumentative or descriptive essays over the narrative. This is especially with reference to Paper 2B where the majority of candidates chose the narrative (MATSEC, Examiners' Report, 2015, 2016).

The narratives demand higher-order writing skills and logical maturity which were more prevalent in texts written by non-AA students in the top grades. Generally, essays given the top grades started off with a good introduction to the entities and used appropriate adjectives to describe them physically and emotionally. The latter reflects the writers' emotional maturity because it requires a good sense of awareness and empathy with a clear projection of specific feelings in a given situation. Such descriptions on emotions need a strong lexical repertoire made up of abstract and low frequency vocabulary. Good narratives were also sensitive to the progress of events, giving the reader the right pacing while respecting temporal progression. Linguistically, a good narrative is the result of a good sense of purpose embedded in good syntax with clear cohesion between sentences and paragraphs that lead to an overall well-sequenced story and coherent writing. This needs to be complemented with good management of the entities in the story balanced in a text that shows more densely integrated packages of information without making it boring for the reader. Literature on this topic confirms that this takes a long time to develop, especially in learners' second language (Flicker, 2007).

Samples (46) – (48) illustrate some extracts of the best narrative essays taken from Paper A and written by non-AA candidates. (46) presents a three-sentence paragraph that is clear, smoothly flowing and well structured. The writing describes in detail the appearance of an eerie room while also allowing the reader to know how the protagonists felt and reacted in a subtle but concrete way. The detailed descriptions help the reader notice and remember significant images in the story. The writer has a strong repertoire of vocabulary and perfect control of grammar and organisational structure to produce a most captivating narrative.

(46) As our eyes adjusted to the darkness, we were greeted by a horrible sight of cobwebs dangling from the ceiling and walls covered in a thick red substance which we dared not investigate. There was a revolting smell of mould and decay, however, the room was completely empty. All that could be seen was a small door which we cautiously opened (1013/15).

(47) and (48) use descriptive language that is straightforward and constructed with a wide lexical variety, appropriate adjectives, idiomatic expression and good syntax. These passages give the reader clear mental images that are memorable. They also focus on sensory details and feelings which make the story human and personal. The writers are creative in their explanation, using descriptive and sophisticated verbs. For example, in (47) the narrator reports how ghost stories are told with a 'gaping mouth' instead of an 'open mouth', and the characters 'slipped out of sight' and did not simply 'go away'. The final sentence is enriched with a hyperbole to make the description more graphic, creating a horror-effect ('bloodcurdling scream'). Similarly, in (48) the writer demonstrates his ability to sustain a good description of the tense situation with a number of expressions. For example, the character was 'consumed by fear' which is more powerful than simple descriptions like 'extremely afraid'. These texts exploit the senses to create a vivid physical atmosphere for the reader.

(47) He would describe the ghost stories in the house in a chilling way, with his gaping mouth and spooky voice. He looked like a ghost himself. I wasn't very keen but he managed to persuade me and when the tour began we stayed at the very back of the crowd and slowly slipped out of sight... We decided to see where it led to. I didn't wear my heart on my sleeve. I didn't want Kyle to see me quaking in my boots, so I led the way. The floorboards

creaked as I made my way up. As I was climbing I felt a hand on my shoulder and let out a bloodcurdling scream (1473/16).

(48) While Simon made his way through the winding tunnel, he felt the air get colder and heard a loud sound of scraping rock. Consumed by fear, he decided to go back, but upon turning around there was nothing except the pitch black of darkness, leaving him only the option to carry on forwards. Ahead of him was a light and he ran towards it with desperation. When he got to it, he saw it was a hanging torch. Behind it, stood a large spiral staircase (1535/16).

The analysis found the same pattern for the very good essays in Maltese. Sample (49) is an introduction to a good narrative. The first line is an idiomatic expression, and gives the reader a good pace to the story. The paragraph demonstrates syntactic accuracy and error-free spelling. Vocabulary gives good expression, like in the use of the word 'naħarbu' (literally 'to escape'/'to rush off') instead of 'immorru niġru' (go off running). The paragraph finishes with a lead at the end that makes the reader want to discover what happens:

(49) Il-ġurnata turik minn kmieni filgħodu, li ma jkollok l-aġtit ta' xejn, speċjalment jekk jkollok xi uġiegħ ta' ras. Niftakar li darba il-Ħadd filgħodu daħal missieri bil-mod f'kamarti u qalli biex inlesti xi ħaġa x'nilbes ħalli naħarbu sa għand in-nanna (806/15).

(49a) The feeling of wanting to do nothing starts from early in the morning, especially if you have a headache. I remember that once on Sunday morning my father entered slowly into my room and told me to prepare something to wear so that we would rush to grandma.

Samples (50) and (51) are two more examples taken from Maltese essays that are also laden with good descriptions that include feelings and emotions. The students can use the language fluently with perfect grammar and hardly any spelling errors. Writing is uninterrupted, with clear, smoothly flowing and well-structured sentences. The narratives are coherent with an impeccable story-line that develops in a steady and coherent way.

(50) Marc kien tifel bravissimu, kellu rasu fuq għonqu. Mill-ewwel ħadna pjaċir bil-kumpanija ta' xulxin. Darba waħda, hu ssuġġerixxa li mmorru mixja qalb il-kampanja u hekk għamilna. Iltqajna quddiem id-dar tiegħi u stennejna tal-linja fl-istess post fejn konna Iltqajna l-ewwel darba. Ix-xemx kienet qawwija, iżda kien hemm ziffa kalma. F'hin minnhom, dort biex insaqsih għal biċċa ħobż, iżda f'dak il-mument, għajnejna ltaqgħu. Minn dik is-sekonda l'hemm, ħassejt qisni kont qiegħda ngħix f'fantasija. Is-sens ta' ferħ u trankwillità li ħassejt ma' Marc kien kważi maġiku (34/16).

(50a) Translation: Marc was very smart, he was diligent. We enjoyed each other's company from the start. Once, he suggested we go for a walk in the countryside and that is what we did. We met in front of my house and waited for the bus in the same place where we had met the first time. The sun was strong, but there was a pleasant breeze. At one point, I turned to ask him for a piece of bread, but at that moment, our eyes met. From that second onwards, I felt like I was living in a fantasy. The sense of happiness and tranquillity that I felt with Marc was almost magical.

(51) *Nħobb* naħseb li issa hija (ommi) qegħda f'post aħjar fejn m'hemmx tbaġhtija, mard u uġiġħ, u f'kull haġa li nagħmel qegħda maġenbi tħarisni u tgħini fil-ħajja ta' kuljum. *Mingħajra* magħna, ħajjitna m'għadiex l-istess.

Meta xi darba kont naħseb li għandi ħajja perfetta, issa biddilt il-fehma, iżda xorta nemmen li kollox għandu s-sabiħ tiegħu (43/16).

(51a) Translation: I like to think that now she (my mother) is in a better place where there is no suffering, sickness and pain, and that in everything I do she is by my side looking after me and helping me in everyday life. Without her, our life is not the same. When once I used to think that I had a perfect life, now I have changed my opinion, but I still believe that everything has its beauty.

5.3.3 Top Essays Paper A – AA scripts

Texts from the AA Paper A cluster demonstrated a range of proficiency levels. However, in contrast to Paper A essays written by candidates without AAs (Rest) in the top grades (see Section 5.3.1.1), there were no outstanding or excellent essays written by AA candidates. In spite of this, the good quality essays written by AA candidates were well structured, demonstrating a variety of vocabulary, good use of syntax and presented in coherent text. Samples (52) and (53) are two good quality essays written by AA candidates and given high marks by examiners. The three errors are in the use of ‘fingers’ instead of ‘toes’, the plural of ‘these footstep’; and ‘what’ is used instead of the possessive ‘who’. These are examples of essays with few mistakes, overall good descriptions with good syntax and coherence. For example, (52) was written by a student who has a reading comprehension score of 98 (Suffolk) and the equivalent age of 12 years, 2 months (NARA), with a standard score of 80 in spelling.

(52) The footstep had five fingers with claws because the footstep showed to have pointed fingers. The creature also seemed to be quite heavy since the

footprint was deep in the snow. John and I searched around the resort to look for more of these footstep but found nothing. We also asked some people and locals to tell us what may this footstep belong to but we had no luck. The day had passed and we didn't have any luck of identifying this creature (216/15).

In (53), there are lexical inaccuracies in the use of words like 'selfless' for 'selfish'; 'suffering from' for 'in pain'; and 'handle' for 'carry'. The only spelling error is 'argueing', which is not a typical dyslexia error of phonology. It is repeated twice, which shows consistency – another atypical feature of dyslexia. In fact, this particular student had average scores in all literacy areas, but had slow speed in reading (equivalent to 9 years, 9 months on the NARA test) and slow handwriting (11.5 words per minute). Examples like these are a reminder that SpLD/dyslexia falls on a spectrum and candidates that are affected mildly are able to produce decent texts with the arrangement of extra time that enables them to structure their ideas and revise their work:

(53) While I was looking around, I saw a family arguing with each other on what to buy and their kids had their hands over their ears so that they won't hear anything. Another situation was when the kids were argueing on what to get and the parents just ignored them and they didn't bother to fix the situation. The last and most *selfless* situation I saw was when an old lady was carrying a heavy bag and no one took their time to help her since she was *suffering from* carrying a bag which is too heavy for her to *handle* (985/15).

(54) is another sample from a candidate with AAs who achieved a standard score of 84 in the Suffolk reading comprehension test and the equivalent of 12 years, 1 month on the NARA comprehension. It is descriptive, using basic but good structured language without spelling

mistakes in English. In fact, the standard score in spelling was 97, which is well within the average range. The paragraph may be criticised for its punctuation. It is made up of only three sentences and would read much better if split into more sentences:

(54) Young people in Malta nowadays have the right to state and place their opinion, an example is the 'Vote No' group, which allows young people to vote in certain elections. This group has been around for about two years. Another organisation which believes that young people are the future of our generation 'called 'Agenzija zgħaagh' have several groups, activities, scholarships, and the list never ends (1787/15).

Despite these examples, the majority of essays from the AA Paper A cluster demonstrated challenges with spelling, that included errors in the low frequency words. In general, these AA candidates had good literacy scores in reading and comprehension (some even above the average range), but below average scores in spelling. This evidently contributed to one of the main limitations in their writing. The presence of a 'specific difficulty' is a characteristic of SpLd/dyslexia literacy profiles, where a 'specific' difficulty emerges in one particular area of literacy but not in all areas. Spelling was therefore the salient characteristic that stood out in the battery of literacy assessments.

(55), (56) and (57) are writing samples that illustrate this point. They are all extracted from narrative essays and give well written accounts. These samples show that the candidates have a good grasp of the language and most likely can speak it very well. However, they find it hard to encode it into writing, especially at the word level in spelling. All these students scored within the average (>90) range in the Suffolk reading comprehension test and NARA comprehension test (>12 years), but well below the average in spelling (<80). Spelling errors are frequent both in high and low frequency words, particularly in sample (55) which has a

total of ten errors and one misused preposition. Nevertheless, when the spelling mistakes are corrected (in italics), reading becomes easier. (56) and (57) also illustrate this. In these samples, the sentence structure is correct, the verbs are well conjugated, the language presents logic with a good lexical mix, and the sentences flow. All this makes the texts coherent. (56) has one striking limitation in the adjective and the noun in the first sentence – ‘mysterious mystery’. (57) has the least number of errors.

(55) Some time passed we were walking quite a stip (*steep*) rocky road and suddly (*suddenly*) my sister and I so (*saw*) black marked footsteps leading to the other side of the street and then we nowtest (*noticed*) that the footsteps ended in the middle of (*with*) blood. We all freaked out and disided (*decided*) to keep on going fowerd (*forward*). Some time later we heared (*heard*) a huge manly scrim (*scream*) bihand (*behind*) us which made us all really terrified and we kept moving foward (*forward*) and did not try to look back (1675/15).

(56) I started looking at the footprints trying to solve this mistirious (*mysterious*) mistory (*mystery*) after stiring (*staring*) at the footprints for allmost (*almost*) an hour I’ve desided (*decided*) to follow them. After following these footprints for seven hours I saw the sun riseing (*rising*) while the footprints disappiring (*disappearing*). For that day I didn’t stop thinking about these footprints (2015/15).

(57) Richard was an ex-soldier so he had experiance (*experience*) with camping and had a lot of survival techniques that he had learned from work. Mark his son was not the type of out doors (*outdoors*) person Richard was, he prefaired (*preferred*) playing with his computer. Jane liked camping and

was preparing (*preparing*) some food for the trip while they were loading the truck (70/15).

In conclusion, generally, AA students who choose Paper A have good writing abilities. They can write long and reasonably good texts using well-structured sentences and good use of language. Their texts present good lexical variety in a chain of well-reasoned arguments. These students can communicate different ideas in a logical and coherent manner, and write interesting narratives. Nevertheless, many find it hard to produce text that is orthographically free from error and some consistently show difficulties in some elements of proper writing conventions. The examples given above specifically show SpLD writing which does not reach the top levels of writing proficiency, which is more sophisticated, complex and that includes amongst others, clarity, precision, as well as creativity and details in the descriptions.

5.3.3.1 Paper A – a wide range of essays and an overlap of abilities for AA and Rest Candidates

Paper A presents a range of proficiency levels in essays. There were poorer essays within this range that belonged to both candidates with AAs and candidates without AAs. Overall, in the analysis of these poorer essays, the general observation was that candidates were conversant in English, understood it and could communicate it in writing at varying degrees with limited proficiency. Writing was often characterised by inaccuracies in syntax, errors in spelling, and at times the arguments, descriptions or narratives could only be understood with strain. Some essays went out of point and were irrelevant when the title was not properly explored and understood, or when the style of writing was not appropriate to the context. This left a general impression that writing needed to be improved, in all aspects and qualities.

In these poorer essays, candidates found it hard to reach the word limit and to write in a well sequenced and coherent manner. In most cases, candidates struggled with spelling, vocabulary range, punctuation, grammar, the correct use of tenses, sentence structure and cohesive words and phrases. Some candidates found it hard to use good written expression, especially idiomatic expression and complex language. For example, several writing tasks requesting emails and articles lost their relevance when they did not follow the correct register and format that demands a formal style of writing. Similarly, those who wrote unrealistic and illogical storylines produced poor narratives. Therefore, despite opting for this higher-level paper, some candidates had considerable difficulties with vocabulary and syntax and would have made a better choice had they opted for Paper B.

(58) and (59) are samples written by AA candidates and taken from Paper A essays showing difficulties in writing. Sample (58) was written by a student whose reading comprehension score was 80 in Suffolk and the equivalent of 10 years 9 months in NARA. The spelling standard score was 79. The two sentences illustrate difficulties in different areas of language, including vocabulary, grammar and overall expression. The wrong use of plural for the regular noun 'student' and the spelling error that substitutes 'it's' (pronoun + verb) with the possessive pronoun 'its' are indications of difficulties in written language. The text suffers from the correct choice of lexicon where 'older life' clearly means 'in the past' and 'machines' is incorrectly replaced by 'mechanisms'. The persistent use of 'for example' throughout the essay is also an indication of poor lexical variety that affects cohesion.

(58) Technology makes young people creative when there is for example two student that is studying media that is about filming and it had everything with technology... Technology helps young people at work, for example in older

life a chair was made with hands, nowadays there are mechanisms that is programmes by the computer (AA81/15).

Similarly, sample (59) shows difficulties with spelling and poor language structure. This student had high reading comprehension standard scores of 136 in Suffolk and reached the ceiling score of 12 years 10 months on the NARA. However, the spelling standard score was much lower at 84. There is clear Maltese language interference in the first sentence: 'After it became seven' (*instead of: after seven o'clock*), translated from the Maltese: *wara li saru s-sebgha (after that it-became the-seven); 'going down' – (better version: snow falling and the sun setting) – Maltese: il-borra u x-xemx neżlin (the-snow and the-sun going-down (pl))*. The lack of punctuation does not give proper structure to the first sentence. The use of the word 'crevis' (crevice) is a low frequency word that is incorrectly spelt. 'Lost' is used three times in the last sentence, reducing the significance of its meaning, especially when used the third time.

(59) After it became seven we started to hed back to the hotel but with the snow and the sun going down we could not see well and one of my friends fell in a small crevis there was no way out or in and he broke his ankle so he was in deep pain. With all the panik we lost orientation and got lost we tried to get back to him but ended up getting lost further (AA238/15).

(60) (61) and (62) are also taken from Paper A and show typical difficulties in writing, this time, by non-AA candidates. In (60), 'advantageous' is used erroneously since the (human) subject cannot be modified by 'advantageous'. 'Have more advantages' should have been used. In (61), there is lack of subject-verb agreement ('this help'); The preposition 'by' is used incorrectly twice in the same sentence; There is a vague circumlocution in 'something by the mobile'; The second sentence is too long and should have been separated into two parts; The

incorrect use of 'what' for 'that' and 'generation it will...' is another mistake using noun-pronoun. In (62), the sentences include the omission of 'to' in the infinitive. The word 'ammount' is a spelling error and the final sentence has a casual tone for a conclusion.

(60) The internet has evolved which finds you everything you want easily...
Young people nowadays are more advantagous than younger people before
as new job opportunities are rising by the second which makes there life
easier (201/16).

(61) This help young people to make more friends by these things and even
if something happens something by the mobile it can help them. In these
days young people are having all what they need to help them and in the
future they will have more help from things like that and even the generation
it will change because it won't stay the same like the past everyday it gets
better and new things come out (2113/16).

(62) In conclusion my opinion is for us teens use technology, as long as it is
not an abnormal ammount. And use it for the right reasons, no reason why
not if it makes your life easier (1941/16).

Samples (63) and (64) are examples from Maltese Paper A essays taken from essays with good vocabulary use but poor writing, particularly in spelling. (63) comes from an AA student with an average literacy profile. N&N (Maltese comprehension) score was 104 and Maltese spelling was 85. English Suffolk score was 103 and English spelling was 84, showing a weakness in spelling in both languages. The three notable mistakes are 'facilita' for (facility), 'magħagla' for 'mgħaġla' (fast/hurried) and 'risercika' for 'riċerka' (research). Otherwise, the essay was well written with sound arguments about the advantages of computers in our lives.

(63) Il-kompjuter huwa *facilita* li tgħinek tistudja u tfittex fuq affarijiet ġodda. Fil-ħajja *magħagla* tal-lum din ma tistax issir. Madanakolu l-ħajja ta' madwari ma tkunx evolviet daqshekk. u l-affarijiet ta' *risercika* tkun għada qed issir minn fuq il-kotba (AA82/15).

(63a) The computer is a facility that helps you study and search about new things. In today's fast life this cannot happen. Nevertheless life around me would not have evolved this much. And things of research would still be done from books.

Similarly, (64) is another example of an essay written by a Paper A student without AAs. The argumentation in the text is coherent and logical, explaining the benefits of computers in our lives and giving details of the disadvantages that this brings with it. Despite the clarity of thought, the text has plenty of spelling mistakes in high frequency words such as 'jesisti' for 'jeżisti' (it exists), 'tiħu' for 'tieħu' (it takes), 'iġifieri' for 'jigifieri' (that is) and 'nider' for 'nidher' (I appear).

(64) Madanakollu, kieku ma kienx *jesisti* l-kompjur jew kieku jirnexxili neliminaħ minn *ħajtu* ħajti *tiħu* *xegħra* oħra. L-ewwel ħaġa kieku nħossni iżjed kuntenta u nerga nibda nsir extrovert *iġifieri* li nkun *kapaċċi* nagħmel "eye contact" u nkun kapaċi nkompli jew nibda *konverzazzjoni* meta nkun wiċċ imb'wiċċ mhux wara "screen". Nibda *ngħamel* iżjed *eżertizju* biex *niħu* ħsieb *saħti* aħjar u *nider* aħjar (1457/15).

(64a) Nevertheless, if the computer did not exist or if I manage to eliminate it from my life my life takes a different turn. Firstly, I would feel happier and I become extrovert again which means I would be able to make 'eye contact' and I would be able to continue or start a conversation when I am face-to-

face and not behind a screen. I start making more exercise to look after my health better and look better.

5.3.3.2 Paper B – More similarities between AA and non-AA scripts

As expected, there were fewer good-quality essays and more poor-quality essays in Paper B than in Paper A. The writing in Paper B was more basic, functional and less creative than Paper A texts. Candidates with good proficiency levels would choose to sit for Paper A and those with challenges in language tend to opt for the less demanding Paper B. In fact, a substantial number of essays in Paper B demonstrated problems at all levels of written language. Nevertheless, the good quality essays at Paper B typically had basic and satisfactory functional English. Expressive language was scant, and descriptions of persons, events or things did not go into detail nor demonstrated good writing qualities. Arguments tended to be matter-of-fact and lacking in deep thought and analysis. Vocabulary was limited with grammatical inaccuracy, spelling and punctuation errors, and often inconsistency in the use of the correct tense. At times, these made reading difficult. (65) and (66) are two samples written by AA students. The student who wrote (65) achieved a reading comprehension score of 88 in Suffolk and the equivalent of 10 years, 4 months in the NARA test. The spelling test result had a standard score of 91. The student who wrote (66) had a reading comprehension standard score of 115 in Suffolk and the equivalent of 11 years, 4 months in the NARA test. The spelling age was 93.

(65) It was eleven in the morning we were travelling in Africa in a huge bus.

This bus had one hundred seats on every side. It wasn't *comfortable*. By the time we were travelling I see shadows outside the window and I hear a

creature moving in the tall grass. My friends were making a lot of sounds and singing and dancing (AA6162/15).

(66) She left at around five in the afternoon and *wasnt* coming back till tomorrow and so it was the time to started decorating the place. I prepared food and *bevrages* for *every one* and I also *downloaded* the latest music from the internet. It was perfect. By eight o'clock everyone had come and we celebrated till around one in the morning. We could have continued but the police had to shut everything down because we *where* making *to* much noise (AA5466/15).

Those with the poorest levels of proficiency demonstrated underlying difficulties that clearly went beyond writing. For example, a number of candidates did not understand the title correctly and went out of point. Many struggled to write to the word limit. At the word level, there were difficulties with spelling and lexical variety. At the sentence level, there were difficulties with syntax and poor cohesion. Poor cohesion across paragraphs affected the structure and organisation of arguments or narratives. Often, the same cohesive devices and discourse markers were used repeatedly at the beginning of sentences, reflecting a poor repertoire of lexical variety. As a result, this brought about poor coherence of writing with poor connections between ideas and arguments that often did not follow established conventions of the genre.

Samples (67), (68) and (69) are illustrations of texts written by non-AA candidates. These show severe difficulties at the word level. Spelling is poor throughout. Words like 'rajtin' (writing), 'bikos' (because) and 'gank' (junk) are influenced by Maltese orthography and phonetics. For example, in the word 'gank', the affricate represented by 'j' in English is represented by the Maltese letter 'ġ'. The sentence structure is broken and the ideas are

unclear. This makes it hard for the reader to decode the words and understand the sentences, making a second or a third read necessary. (67a) gives the corrected version of the spelling of sample (67).

(67) I am rajtin this bikos der are so money young popel tat hey downt now how to cook. And her ara mane popel that far to eat the have to go to bea gank foods. I ting they must make after scalls to teac young popel on how to make som simpell foods and how to cook heallty foods. And the are so money young kisols that ther moders wourk all day and they are no won to make them foods on ther tobells (6452/16).

(67a) *Corrected: I am writing this because there are so many young people that they don't know how to cook. And here are many people that for to eat they have to buy junk foods. I think they must make after schools to teach young people on how to make some simple foods and how to cook healthy foods. And there are so many young kids that their mothers work all day and there are no one to make them foods on their tables.*

The samples (68) and (69) are made up of a one-sentence-paragraph from narratives describing action. Both can be understood when read slowly and decoded carefully. However, the writing is overall weak, marked with difficulties at both the word level, in particular severe spelling errors, and long sentences that should have been separated. (68a) and (69a) are corrections of the spelling of the samples.

(68) Oncs, I rimember malta was being ateked by the Itelines and Ryan and I whier serandid by three pepoel and two of tham kame ateking my and I meniged to askap but Ryan was being heart I rean back to Ryan an I meneged

to find a knife and I killed them all at that bay awer Friendship bikem even stronger (5018/16).

(68a) Corrected: Once, I remember Malta was being attacked by the Italians and Ryan and I were surrounded by three people and two of them came attacking me and I managed to escape but Ryan was being hurt I ran back to Ryan and I managed to find a knife and I killed them all at that day our friendship became even stronger.

(69) When I was going to school I had an accident unfortunately I couldn't work or write because my hand was in the cast (gips) and my feet was in the cast (gips) too and my friend was there for me she was there when I needed her she was taking me for my lesson at school and taking my notes for me because time later I had my O'Levels coming by she was a true friend for me if she wanted she couldn't let time alone and she went for herself like the others" (5826/16).

(69a) Corrected: When I was going to school I had an accident unfortunately I couldn't walk or write because my hand was in the cast and my feet was in the cast too and my friend was there for me she was there when I needed her she was taking me for my lesson at school and taking my notes for me because time later I had my O'Levels coming by she was a true friend for me if she wanted she couldn't let time alone and she went for herself like the others.

A similar scenario was found across the Maltese essays. The good quality essays in this range lacked the 'academic' and 'literary-type' of writing. The language used was functional and adequate for explanations that do not require deep analysis and abstract concepts. Nevertheless, since most candidates sitting for the exam were native Maltese speakers, their

essays had the strong advantage of being backed by their fluency and knowledge of the first language. Even when the text was distant from academic and literary qualities, there was evidence of low-frequency words, content-specific and varied vocabulary, idiomatic phrases that were fluently used in the correct context, and overall better cohesion and coherence than that demonstrated in the English essays. To illustrate this, sample (70) shows a typical passage written by an AA student whose N&N (Naqra u Nifhem) score is 100 and spelling <62. Indeed, this score reflects good reasoning in writing albeit the difficulties with spelling:

(70) Il-flus ukoll *jistaw iwwaqawna* f'xi vizzji koroh li *jwasluna* f'hafna inwkiet li hadd mil-bniedem ma jkun jixtieq. Dawn *jistaw jwasluna għall-serq, vandalizmu* fuq xi hadd jew xi haga, *jistaw iwwaqawna* fil-vizzji tad-drogi u ta' *l-alcohol* u *bdawn* l-affarijiet mhux talli *inwaġġaw* aħna talli *ukoll inweġġaw* lil ta' madwarna li ma jixraqilhomx hekk (AA6158/15).

(70a) Translation: Money may also trap us into bad habits that lead us into big trouble that no human would want. These may lead us to theft, vandalism on someone or something, we may fall into drug addiction and alcohol and with these things we not only harm ourselves, but we also harm those around us who do not deserve this.

In contrast, samples (71) and (72) had a substantial number of difficulties at all levels of writing. (71) was written by a candidate who did not have AAs. The text has many spelling errors. The student explains the perils of computers by linking it to addiction, then moves on to other disadvantages and finally concludes by getting back to addiction. This shows lack of structured thought and an incomplete development of an argument that had to be revisited. The paragraph does not stop there and drags on without a proper conclusion, using the same arguments repeatedly in different parts. This confusion suggests that the student wrote the

ideas without creating a plan first. (72) was written by a student with AAs who had very poor standard scores in N&N Maltese at <62 and, in spelling <62. The writing shows general difficulties including challenges with conjugation, for example 'kien' (he was) for 'kont' (I was) and 'jilgħab' (he plays) for 'nilgħab' (I play) where the third person singular is used instead of the first person singular. The text gives an overall description of what the writer did at the grandmother's house. The second sentence is out of context and the paragraph leaves the reader with a sense of discontinuity.

(71) Alijja ħajti tkun aħjar għax jien naqa addikt al-kompjuter li manel kwazi gurnatu taqa u meta ma ikollix skola aktar noqod fuqu imm mijarju inkun aħjar għax noħroġ aktar nitkellem manies wiċċ im bwiċċ għax fuq il-komputer hafna drabi ma tkunx taf ma min jjaft titkellem u hafna nies ġew abbuzati imħabba ekk u minajr kompjuter tamel tajjeb għal ajnejk għax gurnat fuq il-kompjuter ħazin alik didmegja ajnejk ħin kollu bil eda hazin għal darek u is-saħħa tibda tonqos għax ma tkunx amit naqa ezercizzju fiziku u tkun tinqata qisek mid-dinja alik waħdek Imma xorta fiħ lis vantaggi mijaj il kompjuter is vantagg huwu issir edict emm minn huwa edict tal ħnizriet li emm fuq il-kompjuter u la darba bdejt matistax tiqed jekk ma mortx and xi ħadd li jejnekk jekk le inkundannat al dejjem... (6270/15).

(71a) Translation: For me my life would be better because I am a bit of a computer addict and I spend nearly all day (undecipherable) and when I do not have school I stay at it even more but without it I would be better off because I would go out more to speak with people face to face because on the computer many times you don't know you are speaking to and many people have been abused because of this and without a computer your eyes are better off because a day on the computer is bad for you damage your

eyes sitting all the time is bad for your back and health starts to decrease because you would not have done a little bit of physical exercise and you would be like withdrawing into a world of your own. But the computer still has disadvantages for me disadvantage is to become addict there are those who are addicts for junk/porn (ħnizriet) that are on the computer and once you start you cannot (undecipherable, probably 'stop') if you have not been to someone who helps you if not you are condemned forever...

(72) Il-kmara tan-nanna hemm soda kbira u kien żgħar kien norqod man-nanna meta kelli jkunn magħha bil-lejl. Fuq il-belt nanna kont idendel il-ħwejjeg. Wara l-iskola kien mmur id-dar tan-nanna u għamel ix-xogħol għad-dar, filwaqt in-nanna għamel l-ikel. Meta n-nanna tara t-televiżjoni fil-kmara ta' jagħx u nilgħab mal-gugarli tiegħi. Kien inħobb jilgħab fuq il-'kompjuter' jew naqra xi kotba fil-kmara ta' studju (AA5561/15).

(72a) Translation: Grandma's room there is a big bed and he was small he used I-slept with her when I he-had to be with her at night. On the city (should be 'roof' but the spelling of the two words is similar, 'belt' [city] and 'bejt' [roof]) grandma I-used she hanged the clothes. After school he used to go to grandma's house and he-did the house work, while grandma he-did food. When grandma watches television in the room of living (literal translation) and I play with my toys. He-used I-loved playing on the computer or I-read books in the room-of-study (literal).

5.3.4 Maltese as a first language

Maltese stood out as being the native language for the majority of students. This is a reminder that these learners have a certain depth of experience in Maltese, which they lack for their second language English. A few selected idiomatic expressions and colourful descriptions presented in (73) were taken from various essays of different proficiency levels in both SEC Maltese Paper A and Paper B (See Appendix 7 for more examples). These were written by both AA candidates and the Rest. Even though some have spelling errors, they were all used appropriately in the right context:

(73) *Għaliex meta ikellek problema serja jaħarbu jigru bħall ġrieden;*

Because when you have a serious problem (when you're in trouble) they (friends) run away (scatter) like mice;

Ħafna tfal jaqgħu f'din in-nassa;

Many children fall into the trap (fall prey);

Minn dakinhar, l-affarijiet ħadu t-triq għan-niżla;

From that day onwards, things started to take a downward path (deteriorate; take the slippery slope);

Noqogħdu taħt saqaf wieħed;

We live under the same roof;

Wasalt f'teqba t'għajn u mort dritt għall-universita';

I arrived in a shot and went straight to university (alternative translations: as quick as a flash, as quick as lightning);

In general, descriptions of places and directions were better explained in Maltese than in English. Sample (74) gives a typical description of the village square that is accurate and colourful. A case in point is the imagery used in the last sentence where the cooing of the

pigeons is compared to the grumbling of the villagers in the village square. The word for the sound of pigeons in Maltese is 'gerger' which translates to 'grumble', a verb that also means 'people complain'. (74) has a few spelling errors (in italics) with correct punctuation and good syntax. (75) also has an interesting description of a bustling village square. However, the passage contains poor punctuation and a number of spelling errors, some of which are high frequency words ('ġejj' for 'ġej'; 'naħħa' for 'naħa').

(74) Fil-pjazza tar-Rabat, waqt li int tkun qiegħed tosserva 'tista' tara ħajjet in-nies *għaddejin* għal xi qadja jew sejrin sal-knisja. Il-pjazza toffri xena mill-ħajja tal-Maltin moderni. Ħafna karozzi ma' *jifqgħux* u ħafna nies imħabbtin flimkien ma' dawn tara ukoll *x'anzjan* jixrob xi kikkra *kafe* waqt li jara d-dinja għaddejja. Il-pjazza toffri post ukoll għall-ħafna nies biex wara ġurnata ta' xogħol, *jifqgħu* ftit u *jiltaqu* mal-ħbieb tagħhom fil-każini. Wieħed fil-pjazza jista jisma *ukoll* il-ħamiem ta' fuq il-bjut igergru flimkien mat-tgergir ta' l-istess nies li tista' *tejd* għamlu l-pjazza qisha darhom (2387/16).

(74a) Translation: In the square in Rabat, while observing you can see the life of people passing by on an errand or going to the church. The square offers a scene from the life of the modern Maltese. Many cars do not stop and you see many busy people as well as some old man drinking a cup of coffee while watching the world pass by. For many people, the square also offers a place where they can stop after a day's work and meet their friends in the band clubs. In the square, one can also hear the pigeons on the roofs cooing together with the cooing (grumble/complaints) of the same people whom you can say have made the square (like) their home.

(75) Id-dar kienet *tider* qadima u *zlingata* l-għamara kienet *kolla* migrufa u mnaqxa, il-mirja kienu kollha trabb li ma tarax minnhom u is-sufani kienu

miksijin b'ložor bojod li maż-żmien bit-trab ġew griżi. Id-dar kienet kemm xejn kbira u il-ħoss kien qed jirbombja seww mad-dar u ma *stajnix* niġu *għall* konkluzjoni minn fejn kien *ġejj* il-ħoss. Isfel tad-dar konna *dornieħ* kollu iżda ma nstab xejn il-ħoss issa kien donnu naqas iżda xort kien *għadu jinstama* sew għalhekk iddeċidejna li *nitelgħu n-naħħa* fuq tad-dar fejn konna għadna ma morniex (2420/16).

(75a) Translation: The house was looking old and derelict the furniture was all scratched and peeled, the mirrors were all so dusty that you couldn't see through them and the sofas were covered in white sheets that turned grey with dust over time. The house was somewhat big and the sound was echoing all over the house and we couldn't reach a conclusion as to where the sound was coming from. We had searched everywhere downstairs but nothing was found the sound had decreased (lowered) but it could still be heard so we decided to go up to the top part of the house where we had not been.

Similarly, (76) – (80) are examples of Paper A text written by non-AA candidates showing good use of idiomatic expression in excellent narratives. (79) and (80) were extracted from Paper B and written by AA candidates. These samples are not taken from top quality essays but still demonstrate the fluency of the first language that comes more natural to most students, even if some find it hard to spell accurately:

(76) Għadni niftakar qisu l-bieraħ dik iż-ziffa tar-riħ fuq wiċċi, inħoss il-qtar milħien tal-baħar hekk kif nara ix-xemx nieżla. Kienet waħda mill-isbaħ ġranet ta ħajti u jgħaddi kemm jgħaddi żmien ma ninsija qatt (420/16).

(76a) Translate: I still remember like it was yesterday the breeze on my face, I feel the salty drops of the sea while I see the sun setting. It was one of the most beautiful days of my life and despite the passing of time I will never forget it.

(77) Bix-xemx tiżreg u r-riħ idellek; konna qisna id-di u id-do ma noqodux mingħajr xulxin; kelli seba' mitt sena sakemm inżanzana (kamera). insibha tistenna fuq ix-xwiek; l-baħar kien ċar Kristall; Ma stajniex nistennew sakemm nintefaw il-baħar; ħassejnieh (il-baħar) sħun banju bix-xemx tikwi; Il-kurżita' għelbitna; smajna ħoss tal-waħx; iż-żmien jgħaddi malajr u ma jħalli l-ħadd jistenna; F'kemm trodd salib; frott tal-immaginazzjoni; Maria illum ħallietna (420/16).

(77a) Translate: With the scorching sun and sticky wind we were like two peas in a pod who couldn't stay apart; I was so edgy to try out the camera for the first time. I find her waiting eagerly; the sea was crystal clear; we couldn't wait to jump into the sea; The sea felt like a hot balloon with the scorching sun; we were overtaken by curiosity; we heard a scary (eerie) sound; time goes by quickly and waits for nobody; very quickly (as fast as making the sign of the cross); (fruit of) figment of the imagination; Maria passed away.

(78) Il-Knisja tinxtgħel kollha u tiġi mzejna bl-ifejn damask li tistħajjilha palazz ta' xi granmastru (2278/16).

(78a) Translation: The church is all lit up and gets decorated with the finest damask that you'd imagine looks like the palace of a grandmaster.

(79) Kinet waħda minn dawk il-ġranet li kienet kešha ixxoq l-għadam u għallek qadna ġod-dar tan-nanna stess... Malli inżilna qisu ħmistax –il targa inalaq il-

bieb b'sabta u bil-qatgħa li hadd imsarni niżlu f'saqajja... Malli smajtu jgħid hekk ġismi kesaħ (AA6773/15).

(79a) Translation: It was one of those days that was chilling cold and so we stayed in grandma's house... As soon as we went down about fifteen steps the door shut with a bang and I got a (huge) fright (my intestines dropped to my feet).

(80) Fil-ħin waqt li tal-familja kienu qedin jirkellmu fuq in-nanna jien iddejjaqt nibqa' fejnhom fil-kcina għax ħassejt qalbi tinafass waqt li issemuha (AA6742/15).

(80a) Translation: At that time when the family was speaking about grandma I felt sad staying beside them in the kitchen because I felt my heart break (literal: squeeze) when they mentioned her.

5.3.4.1 Language Interference

Linguists consider bilingualism an advantage to language learners as it gives the bilingual two different language codes to access and moreover, one language can build on the other (Cummins, 1985; Dagnino, 2015). The learner's weaker language can be strengthened with the support of the dominant one. At the same time, both stimulate each other to various degrees because transference of language knowledge happens both within and across languages in an overlapping and parallel manner and not in sequential and discrete ways (Garcia, 2009). Following on Cummins' 'Threshold Hypothesis', at a certain stage of language development, a bilingual writer with a good level of proficiency should be able to clearly

distinguish between the two codes and write the two languages independently, accurately and correctly without interference of one language over the other (see Section 2.3.1).

The results of the analysis show that those who had good proficiency in one or both languages and good writing skills could distinguish clearly between the two language codes. Their texts illustrated a good grasp of the written register, with fluent, accurate and native-like use of the language. In contrast, there was clear evidence of language interference in the writing of those who had poorer proficiency. This generally happened in the weaker of the two languages, which, in this case, was mostly English. English texts showed strong elements of Maltese influence in the lexical choice and syntax. This was consistent with literature showing how students often tried to predict how the word could be spelled using L2 rules and vice versa. Some errors demonstrated reliance on the phonology of both languages, resulting in mixed errors (Palladino et al, 2016). In these spelling errors, English was structured on Maltese phonology and the long English text sentences were structured on typical Maltese syntax.

5.3.4.2 Maltese language Interference in English Writing

Samples (81) - (97) are taken from the English essays showing interference of Maltese at the sentence level. These samples are taken from both Paper A and B texts. (81) to (87) belong to the Rest candidates and (88) to (97) belong to AA candidates. Many are literal translations from Maltese, showing no sensitivity to the meaning in the context. Such translations changed the meaning of the text or made it hard to understand. Not all readers can make out the meaning especially if they are not exposed to Maltese.

(81) Sure, maybe they (young people) don't have *as much as problems as the elders, but they count as well* (1946/16).

This shows the incorrect use of 'much' with countable nouns (problems). Moreover, the wording for the comparison has an extra 'as'. The use of 'elders' is a literal translation. It has limited usage in English, while in Maltese, 'ix-xjuħ' is used colloquially to refer to parents and in neutral settings to refer to older people.

(82) It's not fair to say that nowadays life is easier as many things have changed *from a few years ago to now* (1951/16).

The use of 'from a few years ago to now' is not idiomatic. It is a literal translation from Maltese ('Minn ftit zmien ilu 'l hawn'). The correct phrase should read, 'over the past few years'.

(83) This shows us that in the past *there* life was *more difficult from now* (2113/16).

'Their' instead of 'there' is a common error found in many texts. The preposition 'from' is an incorrect translation of the Maltese 'minn' (*iktar diffiċli (minn) mil-lum*) in the context. It should be the comparative 'than' and not 'from'.

(84) "Another fact is that *young people of nowadays* tend to neglect writing their own thing". (1707/16).

Another literal translation from Maltese that includes the preposition 'of' (*iż-żgħażaġħ tal-lum*). Instead, it should read 'young people nowadays' or 'nowadays, young people'.

(85) *Nowadays many difficulties which had those in the past* are no longer a problem (2464/16).

Sentence (85) is structured on Maltese syntax. English uses a different word order with the subject preceding the verb. Moreover, in this sentence, the subject cannot be reduced to the demonstrative pronoun 'those'. The correct version may read: '... which people in the past had'.

(86) *The most thing that got affected throughout the years was dating*
(2464/16).

This is another example of a sentence built on Maltese syntax. In this sentence, 'most' is used incorrectly. It should follow the verb it intends to modify (*affected*). Moreover, the auxiliary 'was' would have been a better choice than 'got' in the written mode.

(87) *The most important thing that a teacher should keep in mind is that not the money that counts that you are coming, but the students that you are educating well for them to find a good job in the future* (2765/16).

(87a) *The most important thing for a teacher is not the money she earns but the students' education and their future.*

The syntax in (87) is confused because it follows Maltese word order. This is another sample showing literal translation. A correct alternative to it is (87a).

(88) *Today we have technology that is very improved from other generations"*
(AA2015/16).

The comparison is badly expressed in (88). 'From' should be replaced by 'compared to'.

(89) *We have many shopping complex one of them is the 'bay street' and we have a hotel's. The cheap once and that of the cost once* (AA6952/15).

In (89) 'complex' should be pluralised. The object pronoun 'them' should be replaced by the relative pronoun 'which' to refer to the subject 'shopping complexes'. The definite article preceding 'Bay Street' should be omitted since it does not require it. The plural quantifier 'many' should replace the indefinite article and the noun should be plural, hotels, not possessive. 'Once' is the result of Maltese pronunciation making 'ones' and 'once' homophonous. The idiomatic 'the costly ones' should replace 'cost' which needs to function as an adjective. 'More expensive ones' or 'others at the high (or higher) end' is more appropriate.

(90) We past from many places interesting like big bildings old and more, we past from a big fabrice that they make the cars... (AA6953/14).

'We past from' is a literal translation from Maltese 'għaddejna minn' and 'fabrice' is a non word that is influenced from the Maltese 'fabbriki' (factories).

(91) She looks like she have 17 years old but she have 19 years old. She is so open example if she have something in he stomach she say it (AA5943/16).

In (91) we see the incorrect use of the verb 'to have' instead of 'to be' which is a literal translation from Maltese. Wrong conjugation in the second sentence of the third person singular for 'have' (instead of 'has') and 'say' (instead of 'says'). The personal pronoun 'he' is incorrect (or a possible slip) and should be replaced by the possessive pronoun 'her'. These are basic errors that would be typical of primary school children.

(92) When you are from a small age you should notice how your mother or father are cooking you meals so you can do how they are doing your meal (AA6679/16).

'From a small age' is not acceptable English. It is a literal translation from Maltese. 'Very young' would have been more appropriate. In the last part of the sentence a better lexical choice would have been 'copy' instead of 'you can do how they are doing'.

(93) And it (cooking) *will cost u for the good* (AA6448/16).

(93) is a literal translation from Maltese ('tiswielek tajjeb'). 'You will benefit from it' or 'It is to your advantage' are better expressions.

(94) Once I got to the hospital they suggested I spend a night there in order to be *under their hands* (AA5266/16).

The correct idiomatic expression should be 'under their care'. This was translated literally from the Maltese 'taħt idejhom'.

(95) When someone trys to buly *someone from us we skip for each other* (AA5634/16).

The expressions *someone from us* and *we skip for each other* in (95) were translated literally from the Maltese 'xi ħadd minna' and 'naqbzu għal xulxin'. The correct versions should be 'one of us' and 'we stand up for each other'.

(96) The Ideal School probably to parents they tell you it must have politness, good behaviour and *disiplence*. I agree with that but however *not to much strict*" (AA5021/16).

In (96) the syntax of the sentence is structured on Maltese. There are lexical inaccuracies such 'the school must have' instead of 'must promote', spelling errors 'discilence' for 'discipline' and the redundant, incorrect 'but' preceding 'however'. The redundant 'much' in 'Not too much strict' also needs to be removed.

(97) In every fest there are fireworks and *'purcissjoni'* (AA5761/15).

The use of the Maltese word *'puċissjoni'* for 'procession' and the word 'fest' for 'feast' is also influenced by Maltese 'festa'.

Similarly, there was evidence of interference of Maltese pronunciation at the word level in spelling. (98) presents a number of examples taken from Paper A that illustrate this.

(98) 'Project' (project): This was a frequent orthographic mistake (English 'j' pronounced as an affricate which would be written as 'ġ' in Maltese).

'Compjuter' (computer) and 'sosajity' (society). This was another frequent orthographic mistake. The Maltese 'j' was often included in a word where it has the same pronunciation as in English.

'Ones' instead of 'once': Another common mistake owing to the fact that word-finally all obstruents in Maltese are devoiced. So /z/ is devoiced to /s/.

The following were isolated examples of Maltese versions used in English essays: Awstralia (Australia); Passaport (Passport); Abbandunat (Abandoned). This reflects the inability to distinguish the words as used in the two languages.

Another notable mistake made by many students, irrespective of AAs, concerned the English translation of the Maltese words *'jgħallem'* (to teach) and *'jitgħallem'* (to learn). In Maltese, these two verbs with distinct meanings have very similar roots *'j-għ-ll-m'* and *'j-t-għ-ll-m'*, the latter being the fifth form which is formed by prefixing t- to the second form of the verb (Borg & Azzopardi-Alexander, 1997). In English, they are completely different: 'teaching' and 'learning'. (99) and (100) show how these were incorrectly used:

(99) If the lesson will be once a week that would be enough to *learn* the children (6571/16).

(100) When you are growing up your perants should *learn* you how to preper your own food for school... (AA5945/16)

5.3.4.3 English Language Interference in Maltese Writing

To a much lesser degree, there were instances where Maltese essays showed interference from English. The pattern was the same as in the English essays. The most common mistakes were in translating literally, mixing of the genders and incorrect spelling resulting from confusion of the Maltese orthographic symbols with those used for English. These mistakes were typical of Maltese essays of poor quality. For example, sample (101) was written by an AA candidate who had low overall average literacy scores in English (Suffolk standard score of 89; NARA comprehension at the ceiling age of 12.11 years; NARA accuracy 10.08 years and spelling score of 88), but poor scores in Maltese (reading comprehension Naqra u Nifhem standard score of 63 and spelling score of 66). The English expression ‘at the end of the day’ cannot be translated word for word. *Fl-aħħar mill-aħħar* at the beginning of the sentence would have been the correct equivalent.

(101) Id-dar tan-nanna, fil-familja tieghi hija magħrufha ukoll bħala d-dar fejn tiltaqa il-familja kollha. Naħseb jien li kull familja għandha post ta’ ġbir *fl-aħħar tal-ġurnata* (AA5493/15).

(101a) Translation: Grandma’s house, in my family it is also known as the house where all the family meets. I think that all families have a place of gathering at the end of the day.

Sample (102) was written by an AA student who has below average standard scores in Maltese reading and comprehension of 82 and spelling at 86. In contrast, the English literacy scores were strong with the student achieving a standard score of 111 in the Suffolk reading comprehension test, the ceiling score of 12.11 years in both NARA comprehension and accuracy and 95 in English spelling. In relation to sample (102), the correct Maltese phrase '*li titkellem ma'*' (to speak with) and '*fil-grupp li toqgħod ma'*' (the group you hang out with) requires the use of the preposition 'ma'' (with) joined to the co-referential pronoun '-hom' (them), hence 'magħhom' (with them), 'miegħu' (with him). 'Toqgħod ħinek' instead of 'tqatta'' is a literal translation from 'spend time'; 'Unfortunatament' does not exist in Maltese since 'un-' is not a negative prefix. 'S-' is used instead, hence 'sfortunatament'.

(102) Hemm dawk in-nies li tafhom, imma qatt ma titkellem maħghom fil-fatt huma l-ħbieb biss tal-vista. Imbgħad hemm il-ħbieb *li titkellem ma, hu toqgħod ħinne* magħhom... *Unfortunatament* hemm dawk in-nies li jkunu ħbieb *go wiċċek* imma jgħidu kontrik minn wara darhek. Imbgħad hemm dawk in-nies, wieħed jew tnejn li normalment ikunu *fil-grupp li toqgħod ma* (AA62/16).

(102a) Translation: There are those people that you know, but that you never speak to in fact they are only friends by sight. Then there are friends that you speak with, and spend time with them... Unfortunately there are those people that are friends to your face but they talk about you behind your back. Then there are those people, one or two who normally are in the group that you stay with.

The word 'niksbu' (we achieve) instead of 'negħlbu' (we overcome) is used in (103). In fact, these have the opposite meaning. 'Modijiet' is used instead of the irregular plural form 'modi'

(ways); 'indiskreabbli' (from English 'indescribable') instead of 'ma tiddiskrivihomx' or 'indeskrivibbli'.

(103) Huma jistgħu jkunu hemm għalina f' mument i diffiċli u jgħinuna *niksbu* l-ħażen u l-problemi. Hemm ħafna modijiet kif tiltaqa' ma nies godda. Il-ferħ li tista' gġib meta tkun mal-ħbieb hija indiskreabbli (AA75/16).

(103a) Translation: They can be there for us in moments of difficulty and help us overcome wrong-doing and problems. There are many ways to meet new people. The joy that you can get when you are with friends is indescribable.

In (104), the adverb 'iktar' (more) should follow the verb naf(ha) (know her) in Maltese. 'Nafha iktar' instead of 'iktar nafha'. The object pronoun '-ha' at the end of 'niftakarha' (I remember her) and the demonstrative pronoun 'dik' are in the wrong gender since they both refer to the masculine noun 'mument' (moment) 'niftakru'/'dak' not 'niftakarha'/'dik'.

(104) Saqsejtha ħafna mistoqsijiet biex insir *iktar nafha*... Nista ngħid li nibqa niftakarha għall-ħajti *dik* il-mument (AA257/16).

(104a) Translation: I asked her many questions to get to know her better... I can say that I will remember that moment throughout all my life.

In (105), the noun with the possessive pronoun suffix takes no article: ommi (my mother) not l-ommi (the-my mother). 'Supportiva' is not a Maltese word and 'ta' appoġġ' or 'sapport' should replace it.

(105) ...*l-ommi* kienet vera *supportiva* u qattli xi ħaġa li qatt ma ħa ninsa... (5868/16)

(105a) Translation: ... The-my-mother was very supportive and told me something that I will never forget...

In (106), ‘Suggerimenti’ is the Maltese for ‘suggestions’ and should replace the word occurring here with the Maltese plural suffix ‘-i’.

(106) Il-ħbieb jistgħu jgħinuk meta għandek problemi. Kbar u ma tafx x’sে tagħmel, imma il-ħbieb qietuk *suggerioni* għal problemi li għandek (AA6198/16).

(106a) Translation: Friends can help you when you have problems. Big and you don’t know what to do, but the friends give you suggestions for the problems you have.

In (107), ‘tijaja’ could have been an attempt to refer to the 1st person possessive pronoun ‘my’ in the feminine. ‘J’ in ‘jurnata’ is a mis-spelling of ‘ġurnata’, probably from the English pronunciation of ‘j’ as an affricate in words like ‘judge’.

(107) Id-dar tan-Nanna hija post f’qalbi! id-dar tan-nanna hija id-dar tijaja Fejn qaddejt ħafna min ħajti hemm hu hija post li *educat* ruħu biex inkun it-tifla li Jien illum il-*Jurnata* (5523/15).

(107a) Translation: The house of grandma is a place in my heart! The house of grandma is my house where I have spent most of my life there and is a place that he-educated-himself so that I will be the girl that I am nowadays.

The lack of punctuation makes the sentence-paragraph (108) hard to read. There is inconsistency in the gender agreement. ‘Kbir’ (masculine for big) and ‘lussuża’ (feminine for luxurious) are two adjectives used to describe ‘dar’ (house feminine). ‘In-nannu kienet’ (the grandfather was) is another mistake in gender. ‘Nithassarha’ (nithassar (I am sorry) lilha (for her) = nithassar + ha) could be the result of poor knowledge of morphology or just a spelling error in Maltese.

(108) Id-dar tan-nanna vera *kbir* u lussuża u kont ngħidilha biex noqgħod għandek u kienet tgħidli qogħod bil-qalb kollha għax miskina kont *nithassara* għax toqgħod *waħidha* għax n-nannu *kienet* miet kellu disgħin sena u bkejna ħafna għalih u alla jaħfirlu dejjem kont għalija kien jgħidli (AA6672/16).

(108a) Translation: The house of grandma he-is very big and luxurious and I used to tell her to stay at yours and she used to tell me stay with all my heart because poor her I used to pity her because she lives on her own because granddad she-had died he was ninety years and we cried a lot for him and god forgive him you-were there for me he used to tell me.

The following are examples that show interference of English at the Maltese word level in spelling:

(109) Kien is-Sibt u jien ma *kelliex schola*" (AA6814/15).

(109a) Translation: It was Saturday and I did not have school.

The Maltese word for school is 'skola'. The incorrect spelling 'schola' has been influenced from English.

(110) ...*conna* ħadna *ħafna pjaċir* u kull darba li nara ir-ritratti nerga niftakar kollox (5606/16).

(110a) Translation: ... we had great fun and every time that I see the photos I remember everything again.

(111) Antic (antik); Avucat (avukat).

(111a) Translation: very old; lawyer.

In (110) and (111), the sound for [k] is written as the letter 'c' instead of 'k' in Maltese. The correct spellings are 'konna', 'antik' and 'avukat'. Instead, the letter 'ċ' (with a dot) in Maltese

is used for the sound [tʃ]. The use of 'k' for 'c' was a common mistake made by many students with low proficiency levels in Maltese.

5.3.5 Formality and Informality – Correct Style and Register

The distinction between the good texts and the poorer ones also stands out in the formulation of writing and the language used. Linguists conceptualise language as a set of 'registers' through which schooling activities are accomplished. Therefore, students need to be conversant with the different (writing) registers in order to accomplish the purposes of these activities across grades and subject areas (Schleppegrell, 2012). This knowledge in linguistic literacy is considered on a metalinguistic level, giving students control over linguistic variation, awareness of audience/readers' expectations and the correct selection of modality, genre and register for their essay (Ravid & Tolchinsky, 2002). On similar lines, learners would need to demonstrate an academic proficiency in writing (and other forms of communication) that is distinct from communication in social and informal settings. This kind of linguistic literacy is a meta-linguistic competence that helps learners in more complex situations that include decision making, comprehension of complex learning material, evaluation, and comparing and contrasting.

In the analysis of text, the use of the proper register stood out very clearly. Candidates who produced good texts made use of the appropriate register in their writing. The text distinguished between formality and informality in the correct situations. In contrast, the poorer texts demonstrated a kind of writing that was informal and resembled casual conversation. This showed that they lacked the linguistic literacy needed for an appropriate composition. Some researchers have argued that texting and social media language is

changing the way we are writing, arguably eroding the quality of writing with more non-standard uses and contracted forms of English (for example, Dansieh, 2011). (112) is made up of examples that illustrate informal language used in the essays (*in italics*). These were written by both AA candidates and non-AA candidates and taken from Paper A and B and demonstrate the incorrect use of the written register:

(112) I thought that I had been prancked *or something* so I went home (AA15/15).

Well for starters in a society that we are living in there is many pressure and stress (1482/16).

For those people who are working *we can say* that it is easy to find were to work if you have school certificates (2338/16).

It had maybe about fifty stairs to climb (2001/16).

So what he did was he changed the branching rods into triangles (1879/16).

“On the day of my sixthteen birthday all those questions became reality *sort of*” (700/16).

This was an introduction to an essay: “*As you know*, there are many different teachers all around the world” (2765/2016).

“*So, yes*, young people at that time were physically working hard” (2743/16).

I was too scared *I was gonna mess up* (2607/16).

It was just a normal day at school, *you know*, the kind where you wish something would happen to alleviate the mind-numbing boredom (2652/16).

...isn't that far in distance but for me, memories and daily routines in a childhood location is really difficult *when you think about* (695/16).

“Due to the improvement of technology *in basically all the sectors imagineable* we can live easily lives” (2865/16).

Hey Andrea how are you? I hope you're owkeii anyways I want to make a surprise... (5231/16).

Well a good idea of a school place is where you go to learn (5053/16).

Nowadays you can barely trust anyone except your best friend *or maybe* your family because these are truly the people who wish you the best of luck (AA5096/16).

Examples in (113) are taken from Maltese essays. These samples also show informality in writing (presented *in italics*). Some of the words and phrases used such as ‘balla flus’ (a lump sum of money) could easily be classified as slang. Other examples include informal contractions typically used in conversation or written text messages (sms - short message service) such as ‘qas’ for ‘lanqas’ (not even), ‘naqa’ for ‘naqra’ (a little), and ‘ħabba’ for ‘minħabba’ (because of).

(113) I-atmosfera li kont noħloq fil-kamra ckejkna tiegħi, *qas* biss kienet viċin tal-atmosfera fl-istadju tal-‘Camp Nou’” (110/16). (‘lanqas’)

Translation: The atmosphere that I used to create in my small room, was nowhere close to the atmosphere in the stadium ‘Camp Nou’.

“Id-dar tan-nanna hija kbira *naqa* mhux ħażin” (6014/16). (‘naqra’)

Translation: Grandma’s house is quite big.

Mort għandha *hekk* għat-tmienja u nofs ta' filodu (AA6814/15).

Translation: I went to her (like) around half past eight in the morning.

Iżda ġieli issib xi wieħed jew xi klika li jamlulek ħsara Il-Ħbieb huma *ġieli ok u ġili ħżiena* (6035/16).

Translation: However sometimes you find that one or a group that causes you harm The Friends are sometimes OK and sometimes bad.

Iż-zija ħadet ir-ruħ xħin semat li mhux *ħabba* li kienu jamlu riduwhom izda *ħabba* ('minhabba') linvestigazzjoni (5756/16).

Translation: The aunt was relieved when she heard that they were wanted not due to what they did they but because of the investigation.

Imma hawn min għandu *balla flus*, ikollu villa biex imbgħad ma jkunx kuntent sewwa jgħidu "fid-dinja mhawnx kuntentizza" (AA6124/16).

Translation: But there are those who have lumps of money, villa and then they are not happy they are right to say "there is no happiness in the world"

5.3.5.1 Direct Address – The Second Person Singular

It was very common for candidates to use a style of writing that although grammatically correct and acceptable in certain contexts, comes across as informal and conversational in the way it addresses the reader directly in the second person singular ('you'). Once more, this shows that a substantial number of candidates do not use the proper register during high stakes examinations, showing poor understanding of the correct rules in writing. In (114), the text counts 108 words, with the pronoun 'you' featuring eleven times and the possessive 'your' five times:

(114) “It is very important in **your** life to have friends. The more friends **you** have the better. So when **you** have friends **you** are not alone and at least **you** have someone to talk to and joke with. So this is about true friends. When **you** have a big problem and **you** find **your** friends on **your** side. **you** will realise what are true friend. Thats why if **you** have a lot of friends it is better beacause **you** have more friends to help **you** out. So always talk politly with **your** friends and do not say words that are inpropiet. So **you** should always apriciate **your** friends” (AA5765/16).

(115) “The word ‘Selfie’ means that **you** taking photos of **yourself** or taking photos of **yourself** with friends or other people that **you** know and post them on the Internet” (AA5296/15).

(116) - (119) are introductions and conclusions taken from texts written by both AA students (116) and (117), and non-AA students (118) and (119) in both Paper A and B. In some of these samples, writers use an imperative verb form to advise the reader about the topic. Evidently, those using this approach went out of point when the style of writing was incompatible with the genre of the essay. For example, some texts below are taken from the narrative essay on friendship with the title, “Write a short story entitled ‘A True Friend’” (Examination Paper 2016). Writing in the second person singular is not appropriate for this genre.

(116) This story is about A true friend I have a true friend and I can tell **you** some staff about how A true friend can be (AA5044/16).

(117) If **you** want a true friend you have to be true to **your** friends, that is what I learned in life (AA5050/16).

(118) This here will mention a few and good examples that make a good teacher. Firstly **don't** yell for no reason, give second chance and **let** the

students redeem themselves and if a student is alone **go** make him or her some company (1536/16).

(119) “In school **you** find a different kind of teachers. **you** see those that are too friendly, those that don't love and are there just for the paycheck at the end of the month and even those that are friendly but also serious. **You** mostly start labelling all the teachers from the first few days of school. Here I will be telling **you** what makes a good teacher” (1538/16).

As expected, this was also common in the SEC Maltese essays from both AA (122) and non-AA students (120) and (121). (120) is a conclusion to an essay that gives it a paternalistic tone. In (121), the reader is addressed with, ‘Ha nejdlek għala huwa daqshekk importanti dan ir-ritratt...’ (Let me tell you why it [photo] is so important to me...). (122) gives instructions on money management, with advice like, “Ibza’ għalihom” ([You] look after them [money]); ‘Ma nonfquhomx bl-addoċċ’ (Let us not spend them [money] carelessly).

(120) Il-llum il-gurnata huma ffit li issieb ħbiberija li tkun vera għallura amel minn kollox biex ma titlifhomx u zomhom għall qalbek. Għandek tkun int waħda minnhom li tkun il-vera ħabiba fil-ħajja u turijhom xinhu tajjeb u hażien (6260/16).

(120a) Translation: Nowadays you rarely find friendships that is true therefore do everything so that you do not lose them and keep them to your heart. You (fem) should be one of them that is a true friend in life and show them what is right and wrong.

(121) Ir-ritratt li ħadna dakinhar għadni ngħożzu sal-lum. Għax huwa wisq importanti biex namlu go kaxxa u nħallih hemm. Ha nejdlek għala huwa daqshekk importanti dan ir-ritratt... (5613/16).

(121a) Translation: I still treasure the photo we took to this day. Because it is too important to be placed in a box and left there. Let me tell you why this photo is so important...

(122) Il-flus għandna nibzghu għalihom. Ma nonfquhomx bl-addoċċ! Tonfoqx il-flus, fuq xi ħaġa li m'għandekx bżonna. Ibza' għalihom! Għax wara jiddispjaċik ħafna! Għalhekk għandek, toqgħod attent, x'tixtri, Ixtri l-affarijiet li l-ewwel ikollok bżonn, l-affarijiet materjali l-ewwel. L-affarijiet tal-ħajja ta' kuljum!! (AA5037/15).

(122a) Translation: We have to look after money. Let us not spend it carelessly! Do not spend money, on something that you do not need. Look after it! Because afterwards you will feel very sorry! That's why you should, be careful, what you buy, Buy the things that you first need, the material things first. The things for everyday life!!

5.3.5.2 The Relationship between Spoken Language Proficiency and Writing

As shown in this section (Section 5.3), many of the weaker texts, especially in Paper B, show how a substantial number of writers at SEC level do not yet have the academic readiness in the skill of writing. Many samples of texts have illustrated the strong link between conversational and written language (see Sections 5.3.5 and 5.3.5.1) that consequently render texts written in the wrong register. Nevertheless, when the Maltese scripts were compared to the English ones, there was evidence that the native Maltese speakers benefited greatly from their verbal fluency in the language (see Section 5.3.4). Even if their texts did not follow the proper register for writing, good vocabulary was used to give clear and rich

descriptions, more accurate and varied idiomatic expressions, better syntax, better cohesion and coherence than those found in the English texts.

This shows that conversational language is a strong feeder to written language, enhancing it in several ways. It is not a replacement to knowledge of proper writing register, but it gives considerable advantage over English which is the second language for most of the bilingual candidates sitting for SEC. Considering this, those who are not proficient in spoken English will struggle with cognitive processing during encoding (the process of translating thoughts into the written format). Evidently, this added task of writing in the second language further increases demands on the cognitive load, making writing a more laborious task (O'Rourke et al, 2020; Snowling, 2000). As a result, the non-language subjects taught through textbooks in English will make it hard for students who do not have a sufficient level of proficiency to read with understanding. Writing notes and homework in English will be more challenging. In conclusion, therefore, fluency in spoken language is a necessary but not sufficient skill for good writing. Knowledge of the written register is a separate skill that needs to be developed since it is essential for academia.

5.3.6 Coherence - Thoughts, Ideas and Writing

The essays with a good standard of writing were those expressing clear and logical thoughts in descriptions, arguments, and narration. Coherent texts are clear in presentation, starting with a proper introduction and leading the reader to the body. The content in the body is well sequenced, comprehensive and relevant to the topic. It links in a cause and effect manner when it is required. The body connects neatly to the closure of the essay, usually by way of contemplation, a reflection or a final impression. At the end, the whole text has to read as

one whole piece in unity. It was noted that the good *descriptive* essays were those that gave an accurate picture of the surroundings leaving a vivid image in the reader's mind. Good *argumentative* essays presented opposing views in a clear way. The writer took a clear position that was well explained and defended. The good *narrative* essays presented a clear storyline and characters that were made 'alive' with good descriptions (see Section 5.3.2.4).

5.3.6.1 Maturity of Thought

The general observation was that coherence in texts was the result of clear thoughts expressed in good writing. This means that candidates needed to have two interconnected elements – maturity of thought and good writing. Maturity of thought gives writers clear concepts, arguments, opinions and story lines that link well and connect in a logical and sequential manner. In fact, the content of the text was very revealing of the candidates' thoughts, values and attitudes, academic background, and how well-read they were. The second skill - writing - is needed to bring across these thoughts on paper. Writing is a multifactorial skill that assimilates many elements, including spelling, syntax, cohesion and coherence. The combined result of these reflects whether the candidates have achieved knowledge-transforming writing as opposed to knowledge-telling (see Section 2.6.2).

To observe the difference between these two types of writing, it was necessary to analyse the content and hence elements of the discourse in the essays. The higher order ideas were very distinct from those that were not. For example, in the essay on whether young people should be taught how to cook, the most salient idea was the value of independence. Many wrote a whole essay around this idea, giving practical examples on why this is important. The ones that used higher order ideas and reasoning showed more topic depth through evaluation and

analysis. The following are examples: cooking helps with saving money; eating healthy; learning a new skill; complimenting someone or thanking someone; a way of sharing chores at home; being open to new tastes and discovering other cultures; helping with creativity; helping with appreciating others' food; and cooking may be a way of discovering new talents that may lead to a career in catering.

Similarly, in the essay on 'friendship', the poorer essays used a knowledge-telling strategy and focused on describing what a friend is. In these essays, friendship was about "sharing secrets" and going out together to different places at the weekend. Those with a better evaluation and deeper analysis of friendship spoke about the moral, emotional and psychological dimensions of friendship. For them, friendship included unconditional love, trust, being nonjudgemental, and offering support during times of crisis like bereavement, hospitalisation or lending an ear when there was a crisis at home with the parents.

5.3.6.2 Coherent Text

(123) – (127) illustrate coherence at different levels in texts. Both AA candidates and non-AA candidates could write coherent texts to varying degrees, nevertheless, the essays with the top marks were the ones that came across as the most coherent. Hence, 'coherence' is a fundamental quality in writing. (123) is a good example of coherent text from an argumentative essay in Paper A. It is about how technology has facilitated education. It starts off by saying that education has become harder but this has been mitigated by technology. The argument is strengthened by comparing the way students did research in the past. Coherence is achieved by presenting the arguments in a sequence, concisely and in a logical

manner. On the word level, 'hard' was used repeatedly in (123) and 'difficult' could have been a good substitute:

(123) Even though education did get harder and now students have more things to study, it is not hard for them to do some research as now each household has a computer or some other type of technical device, which could help them out. In the past where internet didn't even exist, students had to go to libraries, which had certain opening hours, and look in books (8/16).

(124) is good example of a coherent text taken from the body of a well written Maltese essay. The text has no spelling errors and is presented with convincing arguments that show the need for healthy friendships in life. The text gives a mix of idiomatic expressions that are used accurately and appropriately within the right context. At the end, the argument is supported with a reference to scientific research in favour of relationships. The wording of this is aligned neatly with the rest of the paragraph without sounding academic:

(124) Il-ħbieb veri tal-ħajja, għandna ngħozżuhom sew u nżommuhom qrib tagħna. Fiz-żminijiet koroh, tista' tgħid li dejjem se ssibhom ħdejk, sabiex joffrulek *xaqq ta' dawl*, meta titlef kull tama. Jirnexxilhom *iqawwulek qalbek* sabiex dejjem tkompli miexja 'l quddiem, u huma dejjem lesti sabiex jagħtuk *daqqa t'id*. Il-pariri mingħand sħabna nibqgħu neħduhom anke meta nikbru. F'affarijiet bħax-xogħol, *għax ħabib fis-suq, aħjar minn mitt skud fis-senduq*. Ovjament il-ħbieb ma jkunux ħdejk fi *żminijiet ta' mrar* biss, iżda tkun tridhom jifirħu miegħek fiz-żminijiet ta' *celebrazzjoni* u tgawdija. Żgur li kulħadd għandu bosta memorji sbieħ tal-ħbieb tiegħu li jibqa' jiftakarhom għal dejjem! Barra minn hekk, bosta studjużi u riċerkaturi jistgħu

jikkonfermaw li meta tqatta' hafna hin ma' dawn il-ħbieb, il-moħħ jipproduci bosta kimiċi tajbin, li jagħmluk tħossok ferħana. Għalhekk nistgħu nikkonkludu li l-ħbiberiji tagħna huma ta' benefiċċju għal saħħitna!

(124a) Translation: We should treasure the true friends in life well and keep them close to us. During the hard (ugly) times, you can say that you will always find them at your side, so that they offer you a ray of light, when you lose all hope. They manage to strengthen your heart (give you the courage) to keep walking forward, and they are always ready to give you a helping hand. In matters related to work, a friend in the market is better than a hundred coins in the purse. Obviously friends will not be at your side during the bitter times only, but you'd want them to be joyous with you during the times of celebration and enjoyment. Surely everyone has plenty of pleasant memories with their friends that they will remember forever! Apart from this, many researchers can confirm that when you spend plenty of time with these friends, the brain produces a variety of good chemicals, that make you feel happy. Therefore we can conclude that our friendships are beneficial to our health!

Sample (125) is from a Maltese language essay about friendship (Ħbiberija). The overview is very mature, mentioning values of true friendship that is based on unconditional acceptance. This shows mature thinking and analysis of the topic, in spite of some grammatical errors.

(125) Dawk it-tip ta nies kull ma jaraw quddiem għajnejhom huma oġġetti materjalistiċi, minflok jaraw persuna għal-valuri tagħhom. Ħabib ta' vera huwa wieħed li jaċċetak għall dak li inti u ma jimpurtahx kif tidher min barra. Ħafna tfal jaqgħu f'din in-nassa. Fejn jaħsbu li biex jiġu aċċettati għandhom bżonn jidru differenti jew jaħsbu differenti, kif ukoll jgħixu differenti. Jilbsu

maskla biex jiġu aċċettati bil-personalita differenti tagħhom. Li hija biss reċta biex jiġu jintogħbu (26/16).

(125a) Translate: All that those kinds of people see in front of their eyes are materialistic objects, instead of seeing a person for their values. A true friend is one who accepts you for what you are and does not mind how you look (appear) from outside. Many children fall into this trap. Where they think that to be accepted they need to look different or think differently, as well as live differently. They wear a mask to be accepted with their different personality. Which is only an act to become liked.

(126) is also a coherent error-free piece of text that goes into the details of how a teacher should motivate a class. It is analytical, describing the importance of motivation for learning, the importance of class resources and the attitude of the teacher to make learning interesting. The rest of the essay describes other aspects of a dedicated teacher, such as detailed feedback in corrections, after-school lesson preparation and preparation during the summer months:

(126) The most important thing a good teacher must know how to do is to capture the attention of twenty five students all in one class so that they pay attention to him. Therefore a teacher must keep the lesson interesting by showing them what they are learning in real life, if it is possible, and prepare items such as powerpoints and videos to keep the students interested. He must also be able to joke at times so that students can have a bit of fun while learning, thus making the usually dreadful and boring process of soaking in information which the children normally don't like a bit more bearable (27/16).

There were a few texts like (127) that had mature ideas and analysis, but which were not expressed well in writing, with poor grammar and lexical choice. For example, 'todays life' for 'nowadays'; 'the most persons that are getting hurt' should read 'the persons that are hurt the most...'; 'their' for 'there'. As a result, these suffered in coherence. The following are examples from Paper A:

(127) In todays life the number of a unfortanate seperations in families is increased and the most persons that are getting hurt is the young people. They see there parents fight and seeing them in a separate houses living there lifes away from each other is dreadful for them. They starts to feel alone and abandend. And the struggle when they see there mother in a deprection they will feel the pain of there mother's (2356/16).

5.3.6.3 Incoherent Text

Texts that were poor in coherence were common, especially in Paper B. All these essays showed great difficulties in grammar and lexis. (128) is an extract from the essay on cooking. The argument is made in favour of teaching young adults to cook. However, this argument is not carried through with the last sentence that seems to give away the need to learn (first argument). It states that after all, there is no need for cooking because precooked food can be bought and heated:

(128) Personally, yes they need to know how to cook food. Because when they are going to be older enough, they can't just stay with their parent forever, they need to go to new house or appartament with knowing of how to cook and manage their kitchen and without knowing how to cook, theyre

going to get hungry, but in stores there are foods that are prepared and you need to heat it and wait for period of time.

Sample (129) shows poor coherence that could be related to poor vocabulary. The candidate seems to imply that a 'summer vacation' must include going abroad:

(129) For alot of people in malta summer is a way of having fun whether if you go to the beach or a summer vacation. For example my uncle's summer vacation is going around and running with a motorcycle bike (6047/14).

Sample (130) is an introduction to the essay about grandmother's house. The reader is presented with three disjointed pieces of information - the members who live at grandmother's house; the author who goes to live at her house for a few weeks; and the different kinds of animals that grandmother breeds in her garage. This is bad sequencing of ideas and poor vocabulary where 'garaxx' seems to include 'kamra' (room):

(130) Id-dar tan-nanna joqodu il-kuġini u iż-żiju f'id-dar tan-nanna hija kbira u antika u qeda waħida. Darba minnhom mort noqgħod xi ġimat man-nanna u il-kuġini. In-nanna trabbi kelb, qattus, fenek, u serduk. Dawn trabbijom fil-garaxx f'kamra (6162/15).

(130a) Translate: My cousins and uncle live in grandma's house in the house of grandma it is big and old and is on its own. Once I went to stay some weeks with grandma and the cousins. Grandma breeds a dog, cat, rabbit, and rooster. She breeds these in the garage in a room.

In sample (131) from a Maltese essay, the writer is justifying the need for frontiers and passports. The ideas are not clear and the paragraph is inconclusive. There is a misconception of sentence structure, particularly with poor punctuation. The writer does not understand

what needs to be included in the same sentence and when to begin another sentence. It is also unclear which position the writer takes in this argument, making the whole text incoherent. The reader is left questioning what the motive is and has to read it more than once to understand.

(131) Wiehed jista jghid għalkemm hemm hafna affarijiet tajbin ta' dan il-ħsieb u immaginazzjoni ta' hajja bla fruntieri u passaporti, jekk tkun bniedem biezel tinduna li jezistu l-passaporti għal raġuni u mhux għalxejn għallura tistenna li jkun hemm konsegwenzi jekk il-passaport, l-identita' ta persuna ma' tibqax teżisti. Hemm hafna raġunijiet validi għaliex jeżisti dan waħda minnhom possibbli l-iktar importanti li jekk ma' jibqawx jeżistu n-nies b'xi ħsibijiet ħżiena jistgħu imorru go pajjiż ieħor u jagħmlu l-ħażen go dak il-pajjiż mingħajr ħadd ma jkun jaf min hu jew min huma jekk ikunu grupp. Bla passaporti tfisser bla isem u identita' allura n-nies iridu jaħsbu jekk dak li jixtiequ u joħolmu ikun vera perfett (5211/16).

(131a) Translate: One can say that although there are many good things in this thought and imagination of life without frontiers and passports, if you are a hard-working person you will realise that passports exist for a reason and not for nothing and so you expect that there will be consequences if the passport, the identity of a person does not exist anymore. There are many valid reasons why it exists this is one of them possibly the most important is that they do not exist anymore people with bad thoughts can go to another country and do harm in that country without anyone knowing who it is or they are if they are a group. Without passports means without name and identity and therefore people need to think whether that which they wish for and dream for is truly perfect.

5.3.6.4 Holistic Ideas – Different Shades of Grey

Candidates who wrote overall good essays had strong and defensible arguments, assertions and observations that were holistic and reflected a true picture of reality. Factual arguments presented a good mix of different shades of grey. They went beyond the matter-of-fact writing and showed a good level of analysis. The content of the text demonstrated broad general knowledge that was not limited to school textbook information. Moreover, the way the text was presented showed well informed arguments that were thoroughly processed and structured prior to writing. (132) illustrates this:

(132) This idea of thinking of course only counts for young generations in first world countries. We musn't ignore the fact that young generations living in third world countries or in war zones are only surviving... No matter what shortcuts we may be presented with, we must always remember that all journies have their ups and downs, no matter the destination (2589/16).

In contrast, there was a tendency for poor essays to reflect very limited knowledge and versions of reality that were narrow and absolutist. The essays presented rigid ideas and arguments that reflected a black and white view. This analysis needs to be framed in the context of fifteen- and sixteen-year old students who are in the process of an academic journey. Their level of maturity and reasoning is at a particular stage of moral development with potential for growth through further academic and life experiences. The writing reflects this development. (133), (134) and (135) are taken from Paper A students who did not have access arrangements:

(133) To top it all off, sexism and racism are now extinct. Everyone today is treated as equal, no matter the race or gender (2865/16).

(134) In the modern world it is also very hard to makes good friends who are genuine, kind and loving unlike the past where everyone was kind and generous to each other (1916/16).

(135) In those days school hadn't the benefits it has now so know one had school and there jobs were all horrible and mide blowing. From small ages, teenagers must work for there families. They wouldn't go to school like young people in our ages do. Their life was much harder than ours without the comfortable things yound people have now (2338/16).

(136) is an extract from Paper B which was taken from the first sentence of the essay:

(136) "Cooking is the most important thing in our life (5165/16).

5.3.6.5 Essay Schemas

In most argumentative essays, there are two opposing views that need to be presented, discussed and compared. Generally, students are taught to present an essay schema built on 'for' and 'against' arguments (or 'advantages' and 'disadvantages'). Nevertheless, such a model is not always appropriate. This was the case in one of the argumentative essays in the SEC English Language. For the essay titled, 'All young people should be taught how to cook. Discuss', it was in fact hard to disagree with the statement and argue against teaching young people to cook. However, because some candidates were adamant about following a particular essay schema, they presented an opposing position, which was not persuasive and

did not make logical sense. Trivial and unconvincing reasons were presented against the idea of learning to cook, like danger from fire hazards in the kitchen, injury when preparing food and allergic reactions to food. (137) – (139) are taken from essays that present pros and cons.

(137) Being able to cook is very satisfying for some people, but watching their own children cook makes them worried or satisfied? (6458/16).

(138) When theres an advantage a disadvantage always comes along. Some people knows how to cook but unforunitaly these people cook a lot of oils and fats which one can become obeesy that leads, to risck your life for a heart attack (6466/16).

(139) A Friend has the adventages and disadvantages. Some disadvantages is that you don't now if it's true friend if she is telling the others about what you told here. If she is is cheating on you. This is not a friend. A True friend even if your sick she come and visit you and take care of you. She is confident with her issues too. When arguing about something she doesn't go away and never talk back too each other, Stay near each other and talk about the arguing So you can arange (5080/16).

In their insistence to mention 'disadvantages', a few students turned the title around and argued that it would be a disadvantage if one does not learn how to cook:

(140) There are also the disadvantages if someone does not know how to cook... For example, you are not enough responsible for yourself. Moreover, you are not indipendent (6315/16).

Similarly, in the Maltese essays, there were candidates who tried to fit their essay into a pro and con argumentative composition, resulting in contradictions:

(141) Il-ħbieberija illum il-ġurnata hija importanti ħafna. Fil-ħajja jekk ma jkollokx ħbieb ma tħossokx waħdek u mdejjaq. Illum il-ġurnata il-ħbieberija taf tkun pożittiva u taf tkun negattiva (2098/16).

(141a) Translation: Friendship nowadays is very important. In life if you don't have friends you don't feel alone and sad. Nowadays friendship could be positive and it could be negative.

A similar pattern was seen with the use of idiomatic expression, particularly in the English essays. This figurative language needs to fit in the sentence in a way that makes the text lively and dynamic. The use of idiomatic expressions cannot be mechanical but needs to be accurate and used properly in the right context. Below are some examples that show the incorrect use of idiomatic expressions, even when these were placed in the right context:

(142) It was not easy to work from *dusk till dawn* at the fields (2743/16).

Should read 'from dawn till dusk'.

(143) He died that day and *my heart shattered in half* (2081/15).

The word 'shattered' means to break into many pieces. Therefore, the heart cannot be shattered in 'half'.

(144) ... this will prevent them to be lazy like a *pouched potatoe* (5197/16).

This should be 'couch potatoes' not 'pouched potatoes'.

Candidates are reminded to include expressions that enrich their essays. However, these should not be included at all costs without respecting the context and flow of the text. Both (145) and (146) are examples of conclusions from essays where idiomatic expressions were forcefully used without complementing the text:

(145) It can be hard and to one's mind impossible to find a true friend. They can occur naturally as you have to find your way to it *like a flower in a bush of thorns*, and once you find that *needle in your hay stack* do not let it go" (5752/16).

(146) They are the ones that barely show that have come from a difficult childhood and are suffering now at the moment life for these kind of people don't have their lives *easy as a pea*. But a stressful one, waiting for a ray of hope (2676/16).

5.3.6.6 Contradictions

Poor coherence of ideas may lead to contradictory arguments. (147) and (148) illustrate contradictions from essays that failed to present a coherent text. In (147), the candidate dedicated the whole essay to describing how lucky he is to have a true friend and then in the conclusion, he says that he was betrayed. The essay ends as follows:

(147) One day I thought he was trustworthy but he ain't because I told him a secret and when I told every one I know and ended up fighting So that why is hard to find a good friend these days (5066/16).

(148) is a statement taken from the body of an essay which argues that nothing is more precious than a true friend. Later in the conclusion, the writer contradicts this by saying that a big sum of money is more precious than friendship:

(148) A lot of things are precious in life your family your pets a £500 note but nothing is as precious as a true friend" ... "so in conclusion there are only a few things

as presus as a true friend except one million euros then a million times more presus" (5126/16).

(149) presents a contradiction in the same paragraph that does not make it clear whether the robbery took place.

(149) I woke up one Monday morning when I realised I was getting robbed I quickly went and got my phone from my desk I was really worried I didn't want to shout I didn't want to show fear and I wasn't sure if I was getting robbed or not so I came up with an idea (5237/16).

The introduction and conclusion of the Maltese essay (150) and (150a) are not linked logically. The first sentence in the introduction presents two ideas that do not connect. The writer goes on to declare a detachment from the computer and thereby dampens the link to the topic. In the conclusion, the writer confesses to 'liking' the computer and somewhat contradicts himself by saying that he uses it to communicate. In addition to this contradiction, the text has plenty of spelling and grammatical errors.

(150) Jien il-kompjuter inqata ħajti mingħajru billi forsi hawn minn hu inqas ix-xurtjat minna u ma jkollhomx flus biex jixtru kompjuter. Hajti dan iżmien minajru ma tanċ tafetwan lilil għax billi inkun skola u inbad imur xogħol ma tang insieb ħin biex niġhol fuq il-kompjuter.

(150a) Jiena inħobb ħafna il-kompjuter imma irid ikollok iġ-ġans biex toqod fuqu imma meta inkun nista nqat fuq għax inkun nista nitkellem mal-ħbieb (5687/15).

(150b) Translation: I spend my life at the computer without it perhaps there are those less fortunate than we are and have no money to buy a computer.

My life without it these days does not affect me because I am at school and then go to work I don't find much time to go on the computer.

(150c) I really love the computer but you need to have the chance to stay on (at) it but when I can I spend time on it because I can speak to friends.

5.3.7 Conclusion

A number of writing features came across as challenges to many students who sit for SEC national examinations in Malta. There is a great disparity in proficiency and quality of text between Paper A and Paper B. The best quality essays were Paper A essays written by non-AA candidates, demonstrating fluency with the use of language, overall strong management of all features of the writing that included vocabulary, idiomatic expressions, syntax, cohesion and coherence. It can be seen that, in most cases, students with AAs and those without AAs face broadly similar challenges in all areas of language and writing. Often, what appears to be SpLD difficulties are in fact challenges with the proper mastery of the second language, leaving gaps in proficiency, despite the long years of schooling in a bilingual environment. In conclusion therefore, a substantial number of candidates, particularly those sitting for Paper B who did not apply for AAs during examinations, would in fact score below average and qualify for them if they were to undergo a literacy assessment.

5.4 What do literacy scores tell us about the quality of writing produced by dyslexia candidates?

The first part of the answer to this question focuses on the writing produced by students with different literacy profiles during national examinations. This follows on the significant statistical correlations found between literacy scores and marks and grades (see Section 4.5). These results point at the validity and robustness of the literacy tests that are administered to students with SpLd/Dyslexia in part fulfilment for their applications for examination access arrangements. The qualitative analysis of scripts substantiated these results by showing how AA students who achieved high literacy scores wrote better quality essays than those who achieved lower scores (see Section 5.2). The profiles are based on the literacy scores achieved by students. These have been broadly categorised into three groups: 1. Those who have below average and low average scores; 2. Those who have average and high average scores; 3. Those who have a notable imbalance in the two languages. The second part will look at the few students whose achievements in the languages do not correlate with the scores in the battery of literacy tests. In statistical terms, these are the 'outliers' whose marks and grades do not correlate well with the literacy scores. Examples of these will be analysed in the next section.

5.4.1 Literacy Profiles of Dyslexia Students

Generally, the bilingual literacy profiles of AA students in this study showed an overall level of language development that was in the same range for both English and Maltese. This observation is supported by the quantitative results showing a correlation between the students' essay marks and examination grades in the two languages (see Section 4.5).

Therefore, generally, a bilingual student has challenges in the underlying language that impacts in equal terms, the development of both Maltese and English. This is especially the case with reading and comprehension. The findings in this qualitative analysis point to the categorisation of students with AAs into three main clusters. This section will analyse and discuss these categories:

- 1 Texts from AA students with below average and low average standard scores
- 2 Texts from AA students with average and high average scores
- 3 Texts from students who have a strong dominance in only one of the languages

5.4.2.1 Below Average and Low Average Standard Scores

AA Students who had below average and low average scores particularly in reading comprehension demonstrated general difficulties with writing. The challenges were typical of poor language development as demonstrated in the limited vocabulary repertoire, syntactic accuracy and overall coherence. Although it was noted that in most cases there was a dominance in one of the languages, usually in the native Maltese language, this did not necessarily translate to good and accurate writing. In this range of literacy abilities, the writing was not structured and did not follow the proper conventions. In fact, writing usually came across as colloquial language with lack of punctuation and poor knowledge of the register (see Section 5.3.5). Samples of some of the essays written by students who achieved below average and low average scores are shown in this section.

Samples (151) and (152) are examples from a Paper B essay written by a candidate with AAs whose standard score in Maltese spelling was <63 and reading comprehension 88. Similarly, scores were poor in English at <63 in spelling and 73 in reading comprehension. The reader is

immediately struck by the big number of spelling errors (in italics). Accurate spelling in Maltese can be a big challenge for those who have dyslexia, despite the language having shallower orthography than English. This is mostly due to the encoding of morphology. However, this shortfall seems to be mitigated by solid knowledge of the native language, reflected in good language structure in the text, albeit poorly expressed in writing. Further evidence of ‘nativeness’ is in lexical variety and precision, particularly low frequency words and content-specific vocabulary like: ‘*tnaqqix fil-ġebel*’ (stone carving); ‘*ħnejjiet*’ (arches); ‘*restawr fuq il-ġebel*’ (stone restoration). The mistakes are therefore not related to poor knowledge of the language, but to failure in distinguishing between casual conversation and writing style. This is evident in spelling errors and poor punctuation that impact on the syntax. If these errors were to be corrected, the text would read well.

(151) *Għand nanti mux alek biss niħu gost nmur imma ax id-dar ta nanna hemm ħafna tnaqix fil-gebel, ħnejit u xi arlogi li kien amel in-nannu meta kien għadu ħaj fid-dar ta nati hemm ukoll ritratti ta nannu ta meta amel xi xol fil knisja tar raħal bħal tnaqix jew xi restawr fuq il-ġebel dawn ir-ritratti jimpresjonawni ħafna u jfisru ħafna alija imma d-dar tan-nanna kul meta mmur najd kikku għadu hajj ma kienx jalimni namel daww larkiketura bħal manda nati fid-dar” (AA6835/15).*

(151a) Translation: I enjoy visiting grandma not only for that but because in grandma's house there is a great deal of sculpted stonework, many arches and clocks that grandfather made when he was still alive in grandma's house there are also photos of when grandpa did works in the village church like sculpting or restoration on stonework these photos impress me a lot and they mean a lot to me but grandma's house whenever I go I say if he is still

alive wouldn't he have taught me do those architecture like grandma has in her house.

Sample (152), written by the same student is also full of spelling mistakes that include high frequency words. It is also written in poor language, illustrating difficulties with punctuation, syntax and, unlike the Maltese text, limited lexical variety. The word 'fabrice' should be 'factory' and is probably a transfer of the Maltese word 'fabbrica'. 'Waching', and 'berning' are phonological spelling errors. So are 'traviling' and 'trefiling', which show inconsistency in encoding words.

(152) A day on the bus that i never forget i had a day *traviling* on the bus was near the window and i was *waching evry ting*. We past from many places interesting like big *bildings* old and more, we past from a big *fabrice* that they make the cars and it was very big then we met in big fire when we was *trefiling* we passed frome a big bush and *ther* was the people in the fire and, was bring them *berning* the came the police and firemen.

The literacy scores of the student who wrote samples (153) and (154) shows a borderline profile in both English and Maltese reading comprehension with standard scores of 87 (N&N) in Maltese and 81 (Suffolk) in English. The spelling score was better in English at 71 and poorer in Maltese at <62. Once again, the student demonstrates more fluency in Maltese than English, evident from the use of content specific vocabulary. 'Il-fajjara' means 'slingshot'. It is seldom used and probably specific to dialect speakers. The English word 'slingshot' is probably better known among Maltese speakers. 'Qasba ta siequ' (correct: qasba ta' siequ) means 'shin', a word that is specific to a body part and likely to be part of a native/fluent speaker's jargon. The English text gives a flat description of what happens during a school bus journey. The vocabulary used is limited with difficulties in spelling low frequency words: 'pen house'

for 'penthouse'; 'furnel' for 'tunnel'. There are also spelling mistakes in commonly used words: 'her' for 'hear'; 'an other' for 'another'; 'some times' for 'sometimes'. The past participle 'thrown' is wrongly used as 'throwed'.

(153) *Qbat il-fajjara għamilti* ġebli ġo fih u immirajtha... L-ieħor *prova* jistaħba imma kien kollu *ta* xejn għax meta kien qiegħed jistaħba siequ l-*leminija* kienet ftit l-barra u stajt nolqtu sew f'qasba ta siequ. (AA6756/15).

(153a) Translation: I picked up the slingshot put a stone in it and aimed... The other tried to hide but it was all in vain because when he was hiding his right leg was slightly exposed and I could hit him well in his shin.

(154) As I keep pass the houses on my left hand side I can also see men building a huge house and at the top with a *pen house*.

Beside, outside the window there is inside the bus. Of course, inside the bus, there are children like me. Inside the bus I *her* so much thing some of them are bad thing that I can't tell them in here. When we get under a *furnel* every one starts screaming and it give me a headache. *Some times* I see thing *throwed* from one side to *an other* and sometimes from the back of the bus to the front of it (AA6860/15).

Sample (155) is another typical example written by a student who is evidently conversant in Maltese despite the borderline score of 87 in reading comprehension and <62 in spelling. Similarly, the scores in English were poor with a standard score of 73 in Suffolk reading comprehension test and <63 in English spelling. In Maltese, the student has difficulty with using proper writing conventions but uses content-specific vocabulary that demonstrate a deep understanding of the native language. For example, *Kuciniri* (pl) (correct: *kuċinieri*) means cooking stoves. These are old kitchen equipment which are no longer used in modern-

day kitchens. Similarly, *sigra tan-naspli* and *sigra tar-rumin* (correct: *sigra tar-rummien*) are a loquat tree and a pomegranate tree. Possibly, the student does not know the English names of the fruit trees. Sample (156) is the English text written by the same student. The language used is elementary with very basic vocabulary and poor expression. There are challenges with verb conjugation. Like (155), there are difficulties with punctuation and the writing uses colloquial language. However, there are fewer spelling errors in English than in Maltese.

(155) *Id-dar tan-nanna antika hafna għanda l-amara antika saqqu bil-molol gebel antic u għanda hafna kuċiniri. Jien meta kont zghir meta kont immur id-dar tan-nanna kont nitla fuq il-bejt u noqod nilab mal-klieb. Id-dar tan-nanna għanda ġnien ukoll u fill ġnien għanda ħafna sigar ilom għem xi ħamsin sena għand sigra tan-naspli, sigra tal-lewż u is-sigra tar rumin (AA6795/15).*

(155a) Translation: Grandma's house is very old it has old furniture spring mattress old stonework and has many cooking stoves. When I was young when I used to go to grandma's house I used to go up to the roof and play with the dogs. Grandma's house has a garden as well and in the garden there are plenty of trees they have been there about fifty years she has a loquat tree, almond tree and pomegranate tree.

(156) In Malta in summer all the children and teens and some adults finishes school and work.

In summer the *perents* of the children takes the children to the beach to swim and play in sand and some of them go with friends. Teenagers and *adults* go find a part time job for summer to have some money. Some of the Maltese people go *Abrode* or go on a cruise or go to the other small island gozo. Maltese people loves the weekend because the pubs and clubs open and

they go out to party with friend. Some of the teens boys and girls likes to go to the beach to look at girls and boy, girls with bikini and boys with *musles* (AA6698/15).

5.4.2.2 Average and High Average

In contrast, those students whose scores were in the average and high average range demonstrated good quality writing in both languages, with relevant content and the correct style and register. Writing was well-organised with good use of topic sentences. Sentences and paragraphs were well linked with a variety of cohesive words that were used in the right context. The ideas were coherent and presented logically. As expected, there were a number of spelling errors congruent with the writing of AA students. Nevertheless, the frequency and severity were far less than those in essays written by students who achieved poorer literacy scores (see Sections 5.2.3.2 to 5.2.3.5). These essays were characterised by a wider range of vocabulary and idiomatic expressions, good use of punctuation, correct sentence structure and the correct use of tenses. In particular, some narratives stood out for their accuracy in written language, marked with a varied vocabulary, proper character and event descriptions, and a very coherent and well-developed story plot. The contrasting arguments in the argumentative essays were well explained and developed in a very coherent manner, showing a good sense of maturity in thought and in writing.

Samples (157) and (160) illustrate typical essays in English and Maltese written by the same students with average and high average standardised scores. Once again, the level of proficiency demonstrates how both languages have the same level of development, supporting the threshold hypothesis by Cummins (see Section 2.3.1). Samples (157) and (158)

are examples from a student who achieved average scores in both languages. The student achieved a Suffolk reading and comprehension standard score of 107, an equivalent of 13 years in NARA Comprehension; N&N (Maltese reading and comprehension) standard score of 112 and a NARA Accuracy score equivalent to 9 years 1 month. The writing difficulties were mostly evident in the spelling, with a standard score of 81 (below average) in English and a standard score of 86 in Maltese. Both texts demonstrate the appropriate use of vocabulary, good structure, syntactic correctness and an overall coherent text.

(157) Biex persuna *tagħamel* użu tajjeb *mill* flus trid taħdem biex taqla l-flus *umbad* ma tberbaqhomx fuq ċuċati iżda *iġġemaħhom* u meta jkollha *bżon* tużhom. Il-ħajja qeda issir aktar għolja u *għalekk* ħafna nies jhossu *bżon* li *jkolhom* aktar *min* xogħol wieħed. Jekk persuna tiflaħ taħdem ma hemm xejn ħażin, imma jekk persuna taħdem ħafna u *qat* ma tgawdi ħin *mal*-famija din tkun qed jagħmel il-flus *l-alla* taħgħa (AA843/15).

(157a) For a person to make good use of money s/he needs to work to earn money and then does not squander them on trivialities but save them and when the need arises s/he uses them. Life is becoming more expensive and so many people feel the need to have more than one job. If a person is strong and willing to have more than one job, then there is nothing wrong, but if a person works too much and never enjoys time with the family then he would be making money his/her own God.

(158) *Every one* who lived in the same town Emma and her husband lived said how in love they were. Emma after two years was fed up with the fact that she was stuck at home and her husband got to live an amazing life. Emma *tryed* talking to her husband about *geting* a job at a supermarket just

to break out of her routine but everytime he would yell at her and say that if they needed money he could provide more for them. Emma decided to go against her *husbands* words and get a job at a police station organising files at minimum wage and not tell her husband (AA1056/15).

Sample (159) and (160) are two other examples from a student who scored in the average range in the English and Maltese literacy assessments. In contrast to the students who wrote (157) and (158), this student had an overall balanced profile with average standardised scores throughout, including in spelling at 101 in English and 109 in Maltese. The standardised score in Suffolk was 106 and 108 in N&N (Maltese reading and comprehension). NARA Comprehension was the equivalent of 13 years. The student qualified for access arrangements due to slow processing speed affecting the speed of reading which was the equivalent to 6 years and 1 month on the NARA and 7.6 words per minute on the writing speed test. The two texts are from narratives, giving a good description of a discovery. Overall spelling is correct and vocabulary is rich, including good idiomatic expression. Syntax is correct and both texts are coherent and captivating, congruent to the genre. These texts are the work of a bilingual learner who has a balanced development of the two languages.

(159) Mat-tokki ta' nofsinhar, inħoss żiffa ħelwa fuq wiċċi, pero' din ma tantx damet għax sekonda wara nisma bieb jissabbat b'kemm kellu saħħa. Imsarni niżlu f'saqajja, imma jien għamilt il-kuraġġ u erġejtilha biex insegwi l-ħoss tal-bieb. Wara ffit wasalt quddiem bieb li kien *għeqdem* minn dak ta' barra. Insomma ftaħtu u sibt taraġ twil li kien jagħti l-isfel. Jien bdejt nieżel bil-mod sa ma wasalt go xelter tal-gwerra. Jien qbadt miexi, waqt il-mixi beda nieżel l-ilma minn mal-ħitan, kif ukoll bdejt nilmaħ xi affarijiet tal-fuħħar. Go qalbi

għedt li din kienet kemmxejn dar antika la kienet għada tiftakar il-gwerra (AA806/15).

(159a) At the stroke of midday, I felt a breeze on my face, however this did not last because a second later I heard a door slamming hard. I got a shock (literal translation: my intestines dropped to my feet), but I plucked up courage and stood to follow the sound of the door. After a while I came to the door that was older than the front door. Anyway I opened it and found a long staircase that led downstairs. I started going down slowly until I arrived at a war shelter. I started walking and while doing so, water was dripping down the walls, while I was spotting clay objects. In my heart I said that this was a rather old house since it could remember the war.

(160) I was shocked as I was never told about this tiny door in the ground. I plugged up courage and opened it widely. Various smells came out, but I did not mind and so I went down a flight of stairs. When I reached the bottom of this stairs I saw a type of place where people are supposed to be buried. Curiosity made me go further inside. To my surprise I found a sign that on it there was written that a member of our family had died long ago and was buried right at that spot. Shivers ran down my spines, but in a sense I was very angry as I never expected my family to keep something like this from me. I decided to go back up and pretend that nothing happened. This was until I arrived back home (AA1017/15).

5.4.2.3 Strong Dominance in one Language

The third literacy profile that stood out was that demonstrating a huge imbalance between Maltese and English literacy scores. Evidently, this was the result of a strong dominance in one language. Sample (161) is one such example of a Maltese text written by a learner whose knowledge of Maltese is not equivalent to his knowledge of English (Sample (162)). The reading comprehension standard score in Maltese was <62 (N&N) and Maltese spelling <62. In contrast, English reading comprehension was 107 (Suffolk) and English spelling 84. Hence, the profile and samples (161) and (162) suggest that there is the literacy ability and writing knowledge in one language but not in another. In Maltese there were difficulties with language expression reflected in spelling, vocabulary, punctuation, and grammar (see sample (161)). For example, the omission of the article (*tad-dar nanna (Nanna's house); Nanna tiegħi (my grandma)*); the incorrect subject-verb gender agreement (*sigu komda (chair + m comfortable + f); kamra favorit (room + f favourite + m)*); incorrect conjugation (*għalli [qalli] stejjer (he told me stories); Kien inħobb nisma (used to [1st person singular] I love listening)*) are typical of a non-native speaker of Maltese. In contrast, (162) written by the same student shows far better-quality language in English. The text contains rich vocabulary, well-selected adjectives that contribute to good expression, good syntax and good coherence that makes the narrative flow. The spelling errors were mainly in low frequency words that included 'herry' for 'hairy', 'tourches' for 'torches', 'hissing' for 'hissing', 'growel' for 'growl' and the error of transposition in 'forset' for 'forest'.

(161) Inħobb kull kamra tad-dar nanna, imma hemm kamra li hija l-aktar favorit tiegħi. Din hija il-kamra ta' Piturri. F'din il-kamra ħafna piturri li għandhom storja differenti għall kull waħda. Nanna tiegħi kant għoqod bileda

fuq sigū komda u għalli stejjer differenti fuq kull piturra. Kien inħobb nisma nanna titkelm fuq il-personi u animali differenti f'koll piturra (AA5561/15).

(161a) Translation: I love every room of grandma's house, but there is a room that is my most favourite (masc. instead of fem.). This is the room of paintings. In this room many paintings that have a different story for each one. My grandma he-used to sit down on a comfortable (fem. instead of masc.) chair and he-told me different stories about each painting. He used to I-love hearing grandma speaking about the different persons and animals in each painting.

(162) Last year, Ted stopped something big and *herry*, at the edge *forset*, peeping through the leaves. When Ted and I went to see what it was, all we found were a footprints bigger than my body. Without a second thought we followed the footprints. We kept losing sight of the prints and when we found them again they pointing us in a different direction. The footprints led us deeper into the *forset*, deeper than we even went before. Our eyes were so fixated on the ground that we had not realised how dark it had become, until Ted fell over an overgrown root and looked up. The darkness did not discourage us. We pulled at our *tourches*, which we never go on a walk without, and walked on. The bats' screech and the snakes' *hishing* were not the sounds that scared us, but it was the *growel* of an unfamiliar animal (AA872/15).

5.4.3 Outliers

The quantitative analysis illustrated a strong correlation between the literacy scores and the marks and grades. The regression analysis supported this strong link and, in most cases, predicted the link between the literacy scores and the essay marks. Nevertheless, there were instances when the literacy scores did not reflect the expected writing level and content of the essays. In these cases, the literacy scores were high and the essays were poor or vice versa. In statistical terms, these are the outliers for they do not follow the expected pattern of performance and achievement. There could be many reasons for this, such as feeling anxious and underperforming during the literacy testing or examinations, an out-of-point essay despite a good level of writing, and a deliberate underperformance in the literacy test to qualify for access arrangements.

The two samples (163) and (164) illustrate this mismatch between literacy scores and the essay. (163) is taken from a Maltese essay written by an AA student who had an overall average literacy profile. The standardised score on the Suffolk was 103, the N&N (Maltese comprehension) score was 104, English spelling was 84 and Maltese spelling was 85. Evidently, this student lost marks in the spelling and a few grammatical errors, despite having overall good writing. The literacy scores predict a better-quality essay from the student with such a literacy profile.

(163) It-tecnologija tal-komputer tagħmila faċli wkoll biex nikkomunikaw izda billi nkun qed nitkelmu aħna l-ħbieb ma tanc għadna niltaqgħu. Jekk l-komputer ma jkunx aċċessibli dak l-ħin kollu li bħalissa nuża biex nitkellem magħhom insib iktar ħin biex niltaqgħu (AA82/15).

(163a) The technology of the computer also makes it easy to communicate but since I speak with friends we don't meet so often. If the computer is not accessible all that time that I now use to chat with them I find more time to meet with them.

Sample (164) shows the reverse of (163). The literacy scores were average on the low side. The Suffolk standard score was 84, NARA Comprehension was the equivalent of 9 years, 1 month. N&N (Maltese reading comprehension) was <63. The standard score in English Spelling was 86 and in Maltese 74. The spelling errors are erratic and typical of someone who has a standard score of 86 in the spelling test. The narrative is coherent, with a varied vocabulary and accurate syntactic structure which makes it atypical of someone who has a standard score of 84 in the Suffolk reading and comprehension test.

(164) It was summer time. I had just finished my O-levels and so my summer break was longer than usual. After the first few *weeks* going out with my friends, I got fed up and spend most of my time inside, playing games and watching movies when my friend, Martina, would come over. After a while we got bored of doing that too. After a while, we started going for long walks and adventures together, also Keith joined us. Keith is a *fried* of our that we met at our school. Once we were on a walk through the beautiful *contryside* and he told us that he cannot join us in two *days* time as his father was making him clean up his basement, so instead we decided to join him (677/15).

5.5 Conclusion

The final observation from the qualitative analysis blends together different elements of the SEC English Language and SEC Maltese essays. The major conclusion is that writing is generally a unified skill. In the same way that word-level spelling and text-level composing do not develop in isolation of each other (Abbott et al, 2010), there is also a clear interconnectedness between lexical, semantic and syntactic development, and discourse development (Danzak, 2011). A good and proficient writing task is the result of accurate, varied and rich vocabulary that constitutes sound syntax and semantics, contributing to logical and coherent discourse. In this way, all components of writing develop and progress in tandem and one does not develop at the exclusion of the other. Therefore generally, the overall development of the different parts of written language reflected the quality of discourse in all the three genres of essays – argumentative, narrative and descriptive.

Following this observation, as verified by literature (see Section 2.8.1), writing seems to fall on a proficiency continuum. An example of this is vocabulary, with words at the low end of the continuum that are simple, general and concrete. As the level of proficiency develops, lexical variety and precision increase and is enriched. Words achieve more depth and begin to represent more specific, implied and figurative language. Finally, at the high level of the proficiency continuum, vocabulary becomes more precise, nuanced and abstract, reflecting deep understanding and academic writing. Similarly, the sentence structure develops from basic sentences that contain simple subject and predicate to compound sentences with two independent clauses. Finally, a proficient writer demonstrates knowledge of complex sentences that contain an independent clause and a dependent clause.

By and large, those students who had challenges in expressing themselves in writing produced ideas based on knowledge-telling strategies that were immature, matter-of-fact, surface, obvious, and not analytical (Bereiter & Scardamelia, 1987). Hence, the writing was overall poor as evidenced from various samples throughout this qualitative section like those presented in just one paragraph, without a proper introduction, body and conclusion. The texts suffered in all aspects that included spelling, vocabulary choice, syntax, intra- and intersentential cohesion and overall coherence. As a result of weak composition, the text became fragmented and hard to understand, with elementary discourse that made it difficult and not interesting to read.

On the contrary, the good quality texts demonstrated proficiency at every level of writing (spelling, vocabulary, grammar, syntax, cohesion and coherence). At the discourse level, these texts showed knowledge-transforming writing (Bereiter & Scardamelia, 1987) that was analytical, innovative, inherently interesting and authentic. Candidates who achieve this mastery in written language can be creative with language, elaborate explanations, using the right style to express their emotions, feelings, opinions and thoughts in a clear way. They manage to assert a presence in their writing, playing with language to the point of using abstract qualities such as irony and sarcasm.

The exceptions on the proficiency continuum were those who had good and mature ideas, but who struggled with some aspects of writing, mainly spelling. In spite of these difficulties, their writing still achieved a rather seamless flow, particularly because their spelling errors were not disruptive, and their text managed to achieve the syntax complexity needed for the construction of good quality essays. These exceptions can be called the SpLD/dyslexia

category of candidates but not all were identified as AA students who received access arrangements.

Chapter 6 - Discussion Chapter

This chapter is a discussion based on the findings in this study. It is presented under the research questions in Sections 6.1, 6.2 and 6.3 and followed by the interpretations of these results and their implications on several key characteristics in the areas of dyslexia, bilingualism, assessment and access.

6.1 In what ways does dyslexia manifest itself in the writing task of SEC level English and Maltese languages at national examinations?

This study confirms that on average, students with SpLD who apply for access arrangements (AAs) in Maltese national examinations have poorer essay marks in both Maltese and English when compared to their peers (see Section 4.3). The essay mark correlates strongly and significantly with the overall grade in the languages showing how writing is fundamental to success in language national examinations. Moreover, results show that for both students with AAs and without AAs, the achievement in languages correlates with achievement in different subjects (see Section 4.3.1). Nevertheless, the strength of the positive relationship between the grades of the languages and the grades of the subjects was stronger for the non-AA candidates than for the AA group. This shows that achieving good grades in the language subjects is a bigger challenge for AA students.

The strong link between writing, languages and subjects underlines the importance of developing the skill of writing throughout schooling and its importance in assessment and the overall achievement of curriculum goals. In fact, from a cognitive neuro-scientific point of

view, spelling and writing are intimately connected with other literacy modalities particularly reading and comprehension, for which specific neural networks are shared (Ravid & Tolchinsky, 2002; Rapp & Lipka, 2011). This points to the importance of giving the development of writing and the consolidation of all literacy skills the utmost priority in the academic formation of students as this helps with accessing learning material and leads to a gainful educational experience.

The analysis of the performance achievements of AA students confirms that SpLD/dyslexia falls on a continuum of abilities. The essay marks in both languages are evidence of a broad range of proficiency levels. This is also reflected in the results of the standardised literacy tests that are administered to students with dyslexia in preparation for their access arrangements application. Evidently, the criteria used to identify SpLD/dyslexia is a very broad net that catches a variety of abilities. Within this spectrum are those at the lower end, with standardised scores of <70, who typically face global challenges in all aspects of literacy that include reading comprehension, reading accuracy and spelling, and often beyond literacy. In contrast, at the other end of the SpLD/Dyslexia continuum are the students whose literacy profile demonstrates a 'specific' difficulty in literacy that is not global, and which, in writing, is particularly evident in spelling errors (see Section 5.2.3.2). This finding implies that students with SpLD/dyslexia are a heterogeneous group and that one single intervention programme does not apply to all. Therefore, different approaches are relevant to the different stages on the continuum.

This distinction between the two ends of the continuum may contribute to the ongoing and often controversial definition of dyslexia. The results in this study seem to support the

discrepancy model of dyslexia that reflects an ability-achievement discrepancy¹². In fact, a statistically significant relationship was found between the General Cognitive Ability (GCA) test scores and SEC English grades, where high GCA test scores correlated with high marks and vice versa (see Sections 4.4.8 and 4.4.10). Similar results were found in the verbal scale of the GCA test (see Sections 4.4.9 and 4.4.11) pointing to the students' ability to comprehend, even if reading fluently is a difficult skill. The situation was not the same for Maltese, where GCA scores did not achieve a significant correlation with the language grade and essay marks. This could be because the GCA test is not administered in the Maltese language, since there is no Maltese version of it. The analysis confirms that AA students at the lower end of the writing proficiency continuum have severe challenges in all aspects of writing, reflecting underlying language and comprehension difficulties. In contrast, those at the upper end write coherently and with a clear understanding of the topic, with challenges in only 'specific' aspects of writing, particularly spelling. This signifies that 'dyslexia' should not be confounded with problems in comprehension as is the case with the broad definition of SpLD, incorrectly implying that students with dyslexia have a thinking problem and not a reading problem (Shaywitz & Shaywitz, 2020).

In addition, a notable shift in the continuum of proficiency levels in writing was evident in the two different papers, A and B. The qualities of texts in Paper A were significantly better than the texts produced in Paper B (see Section 5.3.1). This was particularly the case in English where the assessment demands, including the essay length and essay titles were different for the two papers. Paper A, which has more demanding questions, attracts the better students, including students with dyslexia whose challenges in writing are mild and specific. In contrast,

¹² Definition: Reading at a level significantly below what would be expected based on predictions from intelligence scores.

students who have challenges in languages, including SpLD candidates with severe difficulties, chose to sit for the less demanding Paper B. Although the level of writing produced in each of the Papers was notably different, this does not mean that the demarcation line between the two levels is solid and clear cut. Once again, there was a continuum of abilities in each paper level, making it plausible to have Paper B essays with high marks that are the same or better-quality essays than Paper A essays with low marks. This range of proficiency was also evident for students without AAs, whose abilities were also distinguished by the choice of paper level in English.

The most notable feature of writing was 'spelling' since it was a conspicuous 'symptom' of SpLD/dyslexia writing manifesting in all ranges of abilities (see Section 5.2.3). The most common spelling errors were phonological, visual sequential and rule-based at both ends of the SpLD/dyslexia continuum marking the <70 and >95 categories (see Sections 5.2.3.2). Nevertheless, although the spelling errors from the two SpLD/dyslexia groups were not different in type (mostly phonological, rule-based and sequential), the severity and degree of errors were different. The severe errors were typical in a wide range of words that include the high frequency ones. These errors continuously disrupt the flow of reading and as shown in some cases, made the text very hard to read and at times illegible (see Sections 5.2.3.3 to 5.2.3.5). In contrast, the less severe errors are typical of low frequency words and could be read with minimal disruption.

Beside spelling errors, there were many other challenges in writing. These included errors in basic grammar, wrong conjugation of verbs, mixed up English word order (SVO) and morphological errors in Maltese. Similarly, the incorrect use of punctuation and poor cohesion between sentences contributed to lack of clarity in the texts (see Sections 5.3.6 to

5.3.6.3). Vocabulary choice, difficulties with syntactic structure and coherence in writing were also common challenges that AA students face. The latter, coherence in writing, was a consistent challenge for many. Coherence is the quality that gives unity and continuity of discourse below the surface of writing. Coherence is a very hard construct to describe, quantify and teach and yet, it is the quality in writing that distinguishes high-quality text from others particularly in the narrative essays.

The difficulties with writing illustrated in this study and the impact on performance in language examinations come as no surprise. These findings are reflected in the overall results achieved in Maltese national examinations where, in some years, approximately a third of the students struggled to achieve a SEC pass mark from Grades 1 to 5 or an MQF level 3 qualification (see Section 2.2.1). These grades are needed for continuation to post-secondary education in academic subjects. In a similar pattern of achievement, Maltese students have fallen behind in international rankings, in the assessment of language competencies when compared to students from other European Union countries (TIMS, PIRLS, PISA). This makes it hard to speculate whether the bilingual context is effectively giving an advantage to students or aggravating learning especially since for many learners, English is a second language to which they do not get enough exposure (Cambridge Language Assessment, 2015; Farrell and Ventura, 1998). In the face of this reality, the curriculum can pose serious disadvantages to students who access the subjects through English text books from an early age, even though teachers use code-switching to facilitate communication and teaching in class (see Section 2.3.3).

6.2 Are there differences between the linguistic features of writing produced under examination conditions by access arrangements students with SpLD/dyslexia and the other students without access arrangements?

In view of this overall national performance, the language difficulties faced by Maltese learners do not seem to be limited to candidates with SpLD/dyslexia, even if these challenges in writing were more prevalent in their texts (see all Section 4.5 and all Section 4.6). The same types of writing qualities were present in the texts belonging to the rest of the students, even if the frequency was lower. The texts of non-AA candidates also lay on a similar continuum of proficiencies demonstrating the same strengths and weaknesses in writing. The only stark distinction between the writing of SpLd/Dyslexia candidates and the Rest was in texts that demonstrated top quality writing proficiency at the mastery level of language. SpLD/dyslexia texts were absent in this top level of proficiency, signifying how students with dyslexia do not reach the upper levels in the written language by the age of 15 and 16 when they sit for SEC level (see Section 5.3.1.1).

The similarities of the writing challenges across SpLD/dyslexia candidates and the Rest made it hard to identify whether the difficulties arose from dyslexia, or whether the difficulties originated from poor acquisition of the second language, or from a mix of the two together. The findings illustrate many examples of how students at this level still struggle with language interference, a sign that the two languages have not been mastered competently and separately. The vocabulary used and the syntax structure in many of the poorer essays demonstrated a level of proficiency that is typical of students struggling with learning a second language. Similarly, the poor sequencing of thoughts in some of the essays was not necessarily a symptom of dyslexia but more of a difficulty with language expression and

coherence, most likely arising from poor knowledge of the second language. Due to this, SpLD/Dyslexia in the local bilingual context seems to take a different trajectory to the features and development of dyslexia as typically defined in literature (for example Snowling, 2000), where it is often derived from monolingual contexts.

This study confirms how writing is an advanced literacy skill that is distinct from the other skills in literacy, namely speaking, reading and comprehension. Many texts demonstrated a high level of fluency in Maltese, as illustrated in the broad lexical repertoire and in expression which reflected the first/native language. Nevertheless, it would be an oversimplification to assume that this advantage automatically resulted in better written expression. Many had difficulties with spelling, punctuation, and presenting the text in a coherent way. Writing has its own register and rules that include amongst others, proper planning to express ideas, organised expression that fits into careful sentence structure, formatting and punctuation (see Section 2.13 and Section 5.35). In contrast, speech is spontaneous with loose construction, extralinguistic cues that help in meaning construction, rephrasing and frequent repetition. The language forms that the learners choose vary according to the context of use, the content and the audience (Schleppegrell, 2012). Therefore, students need to be aware of the correct register and that mixing the two modes of language expression is linguistically incorrect.

6.2.1 Teaching Writing

Writing is therefore a skill to be learnt at school and that requires specific instruction in class. This is usually split into two areas, starting from transcription (spelling and handwriting) and sentence construction in the early years, and followed by longer writing in composition form

in later years. There is no information in literature about when and how teaching writing in both languages in Malta happens, or whether this takes place throughout all the primary and secondary years. Research from England and the USA shows great inconsistencies vis-à-vis school policies on teaching instruction, teaching methods, time allocated to teaching and frequency (for example, Richards et al, 2012). Some language teachers have reported that they are not well prepared to teach it because they have not been prepared to do it during their teacher training (Gillespie, 2014). Most especially, this applies to teaching writing to struggling students who necessitate individualised instructional methods (Dockrell et al, 2016; Poch et al, 2020).

Teaching transcription at the word level starts with spelling. This study has shown that there are widespread spelling challenges in both languages for both the AA group and the Rest. A few spelling intervention strategies are mentioned here, that have proved to be effective and improved orthographic knowledge for SpLD students. For example, simple strategies like explicit instruction with multiple practice opportunities and immediate corrective feedback after the word was misspelled, have registered improved results (Wanzek et al, 2006; Prior, 2010; Sayeski, 2011). Encoding instruction about the phoneme-grapheme relationships and word work activities where students manipulate those relationships have also proved to be effective strategies (Weiser & Mathes, 2011). Similarly, the application of the triple 'word form theory' that teaches the coordination between phonological, orthographic, and morphological word forms has had effective results (Richards et al., 2005; Berninger et al, 2008). The use of assistive technology to support spelling interventions was also found to have positive effects on spelling outcomes (Wanzek et al, 2006).

Spelling is rule-governed with an estimated 90% of English spellings that are predictable, based on spelling rules and patterns. Teaching spelling rules, syllable structures, morphological structures, homophones, silent letters, roots, affixes, prefixes, and suffixes are ways of helping students with achieving better spelling in their writing (Dyslexia Help, 2020). Even in transparent orthographies, morphological formations cannot be left to chance because phoneme-grapheme correspondences may lead learners to incorrect spelling (Lehtonen & Bryant, 2005). Moreover, 'dictation' remains an effective way of teaching and assessing spelling in class, even if this method has been subject to plenty of criticism along the years. This method however would need to be administered in methods that are more engaging and learner-centred taking into consideration the needs of the students (<https://www.teachingenglish.org.uk/article/using-dictation>).

In essay-writing, there is a body of evidence supporting the explicit instruction to improve writing, using different techniques according to the genre of essay, like for example compare and contrast compositions (see: Hammann and Stevens, 2003; Macarthur and Philippakos, 2010). O'Rourke et al (2018) advocate for the teaching of explicit and well-practiced writing schemas such as those to develop knowledge of genre, structures and formats, strategies for text production, and the influence of task and audience. Troia and Olinghouse (2013) recommend that these interventions should be supported by evidence-based practices with the input of school psychologists who can function as a valuable resource for teachers and for students who struggle with writing. The traditional techniques of teacher feedback and explicit contrast remain popular and effective ways of teaching writing (Andrews et al, 2009). However, along the years, more creative techniques have been found to be successful in building learner confidence and motivation in writing. For example, collaborative or paired writing gives an opportunity for learners to work together in planning, drafting, revising and

editing text (Storch, 2019). Self-assessment is another method whereby writers are encouraged and prompted to think reflectively about their own writing and to respond through improvement (Diltz, 2006). Teachers need to be pragmatic and explore the teaching methods that they find most effective for their learners after taking into consideration their age and level.

Another noteworthy observation concerns the way texts produced by students with SpLD/dyslexia, especially those who choose Paper B, reflect a clear absence of reading. This is consistent with local literature, suggesting that reading is the weakest skill at the end of Primary Year 5 Benchmark results (Cambridge Language Assessment, 2015). Notably, this underlines the neurological link between reading difficulties and dyslexia which impacts the bidirectional and reciprocal relationship between reading and writing (spelling) (Ehri, 1997; Rapp & Lipka, 2011; Abbott et al, 2010; Shanahan, 2006, 2015). From the phonological deficit hypothesis perspective (Frith, 1999; Ramus, 2004), this explains how students with dyslexia struggle with reading because of challenges in the phonological processing needed for decoding words. In the same way, they struggle with writing because it requires encoding phonological information. Furthermore, when writing, students continuously need to read and reread their own writing, making reading a subskill in writing. Hence, reading difficulties impinge on writing.

The reduced reading experience results in poor exposure to different ideas, genres and writing styles, and stifles the growth of vocabulary and general knowledge. Conversely, exposure to reading was reflected in writing of good quality essays characterised by rich vocabulary, a variety of ideas and clarity of thought. In the process of reading and decoding new vocabulary, learners strengthen their knowledge of spelling and expand their vocabulary

bank (Ocal & Ehri, 2017). Students who wrote good texts were influenced by reading and borrowed vocabulary and ideas from books to enrich their writing, with some clearly traceable to popular stories (see Section 5.3.2.3). Exposure to reading has wide implications, starting from the early years. Evidence from literature illustrates the strong link between reading and cognitive development in pre-schoolers who are exposed to joint book reading activities. Listening to stories exposes young children to a wide range of words, improves understanding and helps with language development, emergent literacy, and readiness for school (Price & Kalil, 2019). In later years, independent reading enhances the overall quality of narrative and descriptive writing while increasing output, mechanics, spelling accuracy, content, grammatical accuracy and text organisation (Jouhar & Rupley, 2020).

Reading and comprehension needs to be seen as an overall development of literacy that follows a gradual progression from decoding print and understanding the superficial short texts to the increasingly complex texts. This progression deserves a proper understanding of the different stages by learners, parents and educators. During primary school years, reading helps develop vocabulary and comprehension skills when texts are read mainly for surface meaning. At middle school, students need to be supported in establishing a foundation of literary terminology that starts from understanding 'story plot' and 'setting'. This should progress to more complex concepts like 'point of view' and 'figurative language'. These metalinguistic concepts are key to the development of critical reading and critical dialogue that are essential skills for literacy. Critical thinking helps in developing coherent writing (Kolour, 2015). It is based on logical thinking and helps develop reflected and critical attitudes toward concepts, values and behaviours. With critical thinking, learners reflect, evaluate, construct and integrate new ideas (Daniel & Fiema, 2017). This development can be further stimulated through dialogic reading strategies in which children as early as kindergarten, are

prompted to speak about the story (Lever & Sénéchal, 2011). Strategies like these lay the foundations to enhanced writing in future years to become more constructive, better articulated and coherent.

6.2.2 Bilingualism in Schools

It remains a challenge to identify SpLD/Dyslexia in bilingual children since the risk of dyslexia may be masked by difficulties in the acquisition of the second language (see Section 2.7.2). This scenario may lead to over-identification or under-identification of dyslexia. Therefore, assessors of dyslexia need to look systematically at both languages when profiling dyslexia in bilinguals (Hedman, 2012). Moreover, the assessment of dyslexia should be done with a greater sensitivity to the issues of the population at hand, such as whether bilingual development was simultaneous or sequential, what the home and community language is, and a measure of the opportunities to use both languages.

Meanwhile, from a pedagogical point of view, bilingual perspectives should be continuously considered in schools to facilitate a person-centred approach to learning. This is said in view of the different school types that illustrate different strengths and weaknesses in the achievement of languages that is a persistent trait in the landscape of Maltese education (see Section 4.3.1 and 4.3.2). Schools should build on the strengths they already have, while at the same time, address the shortfalls in the bilingual development of their students. Bilingual policies need to address the early years by building on translanguaging pedagogies that are flexible and adaptable to the language needs of bilingual/multilingual learners (see Section 2.3). A person-centred approach is fundamental to respect the sociolinguistic realities of all bilingual learners (Baker, 2011; Grosjean, 2001). Urgent attention should be given to those

students who are considerably and consistently underachieving. As seen in this study, biliteracy development is an essential criterion for the learners' engagement with the curriculum, inclusion in class and in the learning community, that leads to a fruitful schooling experience. This will directly affect, amongst others, motivation, confidence and self-esteem which are key to educational engagement and learning (Camilleri et al, 2019).

In practical terms, learners would need additional support and opportunities for practising English outside the classroom. These opportunities may include libraries, English clubs, school events such as celebration days and online blogs and pen friends. Parents should be part of this strategy, providing them with straightforward information that is non-technical about the importance of exposure to English in the home environment and its positive effects on learning. Useful tips may include details on what it means for them as parents to support their children in learning a language (Cambridge Language Assessment, 2015).

Moreover, educators/teachers should be aware of the psycho-linguistic elements of learning in view of language attachment theories (see Section 2.13). An attachment with the language is facilitated when the focus of learning becomes the fulfilment on an affective level, based on a holistic cultural experience that links the students with the social and cultural context of language. Learners' bond with the language is fundamental to acquiring a language during all stages of the learning process. The embodied cognition in terms of emotional and social engagement creates a strong attachment to the language, through which students enjoy themselves in the learning process. Thus, exposure to the language should not only be academic with the focus only on grammar, memorisation, rote learning and testing, but schools should encourage the development of intercultural Discourse to help students engage and form an attachment with the language (McKay, 2003).

6.3 What do literacy scores tell us about the quality of writing produced by dyslexia candidates?

The use of Text Analysis (Textinspector) in this study confirms that text quality is poorer for SpLD/dyslexia candidates (see all Section 4.5 and all Section 4.6). In all the measures used except for one (Reading Ease measure - Flesch), the scores for the SpLD group were significantly and consistently lower than those of the Rest. These texts include measures for lexical diversity (VOC-d), indicating that the vocabulary used by SpLD students is more restricted than that of the Rest. As expected, the frequency of spelling errors was also higher for SpLD/dyslexia candidates. Similarly, the level of vocabulary, as classified by CEFR levels in the software textinspector, was also indicative of vocabulary that lacks the complexity and sophistication that students without SpLD use. The only text measure that did not register any differences between AA and non-AA texts was the measure for Reading Ease (Flesch). This measure calculates a score based on the number of words in the text and the sentence length. These are two qualities that feature erratically in poor texts (both AA and non-AA) that are often short in word length and marked by limited punctuation.

The quantitative part of this study also analysed aspects of the standardised literacy tests administered in preparation for the application of access arrangements. Results show an overall strong and significant correlation between standardised literacy test scores, and language essay marks as well as the global grade in the SEC languages. This reflects how the skills of reading, comprehension and spelling in both English and Maltese are important contributors to good writing and overall achievement in the language subjects at national examinations. These strong and significant links between the literacy results and marks and grades justify and strengthen the validity of the battery of literacy assessment that is

requested for the presentation of students' literacy profile when applying for access arrangements. Despite the often-controversial nature of these standardised educational testing tools, criticised for their incomplete presentation of a profile, the results in this study present a defence for their effectiveness and validity.

Nevertheless, the frequent review and analyses of these tests to ensure their validity remains fundamental, especially because of the adoption of foreign literacy tests, keeping in mind that these have been standardised on a different population to the local one. Dyslexia is multifaceted, and its diagnosis entails a dynamic approach that requires more than the administration of one test. Moreover, it also involves the qualitative interpretation of scores after testing which is essential to arriving at a more comprehensive picture of the students' literacy abilities. For example, many students undergo the General Cognitive Ability test, administered in English, at a young age when their language proficiency in English is still developing. Hence, the cognitive skills of these bilingual learners could easily be underestimated, rendering into question the reliability and validity of the test.

The few but persistent outlying scores in the quantitative results are testimony to literacy profiles that are not square-shaped and rigid. Some students have achieved good literacy scores but went on to do poorly in the language examinations. The reasons for this can be varied, including affective variables like examination stress and anxiety that students with dyslexia experience (Camilleri et al, 2019). Poor writing self-efficacy and apprehension about grammar - which is the students' worry about making errors in grammar, punctuation, and spelling - were also found to be reasons for poor performance in examinations (Sanders-Reio et al, 2014) and not necessarily manifest in literacy testing. Alternatively, some have done very well in the writing task despite achieving poorly in items testing literacy abilities. This

could possibly be due to deliberate underperformance from students who exaggerate or magnify dyslexia symptoms to qualify for examination access arrangements. Such behaviour can be indistinguishable from valid symptomatology when it occurs (Harrison et al, 2008).

6.3.1 Access arrangements

Examination access arrangements are considered fundamental for the removal of barriers to assessment. Nevertheless, studies have shown that the majority in the SpLD/dyslexia group do not take advantage of extra time (Woods, 2007). This is corroborated by research claiming that accommodations may be necessary but are seldom sufficient, especially if dyslexia issues are left untreated (Berninger et al, 2008). Evidence from this research shows that the quality of essays produced by these candidates and the marks and grades achieved do not reflect the expected beneficial impact of extra time, even if this is in fact utilised or if the intentions to use it are there (see all Section 4.5 and all Section 4.6). In contrast, AA students with borderline to average literacy scores achieve good marks and passing grades. Evidently, these are the ones who utilise extra time to improve their writing quality and enhance their performance in the examinations. In summary, even if extra time is used by all students who qualify for them, its benefits do not equally have the desired impact on the quality of the work.

This has many implications for AAs, both for students and for examination administrators. On an individual level, students need to appreciate and understand the importance of extra time as a tool of 'access' during examinations. They need to use it to their full advantage in a strategic way, particularly as it can be used to provide reassurance, time for reading and understanding the questions, time for planning and writing at length, time to proof-read their

work and to ensure legible handwriting. Students need to practice using the extra time when they do homework and when they work past papers. Their performance needs to be structured to ensure that extra time is used wisely to form part of quality examination time.

Such practice also needs support from the schools, primarily in ensuring that extra time is correctly incorporated in the examination time table. In the recent past, some schools were not offering the necessary space for extra time due to tight examination schedules. Students who utilised extra time had to do so during the gap between two examination sessions, ending up losing their rightful break time (Ghirxi, 2013). More importantly, part of the pre-examination training given to AA students by the schools in preparation for examinations should include the strategic use of extra time. Such training has been recently introduced in UK schools and delivered by 'pre-examination access facilitators' whose role is specifically to prepare students with AAs for examinations. The implementation of this service locally would ensure that every school is actively engaged in preparing AA students. Students with different disabilities would benefit from this training. Such an active engagement with preparation for examinations will help increase students' confidence and motivation to use AAs with profit.

From an administrative point of view, AAs demand plenty of resources and logistics. The demand for trained access arrangements support staff and more rooms to accommodate fewer candidates are always a struggle. One could argue that the resources can be invested and better channelled if accommodation is only given to those SpLD/dyslexia candidates with borderline scores who utilise AAs and benefit from them. The implementation of this daring proposal risks excluding those who fall 'on the borderline within the borderline' or those who genuinely use the extra time or feel reassured with extra time, even if this does not improve their failing grade. Arguably it is hard to be surgical in such decisions related to definite

criteria, especially when AAs are viewed as rightful measures for students with identified conditions/disabilities who need them for accessing examinations.

A possible solution to this administrative challenge could be Assistive Technology (AT). AT includes text-to-speech software like computer reader and scanning pens. This enables students to work individually without the need to follow the human reader-to-candidate ratio that limits capacity in the examination room. Indeed, in the past few years, the use of Assistive Technology (AT) has also been a way of facilitating and enabling learning and access to assessment locally. ATs have become more mainstream and acceptable methods/tools that give students independent access to reading. In fact, access given through AT is allowed as an access arrangement during language examinations since it is considered less subjective compared to the access given by a human reader (JCQ, 2020; MATSEC, 2019). Learners need practice and fluency in AT to be able to use it with benefit during examinations. If AT is not the student's normal way of working, it may become a hinderance to access rather than support. Moreover, AT should not be perceived as a panacea to everyone who has difficulties with literacy, especially those who struggle with comprehension. Both reading and comprehension are necessary and it is useless that AT does the reading without students comprehending.

6.3.2 National Assessment

On a national level, the realisation that a big number of candidates (see Sections 2.2 and 2.2.1) with low levels of attainment consistently fail to achieve MQF level 3 in national language examinations is alarming. As seen in this study, the struggle with proper language attainment is having an impact on the overall achievement of educational outcomes. Without implying that there should be no failures in national examinations, such a result is a bold reflection of a considerable mismatch between learning, progress, and assessment, and paints a gloomy picture of an educational system where many are being left behind. An assessment that serves its purpose needs to reflect a sense of proportionality between the learners' abilities and attainment levels and the assessment goals. This alignment is fundamental for an education system that is inclusive and in synchrony with the different levels and needs of all learners, irrespective of disability.

From an assessment point of view, the focus of safeguarding the validity and integrity of national examinations remains a foremost priority. Inclusive assessment for all in Malta should not be about manipulating the assessment criteria to lower the standards. Neither should it be a simple exercise of 'installing' a few access arrangements. On the contrary, assessment should be dynamic, incorporating modes of assessment that are both formative and summative (assessing 'for learning' and 'of learning'). These assessment designs should also reflect different levels of attainment and abilities in the different educational streams of academia, vocational and applied. In addition, a versatile curriculum should complement this assessment approach, that offers a wide variety of subjects to appeal to the interests of all young learners.

This study was carried out during a time of reform when national assessment at SEC level was undergoing huge transformations in line with the Learning Outcomes Framework (National Curriculum Framework, 2012). The reform included the introduction of the Vocational Educational Training Subjects (VET) in 2016 and the recent addition of the SEAC (Applied subjects) that will be assessed for the first time in 2022 (MATSEC, 2021). In the language subjects, SEAC English and Communication and SEAC Malti Għall-Komunikazzjoni (Maltese for Communication) presents a more communicative approach and an assessment that gives equal weighting to the four main language skills – reading, speaking, writing and listening. Moreover, the inclusion of continuous assessments in these subjects is good news to students in Malta who now have wider educational choices at secondary level. This choice enables students to embark on an educational path from earlier on, without having to wait for the post-secondary stage, by which time students who were not keen in the only available academic stream would have become alienated and lost interest in schooling. Despite this, it needs to be seen whether these students with SpLD/dyslexia are having a gainful experience and succeeding when following a VET and SEAC programmes.

In the face of these new opportunities along this educational journey, students need to be guided in their subject selection and career path with the help of educators and counsellors in a person-centred way. Achievement of a qualification is essential for students with SpLD/dyslexia whose condition has often been the cause for exclusion from years of schooling, resulting in low self-esteem, lack of motivation and disengagement from education (Camilleri et al, 2019).

This research shows how a substantial number of students do not have the academic readiness to progress smoothly to the post-secondary level of education. Writing and the

other literacy skills are essential for pursuing post-secondary education at both the academic level and in vocational training. Poor literacy impedes students from fully accessing higher-level curricula and challenges in writing will make students struggle to expressing their knowledge, thoughts and ideas. While acknowledging that post-secondary is not the right time and place to address difficulties in literacy, this crucial educational deficit cannot be left unattended. Literacy intervention programmes should be tailor made to support these students with achieving educational and vocational success.

Chapter 7 - Conclusion

This study presented a close-up look of bilingual writing from typical end-of-secondary school students in Maltese national examinations. The scripts of both access arrangements (AA) students with SpLD/dyslexia and non-AA students were analysed quantitatively and qualitatively, illustrating how generally the writing of the AA group is weaker. Nevertheless, there was a lot of overlap in the qualities of texts belonging to the two groups, pointing to the struggles that many students have with achieving good proficiency levels in the two languages, English and Maltese. This is very concerning on a national level, knowing that many do not achieve the required level of proficiency in literacy that will help them move forward in their post-secondary education.

The results in this thesis strengthen the findings from previous studies (for example, Mifsud et al, 2005) that show how, for many, the poor development of bilingualism and/or dyslexia are long standing issues. Approximately a third of SEC students have consistently, throughout the past years, failed to achieve the desired proficiency levels to progress smoothly into post-secondary education. Research needs to be conducted to establish the stage or stages at which these students start drifting away from curriculum goals. Moreover, future research needs to focus on identifying the risk factors that are leading to this educational derailment. The appropriate intervention is crucial in the formative years to ensure that young students do not become alien to an education system that is so fundamental to their wellbeing, while ensuring that they build a sense of belonging in their learning community by actively participating and feeling included.

The results and findings from the texts in this study can be used to inform educators, parents and students about the strengths and weaknesses of writing in SEC English and SEC Maltese. This is particularly relevant to those who are at the end of secondary school and who are preparing for the language national examinations. The findings in the qualitative section (Chapter 5) can be a source of feedback to guide educators and learners on key qualities of writing, highlighting both the good qualities that enrich and add value to the essays, as well as the ones to be avoided.

This study presented a snapshot of two cohorts of students sitting for examinations in two successive years. Future studies that include more years can contribute to a longitudinal project that gives a more comprehensive feedback of writing, in view of the changing education system that is becoming increasingly dynamic in its assessment, multimodal and inclusive of different learners. Such a study may help us understand whether the changes in the education system that took place in the recent past (NCF, 2012) are truly having a positive effect on different areas of education. Similarly, in relation to this study, it is interesting to find out whether there will be any marked improvements in the language proficiency levels of students.

Similarly, future studies on English and Maltese texts are needed in view of a multicultural learning community that has become more diverse in the recent past. In view of this reality, the concept of bilingual learners would need to be expanded to include different learners who may have influences other than English and Maltese in their language development. Such research can give a broader picture of different learner types who bring to the fore different forms of written expression and different language usage.

Moreover, studies on writing at different stages of education would be essential to understand the way writing developed pre-SEC examinations and how it continues to develop at the post-secondary and tertiary levels. These studies would give a more complete picture of developments in bilingual writing and help educators at these levels understand the strengths and weaknesses of their students. Indeed, the explicit teaching of literacy stops beyond a certain point because teachers assume that these skills have developed since they have been taught in previous years. On the contrary, studies like this one illustrate that this approach is not correct, and it is not the case for many learners who, for different reasons, still need support in literacy development.

This study can also lead to more detailed analyses of writing, particularly in the different school types that have different bilingual development. Using more focused qualitative analysis on a one-to-one level, the text of students with different proficiency levels can be studied in more detail. This could also be an opportunity for schools to understand how their bilingual model of teaching can be improved by addressing the weaknesses that are bringing about the huge imbalances between the two languages. Detailed studies of writing can also be used to evaluate the benefits or otherwise of specific literacy programmes in schools. This is an area that needs further exploration due to the application of literacy interventions at individual and class level.

This study also highlighted the unclear distinction between dyslexia and bilingualism. In many ways, the texts from AA and non-AA students have shown similar patterns of writing. Therefore, the results should be interpreted as a sign of caution to educators and psychologists to be sensitive to these two concepts that can easily overlap or disguise one another. The term SpLD/dyslexia covers a very broad spectrum as does bilingualism. Students

are evidently not homogeneous in their bilingual development and similarly, school types have different bilingual outcomes. Therefore, any diagnostic or teaching approach should be sensitive to the individual needs and to the cultural background of the bilingual learner. Considering this, this research provokes further discussion on the teaching methods as well as on the educational and psychometric assessments that are used in Malta. Often these tools and measures are borrowed and utilised from overseas and therefore this calls for a finer interpretation of results.

Finally, it is hard to analyse the true impact of examination access arrangements, but this study has shown in real terms that AAs do not seem to achieve the desired effect on the performance of students with SpLD/dyslexia in national examinations. Over the years however, the provision of access arrangements to SpLD students made leaps forward with the introduction of assistive technology (AT) in education. The purpose of AT is to make students more independent in their access to learning and assessment and to rely less on human assistance. The learning value of empowerment from the use of AT on the performance of students with SpLD/dyslexia is yet to be fully explored. There are still gaps in the literature, especially locally, as to whether students benefit from AT when accessing learning. Moreover, answers are still sought as to what extent assistive technology is helping students access assessment and national examinations.

In conclusion, this study aimed at providing an understanding of bilingualism and dyslexia from a different angle – that through the analysis of SEC students' writing during national examinations in Malta. The multifactorial topics in this thesis can be the impetus to further research, both within these areas and others within the field of education. It is the hope of the researcher that this project does not stop here and that future studies will follow.

References:

Abbott, R. D., Berninger, V. W., & Fayol, M. (2010). Longitudinal relationships of levels of language in writing and between writing and reading in grades 1 to 7. *Journal of Educational Psychology, 102*(2), 281-298.

ACCESS-Disability Support Unit (ADSU) (2015). Feedback received from professionals regarding Examination Access Arrangements (Unpublished).

ACCESS-Disability Support Unit (ADSU) (2018). Feedback received from professionals regarding Examination Access Arrangements (Unpublished).

Access Disability Support Unit (ADSU). Retrieved from January 7
(<https://www.um.edu.mt/about/services/support/access> (2019)

ACTU – Access to Communication and Technology Unit (2018, December 4).
([https://education.gov.mt/en/education/student-services/Pages/Special_Education/Access-to-Communication--Technology-Unit-\(ACTU\).aspx](https://education.gov.mt/en/education/student-services/Pages/Special_Education/Access-to-Communication--Technology-Unit-(ACTU).aspx)).

Adelman Reyes, S. & Kleyn, T. (2010). *Teaching in Two Languages: A Guide for K–12 Bilingual Educators*. Thousand Oaks, CA: Corwin.

Agius, R., Camilleri, M. N., & Zammit, C. (2018). Investigating the spelling performance of Maltese children. *Malta Journal of Health Sciences, 5*(1), 27-37.

Ainsworth, M. D. S. (1968). Object relations, dependency, and attachment: A theoretical review of the infant mother relationship. *Child Development, 40*, 969-1025.

Akoğlu, G. & Yağmur, K. (2016). First-language skills of bilingual Turkish immigrant children growing up in a Dutch submersion context. *International Journal of Bilingual Education and Bilingualism, 19*(6), 706-721.

Alamargot, D., Morin, M-F. & Simard-Dupuis, E. (2020). Handwriting Delay in Dyslexia: Children at the End of Primary School Still Make Numerous Short Pauses When Producing Letters. *Journal of Learning Disabilities*, 53(3), 163-175.

Alderson, J. C. (2007). The CEFR and the Need for More Research. *Modern Language Journal*, 91(4), 659-63.

Ali, M., Farrugia, J. and the Gender Issues Committee of the University of Malta (2013). Why do students opt not to sit for SEC examinations at the end of their compulsory education? *Publications Committee, Faculty of Education*, 7(1), 89-115.

Alotaibi, H. (2014). The Role of Lexical Cohesion in Writing Quality. *International Journal of Applied Linguistics & English Literature*, 4(1), 261-69.

Afonso, O., Suárez-Coalla, P., Cuetos, F. (2020). Writing Impairments in Spanish Children with Developmental Dyslexia. *Journal of Learning Disabilities*, 53(2), 109-119.

Almeida, F., Daniel, F. & Queirós, A. (2017). Strengths and Limitations of Qualitative and Quantitative Research Methods. *European Journal of Education Studies*, 3(9), 369-387.

Aloudat, A. (2017). Spelling Errors in English Writing Committed by English-Major Students at BAU. *Journal of Literature, Languages and Linguistics*, 32.

Andersen, K. (2017). Translanguaging pedagogy in multilingual early childhood classes: A video ethnography in Luxembourg. *Translation and Translanguaging in Multilingual Contexts*, 3(2), 1.

Andrews, R., Torgerson, C., Low, G., & McGuinn, N. (2009). Teaching argument writing to 7- to 14-year-olds: An international review of the evidence of successful practice. *Cambridge Journal of Education*, 39(3), 291-310.

Arfé, B., Mason, L., Fajardo, I. (2018). Simplifying informational text structure for struggling readers. *Reading and Writing, 31(9)*, 2191-2210.

Association for Educational Assessment (AEA) Conference (2018). <http://www.aea-europe.net/>

Azzopardi-Alexander, M. (2017). The Phonetic Study of Speakers along the Maltese-English Continuum. In Saade, B. & Tosco, M. (Eds.). *Advances in Maltese Linguistics* (p.193-223). Germany: Universität Bremen.

Bacon-Shone, John. (2015). *Introduction to Quantitative Research Methods*.

(Researchgate.net:

https://www.researchgate.net/publication/265793712_Introduction_to_Quantitative_Research_Methods) Retrieved 2018, March 20.

Bailey, A. L., & Carroll, P. E (2015). Assessment of English Language Learners in the Era of New Academic Content Standards. *Review of Research in Education, 39 (1)*, 253-294.

Baker, C. (2011). *Foundations of Bilingual Education and Bilingualism, 5th Edition*. UK: Short Run Press Ltd.

Baker, C. (2014). *A Parents' and Teachers' Guide to Bilingualism, 4th Edition*. UK: Short Run Press Ltd.

Barnett, A. L., Connelly, V. & Miller, B (2020). The Interaction of Reading, Spelling, and Handwriting Difficulties with Writing Development. *Journal of Learning Disabilities, 53(2)*, 92-95.

Bartlett, T. & O'Grady, G. (2017). *The Routledge Handbook of Systemic Functional Linguistics*. New York, London.

Bax, S., Nakatsuhara, F. & Waller, D. (2019). Researching L2 writers' use of metadiscourse markers at intermediate and advanced levels. *System* 83, 79-95.

Bereiter, C. & Scardamalia, M. (1987). *The psychology of written composition*. Hillsdale, New Jersey: Lawrence Erlbaum Associates, Publishers.

Bereiter (2014). Carl Bereiter Interview Part A (Retrieved 2020, September 9).
<https://www.youtube.com/watch?v=zRHmAW6PLzU>

Bernhardt (1980). Reviewed Work: Cohesion in English by M. A. K. Halliday, Ruqaiya Hasan. *Style*, 14(1), 47-50.

Berninger, V. W. (2009). Co-ordinating transcription and text generation in working memory during composition: Automatic and constructive processes. *Learning Disability Quarterly*, 22(2), 99–112.

Berninger, V. W., & Swanson, H. L. (1994). Modifying Hayes and Flower's model of skilled writing to explain beginning and developing writing. In E. C. Buttereld (Ed.), *Advances in cognition and educational practice, Vol. 2. Children's writing: Toward a process theory of the development of skilled writing*, 57–81. JAI Press: Greenwich.

Berninger, V., Fuller, F. & Whitaker, D. (1996). A Process Model of Writing Development across the Life Span. *Educational Psychology Review*, 8(3), 193-218.

Berninger, V., W., Nielsen, K., H., Abbott, R., D., Wijsman, E., & Raskind, W. (2008). Writing Problems in Developmental Dyslexia: Under-recognized and under-treated. *Journal of School Psychology*, 46(1), 1-21.

Berninger, V. W., Winn, W. D., Stock, P., Abbott, R. D., Eschen, K., Lin, S-J., Garcia, N., Anderson-Youngstrom, M., Murphy, H., Lovitt, D., Trivedi, P., Jones, J., Amtmann, D. & Nagy, W. (2008). Tier 3 Specialized Writing Instruction for Students with Dyslexia. *Reading & Writing*, 21(1), 95-129.

Beyreli, L. & Ari, G. (2009). The use of analytic rubric in the assessment of writing performance - inter-rater concordance study. *Kuram ve Uygulamada Egitim Bilimleri, (9)*, 105-125.

Bhattacharya, A. & Ehri, L. (2004). Graphosyllabic analysis helps adolescent struggling readers read and spell words. *Journal of Learning Disabilities, 37*, 331-348.

Boada, R. & Pennington, B. F. (2006). Deficient implicit phonological representations in children with dyslexia. *Journal of Experimental Child Psychology, 95(3)*, 153-193.

Borg, A. (1988a). The maintenance of Maltese as a language: What chances? *Council of Europe 1988*: 89-106.

Borg, A. & Azzopardi-Alexander, M. (1997). *Foreign Language Study*. UK: Routledge.

Bourassa, D., & Treiman, R. (2003). "Spelling in Children with Dyslexia: Analyses from the Treiman-Bourassa Early Spelling Test." *Scientific Studies of Reading, 7(4)*, 309-33.

Bowlby, J. (1969). *Attachment and Loss, Vol. 1: Attachment*. New York: Basic Books.

Braun, V. and Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3 (2)*, 77-101.

Brincat, J.M. (2011). *Maltese and other languages: A linguistic history of Malta*. Malta: Midsea Books.

British Dyslexia Association (BDA). Definition of Dyslexia (2020, May 14)
<https://www.bdadyslexia.org.uk/dyslexia/about-dyslexia/what-is-dyslexia>

Byker, E. (2013). Critical Cosmopolitanism: Engaging Students in Global Citizenship Competencies. *English in Texas Journal, 43*, 18-22.

Camilleri, S., Chetcuti, D., & Falzon, R. (2019). "They Labeled Me Ignorant": Narratives of Maltese Youth with Dyslexia on National Examinations. *SAGE Open* 9.2.

Camilleri Grima, A. (2013). A select review of bilingualism in education in Malta. *International Journal of Bilingual Education and Bilingualism*, 16(5), 553-569.

Cambridge Dictionary Online (2019, August 1). <https://dictionary.cambridge.org/dictionary/>

Campano, G. (2007). *Immigrant Students and Literacy: Reading, Writing, and Remembering*. New York: Teachers College Press.

Canagarajah, S. (2006). Toward a writing pedagogy of shuttling between languages: Learning from multilingual writers. *College English*, 68(6), 589-604.

Canagarajah, S. (2011). Codemeshing in Academic Writing: Identifying Teachable Strategies of Translanguaging. *The Modern Language Journal*, 95(3), 401-417.

Caravolas, M., Hulme, C., & Snowling, M. J. (2001). The foundations of spelling ability: Evidence from a 3-year longitudinal study. *Journal of Memory and Language*, 45(4), 751-774.

Caruana, S., Cremona, G. & Vella, A (2011). *Malta: Country Report for Meridium Project* (2019, August 29).
http://www.humanrightsmalta.org/uploads/1/2/3/3/12339284/caruana_cremona_vella_malta-country_report_for_meridium_project_illegal_immigration_legislation_education.pdf

Caruana, S., Cremona, G. & Vella, A (2013). Language Use Perception and Attitudes amongst Maltese Primary School Teachers. In Caruana, S., Coposescu, L. & Scaglione, S. (Eds.), *Migration, Multilingualism and Schooling in Southern Europe* (p.315-354). UK: Cambridge Scholars.

Cassar, C. (2001). *Malta: Language, Literacy and Identity in a Mediterranean Island Society*. *National Identities*, 3(3), 257-275.

Cassar, M., Treiman, R., Moats, L., Pollo, T. & Kessler, B. (2005). How Do the Spellings of Children with Dyslexia Compare with those of Nondyslexic Children? *Reading and Writing*, 18, 27-49.

Charmaz, K. (2006). *Constructing Grounded Theory. A Practical Guide Through Qualitative Analysis*. Sage. UK: London
http://www.upv.es/i.grup/repositorio/Charmaz_2006_IEMA_ConstructingGroundedTheory.pdf

Choy, S., Singh, P., & Li, M. (2017). Trans-Cultural, Trans-Language Practices: Potentialities for Rethinking Doctoral Education Pedagogies. *Education Sciences*, 7(1), 19.

Clarke, V. and Braun, V. (2013). *Successful qualitative research: A practical guide for beginners*. London: Sage.

Cline, T. (2000). Multilingualism and dyslexia: challenges for research and practice. *Dyslexia (Chichester, England)*, 6(1), 3–12.

Coffin, C., & Donohue, J. P. (2011). Academic Literacies and Systemic Functional Linguistics: How do they relate? *Journal of English for Academic Purposes*, 11(1), 64-75.

Collins, G. G. (2011). An examination of errors of coherence in adolescent sentence combining. *LSU Doctoral Dissertations*.
(https://digitalcommons.lsu.edu/cgi/viewcontent.cgi?article=2768&context=gradschool_dissertations) (2020, October 15).

Common European Framework of Reference for Languages: Learning, Teaching, Assessment Companion Volume with New Descriptors (2019, December 29).
<https://rm.coe.int/cefr-companion-volume-with-new-descriptors-2018/1680787989>

Cook, V.J. (2001). Using the first language in the classroom. *Canadian Modern Language Review*, 57, 402-423.

Corpus of Learner English in Malta (CLEM) (2016, June 25)
<http://mlrs.research.um.edu.mt/index.php?page=corpora>

Council of Europe Portal – European Language Portal (ELP), (2020, March 20).
<https://www.coe.int/en/web/portfolio/introduction>

Council of Europe (2007). *Intergovernmental Policy Forum: The Common European Framework of Reference for languages (CEFR) and the development of language policies: challenges and responsibilities*. <https://rm.coe.int/impact-of-the-common-european-framework-of-reference-for-languages-and/16805c28c7> (2019, November 1).

Council of Europe (2011a). *European Language Portfolio (ELP): Principles and guidelines, with added explanatory notes*. Strasbourg, France: Council of Europe.

Council of Europe (2012). *Guide for the development and implementation of curricula for plurilingual and intercultural education*. Executive Version - Language Policy Division. <https://rm.coe.int/guide-for-the-development-and-implementation-of-curricula-for-plurilin/16805a0113> (2019, November 12).

Council of Europe (2018). *Common European Framework of Reference for Languages: Learning, Teaching, Assessment Companion. Volume with New Descriptors*. <https://rm.coe.int/cefr-companion-volume-with-new-descriptors-2018/1680787989> (2019, November 5).

Cowan, N., Hogan, T.P., Alt, M., Green, S., Cabbage, K.L., Brinkley, S. & Gray, S. (2017) Short-term Memory in Childhood Dyslexia: Deficient Serial Order in Multiple Modalities. *Dyslexia*, 23(3), 209-33.

Creswell, J., & Plano Clark, V. (2007). *Designing and conducting mixed methods research*. Thousand Oaks, CA: Sage.

Creswell, J. W. (2014). *Research Design. Qualitative, Quantitative, and Mixed Method Approaches*. 4th edition. Sage, USA.

Creswell, J. W. (2015). *A Concise Introduction to Mixed Methods Research*. Thousand Oaks: SAGE.

Crusan, D., Plakans, L., & Gebril, A. (2016). Writing assessment literacy: Surveying second language teachers' knowledge, beliefs, and practices. *Assessing Writing, 28*, 43–56.

Crystal, D (2008). *A Dictionary of Linguistics and Phonetics, 6th Ed*. Blackwell Publishing: USA.

Culham, R. (2003). *6 + 1 Traits of Writing: The Complete Guide Grades 3 and Up*. Scholastic: US.

Cummins, J. (1979). Linguistic interdependence and the educational development of bilingual children. *Review of Educational Research, 49*, 222–251.

Cummins, J. (2008). Teaching for Transfer: Challenging the Two Solitudes Assumption in Bilingual Education. *Encyclopedia of Language and Education, 5*.

Curdt-Christiansen, X., L. & Sun, B. (2016). Nurturing bilingual learners: challenges and concerns in Singapore. *International Journal of Bilingual Education and Bilingualism, 19*(6), 689-705.

Dagnino, A. (2015). Bilingualism across the Lifespan. *11th Annual Symposium, Centre for Intercultural Language Studies (CILS)*, The University of British Columbia, Vancouver.

- Daniel, M., & Fiema, G. (2017). Dialogical Critical Thinking in Children. *Knowledge Cultures*, 5(4), 42-65.
- Dansieh, S. A. (2011). SMS Texting and Its Potential Impacts on Students' Written Communication Skills. *International Journal of English Linguistics*, 1(2), 222-229.
- Danzak, R. L. (2011). The Integration of Lexical, Syntactic, and Discourse Features in Bilingual Adolescents' Writing: An Exploratory Approach. *Lang Speech Hear Serv Sch*, (4), 491-505.
- De Jong, E. J. (2011). *Foundations for Multilingualism in Education: From Principles to Practice*. Philadelphia PA, Caslon Publishing.
- DelleBovi, B. M. (2012). Literacy instruction: From assignment to assessment. *Assessing Writing*, 17, 271–292.
- DeLuca, C. & Bellara, A. (2013). The Current State of Assessment Education: Aligning Policy, Standards, and Teacher Education Curriculum. *Journal of Teacher Education*, 64(4), 356-372.
- D'Este, C., & Ludbrook, G. (2013). Fairness and Validity in Testing Students with SpLD. In Tzagari, D. & Spanoudis, G. (Eds.), *Assessing L2 Students with Learning and Other Disabilities*. Newcastle upon Tyne, UK: Cambridge Scholars.
- Diltz, J. (2006). Words to voice: Three approaches for student self-evaluation. *Teaching English in the Two-Year College*, 34(1), 41–45.
- Dockrell, J. E. (2014). Introduction. In Arfe, B., Dockrell, J. & Berninger, V. (2014). *Writing Development in Children with Hearing Loss, Dyslexia, or Oral Language Problems*. xvii-xxii. Oxford University Press: UK.
- Dockrell, J. E., Marshall, C. R., & Wyse, D. (2016). Teachers' reported practices for teaching writing in England. *Reading and Writing*, 29(3), 409-434.

Dutro, S. (2006). Providing language instruction. *Aiming high/Aspirando a lo Mejor resource*. Santa Rosa, CA: Sonoma County Office of Education, 1-7.

(https://www.scoe.org/docs/ah/AH_dutro.pdf) (2019, December 3).

Dyslexia Help (2020, October 13). Strategies on spelling.

<http://dyslexiahelp.umich.edu/professionals/dyslexia-school/spelling/how-should-spelling-be-taught>

Education Act (CAP. 327) Admissions Regulations (2016).

https://www.um.edu.mt/__data/assets/pdf_file/0011/265709/adminregs2016.pdf

Eggs, S. (2004). *An Introduction to Systemic Functional Linguistics*, 2nd Edition, London: Continuum.

Ehri, L. C. (1995). Phases of development in learning to read words by sight. *Journal of Research in Reading*, 18(2), 116-125.

Ehri, L. C. (1997). Learning to read and learning to spell are one and the same, almost. In C. Perfetti, L. Rieben, & M. Fayol (Eds.), *Learning to spell: Research, theory, and practice across languages* (Vol. 13, pp. 237-268). Mahwah, NJ: Erlbaum.

Ehri, L. C. (2014). Orthographic Mapping in the Acquisition of Sight Word Reading, Spelling Memory, and Vocabulary Learning. *Scientific Studies of Reading*, 18(1), 5-21.

Elliott, J. and Grigorenko, E. (2014). *The Dyslexia Debate*. Cambridge University Press. US.

Elliot, G. & Johnson, N. (2008). All the Right Letters – Just not necessarily in the right order. Spelling errors in a sample of GCSE English scripts. (Paper presented at the British Educational Research Association Conference, Edinburgh) Cambridge Assessment.
<https://www.cambridgeassessment.org.uk/Images/109772-all-the-right-letters-just-not-necessarily-in-the-right-order.-spelling-errors-in-a-sample-of-gcse-english-scripts.pdf>

Endarto, I. (2017). *Systemic Functional Linguistics: A Brief Introduction*. Presented at Forum Diskusi Basantara Yogyakarta, on May 24, 2017.

English Vocabulary Profile (EVP) Website (2020, July 16) (<http://www.englishprofile.org/>)

Enkvist, N. E. (1978). Coherence, Pseudo-coherence, and non-coherence. In Ostman, J (Ed.), *Semantics and Cohesion*. Research Institute of the ABO (p.109-128).

European Commission – Education and Training Monitor - Malta (2019)

https://ec.europa.eu/education/sites/education/files/document-library-docs/et-monitor-report-2019-malta_en.pdf (2020, February, 11).

Everatt, J., Smythe, I., Adams, E. & Ocampo, D. (2000). Dyslexia screening measures and bilingualism. *Dyslexia*, (6), 42-56.

Everatt, J., Reid, G. & Elbeheri, G. (2013). Assessment Approaches for Multilingual Learners with Dyslexia - Diverse Perspectives. In Martin, D. *Researching Dyslexia in Multilingual Settings*. Bristol: UK.

Everatt, J., Sedaghi, A., Grech, L., Elshikh, M., Abdel-Sabour, S., Al-Menaye, N., McNeill, B. & Elbeheri, G. (2013). Assessment of Literacy Difficulties in Second Language and bilingual Learners. In Tsagari, D. & Spanoudis, G. (Eds.), *Assessing L2 Students with Learning and Other Disabilities*. Newcastle upon Tyne, UK: Cambridge Scholars.

Ewing, D. (2018). Presenter at the Employment and Dyslexia Conference organised by the Malta Dyslexia Association (MDA) at the Excelsior, Floriana. 2018, October 18.

Faradhibah, R.N. & Nur, A.N. (2017). Analyzing Students' Difficulties in Maintaining their Coherence and Cohesion in Writing Process. *Eternal (English, Teaching, Learning & Research Journal)*, 3(2), 183-194.

Farrell, M. P. & Ventura, F. (1998). Words and Understanding in Physics. *Language and Education*, 12(4), 243-253.

Farrugia, C. (2017). Ombudsman, Commissioner for Education. *Good: Could Be Better. Matsec Access Arrangements for Special Needs Candidates with reference to candidates suffering from ADHD, Autism or Dyslexia Conditions*. Office of the Ombudsman - An Own Initiative Report by Professor Charles Farrugia (<https://www.ombudsman.org.mt/wp-content/uploads/2017/07/Good.-Could-be-better.pdf>)

Firman, C. (2007). *A study of word-level decoding skills of 7-year-old Maltese children in a bilingual environment*, Ph.D. thesis, University of Malta, Msida, Malta.

Firman, C. (2009). Perspectives from Malta. *Perspectives on Language and Literacy*, 35(1), 28-31.

Fitzgerald, J. (2006). Multilingual writing in preschool through 12th grade: The last 15 years. In MacArthur, C.A., Graham, S. & Fitzgerald, J. (Eds.), *Handbook of writing research* (pp. 337-354). New York, NY: Guilford Press.

Flecken, M. (2011). Assessing bilingual attainment: macrostructural planning in narratives. *International Journal of Bilingualism*, 15(2), 164–186.

Flick, U. (2013). *The Sage Handbook of Qualitative Data Analysis*. Sage
https://www.ewi-psy.fu-berlin.de/einrichtungen/arbeitsbereiche/qualitative_sozial-_bildungsforschung/Medien/58869_Flick__The_SAGE_HB_of_Qualitative_Data_Analysis_Chapter1_mapping-the-field.pdf (2017, August 13)

Flower, L., & Hayes, J. R. (1981). *A Cognitive Process Theory of Writing*.
https://pdfs.semanticscholar.org/e447/bb67c5341f06be588106853db4975ae514a4.pdf?g_a=2.92499547.714327060.1585415442-20162548.1585313938

Foundation for Information Technology Accessibility (FITA) Website, 2018, December 4,
<https://fitamalta.eu/>.

Freshwater, D. (2007). Reading Mixed Methods Research: Contexts for Criticism. *Journal of Mixed Methods Research*, 1(2), 134–146.

Frith, U. (1986). A Developmental Framework for Developmental Dyslexia. *Annals of Dyslexia*, 36, 69-81.

Frith, U. (1999). Paradoxes in the definition of dyslexia. *Dyslexia*, 5(4), 192 – 214.

Fueller, C., Loescher, J. & Indefrey, P. (2013). Writing superiority in cued recall. *Frontiers in Psychology*, 4, 764-776.

Garcia, O. (2009). *Bilingual Education in the 21st Century: A Global Perspective*. Wiley, Blackwell: US.

García, O. (2009). Education, Multilingualism and Translanguaging in the 21st Century. In: Mohanty, A., Panda, M., Phillipson, R. & Skutnabb-Kangas, T. (Eds). *Multilingual Education for Social Justice: Globalising the local*. (p.128-145). New Delhi: Orient Blackswan.

Gauci, H., & Camilleri Grima, A. (2013). Codeswitching as a Tool in Teaching Italian in Malta. *International Journal of Bilingual Education and Bilingualism*, 16(5), 615-31.

Gee, J. P. (1996). *Social linguistics and literacies: Ideology in discourses* (2nd ed.). London: Taylor & Francis.

<http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.476.9477&rep=rep1&type=pdf>

Gee, J. P. (2001). Reading as situated language: A sociocognitive perspective. *Journal of Adolescent & Adult Literacy*, 44, 714-725.

Gerot, L. (2000). Exploring Reading Processes. In L Unsworth (ed). *Researching Language in Schools and Communities: Functional Linguistic Perspectives*. London and Washington.

Ghirxi, J. (2013). Exam Access Arrangements in Malta: Consultation document prepared for the Ministry for Education and Employment on identified current challenges and proposed ways forward.

(<https://education.gov.mt/en/resources/Documents/Policy%20Documents%202014/Exam%20Access%20Arrangements%202013.pdf>) 2017 November 2.

Gillespie, A., Graham, S., Kiuahara, S., & Hebert, M. (2014). High school teachers use of writing to support students' learning: A national survey. *Reading and Writing, 27*(6), 1043–1072.

Glaser, B., & Strauss, A. (1967). *The Discovery of Grounded Theory: Strategies for Qualitative Research*. Mill Valley, CA: Sociology Press.

Gosse, C., & Van Reybroeck, M. (2020). Do Children with Dyslexia Present a Handwriting Deficit? Impact of Word Orthographic and Graphic Complexity on Handwriting and Spelling Performance. *Research in Developmental Disabilities, 97*.

Goswami, U. (2000). Phonological representations, reading development and dyslexia: towards a cross-linguistic theoretical framework. *Dyslexia, 6*, 133–151.

Grabe, W. (2000). Textual Coherence and Discourse Analysis. *Australian Review of Applied Linguistics. Supplement Series, 16*(1), 65-82.

Grabowski, J. (2005). Speaking, writing, and memory span performance: Replicating the Bourdin and Fayol results on cognitive load in German children and adults. In L. Allal & J. Dolz (Eds.), *Proceedings Writing 2004*.

Grabowski, J., (2010). Speaking, writing, and memory span in children: Output modality affects cognitive performance. *International Journal of Psychology, 45*(1), 28 -39.

Grima, A. (2008). Living life in a language.

<https://adriangrima.org/?s=living+life+in+a+language>

Grosjean, F. (2001). The bilingual's language modes. In Nicol, J. (Ed.). *One Mind, Two Languages: Bilingual Language Processing* (p.1-22).

Guest, G., MacQueen, K. M., & Namey, E. E. (2012). *Applied Thematic Analysis*. Sage. USA.

Gunning, T. G. (2014). *Assessing and Correcting Reading and Writing Difficulties: A Student-Centered Classroom*, 5th Edition. US: Pearson.

Halliday, M. A. K., Hasan, R. (1976/2013). *Cohesion in English*. London and New York: Routledge.

Hammann L.A., Stevens R.J. (2003) Instructional Approaches to Improving Students' Writing of Compare-Contrast Essays: An Experimental Study. *Journal of Literacy Research*, 35(2), 731-756.

Hamp-Lyons, L. (2016a). Farewell to Holistic Scoring? *Assessing Writing*, 27, A1-A2. Web.

Hamp-Lyons, L. (2016b). Farewell to Holistic Scoring. Part Two: Why Build a House with Only One Brick? *Assessing Writing*, (29), A1-A5. Web.

Harding-Esch, E. & Riley, P. (2003). *The Bilingual Family – A Handbook for Parents*. 2nd Edition. UK: Cambridge University Press.

Harrison, A.G., Edwards, M.J., & Parker, K.C. (2008). Identifying students feigning Dyslexia: Preliminary findings and strategies for detection. *Dyslexia*, 14(3), 228-246.

Hayes, J. R. (2017). Are Cognitive Studies in Writing Really Passé?. In Portanova, P., Rifenburg, M. & Roen, D. (Eds.). *Contemporary Perspectives on Cognition and Writing* (p.vii-xv). Colorado: WAC Clearinghouse, Fort Collins. 2019, December 20.
(<https://wac.colostate.edu/docs/books/cognition/writing.pdf>)

Hayes, J.R. & Berninger, V. W. (2014). Cognitive Processes in Writing: A Framework. In Arfe, B., Dockrell, J. & Berninger, V. (2014). *Writing Development in Children with Hearing Loss, Dyslexia, or Oral Language Problems*, 3-15. Oxford University Press: UK.

Heaton, J. (2004). Types of qualitative secondary analysis. In Heaton, J. *Reworking qualitative data* (pp. 35-52). London: SAGE Publications Ltd.
<http://methods.sagepub.com/base/download/BookChapter/reworking-qualitative-data/n3.xml>

Hedman, C. (2012). Profiling Dyslexia in Bilingual Adolescents. *International Journal of Speech Language Pathology*, 14(6), 529-42.

Hellman, C. (1995). The Notion of Coherence in Discourse. In Rickheit, G. (Ed.) et al. *Focus and Coherence in Discourse Processing. Research in Text Theory* (p.190-203). DeGruyter: Berlin.

Hoberman, R. & Aronoff, M. (2003) The verbal morphology of Maltese: From Semitic to Romance. In J. Shimron (Ed.), *Language processing and acquisition in languages of Semitic, root-based, morphology*, 61-78. John Benjamins: Philadelphia, US.

Hopfenbeck, T. N. (2019). Does a test have to be fair to be valid?. *Assessment in Education: Principles, Policy & Practice*, 26(5), 537-540.

Huntington, S. (1993). The Clash of Civilizations? *Foreign Affairs*, 72(3), 22 -22.

Huxham, M., Campbell, F., & Westwood, J. (2012). Oral versus Written Assessment: A Test of Student Performance and Attitudes. *Assessment and Evaluation in Higher Education*, 37(1), 125-136.

Hyland, K., and Tse, P. (2004). Metadiscourse in Academic Writing: A Reappraisal. *Applied Linguistics*, 25(2), 156-77.

Imperial College Disability Advisory Service, London, UK. (2020, February 14)
<http://www.imperial.ac.uk/disability-advisory-service/current-students/assistive-technology/>

International Baccalaureate (2010). *Learning diversity in the International Baccalaureate programmes: Special educational needs within the International Baccalaureate programmes*. Cardiff, Wales, UK.

International Dyslexia Association (IDA) (2021, February 2) <https://dyslexiaida.org/spelling/>

Jalali-Moghadam, N., & Hedman, C. (2016). Special Education Teachers' Narratives on Literacy Support for Bilingual Students with Dyslexia in Swedish Compulsory Schools. *Nordic Journal of Literacy Research*, (2), 1-18.

Janjua, F. (2012). Cohesion and Meanings. *Canadian Social Science*, 8(2), 149-155.

Johns, A. M. (1986). Coherence and Academic Writing: Some Definitions and Suggestions for Teaching. *TESOL Quarterly*, 20(2), 247-265.

Johnson, R., Onwuegbuzie, A. & Turner, L. (2007). Toward a Definition of Mixed Methods Research. *Journal of Mixed Methods Research*, 1, 112-133.

Joint Council for Qualifications (JCQ): Access Arrangements and Reasonable Adjustments 2018-2019 (<https://www.jcq.org.uk/exams-office/access-arrangements-and-special-consideration/regulations-and-guidance/access-arrangements-and-reasonable-adjustments-booklet>) 2018, December 4.

Joint Council for Qualifications (JCQ): Access Arrangements and Reasonable Adjustments 2017-2018. (<https://exams.gov.mt/dbfile.aspx?id=631>) 2018, December 4.

Jouhar, M.R. & Rupley, W.H. (2020). The Reading–Writing Connection based on Independent Reading and Writing: A Systematic Review. *Reading & Writing Quarterly*, 3(24), 1-21.

Kandel, S., & Perret, C. (2015). How Does the Interaction between Spelling and Motor Processes Build up during Writing Acquisition? *Cognition*, 136, 325-36.

Karabinar, S. (2012). Learners' Writing Approaches in the Context of First and Second Language use. *Akdeniz Language Studies Conference 2012. Procedia - Social and Behavioral Sciences*, 70, 1329 – 1337.

Kellogg, R. T. (2001). Competition for Working Memory among Writing Processes. *The American Journal of Psychology*, 114(2), 175-91.

Klein, C. (1993). *Diagnosing Dyslexia. A Guide to the Assessment of Adults with Specific Learning Difficulties*. Adult Literacy and Basic Skills Unit: London.

Kolour, D. M. (2015). The Impact of Teaching Critical Thinking Tasks on Coherence in Argumentative Essay Writing among EFL Learners. *Mediterranean Journal of Social Sciences*, 6(6). 460-468.

Korkemaki, R-L. & Dreher, M. (1993). Finland, Phonics, and Whole Language: Beginning Reading in. *Language Arts*, 70(6), 475.

Kormos, J. (2013). Editorial. In Tsagari, D. & Spanoudis, G. (Eds.), *Assessing L2 Students with Learning and Other Disabilities*. Newcastle upon Tyne, UK: Cambridge Scholars.

Kumamoto, C.D. (2002). Bakhtin's others and writing as bearing witness to the eloquent "I" *College Composition and Communication*, 54(1), 66-87.

Lai, E. R., Wolfe, E. W., & Vickers, D. (2015). Differentiation of Illusory and True Halo in Writing Scores. *Educational and Psychological Measurement*, 75(1), 102-25.

Lam, S. S.T., Au, R. K. C., Leung, H. W. H., & Li-Tsang, C. W. P. (2011). Chinese Handwriting Performance of Primary School Children with Dyslexia. *Research in Developmental Disabilities*, 32(5), 1745-756.

Lam, S. S-Y., White-Schwoch, T., Zecker, S. G., Hornickel, J., & Kraus, N. (2017). Neural Stability: A Reflection of Automaticity in Reading. *Neuropsychologia*, 103, 162-67.

Landerl, K., & Wimmer, H. (2000). Deficits in phoneme segmentation are not the core problem of dyslexia: Evidence from German and English children. *Applied Psycholinguistics*, 21(2), 243-262.

Lane, H. B. (2020). *How Children Learn to Read Words: Ehri's Phases*. University of Florida Literacy Institute (UFLI), <https://education.ufl.edu/uflifiles/2020/03/EhriPhases.pdf>

Lavelle, E (1993). Development and validation of an inventory to assess processes in college composition. *British Journal of Educational Psychology*, 63, 489-499

Lavelle, E. (2007). Approaches to Writing. In Torrence, M., Van Waes, L., & Galbraith, D. (Eds.), *Writing and Cognition: Research and Applications*. (pgs. 219-230). Amsterdam: Elsevier Ltd.

Laver, M., Benoit, K. & Garry, J. (2003). Extracting policy positions from political texts using words as data. *American Political Science Review*, 97(2).

Legge Gemini (2010). Italian Law: Articolo 6: "Forme di verifica e di valutazione": http://icbernareggio.it/leggi/dm_20110712.pdf

Lehtonen, A. & Bryant, P. (2005) Active players or just passive bystanders? The role of morphemes in spelling development in a transparent orthography. *Applied Psycholinguistics*, 26, 137-155.

Leijten, M. & Van Waes, L. (2013). Keystroke Logging in Writing Research. *Written Communication*, 30, 358-392.

Leo, K. (2012). Investigating Cohesion and Coherence Discourse Strategies of Chinese Students with Varied Lengths of Residence in Canada. *TESL Canada Journal*, 29(16), 157.

Leung, C., Harris, R. and Rampton, B. (1997) The idealised native speaker, reified ethnicities and classroom realities. *TESOL Quarterly*, 31, 543–560.

Lever, R. & Sénéchal, M. (2011). Discussing Stories: On How a Dialogic Reading Intervention Improves Kindergartners' Oral Narrative Construction. *Journal of Experimental Child Psychology*, 108 (1), 1-24.

Lipowicz, I. (2014). "We've Lost a Sense of Purpose in Academic Writing." *University Wire*.

Little, D. (2007). The Common European Framework of Reference for Languages: Perspectives on the Making of Supranational Language Education Policy. *Modern Language Journal*, 91(4), 645-55.

Little D. (2019, June 13) European Centre for Modern Languages of the Council of Europe website.

<https://www.ecml.at/Thematicareas/EvaluationandAssessment/EuropeanLanguagePortfolio/tabid/4179/Default.aspx>

Little, D. & Gudrun E. (2015). Learner Identity, Learner Agency, and the Assessment of Language Proficiency: Some Reflections Prompted by the Common European Framework of Reference for Languages. *Applied Linguistics*, 35, 120-39.

Lovett, B. J. & Lewandowski, L. J. (2015). *Testing Accommodations for Students with Disabilities – Research-based Practice*. American Psychological Association. Washington, DC.

Luke, A. (2012). Critical Literacy: Foundational Notes. *Theory Into Practice*, (51), 4-11.

Macarthur, C.A. & Philippakos, Z. (2010). Instruction in a Strategy for Compare–Contrast Writing. *Exceptional Children*, 76(4), 438-456.

McCarthy, P. & Jarvis, S. (2007). Vocd: A theoretical and empirical evaluation. *Language Testing*, 24, 459-488.

Maguire & Delahunt (2017). Doing a Thematic Analysis: A Practical, Step-by-Step Guide for Learning and Teaching Scholars. *All Ireland Journal of Higher Education. AISHE-J*, 9 (3), 3351-33514 (<https://ojs.aishe.org/aishe/index.php/aishe-j/article/view/335/553>).

Malpique, A. A., Pino-Pasternak, D., & Roberto, M. S. (2020). Writing and Reading Performance in Year 1 Australian Classrooms: Associations with Handwriting Automaticity and Writing Instruction. *Reading & Writing*, 33(3), 783-805.

Malta Digital Education Portal Webiste. <https://www.digital.edu.mt/> (Retrieved in March 2020).

Malta Dyslexia Association (MDA) <https://maltacvs.org/voluntary/malta-dyslexia-association-2/> (retrieved in March 2018).

Mama, Y. & Icht, M. (2016). Auditioning the Distinctiveness Account: Expanding the Production Effect to the Auditory Modality Reveals the Superiority of Writing over Vocalising. *Memory*, 24(1), 98-113.

Martinelli, V. (2016). Weak English Language Literacy and Early School Leaving in a Maltese Context. *Education Provision to Every One: Comparing Perspectives from Around the World*, ed. BCES, pp. 9-15.

Martin-Kniep, G. (2000). Standards, Feedback, and Diversified Assessment: Addressing Equity Issues at the Classroom Level. *Reading and Writing Quarterly*, (16), 239-256.

Matriculation Level Regulations (2021, January 11)

https://www.um.edu.mt/matsec/regulations/mc_regulations

MATSEC Statistical Reports 2004-2019 (2021, January 11)

<https://www.um.edu.mt/matsec/reportscommunication>

MATSEC English Language and Maltese Syllabi (2021, January 11)
(<https://www.um.edu.mt/matsec/syllabi>).

Mattinson, J. (2012). Appropriate testing accommodations for blind test-takers: High Stakes Examinations. *Journal of Blindness Innovation and Research*, 2(1).

Maynooth University. National University of Ireland, Maynooth (2013). Policy, Guidelines and Procedures for the Granting of Reasonable Accommodations in Examinations to Students with Disabilities. Adopted by DAWN November, 2013

<https://www.maynoothuniversity.ie/sites/default/files/assets/document/Maynooth%2520University%2520Examination%2520Policy%252C%2520Guidelines%2520%2526%2520Procedures.pdf>

Mazzacano D'Amato, E (2011). A study on the use of Examination Access Arrangements (unpublished but in presentation).

Mazzacano D'Amato, E. & Pirotta, D. (2015). *Assistive technology and disability. A case study of examination access arrangements for the blind*. EAE Conference Glasgow.

McCardle, P., Miller, B., Lee, J. R. & Tzeng, O. (2011). *Dyslexia across the Languages - Orthography and the Brain-Gene-Behavior Link*. Brooks Publishing: US.

McCarthy, P. M. & Jarvis, S. (2010). MTL, vocd-D, and HD-D: A Validation Study of Sophisticated Approaches to Lexical Diversity Assessment. *Behavioural Research Methods*, 42(2), 381-92.

McKay (2003). *Gee's Theory of D/discourse and Research in Teaching English as a Second Language: Implications for the Mainstream*. University of Manitoba. <https://umanitoba.ca/faculties/education/media/MacKay-2003.pdf>

Mifsud, C., Grech, R., Hutchison, D. & Morrison, J. (2005). Literacy in Malta: The National Literacy Survey of Year 5 Pupils (Aged 9-10) *Research in Education*, 73, 36 -52.

Mifsud, J., & Farrugia, J. (2017). Language choice for science education: policy and practice. *Curriculum Journal*, 28(1), 83–104.

Mifsud, M. (1995). *Loan Verbs in Maltese - A Descriptive and Comparative Study*. Brill: Leiden.

Miles, T. R. (1983). *Dyslexia – The Pattern of Difficulties*. Collins. Kent.

Miller, P., Kargin, T., & Guldenoglu, B. (2014). Differences in the Reading of Shallow and Deep Orthography: Developmental Evidence from Hebrew and Turkish Readers. *Journal of Research in Reading*, 37(4), 409-32.

Ministry of Education (1999). Creating the future together. *National Minimum Curriculum*. Malta: Ministry of Education.

Ministry of Education and Employment (2012). A National Curriculum Framework for All (NCF). <http://curriculum.gov.mt/en/Resources/The-NCF/Documents/NCF.pdf>

Ministry for Education and Employment (2015). Language Policy for the Early Years in Malta and Gozo – a Consultation Document.

<http://education.gov.mt/en/Documents/A%20Language%20Policy%20for%20the%20Early%20Years%20Consultation%20Document.pdf>

Mislevy, R. J., Haertel G, Britte, C. H., Ructtinger, L., DeBarger, A., Murray, E., Rose, D., Gravel, J., Colker, A. M., Rutstein, D. & Vendlinski, T. (2013). A “conditional” sense of fairness in assessment. *Educational Research and Evaluation, 19*(2-3), 121-140.

Morello, J., T. (2000). Comparing speaking across the curriculum and writing across the curriculum programs. *Communication Education, 49*(1), 99-113

Morgan, D. L. (2007). Paradigms Lost and Pragmatism Regained: Methodological Implications of Combining Qualitative and Quantitative Methods. *Journal of Mixed Methods Research, 1*(1), 48–76.

Morken, F. & Helland, T. (2013). Writing in Dyslexia: Product and Process. *Dyslexia, 19*(3), 131-48.

Morson, G.S. & Emerson, C. (1990). *Mikhail Bakhtin: Creation of a Prosaics*. California: Stanford University Press. (Online access: https://books.google.com.mt/books?id=BViC_wkbd4oC&printsec=frontcover&redir_esc=y#v=onepage&q=myself&f=false)

Motlhaka, H. A. & Makalela, L. (2016). Translanguaging in the 21st Century: New pathways for epistemic access and identity affirmation *Southern African Linguistics and Applied Language Studies, 34*(3), 251-260.

Nation, K. & Snowling, M. J. (1998). Individual Differences in Contextual Facilitation: Evidence from Dyslexia and Poor Reading Comprehension. *Child Development, 69*(4), 996-1011.

Nauman, A. D., Stirling, T., & Borthwick, A. (2011). What makes writing good? an essential question for teachers. *The Reading Teacher*, 64(5), 318-328.

Nieto, S. (2014). Introduction to "Diversity, Globalization, and Education". *The Educational Forum*, 78(1), 3-6.

North, B. (2014). Putting the Common European Framework of Reference to Good Use. *Language Teaching*, 47(2), 228-249.

Ocal, T., & Ehri, L. (2017). Spelling Ability in College Students Predicted by Decoding, Print Exposure, and Vocabulary. *Journal of College Reading and Learning*, 47(1), 58-74.

Ochieng, P. A. (2009). An Analysis of the Strengths and Limitation of Qualitative and Quantitative Research Paradigms. *Problems of Education in the 21st Century*, 13, 13-18.

Ochsner, K. & Kosslyn, S. M. (2013). *The Oxford Handbook of Cognitive Neuroscience, Volume One*. Oxford University Press: UK.

Olinghouse, N., Santangelo, T. & Wilson, J. (2012). Examining the Validity of Single-Occasion, Single-Genre, Holistically Scored Writing Assessments. In Steendam, E., Tillema, M., Rijlaarsdam, G. & Bergh, H. *Measuring Writing: Recent Insights into Theory, Methodology and Practice* (Chapter 4, pp.55-82).

O'Rourke, L., Connelly, V. and Barnett, A. (2018). Understanding Writing Difficulties through a Model of the Cognitive Processes Involved in Writing. (p. 11-28). In Miller B., McCardle P., & Connelly V. (Eds.). *Writing Development in Struggling Learners: Understanding the Needs of Writers across the Lifecourse*: LEIDEN; BOSTON: Brill.

Pace, T. & Borg, A. (2017). *Maltese - Does Official Recognition Matter?* *Revista De Llengua I Dret*, 67, 70-85.

Palladino, P., Cismondo, D., Ferrari, M., Ballagamba, I. & Cornoldi, C. (2016). L2 Spelling Errors in Italian Children with Dyslexia. *Dyslexia*, 22(2), 158-72.

Palviainen, A., Protassova, E., Mård-Miettinen, K. & Schwartz, M. (2016). Two languages in the air: a cross-cultural comparison of preschool teachers' reflections on their flexible bilingual practices. *International Journal of Bilingual Education and Bilingualism*, 19(6), 614-630.

Park, M. S. (2013). Code-switching and Translanguaging: Potential Functions in Multilingual Classrooms. *Teachers College, Columbia University Working Papers in TESOL & Applied Linguistics*, 13(2), 50-52.

Peterson, R. L. & Pennington, B. F. (2012). Developmental Dyslexia. *The Lancet (British Edition)*. 379 (9830), 1997-2007.

Pinto Navas, A. L. G., Ferraz, D. E. & Borges, A. J. P. (2014). Phonological Processing Deficits as a Universal Model for Dyslexia: Evidence from Different Orthographies. *CoDAS*, 26(6).

Poch, A.L., Hamby, M., & Chen, X. (2020). Secondary Teachers' Beliefs About Teaching Writing to Typically Achieving and Struggling Adolescent Writers. *Reading & Writing Quarterly*, 36(6), 497-520.

Price, J. & Kalil, A. (2019). The Effect of Mother-Child Reading Time on Children's Reading Skills: Evidence from Natural Within-Family Variation. *Child Development*, 90(6), 688-702.

Prior, P. (2006). A sociocultural theory of writing. In C. A. MacArthur, S. Graham, & J. Fitzgerald (Eds.) *Handbook of Writing Research* (pp. 54-66). New York: Guilford Press.

Prior, L. A. (2010). Dyslexia and writing: Why are so many instructional plans one-dimensional? *Voices from the Middle*, 18(1), 54-56.

Progress in International Reading Literacy Study (PIRLS) (2011).

<https://researchanddevelopment.gov.mt/en/Documents/PIRLS%202011-%20Malta%20Report.pdf>

Progress in International Reading Literacy Study (PIRLS) (2016).

<http://timssandpirls.bc.edu/pirls2016/international-results/pirls/student-achievement/pirls-achievement-results/>

Protopapas, A., Aikaterini F., Drakopoulou, S., Skaloumbakas, C. & Mouzaki, A. (2013).

"What Do Spelling Errors Tell Us? Classification and Analysis of Errors Made by Greek School Children with and without Dyslexia." *Reading and Writing*, 26(5), 615-46.

Quality Assurance Agency (QAA) (2014). Code of Practice: Reasonable Adjustments for

Disabled Students: https://www.student-registry.admin.cam.ac.uk/files/codeofpractice_reasonableadjustmentsfordisabledstudents_14-15.pdf

Ramus F. (2004). Neurobiology of dyslexia: a reinterpretation of the data. *Trends Neuroscience*, 27(12), 720-6.

Ramus, F., Marshall, C. R., Rosen, S., & Van der Lely, H. K. (2013). Phonological deficits in specific language impairment and developmental dyslexia: towards a multidimensional model. *Brain*, (136), 630–645.

Rapp, B. & Lipka, K. (2011). The Literate Brain: The Relationship between Spelling and Reading. *Journal of Cognitive Neuroscience*, 23(5), 1180-197.

Ravid, D., & Tolchinsky, L. (2002). Developing Linguistic Literacy: A Comprehensive Model. *Journal of Child Language*, 29(2), 417-47.

Reid, G. (2016). *Dyslexia: A Practitioner's Handbook, 5th Edition*. Wiley-Blackwell: US

Reid, G., Soler, J. & Wearmouth, J. (2003) *Meeting Difficulties in Literacy Development: Research, Policy and Practice*. Taylor & Francis Group. ProQuest Ebook Central.

Richards, S., Sturm, J. M., & Cali, K. (2012). Writing instruction in elementary classrooms: Making the connection to common core state standards. *Seminars in Speech and Language*, 33(2), 130-145.

Richards, T., Berninger, V., Nagy, W., Parsons, A., Field, K., & Richards, A. (2005). Brain activation during language task contrasts in children with and without dyslexia: Inferring mapping processes and assessing response to spelling instruction. *Educational and Child Psychology*, (22), 62–80.

Richardson, U., Mikko, A. & Ramachandra, N.B. (2011). Prevention of Reading Difficulties in Highly Transparent Finnish. In *Dyslexia Across Languages*. McCardle, Miller, Lee & Tzeng (2011). Brookes. Maryland, USA.

Roberts, C. W. (2000). A Conceptual Framework for Quantitative Text Analysis : On Joining Probabilities and Substantive Inferences about Texts. *Quality & Quantity*, 34(3), 259-74.

Rose, J (2009). *Identifying and Teaching Children and Young People with Dyslexia and Literacy Difficulties. An independent report from Sir Jim Rose to the Secretary of State for Children, Schools and Families*. <http://www.thedyslexia-spldtrust.org.uk/media/downloads/inline/the-rose-report.1294933674.pdf>

Ruairc, G. M. (2009). Dip, Dip, Sky Blue, Who's It? NOT YOU: Children's Experiences of Standardised Testing: A Socio-cultural Analysis. *Irish Educational Studies*, 28(1), 47-66.

Rubrics:

<https://www.teachervision.com/teaching-methods-and-management/rubrics/4524.html> On

Ryder, D. & Norwich, B. (2018). What's in a name? Perspectives of dyslexia assessors working with students in the UK higher education sector. *Dyslexia*, 24, 109-127.

Sadik, C. (2014). *100 Spelling Rules*. Booksurge Publishing.

Saldana, J. (2016). *The Coding Manual for Qualitative Researchers (3rd Edition)*. London, UK: Sage. <https://www.sfu.ca/~palys/Saldana-CodingManualForQualResearch-IntroToCodes&Coding.pdf>

Salend, S. J. (2011). *Creating Inclusive Classrooms – Effective and Reflective Practices, 7th Edition*. New Jersey: Pearson.

Sanders-Reio, J., Alexander, P. A., Reio, T. G. & Newman, I. (2014). Do students' beliefs about writing relate to their writing self-efficacy, apprehension, and performance? *Learning and Instruction, 33*, 1-11.

Savage, R., Kozakewich, M., Genesee, F., Erdos, C., & Haigh, C. (2017). Predicting writing development in dual language instructional contexts: Exploring cross-linguistic relationships. *Developmental Science, 20*(1), 1-13.

Sarzhoska-Georgievska, E. (2016). Coherence: Implications for teaching writing. *English Studies at NBU, 2*, 17-30.

Sayer, P. (2013). Translanguaging, TexMex, and Bilingual Pedagogy: Emergent Bilinguals Learning Through the Vernacular. *TESOL Quarterly, 47*(1), 63-88.

Sayeski, K. L. (2011). Effective spelling instruction for students with learning disabilities. *Intervention in School and Clinic, 47*(2), 75–81.

Schleppegrell, M. J. (2012). Academic Language in Teaching and Learning: Introduction to the Special Issue. *The Elementary School Journal, 112*(3), 409-418.

Schoonenboom, J. & Johnson, R. (2017). How to Construct a Mixed Methods Research Design. *KZfSS Kölner Zeitschrift für Soziologie und Sozialpsychologie, 69*, 10.

Schuster, E. H. (2006). A Fresh Look at Sentence Fragments. (Developing Student Writing Skills). *English Journal*, 95(5), 78-83.

Schwartz, M. & Palviainen, A. (2016). Twenty-first-century preschool bilingual education: facing advantages and challenges in cross-cultural contexts. *International Journal of Bilingual Education and Bilingualism*, 19(6), 603-613.

Sciriha, L. (1997). One country, two languages? In *Malta: A Siege and a Journey*. (p.69-90), (Eds) R. Pascoe, and J. Ronayne. Victoria: Victoria University Press.

Sciriha, L. (2001). Trilingualism in Malta: Social and Educational Perspectives. *International Journal of Bilingual Education and Bilingualism*, 4(1), 23-37.

SEC English Language and Maltese Examiners' report:
<https://www.um.edu.mt/matsec/reportscommunication>

SEC Regulations. Retrieved from
https://www.um.edu.mt/matsec/regulations/sec_regulations

SEC Vocational Subjects Policy Document. Retrieved from
https://www.um.edu.mt/__data/assets/pdf_file/0003/322671/POLICYDOCUMENTAugust17.pdf

Selikowitz, M. (2012). *Dyslexia and other Learning Difficulties*. 3rd Edition. Oxford University Press: UK

Shanahan, T. (2006). Relations among oral language, reading and writing development. In C. MacArthur, S. Graham, & J. Fitzgerald (Eds.), *Handbook of Writing Research* (pp. 171–183). New York: Guilford Press.

Shanahan, T. (2015). Relationships between reading and writing development. In C. MacArthur, S. Graham, & J. Fitzgerald (Eds.) *Handbook of Writing Research, 2nd Edition* (pp. 194–210). New York: Guilford Publications.

Shaw, S. D., & Weir, C., J. (2007). *Studies in Language Testing: Examining Writing*. UK: Cambridge University Press.

Shaywitz, S. E. (1998). Dyslexia. *The New England Journal of Medicine*, 338(5), 307-12.

Shaywitz B. A. & Shaywitz, S. E. (2020) The American experience: towards a 21st century definition of dyslexia. *Oxford Review of Education*, 46(4), 454-471.

Shohamy, E. (2010). Language teachers as partners in crafting educational language policies? *IKALA Journal*. 13,144.

Shohamy, E. (2011). Assessing multilingual competencies: Adopting construct valid assessment policies. *The Modern Language Journal*, 95(3), 418-429.

Shohamy, E. (2013). The discourse of language testing as a tool for shaping national, global, and transnational identities. *Language and Intercultural Communication*, 13(2), 226-236.

Smith, A. M. (2013). Developing Cognitive Assessments for Multilingual Learners. In Martin, D. *Researching Dyslexia in Multilingual Settings*. Bristol: UK.

Snowling, M. J. (2000). *Dyslexia Second Edition*. Oxford: Blackwell.

Snowling, M. J. (2013). Dyslexia: An Impairment of Language Learning lecture by Prof Maggie Snowling at the British Academy,
<https://www.youtube.com/watch?v=PRNLonXAhdK>

Soltero-González, L., Escamilla, K & Hopewell, S. (2012). Changing teachers' perceptions about the writing abilities of emerging bilingual students: towards a holistic bilingual perspective on writing assessment. *International Journal of Bilingual Education and Bilingualism*, 15(1), 71-94.

Spandel, V. (2006). In Defense of Rubrics. *English Journal*, 96(1), 19-22.

Spandel, V. (2013). *Creating Writers: 6 Traits, Process, Workshop, and Literature (6th Ed)*. Pearson: UK.

Sparks, R. L. (1995). Examining the linguistic coding differences hypothesis to explain individual differences in foreign language learning. *Annals of Dyslexia*, 45, 187–214.

Stewart, I., McElwee, J. & Ming, S. (2013). Language Generativity, Response Generalization, and Derived Relational Responding. *Analysis Verbal Behaviour*, (29), 137–155.

Storch, N. (2019). Collaborative Writing. *Language Teaching*, 52(1), 40-59.

Strömqvist, S., Holmqvist, K., Johansson, V., Karlsson, H., & Wengelin, Å (2006). What key-logging can reveal about writing. In K. Sullivan and E. Lindgren (Eds.) *Computer Key-Stroke Logging and Writing: Methods and Applications*. (pp. 45–72). Amsterdam: Elsevier.

Suárez-Coalla, P., Villanueva, N., González-Pumariega, S. & González-Nosti, M. (2016). Spelling difficulties in Spanish-speaking children with dyslexia. *Journal for the Study of Education and Development*, 39(2), 275-311.

Suárez-Coalla, P., Afonso, O., Martínez-García, C. & Cuetos, F. (2020). Dynamics of Sentence Handwriting in Dyslexia: The Impact of Frequency and Consistency. *Frontiers in Psychology*, 11, 319.

Sullivan, A. (2002). Bourdieu and education: How useful is Bourdieu's theory for researchers? *The Netherlands' Journal of Social Sciences*, 38, 144-166.

Sumner, E., & Connelly, V. (2020). Writing and Revision Strategies of Students with and without Dyslexia. *Journal of Learning Disabilities*, 1-10.

Sumner, E., Connelly, V. & Barnett, A. L. (2013). Children with dyslexia are slow writers because they pause more often and not because they are slow at handwriting execution. *Reading and Writing*, 26, 991–1008.

Sumner, E., Connelly, V. & Barnett, A. L. (2014). The influence of spelling ability on handwriting production: Children with and without dyslexia. *Journal of Experimental Psychology: Learning, Memory and Cognition*, 40, 1441–1447.

Sumner, E., Connelly, V., & Barnett, A. L. (2016). The influence of spelling ability on vocabulary choices when writing for children with dyslexia. *Journal of Learning Disabilities*, 49(3), 293–304.

Sundqvist, P. (2009). Extramural English Matters: Out-of-School English and Its Impact on Swedish Ninth Graders' Oral Proficiency and Vocabulary. Karlstad University Studies (published thesis).

Sundqvist, P. & Wikstrom, P. (2015). Out-of-school Digital Gameplay and In-school L2 English Vocabulary Outcomes. *System*, 51, 65-76.

Sutherland-Smith W. (2002). Weaving the literacy Web: Changes in reading from page to screen. *Reading Teacher*, 55(7), 662-669.

Taylor, L. & Khalifa, H. (2013). Assessing Students with Disabilities: Voices from the Stakeholder Community. In Tsagari, D. & Spanoudis, G. (Eds.), *Assessing L2 Students with Learning and Other Disabilities*. Newcastle upon Tyne, UK: Cambridge Scholars.

The English Benchmarking Study in Maltese Schools: Technical Report (2015). Cambridge English Language Assessment.

<http://education.gov.mt/en/Documents/Cambridge%20English%20Benchmarking%20Project%20Report.pdf>

The Constitution of Malta. Retrieved from

<http://justiceservices.gov.mt/DownloadDocument.aspx?app=lom&itemid=8566>

The University of Malta & Students with Disability (2007). *University of Malta*, Msida, Malta.

The University of Malta Access Arrangements (2013).

https://www.um.edu.mt/__data/assets/pdf_file/0020/204419/accessbooklet2013.pdf

Times of Malta: 'Petition calls for options for students sitting for exams'. Retrieved from

<https://www.timesofmalta.com/articles/view/20140520/local/petition-calls-for-options-for-students-sitting-for-exams.519852>

Tonnessen, F. E., & Uppstad, P. H. (2015). *Can we read letters?: Reflections on fundamental issues in reading and dyslexia research*. Sense Publishers. Rotterdam, The Netherlands.

Torrence, M., Van Waes, L., & Galbraith, D. (2007), *Writing and Cognition: Research and Applications*. Amsterdam: Elsevier Ltd.

Trinity College Dublin Website (2019, February 2)

<https://www.tcd.ie/disability/services/assistive-tech/>

Troia, G., A. & Olinghouse, N., G. (2013). The Common Core State Standards and Evidence-Based Educational Practices: The Case of Writing. *School Psychology Review*, 42(3), 343-357.

United Nations Educational, Scientific and Cultural Organization (UNESCO) (2017) – *A Guide for Ensuring Inclusion and Equity in Education*. UNESCO. Assistant Director-General for Education, 2010-2018 (Qian Tang - writer of foreword). <https://unesdoc.unesco.org/ark:/48223/pf0000248254>

United Nations Educational, Scientific and Cultural Organization (UNESCO): Leaving No One Behind: from digital divide to digital empowerment. 10th session of the Conference of State Parties on the Convention on the Rights of Persons with Disabilities (CRPD), 13-15 June 2017: (https://en.unesco.org/system/files/private_documents/cosp_2017_side_event_-_15_june_-_unesco.pdf) Retrieved 4th December, 2018.

United Nations Educational, Scientific and Cultural Organization (UNESCO) (2016): Digital empowerment: access to information and knowledge using ICTs for persons with disabilities: UNESCO Programme from Exclusion to Empowerment. <https://en.unesco.org/events/leaving-no-one-behind-digital-divide-digital-empowerment>

United Nations Convention on the Rights of Persons with Disabilities (UNCRPD), (2006). <https://www.ohchr.org/en/hrbodies/crpd/pages/crpdindex.aspx>

University of Malta - Guidelines to MATSEC Examinations Access Arrangements 2015. Retrieved from https://www.um.edu.mt/__data/assets/pdf_file/0003/247224/Guidelines_2015.pdf

Van Zeeland & Schmitt (2013). Incidental Vocabulary Acquisition through L2 Listening: A Dimensions Approach. *System* 41(3), 609-24.

Vassallo, O. (2015). *Corpus of Learner English in Malta (CLEM)*. A paper for the Maltese English Workshop 2015, University of Bremen.

Vellutino, F. R., Fletcher, J. M., Snowling, M. J. & Scanlon, D. M. (2004). Specific Reading Disability (dyslexia): What Have We Learned in the past Four Decades? *Journal of Child Psychology and Psychiatry*, 45(1), 2-40.

- Vidal, K. (2011). A comparison of the effects of reading and listening on incidental vocabulary acquisition. *Language Learning* 61(1), 219-258
- Vella, A. (2013). Languages and language varieties in Malta. *International journal of bilingual education and bilingualism*, 16(5), 532 -552.
- Vidrine-Isbell, B. (2017). Chapter 5. Language Attachment Theory: The Possibilities of Cross-Language Relationships. In Portanova, P., Rifenburg, M. & Roen, D. (Eds.). *Contemporary Perspectives on Cognition and Writing* (p.95-114). Colorado: WAC Clearinghouse, Fort Collins. (<https://wac.colostate.edu/docs/books/cognition/writing.pdf>)
- Wanzek, J., Vaughn, S., Wexler, J., Swanson, E. A., Edmonds, M., & Kim, A-H. (2006). A Synthesis of Spelling and Reading Interventions and Their Effects on the Spelling Outcomes of Students with LD. *Journal of Learning Disabilities* 39(6), 528-43.
- Weigle, S. C. (2002). *Assessing Writing*. Cambridge University Press, UK.
- Weiser, B. & Mathes, P. (2011). Using Encoding Instruction to Improve the Reading and Spelling Performances of Elementary Students at Risk for Literacy Difficulties A Best-Evidence Synthesis. *Review of Educational Research*, 81, 170-200.
- Wengelin, A. (2007). The Word Level Focus in Text Production by Adults with Reading and Writing Difficulties. In Torrence, M., Van Waes, L., & Galbraith, D. (Eds.), *Writing and Cognition: Research and Applications*. (pgs. 68-81). Amsterdam: Elsevier Ltd.
- Wengelin, Å., Torrance, M., Holmqvist, K., Simpson, S., Galbraith, D., Johansson, V., & Johansson, R. (2009). Combined Eyetracking and Keystroke-logging Methods for Studying Cognitive Processes in Text Production. *Behavior Research Methods*, 41(2), 337-51.
- Wilkins, A. (2018). Key Note Speaker at the Employment and Dyslexia Conference organised by the Malta Dyslexia Association (MDA) at the Excelsior, Floriana. 2018, October 18.

Wiseheart, R. & Altmann, L. J. P. (2018). Spoken Sentence Production in College Students with Dyslexia: Working Memory and Vocabulary Effects. *International Journal of Language & Communication Disorders*, 53(2), 355-69.

Woods, K. (1998). Special Examination Arrangements for GCSE. *Educational Psychology in Practice*, 14(3), 194-201.

Woods, K. (2007). Access to general certificate of secondary education (GCSE) examinations for students with special educational needs: what is 'best practice'? *British Journal of Special Education*, 34(2), 89-95.

Woods, K., & Hipkiss, A. (2018). Best Practice in Access Arrangements made for England's General Certificates of Secondary Education (GCSEs): Where are we 10 years on? *British Journal of Special Education*, 45(3), 236-255.

Zahra, G. (2017). Candidates' Feedback: MATSEC 2017 Examinations. (https://www.um.edu.mt/__data/assets/pdf_file/0010/325486/CandidatesFeedbackReportMay2017.pdf)

Zahra, G. (2018). Candidates' Feedback: MATSEC 2017 Examinations. (https://www.um.edu.mt/__data/assets/pdf_file/0009/367695/CandidateFeedback2018NewFormat.pdf)

Zhang, J. (2016), Same text different processing? Exploring how Raters' Cognitive and Meta-cognitive Strategies Influence Rating Accuracy in Essay Scoring. *Assessing Writing*, (27), 37-53.

Appendix 1 - An Overview of SEC English and SEC Maltese according to paper, gender, school type, group and marks

Table 4.63: SEC English: A representation of marks marks by paper level, gender, school type and group.

Paper	Gender	School	Group	Mean	Std. Dev.	Sample size	P-value
A	Male	State	Access Arrangement	14.93	4.736	20	.000
			Rest	20.20	4.303	317	
		Church	Access Arrangement	16.40	4.081	10	.000
			Rest	22.59	4.990	657	
		Independent	Access Arrangement	8.50	.	1	.000
			Rest	23.46	4.094	156	
	Post-Secondary/ Private	Access Arrangement	13.83	6.007	3	.281	
		Rest	17.91	6.350	64		
	Female	State	Access Arrangement	15.25	3.298	6	.000
			Rest	21.93	4.609	649	
		Church	Access Arrangement	16.11	2.998	9	.000
			Rest	22.75	4.870	577	
		Independent	Access Arrangement	20.50	5.268	3	.155
			Rest	24.26	4.485	141	
Post-Secondary/ Private	Access Arrangement	14.30	4.324	5	.189		
	Rest	17.83	5.896	107			
B	Male	State	Access Arrangement	12.73	4.654	113	.000
			Rest	16.37	4.946	452	
		Church	Access Arrangement	13.89	3.950	19	.003
			Rest	17.75	5.118	79	
		Independent	Access Arrangement	14.63	4.095	8	.027
			Rest	18.07	3.799	36	
	Post-Secondary/ Private	Access Arrangement	16.39	2.881	9	.955	
		Rest	16.31	4.316	232		
	Female	State	Access Arrangement	13.72	5.403	65	.000
			Rest	17.30	5.092	356	
		Church	Access Arrangement	14.31	5.518	18	.001
			Rest	18.28	4.062	70	
		Independent	Access Arrangement	14.20	3.511	5	.026
			Rest	20.50	4.967	10	
Post-Secondary/ Private	Access Arrangement	18.58	4.164	6	.670		
	Rest	17.76	4.710	343			

Table 4.64: SEC Maltese: A representation of marks marks by paper level, gender, school type and group.

Paper	Gender	School	Group	Mean	Std. Dev.	Sample size	P-value
A	Male	State	Access Arrangement	5.89	4.137	9	.041
			Rest	9.19	4.768	243	
		Church	Access Arrangement	6.63	3.420	8	.010
			Rest	10.79	4.552	646	
		Independent	Access Arrangement	2.00	.	1	.183
			Rest	10.18	6.060	85	
	Post-Secondary/ Private	Access Arrangement	.	.	.	.
		Rest	18.43	18.955	28		
	Female	State	Access Arrangement	9.27	2.102	11	.142
			Rest	11.36	4.699	612	
		Church	Access Arrangement	10.20	5.020	5	.459
			Rest	11.59	4.170	510	
		Independent	Access Arrangement	15.00	.	1	.376
			Rest	11.26	4.175	95	
Post-Secondary/ Private	Access Arrangement	8.00	2.828	2	.425		
	Rest	17.00	15.691	58			
B	Male	State	Access Arrangement	7.34	10.187	128	.935
			Rest	7.41	7.619	513	
		Church	Access Arrangement	4.17	3.854	18	.103
			Rest	6.56	5.910	89	
		Independent	Access Arrangement	5.20	4.712	5	.669
			Rest	6.83	8.382	72	
	Post-Secondary/ Private	Access Arrangement	3.00	1.414	2	.309	
		Rest	15.66	17.514	188		
	Female	State	Access Arrangement	7.56	10.193	63	.089
			Rest	9.99	10.624	411	
		Church	Access Arrangement	6.00	10.383	22	.200
			Rest	8.55	8.346	139	
		Independent	Access Arrangement	12.00	19.298	6	.567
			Rest	8.59	11.746	29	
Post-Secondary/ Private	Access Arrangement	11.50	3.536	2	.685		
	Rest	16.83	18.495	150			

Table 4.65: SEC English: A representation of marks marks by paper level, group, gender and school type.

Paper	Group	Gender	School	Mean	Std. Dev	Sample Size	P-value
A	Access Arrangement	Male	State	14.93	4.736	20	.399
			Church	16.40	4.081	10	
			Independent	8.50	.	1	
			Post-Secondary/ Private	13.83	6.007	3	
		Female	State	15.25	3.298	6	.157
			Church	16.11	2.998	9	
			Independent	20.50	5.268	3	
			Post-Secondary/ Private	14.30	4.324	5	
	Rest	Male	State	20.20	4.303	317	.000
			Church	22.59	4.990	657	
			Independent	23.46	4.094	156	
			Post-Secondary/ Private	17.91	6.350	64	
Female		State	21.93	4.609	649	.000	
		Church	22.75	4.870	577		
		Independent	24.26	4.485	141		
		Post-Secondary/ Private	17.83	5.896	107		
B	Access Arrangement	Male	State	12.73	4.654	113	.073
			Church	13.89	3.950	19	
			Independent	14.63	4.095	8	
			Post-Secondary/ Private	16.39	2.881	9	
		Female	State	13.72	5.403	65	.206
			Church	14.31	5.518	18	
			Independent	14.20	3.511	5	
			Post-Secondary/ Private	18.58	4.164	6	
	Rest	Male	State	16.37	4.946	452	.018
			Church	17.75	5.118	79	
			Independent	18.07	3.799	36	
			Post-Secondary/ Private	16.31	4.316	232	
Female		State	17.30	5.092	356	.084	
		Church	18.28	4.062	70		
		Independent	20.50	4.967	10		
		Post-Secondary/ Private	17.76	4.710	343		

Table 4.66: SEC Maltese: A representation of marks marks by paper level, group, gender and school type.

Paper	Group	Gender	School	Mean	Std. Dev	Sample Size	P-value	
A	Access Arrangement	Male	State	5.89	4.137	9	.531	
			Church	6.63	3.420	8		
			Independent	2.00	.	1		
			Post-Secondary/ Private	.	.	0		
		Female		State	9.27	2.102	11	.339
				Church	10.20	5.020	5	
				Independent	15.00	.	1	
				Post-Secondary/ Private	8.00	2.828	2	
	Rest	Male		State	9.02	3.986	242	.000
				Church	10.73	4.285	645	
				Independent	9.70	4.222	84	
				Post-Secondary/ Private	7.90	4.460	21	
Female				State	11.24	4.151	610	.096
				Church	11.59	4.170	510	
				Independent	11.26	4.175	95	
				Post-Secondary/ Private	10.13	4.315	48	
B	Access Arrangement	Male	State	5.25	3.775	122	.600	
			Church	4.17	3.854	18		
			Independent	5.20	4.712	5		
			Post-Secondary/ Private	3.00	1.414	2		
		Female		State	5.43	3.605	60	.037
				Church	3.90	3.434	21	
				Independent	4.40	5.683	5	
				Post-Secondary/ Private	11.50	3.536	2	
	Rest	Male		State	6.48	4.316	502	.034
				Church	6.07	3.660	88	
				Independent	5.60	4.091	70	
				Post-Secondary/ Private	7.25	4.510	151	
Female				State	7.62	4.338	388	.089
				Church	7.33	4.352	135	
				Independent	5.52	2.622	27	
				Post-Secondary/ Private	7.11	4.758	116	

Appendix 2 - Levene's test for quantitative analysis on mean number of errors.

Table 4.67: Mean number of Errors in Essays with <10 marks

	Levene's Test for Equality of Variances		t-test for Equality of Means		
	F	Sig.	t	df	Sig. (2-tailed)
Equal variances assumed	2.200	.143	.557	63	.579
Equal variances not assumed			.690	22.141	.497

Table 4.68: Mean number of Errors in Essays with marks $10 \leq X < 15$

	Levene's Test		t-test for Equality of Means		
	F	P-value	t	df	P-value
Equal variances assumed	4.995	0.027	2.221	139	0.028
Unequal variances assumed			2.859	135.797	0.005

Table 4.69: Mean number of Errors in Essays with marks $15 \leq X < 20$

	Levene's Test		t-test for Equality of Means		
	F	P-value	t	df	P-value
Equal variances assumed	25.640	0.000	3.637	178	0.000
Unequal variances assumed			3.257	98.444	0.002

Table 4.70: Mean number of Errors in Essays with marks $20 \leq X < 25$

	Levene's Test		t-test for Equality of Means		
	F	P-value	t	df	P-value
Equal variances assumed	4.763	0.030	1.467	173	0.144
Unequal variances assumed			1.069	31.050	0.293

Appendix 3 - Common Reference Levels: Global Scales

Proficient User	C2	Can understand with ease virtually everything heard or read. Can summarise information from different spoken and written sources, reconstructing arguments and accounts in a coherent presentation. Can express him/herself spontaneously, very fluently and precisely, differentiating finer shades of meaning even in more complex situations.
	C1	Can understand a wide range of demanding, longer texts, and recognise implicit meaning. Can express him/herself fluently and spontaneously without much obvious searching for expressions. Can use language flexibly and effectively for social, academic and professional purposes. Can produce clear, well-structured, detailed text on complex subjects, showing controlled use of organisational patterns, connectors and cohesive devices.
Independent User	B2	Can understand the main ideas of complex text on both concrete and abstract topics, including technical discussions in his/her field of specialisation. Can interact with a degree of fluency and spontaneity that makes regular interaction with native speakers quite possible without strain for either party. Can produce clear, detailed text on a wide range of subjects and explain a viewpoint on a topical issue giving the advantages and disadvantages of various options.
	B1	Can understand the main points of clear standard input on familiar matters regularly encountered in work, school, leisure, etc. Can deal with most situations likely to arise whilst travelling in an area where the language is spoken. Can produce simple connected text on topics which are familiar or of personal interest. Can describe experiences and events, dreams, hopes and ambitions and briefly give reasons and explanations for opinions and plans.
Basic User	A2	Can understand sentences and frequently used expressions related to areas of most immediate relevance (e.g. very basic personal and family information, shopping, local geography, employment). Can communicate in simple and routine tasks requiring a simple and direct exchange of information on familiar and routine matters. Can describe in simple terms aspects of his/her background, immediate environment and matters in areas of immediate need.
	A1	Can understand and use familiar everyday expressions and very basic phrases aimed at the satisfaction of needs of a concrete type. Can introduce him/herself and others and can ask and answer questions about personal details such as where he/she lives, people he/she knows and things he/she has. Can interact in a simple way provided the other person talks slowly and clearly and is prepared to help.

Taken from CEFR Website (<https://www.coe.int/en/web/common-european-framework-reference-languages/table-1-cefr-3.3-common-reference-levels-global-scale>).

Appendix 4 – Levene’s test for quantitative analysis on vocabulary

Table 4.71: Levene’s Test for Paper A: AA and Rest candidates on Vocabulary Levels

		Levene's Test		t-test for Equality of Means		
		F	P-value	t	df	P-value
PAA1	Equal variances assumed	0.270	0.603	-1.136	317	0.257
PAA2	Equal variances assumed	1.646	0.200	-2.797	317	0.005
PAB1	Equal variances assumed	0.100	0.752	-3.541	317	0.000
PAB2	Equal variances assumed	3.419	0.065	-4.884	317	0.000
PAC1	Unequal variances assumed	4.804	0.029	-3.750	101.5	0.000
PAC2	Unequal variances assumed	8.782	0.003	-2.690	94.8	0.008

Table 4.72: Leven’s Test for Paper B: AA and Rest candidates on Vocabulary Levels

		Levene's Test		t-test for Equality of Means		
		F	P-value	t	df	P-value
PBA1	Equal variances assumed	2.681	0.102	-3.445	339	0.001
PBA2	Equal variances assumed	0.248	0.619	-3.278	339	0.001
PBB1	Equal variances assumed	2.099	0.148	-3.937	339	0.000
PBB2	Unequal variances assumed	14.810	0.000	-2.685	228.8	0.008
PBC1	Equal variances assumed	0.147	0.701	-1.262	339	0.208
PBC2	Unequal variances assumed	8.183	0.004	-1.314	229.1	0.190

Table 4.73: Mean number of Vocabulary words in Essays for both AA and Rest Groups

Paper	Group	Sample Size	Mean Vocabulary	Std. Deviation	P-value
A1	Access Arrangement	309	59.16	30.809	0.000
	Rest	403	86.22	19.010	
A2	Access Arrangement	309	14.71	10.476	0.000
	Rest	403	27.90	10.688	
B1	Access Arrangement	309	6.04	7.612	0.000
	Rest	397	17.09	9.312	
B2	Access Arrangement	309	2.50	3.132	0.000
	Rest	383	9.10	6.056	
C1	Access Arrangement	309	0.67	1.020	0.000
	Rest	403	1.97	2.097	
C2	Access Arrangement	309	0.30	0.648	0.000
	Rest	403	1.10	1.517	

Appendix 5 – Unlisted words on Textinspector

A	beast	clasp	depends	exasperating	globalisation
abruptly	bedside	cleanse	depot	excessively	globalised
abusing	behavioural	cloak	despicable	exhaled	gloomy
academia	beings	cloakroom	disciplined	existent	gobble
adolescence	belly	clumsily	disciplining	expectancy	gobsmacked
adorable	beloved	cluttered	dishevelled	explorer	gory
adored	benchmark	coated	dismayed		gotten
adorned	berserk	cobwebs	disregard	F	gown
adrenaline	bewildered	cockroach	distillation	fabricated	grandad
adulthood	bidding	collective	distraught	Facebook	groceries
advancements	billiard	colossal	docile	fairies	grocery
advancing	bipolar	comfortability	done	fairytale	growls
advisable	blacked	commotion	doodling	farmhouse	grumbling
agonizingly	blackened	compassion	doorknob	fashioned	guardians
agreeable	blanked	computing	dotted	fictitious	gulped
airplanes	blinded	conditioner	downs	fishy	gunshot
ajar	blinding	conform	dragon	flanking	
algebra	blindly	cons	dripping	flared	H
alien	blossom	contraption	droplets	flashlight	hacker
aliens	blurry	conundrum	drunkard	flashlights	halfway
alleviate	boggling	cornered	dumbfounded	flashy	halloween
amidst	bombarded	couch	dungeon	flipping	hallway
anguish	bony	counteract	dusk	flock	halt
anomalies	boredom	countered	dusting	floorboard	handwritten
anomaly	brainwashed	coursed	dwelling	floored	hardworking
anorexia	brainwave	coven		fluffy	hassle
approachable	branching	cramp	E	flurry	havoc
archeologist	breathlessly	crater	earnestly	foam	haystack
arguable	brighten	crazed	economically	focused	haywire
armour	bristling	creaking	ecstatic	footage	hazy
aroma	budding	creators	educators	footing	headmaster
array	bulge	creepers	eerie	footprint	healthcare
artefacts	bulimic	creepier	effortless	fore	heaploads
artwork	buried	creepiest	effortlessly	forum	heists
ascending	busted	creepy	ego	forwards	herd
ashore	calculus	cropped	elastic	frantically	herons
ashy	calmness	crows	empathetic	freak	hesitant
assuredly	captivating	curfew	emptying	freaked	hibernation
atrocious	captor	curious	encrusted	frequency	hike
attackers	caressing	curled	encyclopaedia	frosty	hiking
attentive	carpenter	cursed	endlessly	fuelled	hinges
attic	carpeted	cyber	engraved	funnily	holistically
audacity	catcher	cyberbullying	engulfed	fuse	homestead
audible	cavaliers	cyberspace	enlighten		homosexuals
awaited	caving		enraged	G	honourable
awaken	chanting	D	ensued	gaming	hoody
	childcare	dagger	envious	gaping	hooked
B	chimes	damnation	epitomise	generalisations	hopping
backbone	chirping	darkening	equilibrium	genres	horrid
banister	chronological	decades	esteem	gigantic	hoverboards
barrel	churn	decorations	eternal	glimmer	howling
barricade	cinematography	demise	eternity	glimmering	hump
beacon	circularly	demotivation	everlasting	glittering	hunched
bearable	clammy	dents	everyday	glittery	hundreds

I	looting	oblivion	progressively	shortcut	thirdly
iceberg	lovable	ones	prostitution	shoved	thirties
ideals	lullaby	optimistically	purged	showcase	thousands
ideology	lulled	optimum	Q	shown	thrust
idyllic	lurked	organisation	queer	shrieking	thud
imaginable	lush	organised	R	shuffled	thudding
imparted	lust	organisms	rags	shutters	thumping
inappropriately	lyceum	others	railing	sided	thunderous
incantations	M	outing	railings	simulators	tile
indecisive	madness	outings	rainfall	sinful	tiles
inducing	magically	overtaken	rambling	situating	tilted
inexpensively	maid	P	raspy	sized	tiptoed
streamed	Malta	panting	ravenous	skeptic	tiptoes
infamous	mantle	paralysed	reachable	skim	tools
inhaled	manually	paranoid	realisation	skinned	torrents
Instagram	marble	parker	realised	skinny	towering
instilled	marbled	paved	recount	skype	tragical
instrumental	markings	peeked	redeem	slumber	trapdoor
intrigued	maroon	peeking	rely	smartphone	trickling
intuitive	massively	perpetrator	resit	smithereens	triple
irrelevant	mastered	persecuted	restoration	smudged	troubling
isle	masts	persecution	resulted	socially	truthfully
J	mathematics	phobia	resulting	sourced	tucked
jagged	maturity	pickled	resuscitation	specialised	tulips
jerked	meadow	picky	revolve	spectacle	tumble
jolly	messaging	pierce	revolver	spiralling	tumbled
joyful	midst	piercing	rightfully	sprinted	tumbling
judgemental	milestone	pigeons	rocker	sprinting	tutorials
judgements	mill	pigtail	rod	stair	twenties
judicious	millions	pillar	rodents	starters	typewriter
juveniles	miserable	pillars	rods	static	U
K	modernised	pinch	rollercoaster	stench	unbreakable
kidnapped	modernism	pistol	rumbled	stinking	unclean
kidnapper	mom	pitstop	rust	stipend	uncoordinated
kidnapping	morsel	plank	rustling	stove	undiscovered
knight	mould	planks	S	sturdy	uneducated
L	multicoloured	plastered	saddistic	subdued	unexperienced
leakage	multinational	platter	sarcastically	suburban	unheard
learnt	muscular	playful	sauntering	sunless	unicorns
lenses	musn't	playshool	savour	superstition	unruly
lifeless	muster	playstation	scholastic	susceptible	unsociable
lifestyle	mustered	plotted	screeching	swamp	unstable
lighthouse	mystical	plummet	screwdriver	swaying	unwelcoming
limitless	mythology	pointy	scrutinise/ze	swirling	ups
linear	N	polished	seared	T	usefully
lit	nagging	porn	seeped	tainted	utilities
lodge	nailed	porridge	sexism	tangle	V
loitering	narrates	positives	shady	tantrum	vampire/s
loot	negatives	powerpoint	shattering	tape	vertically
	neglectful	prank	shipment	taped	vibe
	neverland	preoccupied	shipped	taunt	violet
	noodle	pressured	shockingly	teens	visualise
	numbing	prickly	shoebox	tempered	visually
	numbness	pristine		themed	W
	O	privateer		they're	

walled
wallpapers
wasn't
waxed
welded

weren't
whilst
whilst
whimpers
whiskers

whiteboard
wifi
willow
wireless
wizards

woken
wonderland
wonderland
workings
woven

wreak
Y
you're
you've

youtube

Appendix 6 - Qualitative analysis – Spelling Errors and actual Vocabulary Levels as classified by Textinspector:

Candidate's Spelling Errors	A1	A2	B1	B2	C1	C2
deepdown	down	deep				
everytime	every, time					
somethings	some, things					
some one	some, one	someone				
alot	a, lot					
strickt			strict			
vunerable						vulnerable
leasure			leisure			
panick				panic		
dipression				depression		
greateful			grateful			
lazyness				laziness		
unsecurity						insecurity
thaughts			thoughts			
expresion				expression		
break fast (A1)	fast	break				
souvenir			souvenir			
floorboard	floor, board					
openminded	open	minded				
evergrowing		ever, growing				
bearly				barely		
franctic						frantic
necessity	necessity					
grumpe					grumpy	
centuary		century				
regoin			region			
ilness			illness			
persue					pursue	
substite				substitute		
unfortanetely		unfortunately				
assignements					assignments	
courages					courageous	
sacrafices					sacrifices	
desicions			decisions			
techonology			technology			
accurary				accuracy		
technologicaly					technologically	
acceable				accessible		
responsability				responsibility		
botton			button			
choise			choice			
knoledge			knowledge			
oportunities			opportunities			
comunicate			communicate			
competion		competition				
seperate			separate			
privilages					privileges	
untill	until					
forgin		foreign				
liberies		libraries				
occurring				occurring		
oppotunities			opportunities			

adolscentes						adolescents
conviniance				convenience		
acess			access			
visces						vices
whome				whom		
pressre				pressure		
disapointed			disappointed			
quoes			queue			
clik		click				
imagatly		immediately				
wittneses				witnesses		
abondened			abandoned			
unfortunatly		unfortunately				
bases (B1)				basis		
overlooking (B2)	looking	over				
wether			whether			
apetite					appetite	
dreamhouse	house	dream				
expending				expanding		
distinguishe				distinguish		
apparantley				apparently		
belive		believe				
opend	opened					
trough		through				
capet		kept				
continude			continued			
eighter			either			
finaly		finally				
messive				massive		
notting		nothing				
promiss			promise			
rememberd	remembered					
flash (C1)						flesh
sceliton				skeleton		
terrifying				terrifying		
infront	in	front				
parliment				parliament		
altough			although			
judgements				judgments		
destressing				distressing		
obsticles					obstacles	
occupied				occupied		
adition			addition			
outweigh (C1)		out, way				
houshold				household		
hearth (B2)		heart				
litteraly				literally		
coment			comment			
hole (B1)		whole				
educationary				educational		
staff (A2)			stuff			
fortunetely			fortunately			
untiyng				untying		
comfront				comfort		
diffrent	different					
eachother	each, other					
detracted				distracted		
journies		journeys				
inorder	in	order				
suceed			succeed			

drasticly					drastically	
lasier		lazier				
posses					possess	
persue						pusuit
coursework	course, work					
psycological				psychological		
indipendent			independent			
rumor				rumour		
gooder	better					
teached	taught					
concius				conscious		
consequences				consequences		
reliable			reliable			
challange			challenge			
stressfull			stressful			
differance		difference				
similair			similar			
ment		meant				
boughth/baught	bought					
woring	worrying					
avalable		available				
certainly		certainly				
easly		easily				
fasion		fashion				
projets project		projects				
upsett		upset				
abroud			abroad			
deseases			diseases			
figth			fight			
rubish			rubbish			
sucsess			success			
pharmasist				pharmacist		
acesories					accessories	
drastucly					drastically	
fourty		forty				
appliences					appliances	
assignment					assignment	
devorced			divorced			
remein			remain			
selled		sold				
genious					genius	
reasearch			research			
disapointed			disappointed			
detale		detail				
deacreated			decreased			
lifes	lives					
atleast	at	least				
habbit			habit			
rarly			rarely			
dinosaor		dinosaur				
quiries			queries			
anyother	any, other					
impresion				impression		
future		future				
expiriance			experience			
explinations			explanations			
exersises		exercises				
barly				barely		
seam			seem			
bady		badly				

accesible				accessible		
nessesarily				necessarily		
eachother	each, other					
factors				factors		
beautifuly			beautifully			
although			although			
ultimateley					ultimately	
intellectual				intellectual		
stil		still				
ocassionaly				occasionally		
ciling		ceiling				
therefor			therefore			
carful		careful				
collages		colleagues				
modle		model				
especialy		especially				
curriclum			curriculum			
difficluties			difficulties			
anxitey				anxiety		
appropriatly				appropriately		
determind				determined		
critieria					criteria	
obstacles					obstacles	
strickt			strict			
rumors				rumours		
grand parents		grandparents				
decended				descended		
critized				criticised		
acception					acceptance	
dissappoint			disappoint			
heare	hear					
tryed		tried				
grabed			grabbed			
fifthy		fifty				
expensis		expenses				
lazyness		laziness				
paycheck	pay	cheque				
feild		field				
statment				statement		
globlisation					globalization	
existance				existence		
uprading				upgrading		
sympathiez						sympathize
acustomed					accustomed	
posses					possess	
inovation					innovation	
addictiveness				addiction		
averige			average			
simpel		simple				
supierior					superior	
lose (A2)			loose			
drawback (C1)	draw, back					
affacted				affected		
dissagree			disagree			
effectivly				effectively		
catalogues					catalogues	
emproved		improved				
carriages					carriages	
apliances					appliances	
suplies				supplies		

deegre		degree				
jewelry		jewellery				
finacially				financially		
scepticle						sceptical

Appendix 7 – Idiomatic expressions from SEC Maltese Paper A and Paper B from both AA and non-AA candidates.

Dak il-ħin *qalbi bdiet tħabbat tant li ħsibtha kienet se tispodi bil-ferħ*;
That time my heart started beating (so fast) that I thought it was going to explode with joy;

Kont *fuq ix-xwiek* biex ninzel ngħum;
I was anxious (on edge) to go swim;

Sabiex joffrulek *xaqq ta' dawl*;
... So that they offer you a ray of light;

Għax *ħabib fis-suq, aħjar minn mitt skud fis-senduq*;
Because a friend in the court is better than a penny in the purse. (literal translation: a friend in the market, is better than a hundred quid in the chest);

Għalhekk irridu *noqgħodu b'seba' għajnejn*;
That's why we need to be so vigilant (careful) (literal translation: we need to have seven eyes);

Qisu *Alla kien sema' talbi*;
It was like God had answered my prayers (literal translation: Gor heard my prayers);

Ma damux biex *jinbtu emozzjonijiet ta' mħabba lejh*;
It didn't take long for emotions of love towards him to emerge (literal translation: sprout);

Dejjem ħa jkollu post speċjali fil-*qofol ta' qalbi*;
He will always have a special place in the core of my heart;

Ħlewwa ta' qalb;
To get squeamish;

Għajjena mejta bin-nas;
Dead tired;

Naħbat ġo fih;
I bump into him;

F'salib it-toroq;
At the crossroads;

Qalbi bdiet tħabbat sitta, sitta;
My heart started beating (pounding) (Literal translation: my heart started beating six (beats), six (beats));

Hallih tal-post;
He killed him. (Literal translation: he left him there);

Oħrajn huma *bħal melħ u zokor*. It-tnejn li huma jidru listess imma mhux it-tnejn listess togħma;
Others are like salt and sugar. Both look the same but not both have the same taste;

Jaraw xi *partita taħraq*;
They watch a heated (football) match;

jixrobu *bela' te'*;
They drink a gulp of tea (a cuppa tea);

...Ilħaqna *sirna ilma* u kelna *seba' mitt sena sakemm naqbzu l-baħar*;
...We sweated heavily (literal translation: we became water) and we couldn't wait to jump into the sea;

Ilna ma narawhom *żmien u għomor*;
We have not seen them from time immemorial.

Imma *ix-xitan deffes denbu*;

But the devil interfered (into the matter) (literal translation: The devil pierced [inserted] his tail [into the matter]);
Kemm taqşamni ir-riħa tal-pastizzi;
 The (strong) smell of cheesecakes cuts through me;
 kien tifel bravissimu, *kellu rasu fuq għonqu;*
 He was a very smart boy, he was in his right mind (literal translation: his head was on his neck);
Il-baqra tinbih kollha;
 Everything sells (Literal translation: All parts of the cow sell);
 Għadni nħossha *sal-ġurnata mqaddsa tal-lum;*
 I still feel it to this blessed day;
Laqgħuna bi ħġarhom;
 They eagerly (enthusiastically) welcomed us;
 Jien u Toni issa naqra *mdaħħlin fl-eta;*
 Tony and I have now got on in years;
 Nħarsu lejn il-veduta u *ngħidu kellmtejn;*
 We look at the view and say a few words (literal translation: say two words);
Il-qalb sewda;
 A heavy/broken heart (literal translation: a black heart);
Kull ħaġa fiħ is-sabiħ u l-ikraħ tiegħu;
 Everything has the good and the ugly;
 Izda jien ta' persuna immatura li kont *min waħda daħal u l-oħra ħareġ.*
 The immaturity person I was, all went in one ear and out the other;
Qbadt it-triq tan-nizla;
 I got the downward path (the slippery slope);
 U anke ssib min jiekol xi pastizz frisk *jinzillu għasel;*
 And you also find those who eat a fresh cheesecake that that is so enjoyable (literal translation: that goes down like honey);
 Qata l-aħħar żmien ta' ħajtu *jigġieled kontra l-kanċer;*
 He spent his last (final) years battling (against) cancer;
Kellu tbissima tiddhi d-dawl;
 He had a smile that emits light;
Qbad il-barri minn qrunu;
 I caught the bull by its horns;
Tqajmlek ġismek xewk xewk;
 Gives you goose bumps;
Guħ u aks;
 Hunger and hard times;
Wicc imb'wicc;
 Face-to-face;
Fil-kesħa ixxoq il-għadam;
 Bone-chilling cold;
Nzilna nkiss nkiss;
 We went down on tip toes;
Iz-zalza għola mill-ħuta,
 Not worth it too dear/pricy (literal translation: the sauce is dearer than the fish);
 Bla flus lanqas *tagħnnq u lanqas tbus;*
 Without money it is hard to get married (literal translation: you neither hug nor kiss);
Nimxi qisni nemla;
 I walk at a snail's pace (literal translation: I walk like an ant);
F'radda ta' salib;

In a flash (Literal translation: as fast as making the sign of the cross);
Bil-flus taġġmel triq fil-baħar;
Money talks (literal translation: With money you can pave a road in the sea);
Ommi ratni *minix posti;*
My mum saw that I was not myself (also: not in my full mind);
Iridu jagħmlu *ħajtek infern.*
They want to make your life hell.