

# PIRLS 2021

PROGRESS IN INTERNATIONAL READING LITERACY STUDY  
NATIONAL REPORT  
MALTA 2021



GOVERNMENT OF MALTA  
MINISTRY FOR EDUCATION, SPORT, YOUTH  
RESEARCH AND INNOVATION

# **PIRLS 2021**

## **Malta Report**



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## Executive Summary

The Progress in International Reading Literacy Study (PIRLS) is a comparative study of the reading attainment of 10-year-olds (Year 5). Moreover, it investigates reading literacy and the factors involved in acquiring this skill. The PIRLS study is held over a five-yearly cycle and is conducted under the auspices of the International Association for the Evaluation of Educational Achievement (IEA). The International Study Centre is responsible for the overall design, development and implementation of the study. This includes establishing the procedures, overseeing instrument development, conducting training and carrying out quality assurance measures. To develop the PIRLS reading literacy tests, a large number of reading passages were submitted by the national research coordinators and discussed at international meetings.

### 1. Background to PIRLS 2021

- The survey takes place every five years. The first was carried out in 2001 and PIRLS 2021 was the fifth survey.
- Malta participated for the first time in the PIRLS survey in 2011. The reading literacy test was administered to Year 5 (Grade 4) students, first in Maltese (as a benchmarking exercise) and then in English (as a main test). In 2016, the reading literacy test was administered solely as a main test in Maltese to Year 5 students and in 2021 the language of the test was chosen by the student
- The 3865 Maltese students that participated in the PIRLS study included 1893 females and 1972 males. The sample comprised almost the whole population of 10-year olds and guaranteed a maximum margin of error of approximately 1% using a 95% degree of confidence.
- These students, whose average age was 9.9 years, included all 100 Primary schools ensuring a good geographical representation. 2182 students were from 64 State schools, 1146 students were from 25 Church schools and 537 students were from 11 Independent schools.
- 78 schools comprising of 3030 students participated in digitalPIRLS where test items were delivered and answered on digital devices; while 22 schools comprising of 835 students participated in paperPIRLS, where test items were delivered and answered on booklets.
- Heads of school and teachers were asked to complete questionnaires, which elicited information about school climate and learning environment, and students' engagement in reading literacy. Moreover, the questionnaires provided information about teachers' preparations and the approaches adopted. Parents and students were asked to complete questionnaires, which elicited information about students' demographic and economic backgrounds, educational resources at home, pre-primary education, students' attitude to reading, frequency of reading and their confidence in their reading abilities.
- PIRLS identifies two purposes for reading, which include - literary experience, and acquiring and using information. It also identifies four comprehension processes, which include focus on and the retrieval of explicitly stated information and ideas, the making of straightforward inferences,

interpreting and integration of ideas and information, the examination and evaluation of content, language and textual elements.

- 22% of Maltese heads of school claimed that instruction was affected by COVID-19 for less than 2 weeks which is lower than the international average 25%. 61% of heads of school stated that instruction was affected between 2 to 4 weeks, which is significantly higher than the internal average (15%). Only 17% of Maltese heads of school claimed that instruction was disrupted for more than 8 weeks, which is significantly lower than the international average (60%).
- 71% of Maltese parents claimed that their children stayed home away from school at some point because of COVID-19, which is lower than the international average (87%). Moreover, 10% of these parents claimed that their children were considerably affected by this disruption, which is significantly lower than the international average (22%).

## **2. Reading Attainment in PIRLS 2021**

- A reading scale score is generated to measure reading literacy skills of students, which has a mean of 500 and a standard deviation of 100. This makes it possible to compare reading scale scores between countries and between different cycles.
- PIRLS 2016 identifies four benchmarks of reading achievement. The low, intermediate, high and advanced benchmarks are set at 400, 475, 550 and 625 respectively.
- Malta's mean reading score (515) was significantly higher than the international average (500) and was ranked 31<sup>th</sup> of 57 participating countries.
- Reading attainment of Maltese students was comparable to students from New Zealand, Spain, Portugal, Slovenia, France, Serbia, Albania, Cyprus and Flemish speaking Belgium.
- The bottom 25% of Maltese students scored less than 460 and the top 25% scored more than 575 in the Reading Achievement scale.
- The percentage of Maltese students scoring more than 550 scale points in reading (36%) was equal to the international average (36%). Moreover, the percentage of Maltese students scoring less than 475 scale points in reading (30%) was higher than the international average (25%).
- The mean reading score of Maltese students in the PIRLS 2021 (515) was significantly higher than the mean reading score in PIRLS 2016 (452) and in PIRLS 2011 (457). It is quite difficult to gauge the exact progress made by Maltese students in these ten years since the language of the reading test was altered in the three cycles.
- The language of the test has a huge impact on the students' reading attainment when clustered by school type. When comparing reading attainment between the PIRLS 2016 Maltese test and the PIRLS 2021 mixed language test, the mean reading scores of students attending State and Church schools increased by 43 and 62 scale points respectively; while the mean reading scores of students attending Independent schools increased significantly by 152 scale points.

- In all countries, female students scored higher in reading literacy than males. In Malta, female students scored 6 scale points more than males and this gender gap is significantly smaller than the international average (18 scale points)
- On average, Independent school students (564) scored significantly higher in reading than Church school students (533), who in turn scored significantly higher than State school students (491). Mean reading scores of female students exceed those of males by 3.7 scale points in State schools, 4.7 scale points in Church schools and 11.9 scale points in Independent schools.
- The mean reading scores of Maltese students in literary reading (516) and informational reading (514) are comparable. The mean reading scores of Maltese students in retrieving/inferencing (516) and interpreting/ integrating/evaluating (514) are comparable.
- In all school types, Maltese female students scored higher than males in both reading purposes and comprehension processes; however this gender reading discrepancy was only significant in literary reading performance and this applies to students attending all school types.

### **3. The Parents' Perspective of Home Support**

- The scale score that measures home socio-economic status reading resources ranges from 11.3 (Norway, Sweden and New Zealand) to 7.1 (Morocco). Malta's mean scale score (10.8) is significantly higher than the international average (10.0) and exceeds marginally the 2016 scale score (10.7), indicating that home socio-economic status has increased in the last five years. 45% of Maltese students are classified in the upper SES category, 47% are in the middle category, and 8% are in the lower SES category. Students' reading attainment is positively and significantly related to home socio-economic status.
- Malta's mean scale score that measures home learning resources (10.8) is significantly higher than the international average (10.0). 29% of Maltese students have many home resources, 70% have some home resources, and 1% has few home resources. Students' reading attainment is positively and significantly related to home resources for learning.
- The scale score that measures parents' reading enjoyment ranges from 10.4 (Montenegro, Serbia and Azerbaijan) to 8.9 (Egypt). Malta's mean scale score (10.8) is significantly higher than the international average, and significantly higher than the 2016 scale score (10.2), indicating that parents' reading enjoyment has increased in the last five years. 37% of parents like reading very much; 47% somewhat like reading, and 16% do not like reading. The relationship between students' reading attainment and parents' reading enjoyment is weakly positive.
- The scale score that measures early literacy activities before entering primary schools ranges from 11.5 (Northern Ireland) to 8.2 (Morocco). Malta's mean scale score (11.1) is significantly higher than the international average (10.2) and exceeds the corresponding 2016 scale score (10.7), indicating that early literacy activities before primary schooling have increased in the last five years. According to parents, 57% of Maltese children often engaged in early learning activities, 43% engaged occasionally, and 1% never engaged in these activities. The relationship between students' reading attainment and early literacy activities is weakly positive.

- The scale score that measures performance in early literacy tasks before entering primary schools ranges from 11.9 (Ireland) to 8.6 (Hungary). Malta's mean scale score (10.3) is identical to the international average (10.3) and is marginally higher than the corresponding 2016 scale score (10.1), indicating that performance in early literacy activities at entry in primary schools have increased in the last five years. According to parents, 25% of their children could do early literacy tasks very well; 40% moderately well; and 35% could not do these early literacy tasks. Reading attainment is positively and significantly related to performance in early literacy tasks.
- Malta's mean scale score that measures parents' perception of their child's school (11.2) is significantly higher than the international average (10.2), which indicates that Maltese parents have very positive views of their child's education. 89% of Maltese parents are very satisfied of their children's schools, 10% are somewhat satisfied, and 1% of the parents are less than satisfied. The relationship between students' reading attainment and parents' perceptions of their child's school is weakly positive.

#### **4. Heads' of Schools Perspective of School Climate**

- The percentage of Maltese students from economically affluent homes (33%) is significantly lower than the international average (43%). On the other hand, the percentage of Maltese students from economically disadvantaged homes (6%) is significantly lower than the international average (25%). Students' reading attainment is positively and significantly related to the student's economic background.
- 32% of Maltese heads of school claim that more than 75% of their students enter primary schools with basic literacy skills, which is significantly higher than the international average (26%). 17% of heads of school claim that between 51% and 75% of their students have basic pre-primary literacy skills, which is similar to the international average (19%). Moreover, 51% of heads of school claim that less than half of their students have basic pre-primary literacy skills, which is smaller than the international average (55%). The relationship between students' reading attainment and early literacy skills as perceived by heads of school is weakly positive.
- The scale score that measures reading resource shortages ranges from 12.4 (Bulgaria) to 7.6 (Hong Kong and Macao). Malta's mean scale score (10.0) is similar to the international average (10.0) and is higher than the corresponding 2016 mean scale score (9.7), indicating that reading resource shortages have decreased in the last five years. 26% of heads of school claim that their school is not affected by shortages of resource, 68% claim that it is somewhat affected, and 6% claim that it is affected considerably by these shortages. Students' reading attainment is positively and significantly related to the lack of reading resource shortages at school.
- The scale score that measures the school's emphasis on academic success, according to heads of school, ranges from 12.5 (Saudi Arabia) to 8.5 (Morocco). Malta's mean scale score (10.5) is significantly higher than the international average (10.2) and marginally higher than the corresponding 2016 mean scale score (10.4), indicating that in the last five years schools are making slightly more emphasis on academic success, according to heads of school. 6% of Maltese heads of school make very high emphasis on academic success; 64% make high emphasis; and 30% make medium emphasis on academic success. Students' reading attainment is positively and significantly related to the school's emphasis on academic success.

- The scale score that measures school discipline ranges from 12.0 (Hong Kong) to 7.2 (Morocco). Malta's scale score (11.4) is significantly larger than the international average (10.2), and is significantly larger than the corresponding 2016 mean scale score (10.2), indicating significant improvement in the disciplinary climate of Maltese schools in the last five years. 87% of Maltese heads of school hardly claim any problems; 12% claim minor problems; and 1% claim moderate to severe disciplinary problems. Students' reading attainment is positively and significantly related with fewer disciplinary problems.

## **5. Students' Perspective of their Attitudes and Behaviours**

- The scale score that measures students' reading enjoyment ranges from 12.5 (Uzbekistan) to 8.6 (Norway). Malta's mean scale score (10.3) is marginally higher than the international average (10.1) and marginally lower than the corresponding 2016 scale score (10.4), indicating that in the last five years, students' reading enjoyment decreased slightly. 45% of Maltese students like reading very much, 40% somewhat like reading, and 15% do not like reading. Students' reading attainment is positively and significantly related to their reading enjoyment. The relationship between students' reading attainment is positive and significantly related to reading enjoyment
- The scale score that measures students' confidence in reading ranges from 10.7 (Kosovo) to 8.8 (South Africa). Malta's mean scale score (9.8) is similar to the international average (9.9) and is marginally higher than the corresponding 2016 scale score (9.7), indicating that students' confidence in reading improved slightly in the last five years. 40% of Maltese students are very confident in reading, 37% are somewhat confident; while 23% are not confident in reading. Students' reading attainment is positively and significantly related to their reading confidence.
- Malta's mean scale score that measures students' engagement in reading (10.6) is significantly higher than the international average (10.1) and significantly higher than the 2016 scale score (10.3), indicating that in the last five years, students' engagement in reading lessons improved. 71% of Maltese students are very engaged in reading lessons, 26% are somewhat engaged, and 3% are less than engaged. Students' reading attainment is positively and significantly related to their engagement in reading lessons.
- Malta's mean scale score that measures home digital self-efficacy (10.3) is marginally higher than the international average (10.1). 42% of Maltese students have high digital self-efficacy; 47% have medium self-efficacy, and 11% have low digital self-efficacy. Students' reading attainment is positively and significantly related to digital self-efficacy.
- Malta's mean scale score that measures lack of bullying at school (10.0) is similar to the international average (10.0) and is marginally higher than the corresponding 2016 mean scale score (9.8), indicating a slight improvement in the last five years in controlling bullying in schools. 63% of Maltese students rarely experience bullying, 26% experience bullying monthly and 11% experience bullying weekly. Students' reading attainment is positively and significantly related to a reduction in school bullying.
- Malta's mean scale score that measures orderly behaviour during lessons (9.6) is significantly lower than the international average (10.0), indicating that interruptions during lessons is more prevalent in

Maltese schools than most schools abroad. 16% of Maltese students engage in disorderly behaviour in most lessons, 75% engage in disorderly behaviour in some lessons, and 9% rarely or never engage in disruptive conduct during lessons. There is a positive and significant relationship between reading attainment and orderly behaviour during lessons.

- Malta's mean scale score that measures students' sense of school belonging (10.6) is significantly higher than the international average (10.0). 69% have a high sense of school belonging, 26% have some sense, and 5% have little sense of school belonging. Students' reading attainment is positively and significantly related to the students' sense of school belonging.

## **6. Teachers' Perspective of School Climate**

- Malta's mean scale score that measures the school's emphasis on academic success, according to teachers (10.8) is significantly higher than the international average (10.2) and significantly higher than the corresponding 2016 mean scale score (10.4), indicating that in the last five years schools are making more emphasis on academic success, according to teachers. 17% of teachers claim that their school makes very high emphasis on academic success; 61% claim high emphasis; and 22% of teachers claim medium emphasis on academic success.
- Malta's mean scale score that measures safety and order in schools (10.9) is significantly larger than the international average (10.0) and significantly larger than the corresponding 2016 mean scale score (9.6), indicating that safety issues and order in Maltese schools have improved considerably in the last five years, according to teachers. 60% of Maltese teachers consider their schools very safe and orderly; 38% consider their school somewhat safe; and 2% consider their schools less than safe and orderly.
- Malta's mean scale score that measures teaching limited by students' lack of preparedness and readiness (9.7) is significantly smaller than the international average (10.0). 36% of Maltese teachers claim that lack of students' preparedness and readiness to learn, due to lack of skills, lack of sleep, poor nutrition, absence from class, disruption, lack of interest, and learning impairments, has very little impact on teaching; 53% claim that it has some impact; and 11% claim it has a lot of impact on instruction.
- Malta's mean scale score that measures teachers' job satisfaction (10.2) is marginally higher than the international average (10.0) but is marginally lower than the corresponding 2016 mean scale score (10.3), indicating that in the last five years teachers' job satisfaction has diminished slightly. 56% of Maltese teachers are very satisfied; 35% are somewhat satisfied; and 9% are less than satisfied.

## **7 Summarising Results**

- Regression analysis shows that students' confidence in reading and home learning resources are the best predictors of reading comprehension. These are followed by early literacy tasks before school, digital self-efficacy, orderly behaviour during lessons, students' reading enjoyment, students' sense

of school belonging, home socio-economic status, lack of students' bullying, and students' engagement in reading, where and an improvement in these ten predictors will significantly enhance reading comprehension. Early literacy activities before school, parents' perception of the children's schools and parents' reading enjoyment had negligible impact on reading comprehension achievement.

- Overall, Malta is performing significantly better than average in most scales. Recommendations include, improving students' orderly behaviour during lessons in all school types, reducing student bullying in schools and improving preparedness and readiness of students to learn.

## 1

# Background to PIRLS 2021

## 1.1 Introduction

The Progress in International Reading Literacy Study (PIRLS) is a comparative study of the reading attainment of ten-year-olds (4<sup>th</sup> grade). Moreover, it investigates reading literacy and the factors involved in acquiring this skill. PIRLS is conducted under the auspices of the International Association for the Evaluation of Educational Achievement (IEA). IEA is an independent international cooperative of national research institutions and government agencies that pioneered international comparative assessments of educational achievement in the 1960s to gain a deeper understanding of policy effects across countries' different systems of education. Each successive PIRLS assessment has continued in this tradition, consisting of a state-of-the-art reading assessment measuring trends in reading achievement and accompanied by an extensive set of questionnaires for parents or caregivers, heads of schools, teachers, countries, and the students themselves. The questionnaire data about students' contexts for learning to read and educational opportunities provide important information for interpreting the achievement results.

Conducted every five years, PIRLS assesses international trends in the reading comprehension at an important transition point in children's development as readers. Typically, at this point in their schooling, students have learned how to read and are now reading to learn. The first PIRLS study was held in 2001 with the participation of 26 countries. The target population included all students enrolled in the upper of the two adjacent grades that contain the largest proportion of 9-year olds at the time of testing. The survey was repeated in 2006 in which 40 countries participated in the study. The target population for this study was redefined to include all students who completed four years of schooling from the first year of ISCED level 1. This age group was targeted because at this age children would have learned to read and are now starting to read to learn. In 2011, IEA broadened PIRLS to meet the needs of countries in which most children in the fourth grade are still developing fundamental reading skills by widening participation to fifth and sixth grade students. Additionally, IEA provided a less difficult version of the PIRLS reading assessment for fourth grade students (called prePIRLS). Malta took part in PIRLS for the first time in 2011 together with 47 other participating countries. Like the previous PIRLS cycles, PIRLS 2016 collected extensive information about home supports for literacy, instructional practices, curriculum and curriculum implementation, and school resources in each participating country. For the first time in the PIRLS assessment, the 2016 cycle introduced an ePIRLS

option for participants to assess their students' abilities to acquire and use information when reading online. The ePIRLS online reading achievement scale enabled countries to examine their fourth-graders' online reading performance relative to their performance on the PIRLS reading achievement scales.

Consistent with the drive to innovate with each successive PIRLS cycle, PIRLS 2021 was a transition from paper-based booklets to a digital environment. About half the countries, including Malta, delivered PIRLS 2021 via computers, using a streamlined, easy-to-use user interface that allows students to manage reading the passages and answering the questions together in one seamless process. The colourful passages are designed to be engaging, and there are new item types to facilitate computerised scoring. Unlike PaperPIRLS where assessment material was printed and distributed in booklets, DigitalPIRLS was administered through an e-assessment system that brings efficiency to the operational aspects of PIRLS, including computerised delivery of assessment material to students. This enabled ePIRLS to be integrated with DigitalPIRLS so that ePIRLS did not require an additional day of assessment. Moreover, DigitalPIRLS provided some scope to adjust the assessment design. The computerised DigitalPIRLS can integrate the PIRLS passages and the less difficult PIRLS Literacy passages in flexible ways, making it possible to target the difficulty of the PIRLS 2021 assessment to the level of achievement of the student population in the participating countries. By capitalising on the wide range in difficulty of the passages developed for PIRLS and PIRLS Literacy in 2016 and continuing to expand the difficulty range with the newly developed reading passages, one unified PIRLS 2021 assessment can better measure the range of high, medium, and low reading abilities found in each of the PIRLS participating countries.

Updating the PIRLS frameworks with each assessment cycle provides participating countries with opportunities to introduce fresh ideas and current information about curricula, standards, frameworks, and instruction. This keeps the frameworks educationally relevant, creates coherence from assessment to assessment, and permits the frameworks, instruments, and procedures to evolve gradually into the future. For PIRLS 2021, the frameworks were updated using information provided through reviews by the National Research Coordinators (NRCs) from the participating countries. The PIRLS 2021 expert committees, the Reading Development Group (RDG) and the Questionnaire Development Group (QDG), also provided very important ideas and direction. There was an iterative process of the frameworks being reviewed and revised by the NRCs and expert committees prior to publication.

## **1.2 Participating countries and composition of the Maltese sample**

In the face of school disruptions and closures due to COVID-19, PIRLS 2021 data collection extended over 22 months from October 2020 to December 2021, leading to two waves of data collection in the time period. Albania, Australia, Austria, Azerbaijan, Belgium (French), Belgium (Flemish), Brazil, Bulgaria, Chinese Taipei, Cyprus, Czech Republic, Denmark, Egypt, England, Finland, France, Germany, Hong Kong, Iran, Israel, Italy, Jordan, Kosovo, Macao, Malta, Montenegro, Netherlands, New Zealand, North Macedonia, Norway, Oman, Poland, Portugal, Russia, Serbia, Singapore, Slovak Republic, Slovenia, South Africa, Spain, Sweden, Turkey and Uzbekistan participated in the first wave

between March and June 2021. Bahrain, Croatia, Georgia, Hungary, Ireland, Kazakhstan, Latvia, Lithuania, Morocco, Northern Ireland, Qatar, Saudi Arabia, United Arab Emirates and United States participated in the second wave between August and December 2021. Moreover, Dubai and Abu Dhabi (UAE), Quebec, Alberta, British Columbia, Newfoundland and Labrador (Canada), Moscow (Russia) and South Africa were benchmarking participants.

In most of the participating countries the PIRLS sample was drawn from the population of students aged 10 years who attended Primary educational institutions. For convenience this population is referred to as 10-year-olds or 4<sup>th</sup> grade. In Malta, the main study was administered in spring 2021 with 3865 Year 5 students who attended State, Church and Independent schools. A large percentage (98.1%) of these students was born in 2011 and the average age (9.9 years) was lower than the PIRLS 2021 mean age (10.2 years). The Maltese sample comprised 1893 (49.0%) females and 1972 (51.0%) males and guaranteed a maximum margin of error of approximately 1% assuming a 95% degree of confidence. These students came from 100 schools ensuring a good geographical representation. 2182 (56.5%) students were from 64 State schools, 1146 (29.6%) students were from 25 Church schools and 537 (13.9%) students were from 11 Independent schools. These percentages are comparable to the population percentages of students attending these school types ensuring a good representative sample. Table 1.1 displays the number of male and female Maltese students grouped by school type.

**Table 1.1** Maltese participants categorised by gender and school type

		School Type		
		State	Church	Independent
Gender	Female	1066 (27.6%)	571 (14.8%)	256 (6.6%)
	Male	1116 (28.8%)	575 (14.9 %)	281 (7.3%)

To continue the transition to a digital assessment, education systems in 2021 had the option to participate in digitalPIRLS (an entirely digital assessment) or participating in the paperPIRLS (traditional PIRLS items), which are based on literary and informational passages. In Malta, 22 schools (835 students) participated in paperPIRLS, as a bridge study and the remaining 78 schools (3030 students) participated in digitalPIRLS.

### 1.3 Reading Assessment Framework

The PIRLS framework for assessing reading achievement was initially developed for the first assessment in 2001, using IEA's 1991 Reading Literacy Study as the basis for the PIRLS definition of reading literacy and for establishing the aspects of reading comprehension to be assessed. Since then, the PIRLS assessment framework has been updated for each subsequent assessment cycle. PIRLS 2021 focuses on converting to a digital format by presenting reading passages and items via computer. This will deliver an engaging and visually attractive experience that will motivate students and increase operational efficiency. PIRLS 2021 can be administered in the same digitally based environment as ePIRLS 2021, the computer-based assessment of online reading in a simulated internet environment.

The PIRLS definition of reading literacy is grounded in IEA’s 1991 study, in which reading literacy was defined as ‘the ability to understand and use those written language forms required by society and/or valued by the individual’. With successive assessments, this definition has been elaborated so that it retains its applicability to readers of all ages and a broad range of written language forms, yet makes explicit reference to aspects of the reading experience of young students as they become proficient readers, highlights the widespread importance of reading in school and everyday life, and acknowledges the increasing variety of texts in today’s technological world. The current definition of reading literacy in PIRLS is that reading literacy is the ability to understand and use those written language forms required by society and/or valued by the individual. Readers can construct meaning from texts in a variety of forms. They read to learn, to participate in communities of readers in school and everyday life, and for enjoyment. This view of reading reflects numerous theories of reading literacy as a constructive and interactive process. Meaning is constructed through the interaction between reader and text in the context of a particular reading experience. Readers are regarded as actively constructing meaning, reasoning with the text, and knowing effective reading strategies and how to reflect on reading. In order to acquire knowledge of the world and themselves, readers can learn from a host of text types. Each text type follows conventional forms and rules which aid the reader’s interpretation of the text. Any given text type can take many forms and combinations of forms. These include traditional written forms, such as books, magazines, documents, and newspapers, as well as digital forms that include the numerous ways of communicating via the internet and websites where text often is integrated with various multimedia formats.

Based on reading purposes and comprehension processes, the PIRLS 2021 framework provides the foundation for the PIRLS international assessments of students’ reading achievement following their fourth year of schooling. The PIRLS framework focuses on the two overarching purposes for reading that account for most of the reading done by young students both in and out of school: for literary experience, and to acquire and use information. Moreover, the PIRLS assessment integrates four broad-based comprehension processes within each of the two purposes for reading: focus on and retrieve explicitly stated information, make straightforward inferences, interpret and integrate ideas and information, and evaluate and critique content and textual elements. It should be acknowledged that the purposes for reading and the processes of comprehension do not function in isolation from one another or from the context in which students live and learn. Table 1.2 displays the two reading purposes and four comprehension processes form the basis for assessing PIRLS as well as ePIRLS online reading and presents the reading purposes and processes assessed by PIRLS and the percentages of the assessment devoted to each.

**Table 1.2:** The PIRLS reading purposes and comprehension processes

Purposes for reading	PIRLS	ePIRLS
Literary experience	50%	0%
Acquire and use information	50%	100%
Processes of comprehension	PIRLS	ePIRLS
Focus on and retrieve explicitly stated information	20%	20%
Make straightforward inferences	30%	30%
Interpret and integrate ideas and information	30%	30%
Evaluate and critique content and textual elements	20%	20%

The first purpose for reading is literary experience. In literary reading, readers engage with the text to become involved in events, settings, consequences, actions, characters, atmosphere, feelings, and ideas, and to enjoy language itself. In order to understand and appreciate literature, each reader must bring to the text his or her own experiences, feelings, appreciation of language, and knowledge of literary forms. For young readers, literature can offer the opportunity to explore situations and feelings they have not yet encountered. Events, actions, and consequences depicted in narrative fiction allow readers to experience vicariously and reflect upon situations that, although they may be imagined, illuminate those of real life. The text may present the perspective of the narrator or a principal character, and a more complex text may even have several viewpoints. Information and ideas may be described directly or through dialogue and events. Short stories or novels sometimes narrate events chronologically, or sometimes make more complex use of time with flashbacks or time shifts. The main form of literary texts used in PIRLS is narrative fiction. Given differences in curricula and cultures across the participating countries, it is difficult for PIRLS to include some forms of literary texts. For example, poetry is difficult to translate and is therefore avoided.

The second purpose for reading is to acquire and use information. Informational texts are both read and written for a wide variety of functions. While the primary function of informational text is to provide information, writers often address their subject matter with different objectives. Many informational texts are straightforward presentations of facts, such as biographical details or steps to accomplish a task; however, some informational texts are subjective. A reader must bring a critical mind to these texts in order to form his or her own opinion. Information can be presented in many different formats. Informational pieces that are primarily presented via text may include a table to document facts or a picture to illustrate a description. Both print materials (e.g., manuals and newspapers) and websites present a considerable amount of information via lists, charts, graphs, and diagrams. In addition, words need not be in the form of continuous text, such as in advertisements or announcements, or in sidebars to the text that offer supplemental information such as definitions, lists, or timelines. Looking for and learning from information from the internet involves comprehension of information arranged within a complex reading environment. Effective learning when reading online, then, necessitates the integration of multiple texts, which may contain contradictory or incomplete information. Textual elements and attributes, such as source information, relevance to the assigned task, and relationships to other sources must be recognised and evaluated in order to integrate texts successfully. A fundamental component of successful internet research and comprehension is the ability to locate information that meets one's needs. Readers need to be able to find and select the websites that will provide the target information, navigate to the relevant web pages, and follow links to new websites. Internet searches for information require the additional comprehension demands of inferring the potential usefulness of yet unseen texts (e.g., when evaluating search engine results or links). In order to begin the search for information, online readers must choose among websites to find the one most likely to contain the target information. Once on a given website or page, readers must continue to infer the relevance of the various types of information and texts presented, while ignoring a barrage of advertising. This may involve self-regulatory processes to maintain focus on the task at hand, so as not to be distracted by other interesting topics or advertising.

The first process for comprehension is to focus on and retrieve explicitly stated information. Readers vary the attention they give to explicitly stated information in the text. Some ideas in the text

may elicit particular focus and others may not. For example, readers may focus on ideas that confirm or contradict predictions they have made about the text’s meaning or that relate to their general purpose for reading. In addition, readers often need to retrieve information explicitly stated in the text to answer a question they bring to the reading task, or to check their developing understanding of some aspect of the text’s meaning. Successful retrieval requires fairly immediate or automatic understanding of the words, phrases, or sentences in combination with the recognition that they are relevant to the information sought. Interestingly, printed texts are likely to be initially read and processed at micro-level, whereas online search strategies may benefit from initial macro-processing before the reader can focus on the sentence, phrase, or part of the graphic that has the information. In classifying items, it is essential to examine the item stem and correct response in relation to the text. If the item stem and the correct response both use exact words from the text and are located with a sentence or two of each other, the item is classified as “Focus and Retrieve.” If some synonyms are used, the item still is ‘Focus and Retrieve’. Reading tasks that may exemplify this type of text processing include:

- Identifying and retrieving information that is relevant to the specific goal of reading;
- Looking for specific ideas;
- Searching for definitions of words or phrases;
- Identifying the setting of a story (e.g., time and place);
- Finding the topic sentence or main idea (when explicitly stated); and
- Identifying specific information in a graphic (e.g., graph, table, or map)

The second process for comprehension is to make straightforward inferences. Making inferences allows readers to move beyond the surface of texts and to resolve the gaps in meaning that often occur in texts. Some of these inferences are straightforward in that they are based primarily on information that is contained in one place in the text. The ideas themselves may be explicitly stated, but the connection between them is not, and thus must be inferred. Furthermore, despite the inference not being explicitly stated in the text, the meaning of the text remains relatively clear. Skilled readers often make these kinds of inferences automatically. They may immediately connect two or more pieces of information, recognizing a relationship even though it is not stated in the text. In many cases, the author has constructed a text to lead readers to an obvious or straightforward inference. For example, the action(s) of a character at a point in the story may clearly point to a particular character trait, and most readers would arrive at the same conclusion about that character’s personality or viewpoint. Online reading requires a considerable amount of inferencing, beginning with identifying those websites and webpages most likely to contain the information of interest. Readers also may infer whether it is necessary or useful to follow a link to another page. When classifying items, if the item stem and correct response use paraphrases of the original phrases or sentences in text then the item is classified as “Straightforward Inferencing.” This can mean that new vocabulary is introduced in either the stem or multiple-choice responses, but the items still are considered inference items. Also, if the correct answers to the item are located in several places within the text but the item stem and the correct response both use exact words from the text, then the item is classified as inferencing. Reading tasks that may exemplify this type of text processing include the following:

- Inferring that one event caused another event;
- Giving the reason for a character’s action;
- Describing the relationship between two characters; and

- Identifying which section of the text or website would help for a particular purpose.

The third process for comprehension is to interpret and integrate ideas and information. As readers interpret and integrate, they are attempting to construct a more specific or more complete understanding of the text by integrating personal knowledge and experience with meaning that resides within the text. For example, readers may draw on experience to infer a character's underlying motive or to construct a mental image of the information conveyed. They often need to draw on their understanding of the world, as well as their background knowledge and experiences, more than they do for straightforward inferences. As readers engage in this interpretive process, they are making connections that are not only implicit, but that may be open to some interpretation based on their own perspective. Because of this, meaning that is constructed through interpreting and integrating ideas and information is likely to vary among readers, depending upon the experiences and knowledge they bring to the reading task. Items classified as "Interpret and Integrate Ideas and Information," use concepts and generalisations not explicitly stated in the text. The new ideas or information may be included in the item stem, the acceptable response, or both. A full credit response requires comprehension of the entire text, or at least significant portions of it, as well as ideas or information that go beyond the text. Reading tasks that may exemplify this type of text processing include the following:

- Discerning the overall message or theme of a text;
- Considering an alternative to actions of characters;
- Comparing and contrasting text information;
- Inferring a story's mood or tone;
- Interpreting a real-world application of text information; and
- Comparing and contrasting information presented within and across texts or websites.

The fourth process for comprehension is to evaluate and critique content and textual elements. The text content, or meaning, may be evaluated and critiqued from a personal perspective or with an objective view. This process may require readers to make a justified judgment, drawing on their interpretations and weighing their understanding of the text against their understanding of the world—rejecting, accepting, or remaining neutral to the text's representation. For example, readers may counter or confirm claims made in the text or make comparisons with ideas and information found in other sources. For an item to be classified as 'Evaluate and Critique' an acceptable response to that item involves a *judgement* about some aspect of the text. For example, the item stem can present more than one point of view where it is possible for students to argue either point of view (or both) based on the text or the item stem can ask for a judgement and the evidence to support it. Reading tasks that may exemplify this type of text processing include the following:

- Judging the completeness or clarity of information in the text;
- Evaluating the likelihood that the events described could really happen;
- Evaluating how likely an author's argument would be to change what people think and do;
- Judging how well the title of the text reflects the main theme;
- Describing the effect of language features, such as metaphors or tone;
- Describing the effect of the graphic elements in the text or website;
- Determining the point of view or bias of the text or website; and

- Determining an author’s perspective on the central topic.

The skills required to evaluating and critique online texts are very similar to those required for printed text. However, because anyone can publish anything on the internet, readers also must make judgments about the credibility of the source of the information as well as determine the perspective, point of view, and bias in the text. In addition, the visual and textual features on the internet tend to be much more varied than similar elements of printed text. Online reading tasks that may exemplify this type of text processing include the following:

- Critiquing the ease of finding information on a website; and
- Judging the credibility of the information on the website.

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## **1.4 Context Questionnaire Framework**

Consistent with prior assessments, PIRLS 2021 collects the data about students’ contexts for learning to read through questionnaires administered to various participants in the education process, including the students’ parents and caregivers, the heads’ of school, and their reading teachers. The students themselves also complete a questionnaire. Taken together, the information from these four questionnaires provides the data for learning about students’ home, school, and classroom experiences. As with previous assessments, representatives from each participating country complete a questionnaire about reading education policies at the national level, describing the country’s reading curriculum and instructional practices. The four PIRLS 2021 questionnaires that provide data that can link to each student’s reading achievement are described below.

The Home Questionnaire, entitled the Learning to Read Survey, is addressed to the parents or primary caregivers of each student taking part in the PIRLS 2021 data collection. This questionnaire solicits information on the home context, such as languages spoken in the home, parents’ reading activities and attitudes toward reading, and parents’ education and occupation. The questionnaire also collects data on the students’ early childhood education, early literacy activities, and the child’s reading readiness at the beginning of primary school. PIRLS 2021 focuses on two major aspects of the home that have been found to be of particular importance: the environment for learning and the emphasis on children’s literacy skills.

The Teacher Questionnaire, completed by students’ reading teachers, gathers information about classroom contexts for reading instruction, such as characteristics of the class, reading instructional time, and instructional approaches. The questionnaire also asks about teacher characteristics, such as their career satisfaction, education, and recent professional development activities. PIRLS 2021 focuses on four major aspects of the classroom contexts

The School Questionnaire, completed by the head of school of each participating school, asks about school characteristics, such as student demographics, the school environment, the availability of school resources and technology, and the emphasis on academic success.

The Student Questionnaire, given to all students once they have completed the reading assessment, collects information on students’ home environment, such as books in the home and other

home resources for learning; student experiences in school, including school sense of belonging and whether they are victims of bullying; and students' reading instruction. Students also are asked about their reading habits and attitudes toward reading.

From these questionnaires a number of scales are generated, which are related to home, school and classroom contexts and student attributes. PIRLS has repeatedly shown the importance of home contexts for fostering children's reading achievement. PIRLS 2021 focuses on two major aspects of the home that have been found to be of particular importance: the environment for learning and the emphasis on children's literacy skills.

- Environment for learning
  - Home resources for learning
  - Home socio-economic status
  - Parents' reading enjoyment
  - Language spoken at home
- Emphasis on literacy
  - Early literacy activities
  - Pre-primary education
  - Early literacy tasks when beginning primary schools

PIRLS 2021 collects data about important school contexts for learning. This includes school resources generally and specifically for reading instruction, the school climate for learning, the degree of discipline and safety in the school, and the school's emphasis on reading instruction.

- School resources
  - Student composition of student body
  - Resources for reading instruction
  - Heads' of school formal education
  - Heads' of school years of experience
  - Size of schools
- School climate
  - Parents' perceptions of child's school
  - School emphasis on academic success
  - Teacher job satisfaction
  - Students' sense of school belonging
- School discipline and safety
  - School discipline
  - Safe and orderly school
  - Bullying
- School emphasis on reading instruction
  - Emphasis in early grades on reading skills and strategies

- Time spent on language and reading instruction

PIRLS 2021 pays particular attention to classroom contexts associated with the teaching of reading because the classroom is the primary locus of instruction. These include student engagement, teaching strategies for comprehension skills, types of texts assigned, organisation for teaching, classroom library resources, and classroom assessment. PIRLS 2021 collects data on information technology in the classroom, including access to digital devices for reading instruction, use of technology, and instruction in online reading. Moreover, PIRLS 2021 collects data on classroom climate and on teacher preparation, professional development, and experience.

- Classroom reading instruction
  - Students engaged in reading instruction
  - Teachers develop students' reading comprehension skills and strategies
  - Teachers encourage and motivate students to read
- Information technology in the classroom
  - Classroom access to digital devices for reading instruction
  - Use of technology
  - Instruction in online reading
- Classroom climate
  - Classroom management
  - Classroom instruction limited by student attributes
- Teachers' preparation
  - Teachers' formal education
  - Teachers' years of experience
  - Teachers' professional development

PIRLS 2021 collects data on important student attributes including student reading attitudes and student demographics. Students who are motivated to read and have a strong reading self-concept tend to have better reading comprehension and cultivating these attitudes also may support students in becoming lifelong readers. Results from PIRLS have shown relationships between positive reading attitudes and reading achievement. It is noted that achievement and attitudes can be mutually reinforcing of one another. Better readers may enjoy and value reading more than poorer readers, thus reading more and further improving their skills. Because student demographics are important for analyzing reading achievement, PIRLS also collects data on student gender and age.

- Students' reading attitudes
  - Students' reading enjoyment
  - Students' confidence in reading
  - Familiarity in using digital devices
- Student demographics
  - Gender
  - Age

In every country, the educational system is embedded in a unique configuration of historical, economic, and language factors that combine to determine priorities in how the system is organised for teaching and learning. Countries participating in PIRLS 2021 contribute information about the organization of the education system and the reading curriculum.

- Organisation of the education system
  - Country language/s of instruction
  - System for pre-primary education
  - Age of entry and retention
  - Number of years of school
  
- Reading curriculum
  - Reading curriculum in the primary grades
  - Students with reading difficulties

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## **1.5 Assessment Design Framework**

PIRLS 2021 begins the transition from paper-and-pencil to digital format, with about half the countries choosing to administer the digital format (digitalPIRLS) and half the paper format (paperPIRLS). To ensure comparability across formats, digitalPIRLS and paperPIRLS have the same content in terms of reading passages and questions, although digitalPIRLS takes advantage of some features and item types not available in paper and pencil mode. Countries choosing digitalPIRLS will also administer ePIRLS, an assessment of online reading to acquire and use information first conducted as part of PIRLS 2016. Similar to previous PIRLS assessments, PIRLS 2021 includes a series of contextual questionnaires to gather information about community, home, and school contexts for developing reading literacy.

Based on PIRLS experience in earlier assessment cycles, it is clear that achievement levels in reading comprehension vary widely both across and within countries, posing a challenge in matching the difficulty of the assessment to the reading ability of the students in every country. When an assessment is much too difficult or too easy for a population, little information is available to accurately measure performance. To address this challenge, PIRLS in the past has offered less difficult versions of its assessment materials that countries could choose to administer, beginning with prePIRLS in 2011 and following up with PIRLS Literacy in 2016.

These efforts were successful in expanding PIRLS coverage of students at the lower end of the ability distribution but required separate (although linked) versions of PIRLS and did not address the need for more challenging material for higher achieving students. To address the need for a broader range of assessment difficulty and better targeting of student ability, PIRLS 2021 adopts a single unified assessment based on a new group adaptive assessment design.

The new design is based on having three levels of passage difficulty (difficult, medium, and easy) that are combined into two levels of booklet difficulty. More difficult booklets are composed of two difficult passages or one medium and one difficult passage, while less difficult booklets consist of

an easy and a medium passage or two easy passages. Each country administered the entire assessment, but the balance of more difficult and less difficult booklets varied with the reading achievement level of the students in the country. Countries with higher average reading achievement (average score of 550 or above) could assign the more difficult booklets to 70% of its students and the less difficult booklets to 30% of its students, whereas countries with lower achievement levels (average score of 450 or below) could assign the more difficult booklets to 30% of its students and the less difficult booklets to 70%. This new design improves the match between assessment difficulty and student ability in each country's population by having a greater proportion of more difficult booklets in countries with relatively high achievement and a greater proportion of less difficult booklets in countries with relatively low achievement. Accordingly, this design maximises the information obtained from the assessment while minimally changing existing procedures and time requirements.

In the PIRLS assessment, each student is randomly assigned a test booklet (or booklet equivalent in digitalPIRLS) consisting of two passages and their items. In PIRLS 2021, the 18 passages are arranged into 18 booklets of two passages each, with each passage appearing in two booklets and paired with a different passage each time. Moreover, one of the passage selected for each booklet had a literary purpose, while the other passage had an informational purpose. Booklets 1 – 9 composed of either two difficult passages or one medium and one difficult passage; while booklets 10 -18 composed of two easy passages or one easy or one medium passage.

Two question formats are used in the PaperPIRLS and DigitalPIRLS Literacy assessments: multiple-choice and constructed-response. Multiple-choice questions provide students with four response options, of which only one is correct. Multiple-choice questions can be used to assess any of the four comprehension processes. However, because they do not allow for students' explanations or supporting statements, multiple-choice questions may be less suitable for assessing students' ability to make more complex evaluations or interpretations. On the other hand, constructed-response test items require students to provide a written response, rather than select a response from a set of options.

The emphasis placed on constructed-response questions in the PIRLS assessments is consistent with the definition of literacy underlying the framework. It reflects the interactive, constructive view of reading - meaning is constructed through an interaction between the reader, the text, and the context of the reading task. This question type may be used to assess any of the four comprehension processes. However, it is particularly well suited for assessing aspects of comprehension that require students to provide support or that result in interpretations involving students' background knowledge and experiences. In scoring students' responses to constructed-response questions, the focus is solely on students' understanding of the text, not on their ability to write well. Also, scoring takes into account the possibility of various interpretations that may be acceptable, given appropriate textual support. Consequently, a wide range of answers and writing ability may appear in the responses that receive full credit to any one question.

## 1.6 The Impact of COVID-19 on Education

School closures due to COVID-19 have brought significant disruptions to education across the world. Emerging evidence from some of the region's highest-income countries indicate that the pandemic has giving rise to learning losses and increases in inequality. To reduce and reverse the long-term negative effects, less-affluent lower-middle-income countries need to implement learning recovery programs, protect educational budgets, and prepare for future shocks. At the peak of the pandemic, most countries across the world closed their schools, affecting millions of students. Given the abruptness of the situation, teachers and administrations were unprepared for this transition and were forced to build emergency remote learning systems almost immediately.

Unfortunately, despite best efforts to set up a supportive remote learning experience, evidence is emerging to show that school closures have resulted in actual learning losses. Research analysing these outcomes indicates both learning losses and increases in inequality. Alarming, these losses are found to be much higher among students whose parents have less education, a finding reinforced by a study showing that children from socioeconomically advantaged families have received more parental support with their studies during the school closure period. To investigate the impact of COVID-19 on education, PIRLS asked heads of school to indicate the number of weeks when the school operations were affected by COVID-19. Moreover, PIRLS asked parents to indicate whether their children were absent from school during COVID-19 and how this absenteeism affected their learning progress. Table 1.1 asks Maltese parents whether their child stayed at home at any time because of COVID-19. Table 1.2 investigates whether Maltese parents think whether their children's learning progress was adversely affected by COVID-19. Tables 1.2 and 1.3 ask parents how their child's school engaged with home-based learning during COVID-19 and whether they provided more educational resources to their children.

**Table 1.1:** Child's stay at home because of COVID-19

Did your child stay home at any time because of the COVID-19 pandemic?	Frequency	Percentage
Yes	2042	70.8%
No	842	29.2%

**Table 1.2:** Child's learning progress adversely affected by COVID-19

Do you think your child's learning progress has been adversely affected?	Frequency	Percentage
A lot	291	14.4%
Somewhat	1236	61.2%
Not at all	493	24.4%

**Table 1.3:** Child's school engagement with child's home-based learning

When your child was not in school, how did your child's school engage with your child's home-based learning?	Yes	No
Reading assignments	66.6%	33.4%
Online activities	93.5%	6.5%
Printed learning materials	73.0%	27.0%

**Table 1.4:** Provision of additional educational resources to child during COVID-19

Did you provide more educational resources for your child during COVID-19?	Yes	No
Books	83.7%	16.3%
Digital devices	76.1%	23.9%
Digitally-based learning activities	68.0%	32.0%
Online instruction or tutoring	53.5%	46.5%

**Table 1.5:** Percentage of students by number of weeks affected by COVID-19

Country	School operations not affected	Less than 2 weeks of instruction	2-4 weeks of instruction	5-8 weeks of instruction	More than 8 weeks of instruction
Albania	25%	52%	9%	1%	13%
Australia	8%	22%	12%	10%	48%
Austria	0%	1%	6%	24%	69%
Azerbaijan	17%	11%	10%	6%	55%
Bahrain	52%	13%	9%	5%	23%
Belgium (Flemish)	3%	21%	29%	12%	34%
Belgium (French)	4%	14%	58%	13%	10%
Brazil	19%	6%	6%	3%	65%
Bulgaria	23%	4%	40%	30%	3%
Chinese Taipei	77%	19%	3%	1%	1%
Croatia	2%	5%	26%	33%	35%
Cyprus	2%	5%	51%	34%	8%
Czech Republic	0%	0%	0%	0%	100%
Denmark	0%	1%	1%	8%	91%
Egypt	9%	5%	9%	22%	55%
England	26%	11%	6%	16%	42%
Finland	17%	11%	10%	14%	47%
France	3%	50%	20%	9%	18%
Georgia	14%	17%	15%	16%	38%
Germany	0%	1%	0%	8%	91%
Hong Kong SAR	5%	8%	17%	13%	57%
Hungary	0%	0%	3%	36%	61%
Iran	8%	6%	8%	15%	62%
Ireland	0%	0%	0%	0%	100%
Israel	6%	5%	14%	34%	41%
Italy	6%	6%	44%	21%	23%
Jordan	11%	7%	13%	7%	63%
Kazakhstan	35%	8%	9%	15%	32%
Kosovo	9%	39%	38%	4%	10%
Latvia	1%	1%	3%	1%	93%
Lithuania	2%	1%	1%	7%	90%
Macao SAR	36%	3%	3%	11%	46%
Malta	8%	14%	61%	9%	8%
Montenegro	2%	6%	14%	40%	38%

Morocco	22%	6%	5%	5%	62%
Netherlands	3%	2%	7%	35%	53%
New Zealand	0%	0%	0%	0%	100%
North Macedonia	34%	9%	28%	3%	26%
Northern Ireland	1%	0%	0%	8%	92%
Norway	12%	11%	13%	13%	51%
Oman	15%	13%	24%	15%	34%
Poland	1%	1%	0%	0%	98%
Portugal	6%	4%	8%	44%	37%
Qatar	24%	13%	14%	7%	41%
Russian Federation	61%	14%	20%	2%	3%
Saudi Arabia	22%	13%	12%	12%	40%
Serbia	29%	4%	19%	15%	33%
Slovak Republic	0%	3%	12%	37%	48%
Slovenia	3%	4%	2%	8%	83%
South Africa	16%	15%	28%	14%	28%
Spain	34%	18%	18%	13%	17%
Sweden	34%	12%	10%	10%	34%
Turkey	3%	3%	3%	8%	83%
UAE	45%	15%	8%	6%	26%
United States	7%	5%	11%	5%	72%
Uzbekistan	14%	23%	28%	10%	25%
International Average	15%	10%	15%	13%	47%

Table 1.5 shows that only 8% of Maltese heads of school claimed that their school operations were not affected by COVID-19, which is lower than the international average 15%. 61% of Maltese heads of school stated that the instruction disruption duration caused by COVID-19 was between 2 to 4 weeks. Only 8% of Maltese heads of school claimed that the instruction disruption duration caused by COVID-19 was more than 8 weeks, which is lower than the international average (47%).

**Table 1.6:** Parents' perceptions of their child's learning progress during COVID-19

Country	Percentage of students who stayed home from school at any time because of COVID-19		Percentage of students who stao stayed home by parents' perception of learning progress		
	No	Yes	Not affected	Somewhat affected	Affected a lot
Albania	10%	90%	37%	43%	10%
Austria	11%	89%	15%	51%	23%
Azerbaijan	3%	97%	31%	55%	11%
Bahrain	10%	90%	13%	50%	27%
Belgium (Flemish)	0%	100%	18%	64%	18%
Belgium (French)	5%	95%	20%	52%	24%
Brazil	3%	97%	11%	49%	37%
Bulgaria	14%	86%	11%	50%	25%
Chinese Taipei	92%	8%	3%	4%	1%
Croatia	0%	100%	15%	52%	33%

Cyprus	14%	86%	15%	50%	21%
Czech Republic	7%	93%	15%	54%	24%
Denmark	3%	97%	46%	45%	5%
Egypt	14%	86%	12%	45%	29%
Finland	11%	89%	62%	25%	2%
France	1%	99%	33%	50%	16%
Georgia	12%	88%	4%	44%	40%
Germany	14%	86%	12%	47%	27%
Hong Kong SAR	11%	89%	5%	51%	33%
Hungary	21%	79%	14%	41%	25%
Iran	17%	83%	9%	40%	34%
Ireland	0%	100%	25%	58%	17%
Israel	20%	80%	13%	38%	30%
Italy	7%	93%	26%	53%	13%
Jordan	4%	96%	6%	31%	58%
Kazakhstan	26%	74%	10%	46%	17%
Kosovo	3%	97%	27%	53%	16%
Latvia	4%	96%	17%	53%	27%
Macao SAR	22%	78%	9%	57%	13%
Malta	29%	71%	17%	43%	10%
Montenegro	17%	83%	5%	40%	38%
Morocco	12%	88%	14%	39%	32%
Netherlands	7%	93%	35%	49%	9%
New Zealand	0%	100%	49%	40%	10%
North Macedonia	15%	85%	19%	49%	17%
Northern Ireland	4%	96%	11%	54%	31%
Norway	5%	95%	47%	43%	4%
Oman	13%	87%	23%	43%	20%
Poland	21%	79%	8%	32%	39%
Portugal	15%	85%	16%	55%	14%
Qatar	14%	86%	16%	42%	28%
Russian Federation	11%	89%	16%	48%	25%
Saudi Arabia	12%	88%	29%	40%	18%
Serbia	17%	83%	12%	49%	22%
Slovak Republic	11%	89%	19%	53%	17%
Slovenia	0%	100%	16%	58%	25%
South Africa	32%	68%	12%	22%	34%
Spain	6%	94%	14%	56%	24%
Sweden	46%	54%	34%	18%	2%
Turkey	25%	75%	14%	29%	33%
United Arab Emirates	16%	84%	19%	43%	22%
Uzbekistan	6%	94%	28%	53%	12%
International Average	13%	87%	19%	45%	22%

Table 1.5 shows that 71% of Maltese parents claimed that their children stayed home away from school at some point because of COVID-19, which is lower than the international average

(87%). Moreover, 10% of the 71% of Maltese parents who stated that their children had to stay at home because of COVID-19 claimed that their children were considerably affected by this disruption, which is lower than the international average (22%).

## 1.7 Report Structure

Chapter 1 identifies the countries participating in PIRLS 2021 and describes the composition of the Maltese sample by gender and school type. This chapter first outlines the reading assessment framework, discriminating between the purposes for reading the processes of comprehension; then describes the context questionnaire frameworks. The home questionnaire solicits information on the home context such as parents' reading activities and attitudes toward reading, students' early childhood education, early; the teacher questionnaire gathers information about classroom contexts for reading instruction; the school questionnaire elicits information about school characteristics; and the student questionnaire collects information on students' home reading environment. The chapter describes the assessment design framework and investigates the impact of COVID-19 on children's' education in each participating country.

Chapter 2 first describes the international benchmarks of reading performance and then presents the reading attainment results of 4<sup>th</sup> grade (Year 5 in Malta) students for each of the 57 participating countries in PIRLS 2021. Performance in reading attainment is first compared between countries and then compared between boys and girls for each country separately. Moreover, reading attainment in retrieving/inferencing purposes and interpreting/integrating/evaluating processes is compared between boys and girls attending State, Church and Independent schools. This chapter also contrasts overall reading performance between Maltese students attending different school types and between the 2011, 2016 and 2021 cycles.

Chapter 3 provides the parents' perspective by collecting data through the parent questionnaire. The questionnaire provides rich information about the home socio-economic status, emphasis on early literacy development, parents' reading enjoyment, and literacy readiness of children when starting primary school. It also provides information about the home environment for the development of reading literacy which is used to investigate the relationship between children's home circumstances and their performance on the PIRLS reading assessment. A scale score is generated for each context, which is then related to the PIRLS reading scores. This chapter also investigates differences in these home contexts between State, Church and Independent schools.

Chapter 4 provides the heads' of school perspective by collecting data through the head of school questionnaire. The questionnaire provides information about the school environment and organization contexts, which are essential for the ease and effectiveness of reaching curricular goals. This chapter provides information about the school environment supplied by the head of school and it discusses the school composition by students' socio-economic background and the literacy skills of students at entry in Primary schools. This chapter also investigates how instruction is affected by reading resource shortage at school, school emphasis on academic success and school discipline. A scale score is generated for each context, which is then related to the PIRLS reading scores. This chapter also investigates differences in these school contexts between State, Church and Independent schools.

Chapter 5 provides the students' perspective by collecting data through the student questionnaire. The questionnaire focuses on students' attitudes and habits to reading and their confidence in their abilities. This chapter investigates students' reading enjoyment, students' confidence in their reading abilities; students' digital self-efficacy; and students' competences in using digital devices to find and read information. A scale score is generated for each context, which is then related to the PIRLS reading scores. This chapter also investigates differences in these reading attitudes and habits between boys and girls and students attending State, Church and Independent schools.

Chapter 6 provides the teachers' perspective by collecting data through the teacher questionnaire. The questionnaire focuses on the teachers' emphasis on academic success; safety and order in their schools; teaching limited by students' lack of preparedness and readiness to learn; and teachers' job satisfaction. A scale score is generated for each context, which is then related to the PIRLS reading scores. This chapter also investigates differences in these reading attitudes and habits between State, Church and Independent schools.

In Chapter 7 a regression model is fitted that relates the reading comprehension scores to the generated scales from the students' and parents' questionnaires. The model identifies the significant predictors and ranks them by their impact on reading comprehension achievement. Moreover, the mean scores of the generated scales are computed for each school type and for all Maltese schools combined and then compared with the international scale averages (approximately 10).



## 2

# Reading Attainment in PIRLS 2021

## 2.1 Introduction

This chapter presents the reading attainment results of 4<sup>th</sup> grade students for each of the 54 participating countries and 8 benchmarking participants in PIRLS 2021. Section 2.2 describes the international benchmarks of reading attainment. Performance in reading attainment is first compared between countries in section 2.3 and then compared between male and female students for each country separately in section 2.4. This section also compares attainment of Maltese student between school types. Sections 2.5 and 2.6 analyze performance in reading purposes and reading processes, and section 2.7 contrasts overall reading achievement between Maltese students attending different school types and between students participating in the 2011, 2016 and 2021 cycles.

## 2.2 International Benchmarks of Reading Attainment

The overall reading score was generated to measure reading literacy skills of students. This PIRLS reading achievement scale has a mean of 500 and a standard deviation of 100 and was designed to remain constant between assessments at different cycles. To provide an interpretation of the results summarised on the PIRLS achievement scale for reading comprehension at the fourth grade, PIRLS describes achievement at four points along the scale as international benchmarks: Advanced International Benchmark (625), High International Benchmark (550), Intermediate International Benchmark (475), and Low International Benchmark (400). To develop the descriptions, the TIMSS & PIRLS International Study Center conducted a scale anchoring analysis together with the PIRLS 2016 Reading Development Group (RDG). The descriptions of achievement at the International Benchmarks are based on the reading skills and strategies demonstrated by fourth grade students achieving at each level of the scale.

The texts and items used in PIRLS 2021 were selected and developed based on the PIRLS 2021 Assessment Framework. The framework describes the PIRLS view of reading as an interactive process between the text and the reader and describes the ways that PIRLS measures students' reading achievement. It specifies that the assessment texts and items should cover in equal amounts the two purposes that account for most of the reading done by young students in and out of school:

- For literary experience
- To acquire and use information

Across the literary and informational texts, the PIRLS items measure four processes of comprehension: retrieving, straightforward inferencing, interpreting and integrating, and evaluating and critiquing.

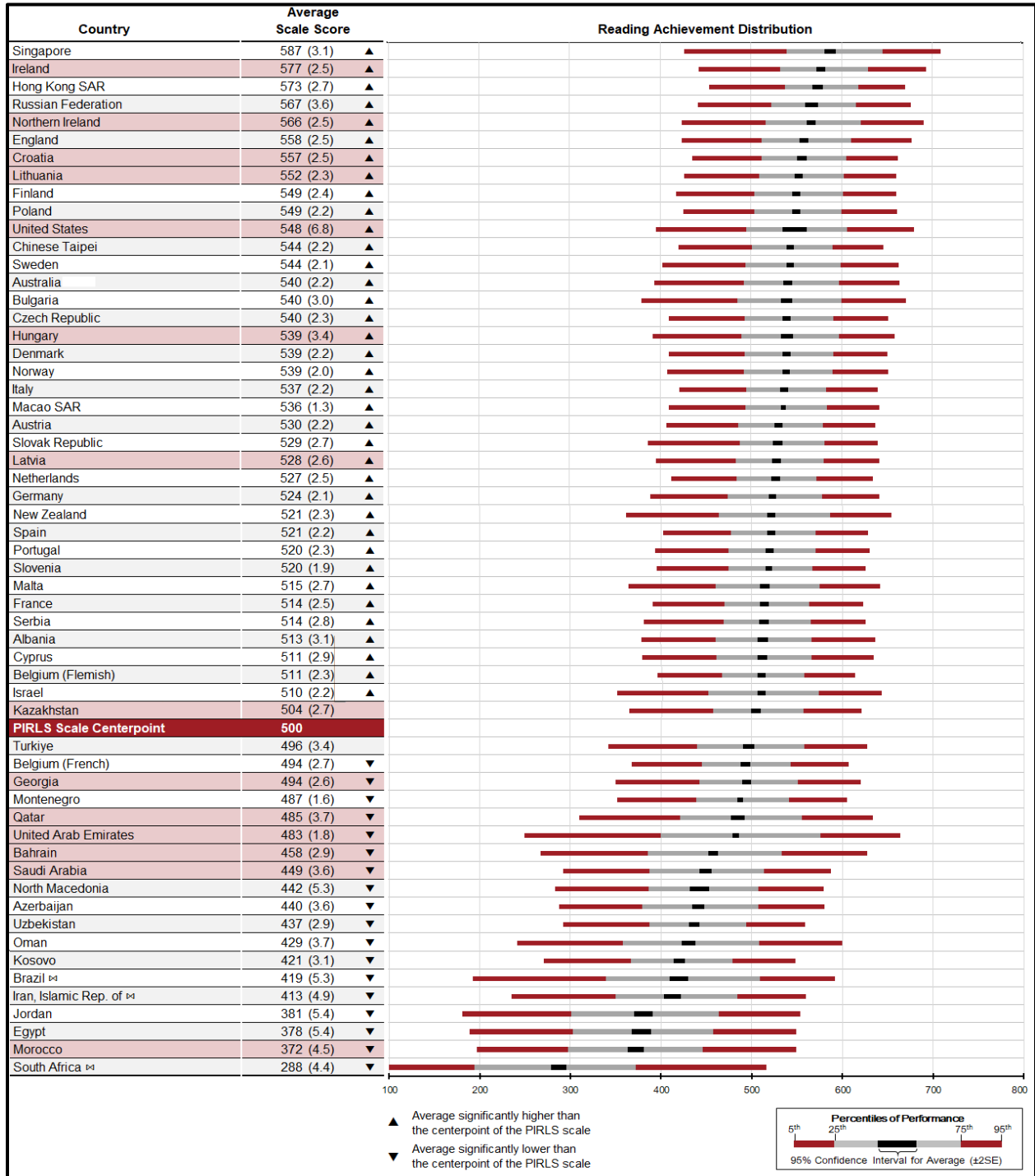
**Figure 2.1:** International Benchmarks of Reading Achievement

<b>●</b>	<b>Advanced</b> International Benchmark
<b>625</b>	<p><i>When reading relatively complex <b>Literary Texts</b>, students can:</i></p> <ul style="list-style-type: none"> <li>• Interpret story events and character actions to describe reasons, motivations, feelings, and character development with full text-based support</li> <li>• Begin to evaluate the effect on the reader of the author’s language and style choices</li> </ul> <p><i>When reading relatively complex <b>Informational Texts</b>, students can:</i></p> <ul style="list-style-type: none"> <li>• Distinguish and interpret complex information from different parts of text, and provide full text-based support</li> <li>• Integrate information across a text to explain relationships and sequence activities</li> <li>• Begin to evaluate visual and textual elements to consider the author’s point of view</li> </ul>
<b>○</b>	<b>High</b> International Benchmark
<b>550</b>	<p><i>When reading relatively complex <b>Literary Texts</b>, students can:</i></p> <ul style="list-style-type: none"> <li>• Locate and distinguish significant actions and details embedded across the text</li> <li>• Make inferences to explain relationships between intentions, actions, events, and feelings, and give text-based support</li> <li>• Interpret and integrate story events and character actions, traits, and feelings as they develop across the text</li> <li>• Recognize the use of some language features (e.g. metaphor, tone, imagery)</li> </ul> <p><i>When reading relatively complex <b>Informational Texts</b>, students can:</i></p> <ul style="list-style-type: none"> <li>• Locate and distinguish relevant information within a dense text or a complex table</li> <li>• Make inferences about logical connections to provide explanations and reasons</li> <li>• Integrate textual and visual information to interpret the relationship between ideas</li> <li>• Evaluate and make generalizations about content and textual elements</li> </ul>
<b>●</b>	<b>Intermediate</b> International Benchmark
<b>475</b>	<p><i>When reading a mix of simpler and relatively complex <b>Literary Texts</b>, students can:</i></p> <ul style="list-style-type: none"> <li>• Independently locate, recognize, and reproduce explicitly stated actions, events, and feelings</li> <li>• Make straightforward inferences about the attributes, feelings, and motivations of main characters</li> <li>• Interpret obvious reasons and causes, recognize evidence, and give examples</li> <li>• Begin to recognize language choices</li> </ul> <p><i>When reading a mix of simpler and relatively complex <b>Informational Texts</b>, students can:</i></p> <ul style="list-style-type: none"> <li>• Locate and reproduce two or three pieces of information from text</li> <li>• Make straightforward inferences to provide factual explanations</li> <li>• Begin to interpret and integrate information to order events</li> </ul>
<b>○</b>	<b>Low</b> International Benchmark
<b>400</b>	<p><i>When reading predominantly simpler <b>Literary Texts</b>, students can:</i></p> <ul style="list-style-type: none"> <li>• Locate and retrieve explicitly stated information, actions, or ideas</li> <li>• Make straightforward inferences about events and reasons for actions</li> <li>• Begin to interpret story events and central ideas</li> </ul> <p><i>When reading predominantly simpler <b>Informational Texts</b>, students can:</i></p> <ul style="list-style-type: none"> <li>• Locate and reproduce explicitly stated information from text and other formats (e.g., charts, diagrams)</li> <li>• Begin to make straightforward inferences about explanations, actions, and descriptions</li> </ul>

## 2.3 Overall Reading Achievement in PIRLS 2021

Singapore (587), Ireland (577), Hong Kong (573), Russian Federation (567), Northern Ireland (566), England (558), Croatia (557), Lithuania (552), Finland (549) and Poland (549) attained the highest mean reading scores of the 57 participating countries in PIRLS 2021 for 4th grade students.

**Figure 2.2:** Distribution of Reading Achievement



Malta's mean reading score (515) was significantly higher than the international PIRLS mean reading score (500) implying that reading attainment of 4<sup>th</sup> grade Maltese students is significantly higher than the average reading attainment of the participating countries. Reading attainment of Maltese students was comparable to nine countries including New Zealand, Spain, Portugal, Slovenia, France, Serbia, Albania, Cyprus and Belgium (Flemish) and significantly higher to 21 countries including Israel, Kazakhstan, Turkey, Belgium (French), Georgia, Montenegro, Qatar, United Arab Emirates, Bahrain, Saudi Arabia, North Macedonia, Azerbaijan, Uzbekistan, Oman, Kosovo, Brazil, Iran, Jordan, Egypt, Morocco and South Africa. The 26 countries that scored significantly higher than Malta in reading included Singapore, Ireland, Hong Kong, Russian Federation, Northern Ireland, England, Croatia, Lithuania, Finland, Poland, United States, Chinese Taipei, Sweden, Australia, Bulgaria, Czech Republic, Hungary, Denmark, Norway, Italy, Macao, Austria, Slovak Republic, Latvia, Netherlands and Germany.

The black shading displayed on Figure 2.2 represents the 95% confidence interval of the population mean reading score on the achievement distribution. Malta's 95% confidence interval is narrow because the vast majority of Maltese student participated in the PIRLS 2021 study, where non-participants included students who were absent on the day of the test or did not satisfy the inclusion criteria. Mean reading scores of two countries differ significantly when their corresponding confidence interval are disjoint (do not overlap). The red shadings display the range of reading scores between the 5<sup>th</sup> and 25<sup>th</sup> percentiles and between the 75<sup>th</sup> and 95<sup>th</sup> percentiles.

**Table 2.1:** Percentiles of Reading Achievement

Country	5 <sup>th</sup> Perc.	10 <sup>th</sup> Perc.	25 <sup>th</sup> Perc.	50 <sup>th</sup> Perc.	75 <sup>th</sup> Perc.	90 <sup>th</sup> Perc.	95 <sup>th</sup> Perc.
Albania	381	411	461	516	567	610	637
Australia	393	432	492	546	596	639	663
Austria	407	438	486	534	578	614	636
Azerbaijan	288	321	378	444	506	554	579
Bahrain	267	310	385	466	534	594	628
Belgium (Flemish)	395	422	467	514	558	593	614
Belgium (French)	368	397	446	498	545	585	608
Brazil	192	239	339	437	509	563	592
Bulgaria	379	422	486	548	601	645	672
Chinese Taipei	420	454	502	550	591	627	647
Croatia	435	466	513	561	605	641	662
Cyprus	378	410	461	514	566	608	633
Czech Republic	409	441	493	545	591	629	651
Denmark	409	440	493	545	590	628	649
Egypt	189	230	303	384	457	515	549
England	424	458	511	562	609	651	676
Finland	417	451	504	556	601	638	660
France	391	420	469	518	563	601	623
Georgia	350	386	442	499	551	594	620
Germany	389	421	474	529	578	619	641
Hong Kong SAR	454	488	536	579	617	651	670
Hungary	392	428	489	549	597	636	658
Iran	235	277	350	422	485	533	561
Ireland	442	480	532	582	629	671	693

Israel	352	389	452	517	574	617	642
Italy	421	449	495	541	583	619	640
Jordan	181	223	301	390	464	522	554
Kazakhstan	371	404	456	509	555	596	619
Kosovo	271	307	367	426	479	523	549
Latvia	395	428	482	533	580	619	641
Lithuania	426	458	509	558	601	638	659
Macao SAR	409	443	494	541	584	620	641
Malta	364	401	460	521	575	616	641
Montenegro	352	385	439	492	541	581	605
Morocco	197	233	297	374	446	510	548
Netherlands	412	441	484	530	572	610	633
New Zealand	361	399	464	530	586	630	654
North Macedonia	283	321	385	448	507	552	579
Northern Ireland	424	461	516	571	621	665	690
Norway	408	439	492	545	590	628	651
Oman	241	284	358	435	507	566	599
Poland	425	456	504	552	599	637	660
Portugal	393	425	475	525	570	607	630
Qatar	310	350	421	493	555	605	633
Russian Federation	441	471	522	573	616	654	676
Saudi Arabia	292	326	387	455	513	560	587
Serbia	381	416	470	519	565	602	625
Singapore	426	473	539	597	646	686	710
Slovak Republic	386	427	488	538	581	618	639
Slovenia	395	425	475	525	568	605	626
South Africa	87	126	194	281	373	462	517
Spain	402	430	477	525	570	607	628
Sweden	402	436	494	549	600	641	663
Turkey	342	380	440	503	559	602	627
UAE	249	299	400	500	577	634	665
United States	395	435	495	555	606	652	680
Uzbekistan	292	327	387	443	494	537	559

Table 2.1 also shows the reading threshold reading scores at the 5<sup>th</sup>, 10<sup>th</sup>, 25<sup>th</sup>, 50<sup>th</sup>, 75<sup>th</sup>, 90<sup>th</sup> and 95<sup>th</sup> percentiles for each individual country. For low performing countries the difference between the 5<sup>th</sup> and 95<sup>th</sup> percentile was larger than high performing countries. This indicates that reading scores are more dispersed in low performing than high performing countries. In Malta, the difference between the 25<sup>th</sup> and 75<sup>th</sup> percentile is 115 scale points, the difference between the 10<sup>th</sup> and 90<sup>th</sup> percentile is 215 and the difference between the 5<sup>th</sup> and 95<sup>th</sup> percentile is 277 scale points. These percentile scores are essential to display the proportion of pupils in different countries below or above a specified threshold scale score. For instance, the 75<sup>th</sup> percentile for Russia is equal to the 90<sup>th</sup> percentile for Malta indicating that the top 25% of students in Russia have the same level of reading attainment as the top 10% in Malta. Similarly, the 90<sup>th</sup> percentiles for Sweden and Croatia is equal to the 95<sup>th</sup> percentiles for Malta, Latvia, Macao and Germany indicating that the top 10% of students in Sweden and Croatia have the same level of reading attainment as the top 5% in Malta, Latvia, Macao and Germany.

Figure 2.3: Multiple Comparisons of Average Reading Achievement

Country	Average Scale Score	Singapore	Hong Kong SAR	Russian Federation	England	Finland	Poland	Chinese Taipei	Sweden	Australia <sup>14</sup>	Bulgaria	Czech Republic	Denmark	Norway (5)	Italy	Macao SAR	Austria	Slovak Republic	Netherlands	Germany	New Zealand	Spain	Portugal	Slovenia	Malta	France	Serbia	Albania	Cyprus	Belgium (Flemish)	Israel <sup>14</sup>	Turkiye	Belgium (French)	Montenegro	North Macedonia
Singapore	587 (3.1)																																		
Hong Kong SAR	573 (2.7)	▼																																	
Russian Federation	567 (3.6)	▼																																	
England	558 (2.5)	▼	▼	▼																															
Finland	549 (2.4)	▼	▼	▼	▼																														
Poland	549 (2.2)	▼	▼	▼	▼																														
Chinese Taipei	544 (2.2)	▼	▼	▼	▼																														
Sweden	544 (2.1)	▼	▼	▼	▼																														
Australia	540 (2.2)	▼	▼	▼	▼	▼	▼																												
Bulgaria	540 (3.0)	▼	▼	▼	▼	▼	▼																												
Czech Republic	540 (2.3)	▼	▼	▼	▼	▼	▼																												
Denmark	539 (2.2)	▼	▼	▼	▼	▼	▼																												
Norway	539 (2.0)	▼	▼	▼	▼	▼	▼																												
Italy	537 (2.2)	▼	▼	▼	▼	▼	▼	▼	▼																										
Macao SAR	536 (1.3)	▼	▼	▼	▼	▼	▼	▼	▼																										
Austria	530 (2.2)	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼																			
Slovak Republic	529 (2.7)	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼																			
Netherlands	527 (2.5)	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼																			
Germany	524 (2.1)	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼																			
New Zealand	521 (2.3)	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼																			
Spain	521 (2.2)	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼																			
Portugal	520 (2.3)	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼																			
Slovenia	520 (1.9)	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼																			
Malta	515 (2.7)	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼																			
France	514 (2.5)	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼																			
Serbia	514 (2.8)	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼																			
Albania	513 (3.1)	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼																			
Cyprus	511 (2.9)	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼																			
Belgium (Flemish)	511 (2.3)	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼																			
Israel	500 (2.2)	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼																			
Turkiye	496 (3.4)	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼																			
Belgium (French)	494 (2.7)	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼																			
Montenegro	487 (1.6)	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼																			
North Macedonia	442 (5.3)	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼																			
Azerbaijan	440 (3.6)	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼																			
Uzbekistan	437 (2.9)	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼																			
Oman	429 (3.7)	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼																			
Kosovo	421 (3.1)	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼																			
Brazil <sup>14</sup>	419 (5.3)	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼																			
Iran, Islamic Rep. of <sup>14</sup>	413 (4.9)	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼																			
Jordan	381 (5.4)	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼																			
Egypt	378 (5.4)	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼																			
South Africa	288 (4.4)	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼																			

▲ Average achievement significantly higher than comparison country    ▼ Average achievement significantly lower than comparison country

Figure 2.3 depicts whether or not the differences in average reading scores between pairs of countries are statistically significant. Selecting a country of interest and reading horizontally across the table, the up-arrow indicates better performance and the down-arrow indicates poorer performance than a comparison country selected from the columns. The absence of an arrow indicates no significant difference in performance. For instance, the mean reading scores of Singapore is significantly higher than those of other participating countries. Similarly, the mean reading scores of South Africa is significantly lower than those of other participating countries.

Figure 2.4: Percentage of Students Reaching International Benchmarks

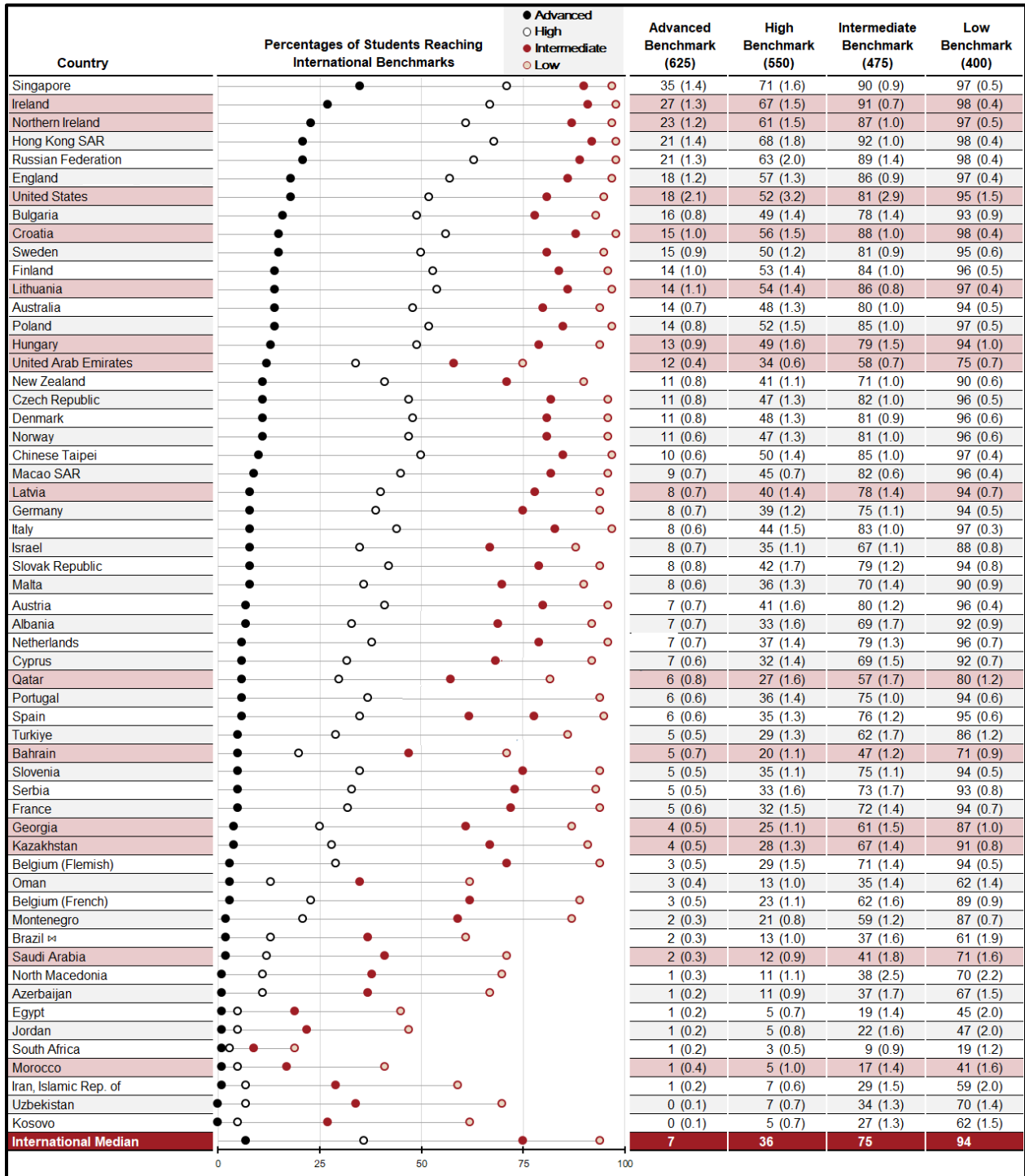


Figure 2.4 show the proportion of students within the International Benchmarks for countries participating in PIRLS 2021. The international average shows that 7% of the students have a reading attainment score above 625, 29% have a reading attainment score between 550 and 625, 39% have a reading attainment score between 475 and 550, 19% have a reading attainment score between 400 and 475 and the remaining 6% have a reading attainment score below 400. The percentages of Maltese

students in these five clusters are respectively 8%, 28%, 34%, 20% and 10%, indicating that compared to the international averages Malta has a slightly larger percentage of high reading achievers and a slightly larger percentage of low reading achievers. Reading attainment varies significantly between countries. In Singapore, Ireland and Northern Ireland the percentages of high reading achievers (35%, 27% and 23%) and low reading achievers (3%, 2% and 3%) differ significantly from those of Iran, Uzbekistan and Kosovo (1%, 0% and 0%) for high reading achievers) and (41%, 30% and 38%) for low reading achievers).

## 2.4 Gender Differences in Overall Reading Attainment

Table 2.2 shows that in all participating countries, girls perform better than boys in reading comprehension. In Spain, Czech Republic, Israel, Malta and the United States the gender differences in mean reading scores were not significant at the 0.05 level of significance; however in the remaining countries the gender differences exceeded 6 scale points and were significant. South Africa had the largest gender discrepancy in reading attainment (57), followed by Bahrain (49), Oman (36), Jordan (36), Saudi Arabia (35), Morocco (33), United Arab Emirates (29), Latvia (27), North Macedonia (25), Northern Ireland (24) Uzbekistan (24) and Brazil (23). The gender difference in mean reading scores in Malta (6) is significantly smaller than the international average (18).

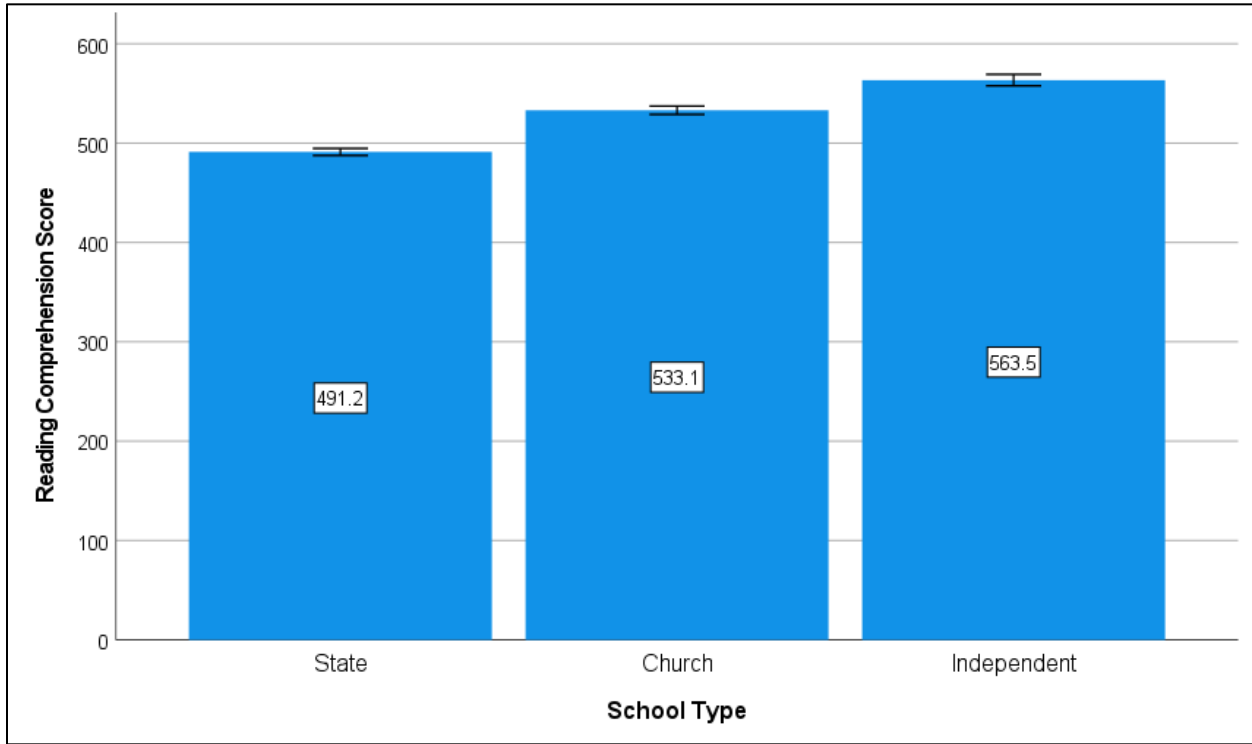
**Table 2.2:** Gender Differences in Reading Performance

Country	Girls		Boys		Difference
	Percentage	Mean Score	Percentage	Mean Score	
Albania	49%	523	51%	503	20
Australia	50%	549	50%	532	17
Austria	49%	537	51%	523	14
Azerbaijan	47%	450	53%	432	18
Bahrain	50%	483	50%	434	49
Belgium (Flemish)	49%	515	51%	507	8
Belgium (French)	49%	499	51%	489	10
Brazil	49%	431	51%	408	23
Bulgaria	48%	548	52%	533	15
Chinese Taipei	48%	551	52%	537	13
Croatia	48%	562	52%	551	10
Cyprus	51%	515	49%	506	9
Czech Republic	49%	541	51%	538	4
Denmark	52%	545	48%	533	12
Egypt	49%	386	51%	370	16
England	51%	562	49%	553	10
Finland	50%	558	50%	541	18
France	50%	521	50%	507	14
Georgia	49%	506	51%	483	23
Germany	49%	532	51%	516	15
Hong Kong SAR	51%	577	49%	569	8

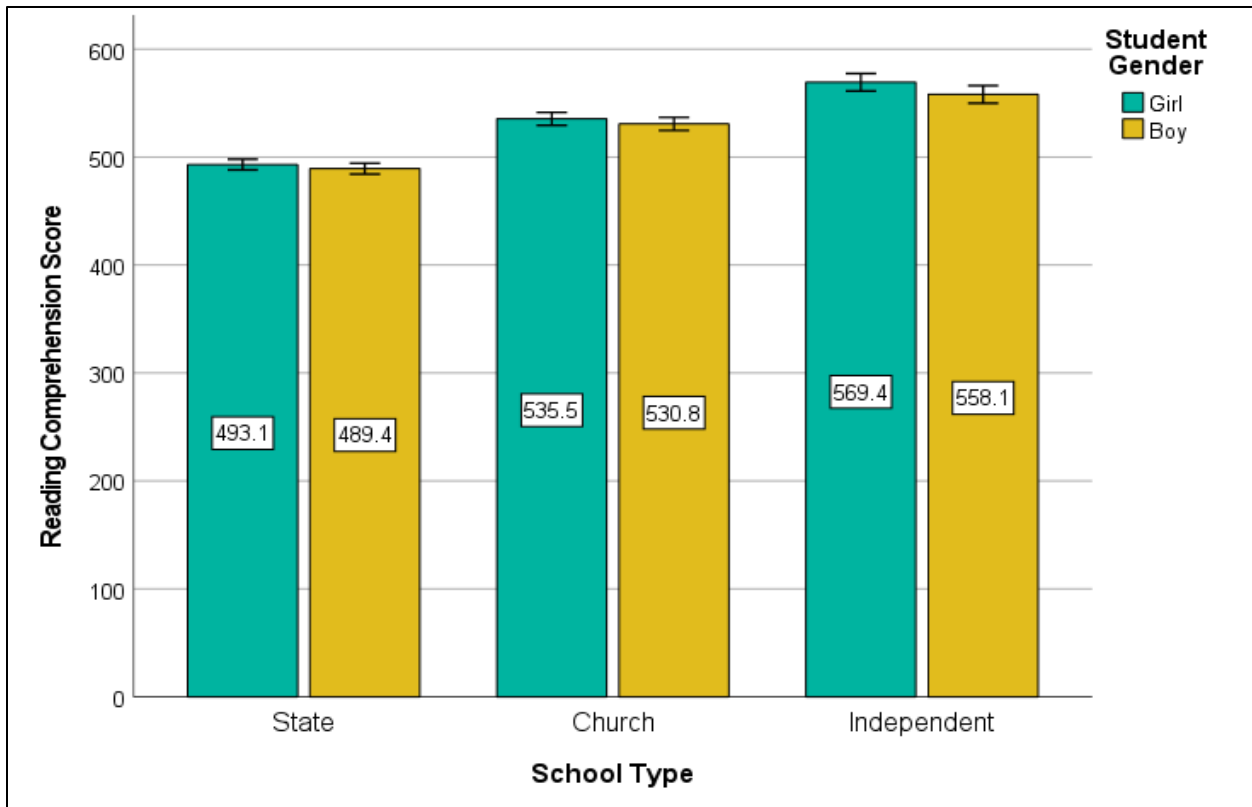
Hungary	50%	547	50%	532	15
Iran	46%	422	54%	405	17
Ireland	49%	583	51%	572	11
Israel	50%	512	50%	508	4
Italy	49%	541	51%	534	7
Jordan	51%	398	49%	362	36
Kazakhstan	50%	512	50%	495	17
Kosovo	51%	431	49%	410	21
Latvia	49%	542	51%	514	27
Lithuania	50%	563	50%	542	21
Macao SAR	50%	540	50%	531	10
Malta	46%	518	54%	512	6
Montenegro	48%	497	52%	478	20
Morocco	48%	390	52%	356	33
Netherlands	50%	534	50%	521	13
New Zealand	49%	531	51%	512	19
North Macedonia	51%	454	49%	429	25
Northern Ireland	52%	578	48%	553	24
Norway	49%	547	51%	531	16
Oman	50%	447	50%	412	36
Poland	47%	560	53%	540	20
Portugal	48%	523	52%	517	6
Qatar	51%	493	49%	476	17
Russian Federation	49%	574	51%	561	13
Saudi Arabia	58%	464	42%	428	35
Serbia	49%	518	51%	509	9
Singapore	49%	596	51%	578	18
Slovak Republic	52%	533	48%	525	8
Slovenia	49%	529	51%	511	18
South Africa	49%	317	51%	260	57
Spain	47%	522	53%	520	2
Sweden	50%	551	50%	536	15
Turkey	49%	505	51%	488	17
UAE	51%	497	49%	468	29
United States	50%	551	50%	544	7
Uzbekistan	48%	449	52%	425	24
<b>International Average</b>	<b>50%</b>	<b>512</b>	<b>50%</b>	<b>494</b>	<b>18</b>

Figure 2.5 shows that the mean reading score of Independent school students (563.5) exceeds the mean reading score of Church school students (533.1) by 30.4 scale points, which in turn exceeds the mean reading score of State school students (491.2) by 41.9 scale points. Figure 2.6 shows similar pattern when Maltese students are grouped by both school type and gender. Mean reading scores for female students exceed those of males by 3.7 scale points in State schools, 4.7 scale points in Church schools and 11.3 scale points in Independent schools.

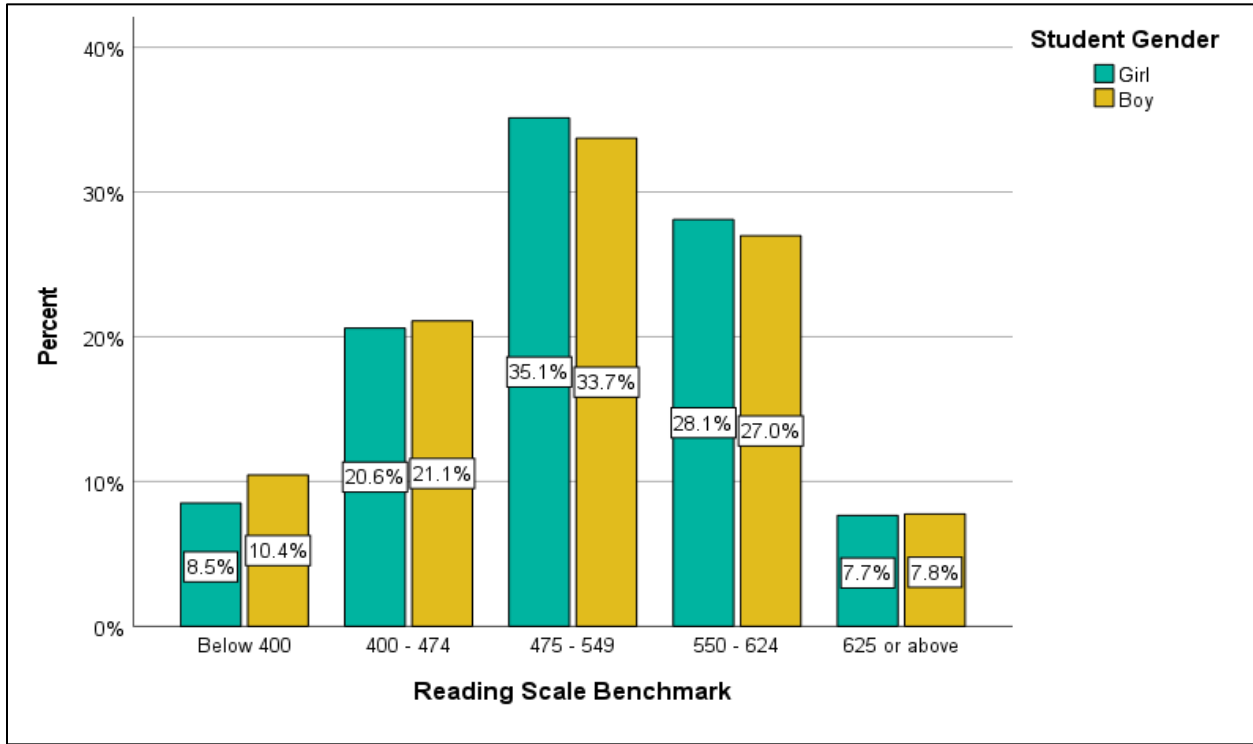
**Figure 2.5:** Reading Performance of Maltese Students by School Type



**Figure 2.6:** Reading Performance of Maltese Students by Gender and School Type



**Figure 2.7:** Reading Scale Benchmarks of Maltese Students by Gender



**Figure 2.8:** Reading Scale Benchmarks of Maltese Students by School Type

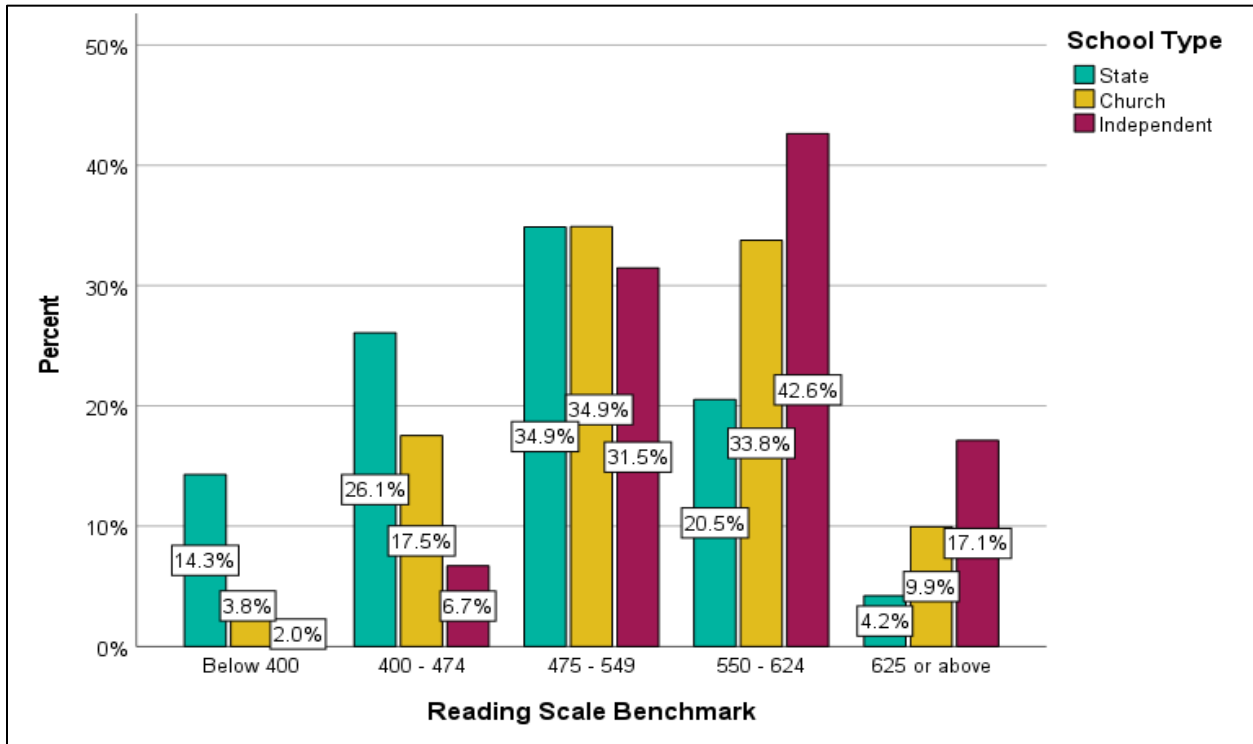


Figure 2.7 displays a larger percentage of boys scoring in the range 400-474 and a larger percentage of girls scoring in the range 550-624. Figure 2.8 shows a larger percentage of students attending Independent schools in the upper reading scale benchmark and a larger percentage of students attending State schools in the lower reading scale benchmarks.

## 2.5 Reading Attainment for different reading purposes

One of the central features and strengths of IEA surveys is the explicit definition of the constructs being assessed. In PIRLS 2021, reading literacy is defined as the ability to understand and use those written language forms required by society and /or valued by the individual. Young readers can construct meaning from a variety of texts. They read to learn, to participate in communities of readers in school and everyday life, and for enjoyment. This definition, in which reading is seen as a constructive and interactive process, is intended to embrace multi-modal forms of reading, as well as traditional print forms. PIRLS identifies two purposes for reading – reading for literary experience and reading to acquire and use information, which are described in Chapter 1. Table 2.3 presents the mean achievement scores of the participating countries in these two purposes of reading and the difference from the overall PIRLS average score. It should be noted, however that the two numerical scale scores representing the reading purposes are not comparable since they represent different constructs and the degree of difficulty may vary between the two assessments. To allow comparison of the relative performance of each country the international average for each purpose was scaled to be 500, similar to the overall international average. This makes it possible to examine relative strengths and weaknesses of countries by comparing the relative positions of the participants on the two scales.

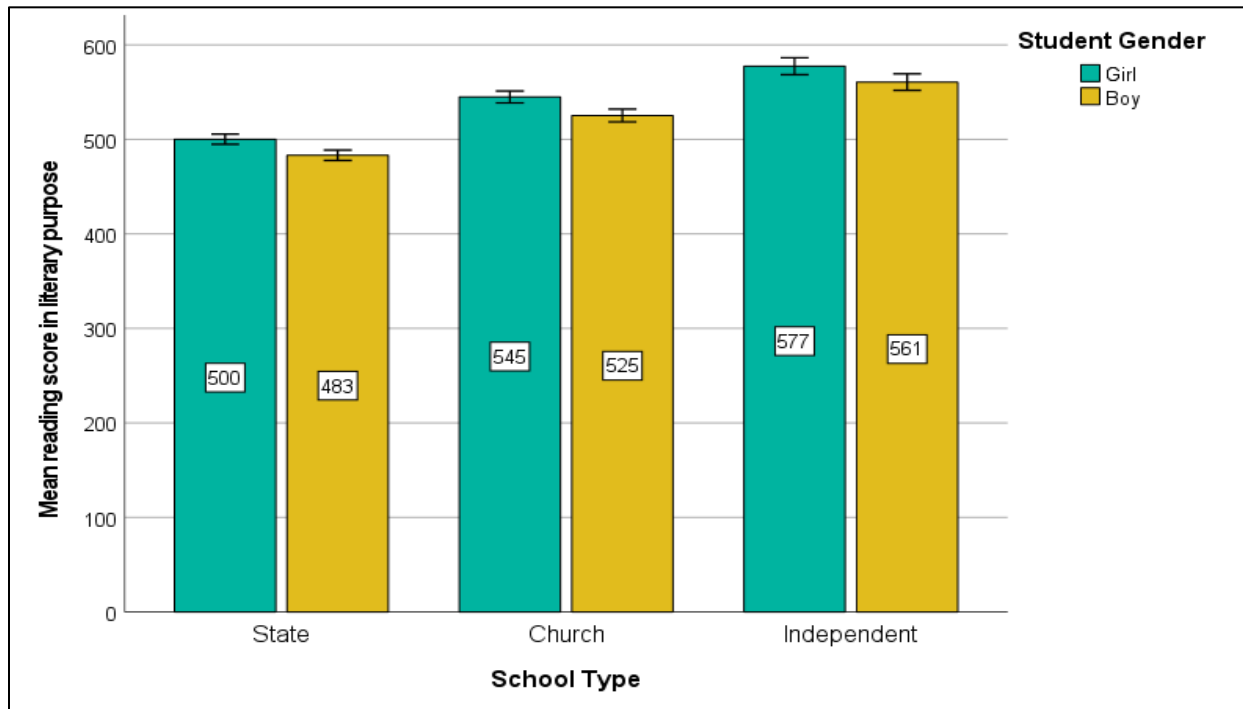
**Table 2.3:** Performance in the two reading purposes

Country	Overall PIRLS Average Score	Literary		Informational	
		Mean Score	Difference	Mean Score	Difference
Albania	513	516	3	509	-4
Australia	540	543	3	539	-1
Austria	530	533	3	527	-2
Azerbaijan	440	441	0	439	-1
Bahrain	458	460	1	457	-1
Belgium (Flemish)	511	511	1	510	-1
Belgium (French)	494	499	5	490	-4
Brazil	419	418	-1	421	2
Bulgaria	540	544	4	538	-2
Chinese Taipei	544	533	-11	549	6
Croatia	557	567	11	553	-4
Cyprus	511	517	6	505	-6
Czech Republic	540	540	0	540	0
Denmark	539	546	7	536	-3
Egypt	378	372	-6	382	4
England	558	558	1	559	1
Finland	549	547	-2	550	1
France	514	516	2	511	-2

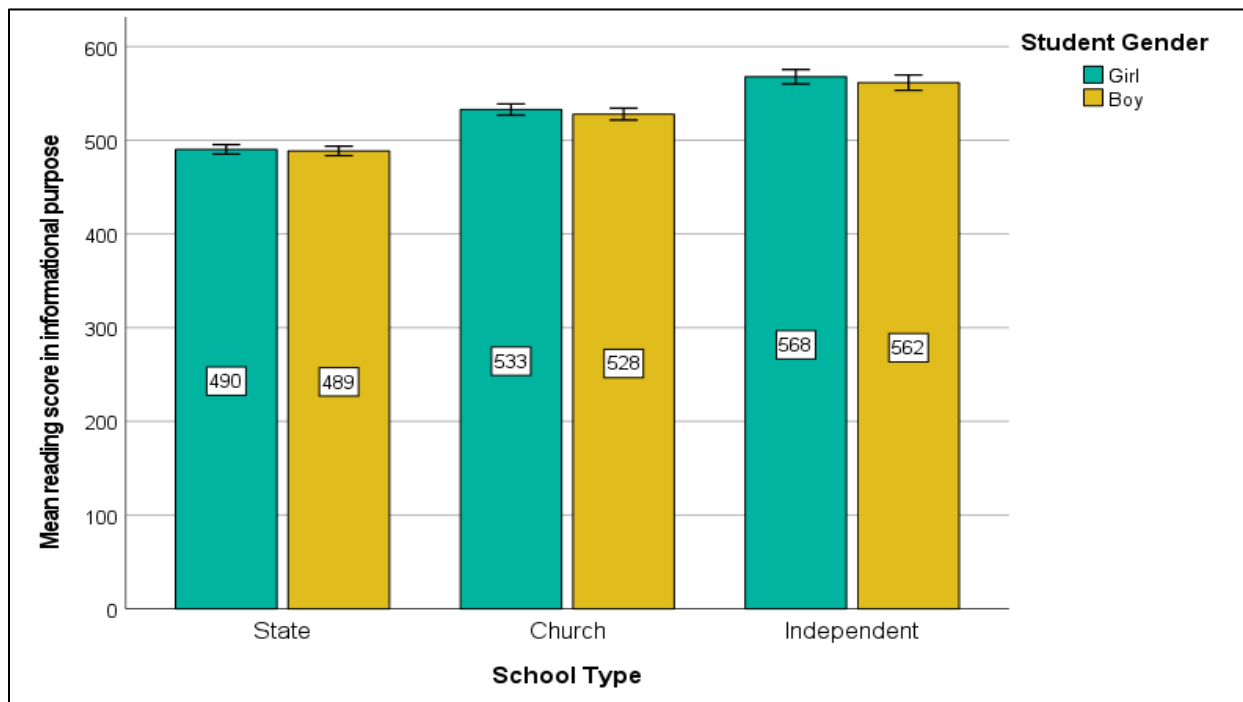
Georgia	494	501	7	486	-8
Germany	524	529	5	522	-2
Hong Kong SAR	573	564	-8	582	10
Hungary	539	541	2	539	-1
Iran	413	413	0	412	-1
Ireland	577	584	6	574	-4
Israel	510	515	5	508	-2
Italy	537	536	-1	538	1
Jordan	381	378	-3	384	3
Kazakhstan	504	508	5	501	-3
Kosovo	421	418	-3	423	3
Latvia	528	527	0	529	2
Lithuania	552	552	0	553	0
Macao SAR	536	525	-10	547	12
Malta	515	516	1	514	-2
Montenegro	487	491	4	483	-4
Morocco	372	372	0	373	1
Netherlands	527	528	1	528	1
New Zealand	521	523	2	521	-1
North Macedonia	442	442	0	439	-3
Northern Ireland	566	573	7	562	-4
Norway	539	538	-1	540	1
Oman	429	425	-4	432	3
Poland	549	552	3	548	-1
Portugal	520	520	0	520	0
Qatar	485	481	-4	486	1
Russian Federation	567	566	-1	568	1
Saudi Arabia	449	444	-5	451	2
Serbia	514	518	4	511	-2
Singapore	587	591	4	586	-1
Slovak Republic	529	530	1	530	1
Slovenia	520	522	2	519	-1
South Africa	288	293	5	279	-10
Spain	521	520	-1	522	0
Sweden	544	545	2	544	0
Turkey	496	495	-2	498	2
UAE	483	478	-5	485	2
United States	548	558	11	540	-8
Uzbekistan	437	438	1	434	-3

Table 2.3 shows that the mean literary reading score of Maltese students (516) differed marginally from the mean informational reading score (514). Malta was among 23 participating countries where both the mean literary and informational reading scores did not differ significantly from the country's mean PIRLS reading score. There were 21 countries where both the mean literary and informational reading scores differed significantly from the country's mean PIRLS reading score. 11 countries registered a significant change in one reading purpose only.

**Figure 2.9:** Literary Reading Performance of Maltese Students by Gender and School Type



**Figure 2.10:** Informational Reading Performance of Maltese Students by Gender and School Type



Figures 2.9 and 2.10 display that in all school types, girls score significantly higher than boys in both literary and informational reading purposes since most of the 95% confidence intervals (error bars) are either disjointed or overlap slightly. Moreover, students attending Independent schools on average score significantly higher than students attending Church and State schools in both reading purposes.

## 2.6 Reading Attainment for different reading processes

PIRLS identifies four reading processes that were described in Chapter 1. These include: focus on and retrieve explicitly stated information, make straightforward inferences, interpret and integrate ideas and information and examine and evaluate content, language and textual elements. The two text-based processes (retrieval and straightforward inferencing) were grouped to form a single scale, and the other two processes more concerned with reasoning (interpreting and integrating, and examining and evaluating) were combined to form another. Participating countries' performance on these two scales, the retrieving and straightforward inferencing scale and the interpreting, integrating and evaluating scale, is reported separately. Table 2.4 shows the mean achievement scores of the participating countries in these two processes of reading and the difference from the overall PIRLS average score. To allow comparison of the relative performance of each country the international average for each process was scaled to be 500, similar to the overall international average. This makes it possible to examine relative strengths and weaknesses of countries by comparing the relative positions of the participants on the two scales.

**Table 2.4:** Performance in the two reading processes

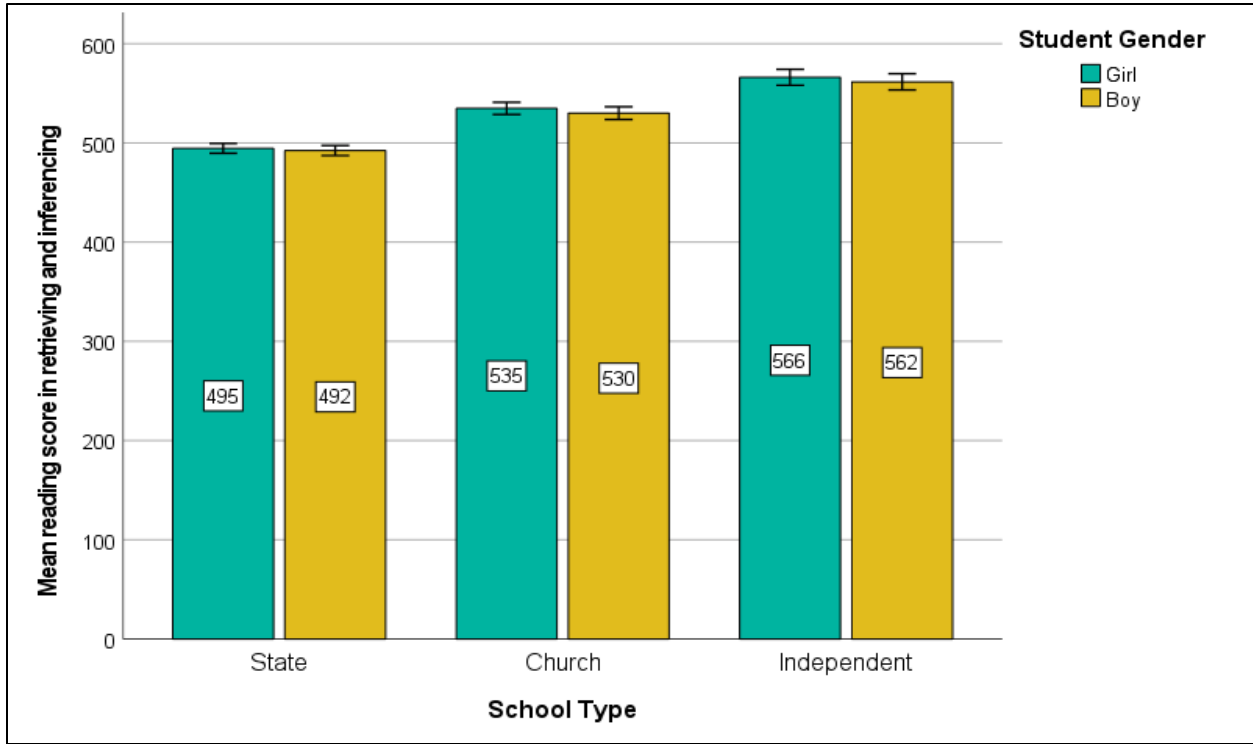
Country	Overall PIRLS Average Score	Retrieving and Inferencing		Interpret, Integrate and Evaluate	
		Mean Score	Difference	Mean Score	Difference
Albania	513	508	-4	518	5
Australia	540	534	-6	547	7
Austria	530	532	2	528	-2
Azerbaijan	440	446	6	431	-10
Bahrain	458	456	-3	462	3
Belgium (Flemish)	511	511	0	510	0
Belgium (French)	494	497	2	492	-2
Brazil	419	418	-1	420	1
Bulgaria	540	541	1	541	1
Chinese Taipei	544	546	2	542	-2
Croatia	557	552	-4	561	5
Cyprus	511	509	-2	512	2
Czech Republic	540	542	3	537	-3
Denmark	539	539	0	540	1
Egypt	378	376	-2	380	2
England	558	554	-3	561	4
Finland	549	550	1	549	0
France	514	519	5	510	-4
Georgia	494	489	-6	500	6
Germany	524	525	1	522	-2
Hong Kong SAR	573	577	4	572	0
Hungary	539	538	-1	541	2
Iran	413	414	1	411	-2
Ireland	577	571	-6	582	5
Israel	510	508	-2	512	2
Italy	537	537	0	538	1

Jordan	381	381	1	379	-2
Kazakhstan	504	505	2	502	-2
Kosovo	421	424	4	412	-9
Latvia	528	525	-3	532	4
Lithuania	552	554	2	551	-1
Macao SAR	536	541	5	534	-2
Malta	515	516	1	514	-2
Montenegro	487	484	-3	491	4
Morocco	372	374	1	366	-6
Netherlands	527	527	-1	529	2
New Zealand	521	521	-1	522	1
North Macedonia	442	443	1	439	-3
Northern Ireland	566	558	-8	573	8
Norway	539	540	1	538	-1
Oman	429	426	-4	433	4
Poland	549	545	-4	552	3
Portugal	520	520	0	520	0
Qatar	485	486	1	482	-3
Russian Federation	567	568	1	568	1
Saudi Arabia	449	450	2	443	-5
Serbia	514	510	-3	516	3
Singapore	587	584	-3	591	4
Slovak Republic	529	530	1	529	0
Slovenia	520	520	0	519	0
South Africa	288	290	2	279	-9
Spain	521	522	1	520	-1
Sweden	544	546	2	542	-1
Turkey	496	499	3	494	-2
UAE	483	484	1	482	-1
United States	548	539	-8	555	8
Uzbekistan	437	441	4	430	-7

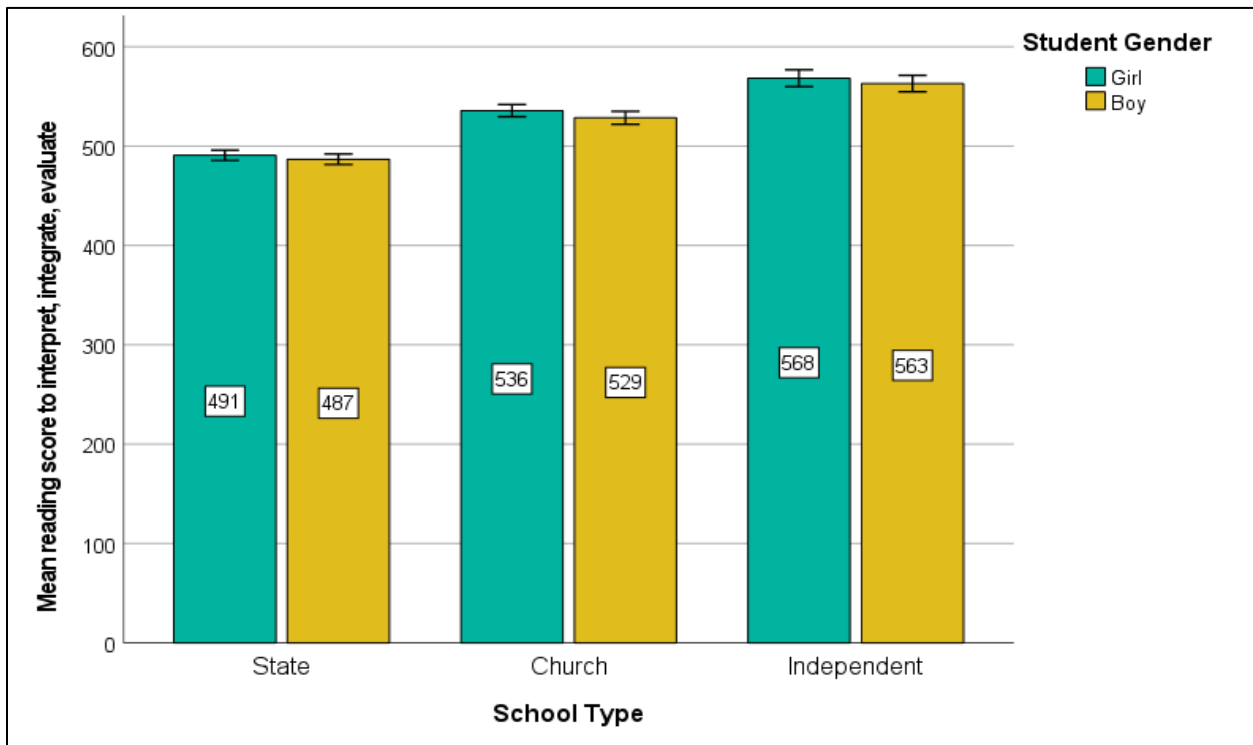
Table 2.4 shows that the mean retrieving and inferencing score of Maltese students (516) differed marginally from the mean interpreting, integrating and evaluating score (514). Malta was among 20 participating countries where the mean retrieving/inferencing and the mean interpreting/integrating/evaluating scores did not differ significantly from the country's mean PIRLS reading score. There were 23 countries where both the mean retrieving/inferencing and the mean interpreting/integrating/evaluating scores differed significantly from the country's mean PIRLS reading score. 14 countries registered a significant change in one reading process only.

Figures 2.11 to 2.12 display that in all school types, girls score significantly higher than boys in both retrieving/inferencing and interpreting, integrating and evaluating processes since most of the 95% confidence intervals (error bars) are either disjointed or overlap slightly. Moreover, students attending Independent schools on average score significantly higher than students attending Church, who in turn score significantly higher than students attending State schools in both reading processes.

**Figure 2.11:** Retrieving/Inferencing Reading Performance of Maltese Students by Gender and School type



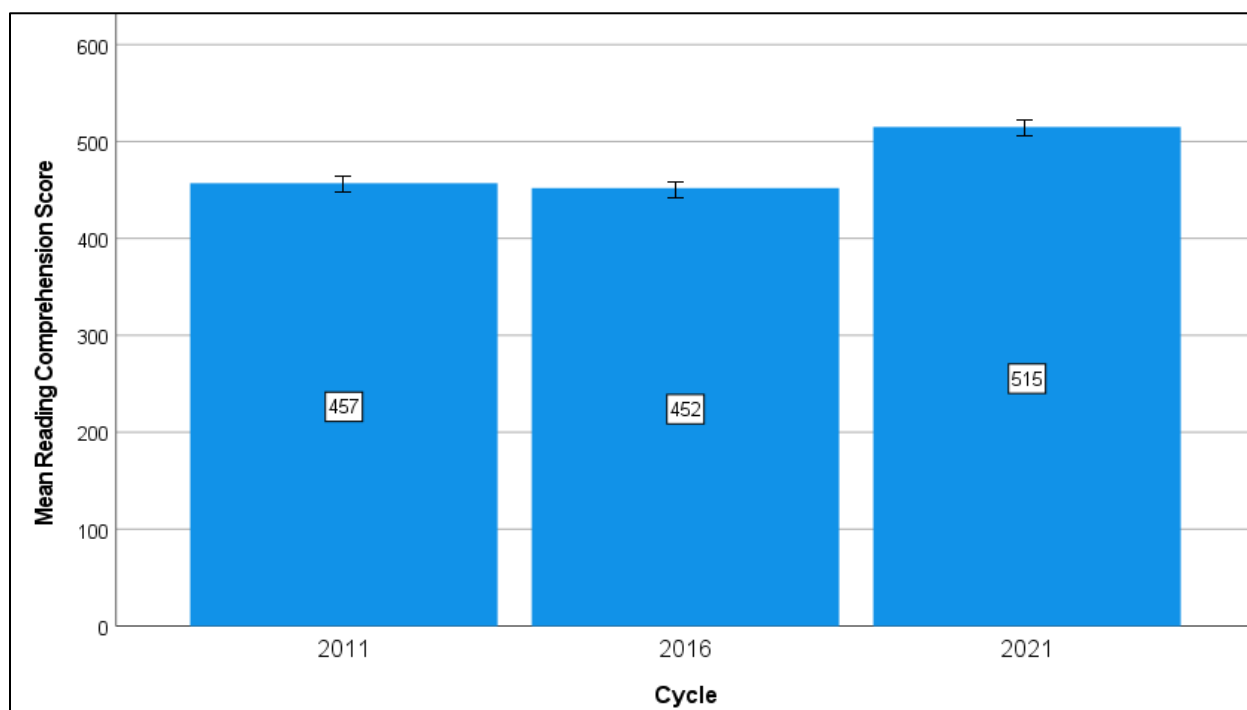
**Figure 2.12:** Interpret, Integrate, Evaluate Reading Attainment of Maltese Students by Gender and School Type



## 2.7 Trends in reading performance in the 2011, 2016 and 2021 cycles

Figure 2.13 displays the reading performance of Maltese students in the PIRLS 2011, 2016 and 2021 cycles. The mean reading score in the 2016 cycle (452) is 5 points lower than the mean reading score in the 2011 cycle (457), while the mean reading score in the 2021 cycle (515) is 58 and 63 points higher than the mean reading scores in the 2011 and 2016 cycles. It should be noted that the language of the reading test was English in 2011, Maltese in 2016, while in 2021 the students were allowed to choose the language of the test.

**Figure 2.13:** Performance in Reading of Maltese students in the 2011, 2016 and 2021 cycles

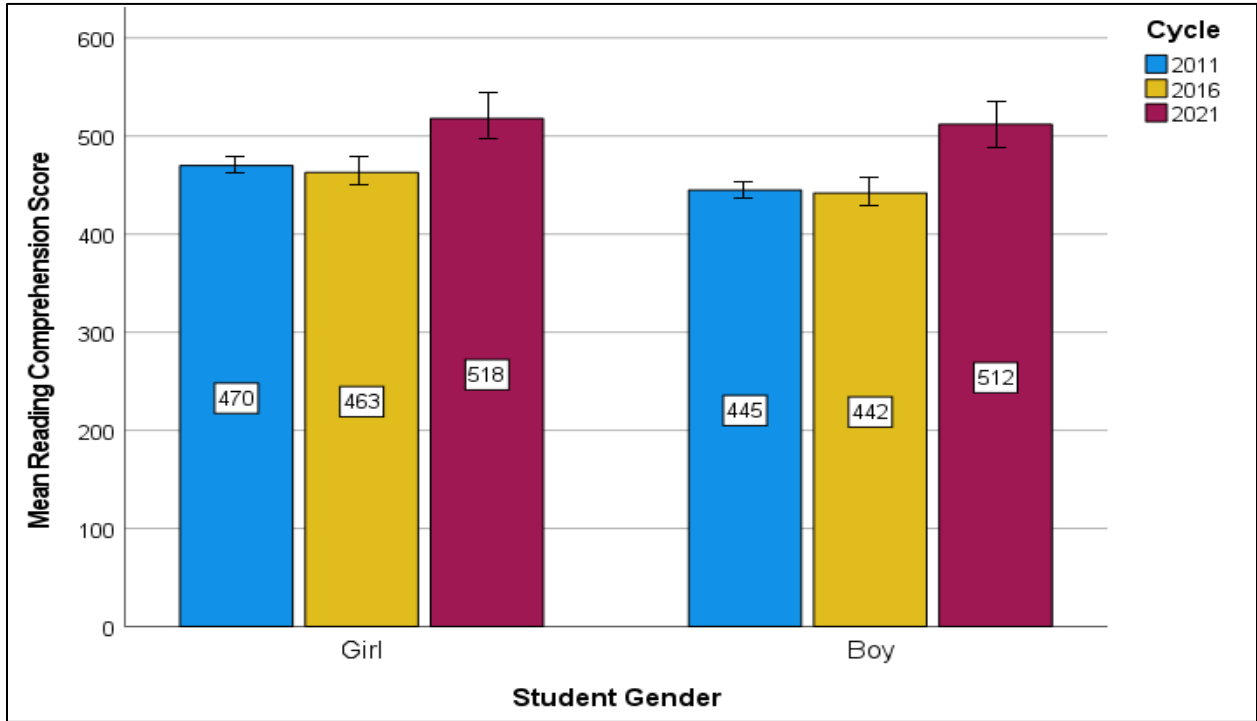


It is quite difficult to measure to true improvement of Maltese students in reading throughout the last 10 years since the language of the reading test was altered in all three cycles. These changes in the language of the reading test surely affected the overall performance of the students, particularly when clustered by school type. Figure 2.14 shows that the performance of both boys and girls in reading increased significantly when the students were allowed to choose the language of the reading test. Moreover, the gender gap decreased from 25 in 2011 to 21 in 2016 to 6 in 2021. Figure 2.15 shows a significant drop in the reading performance of students attending Independent schools when the language of the test was Maltese.

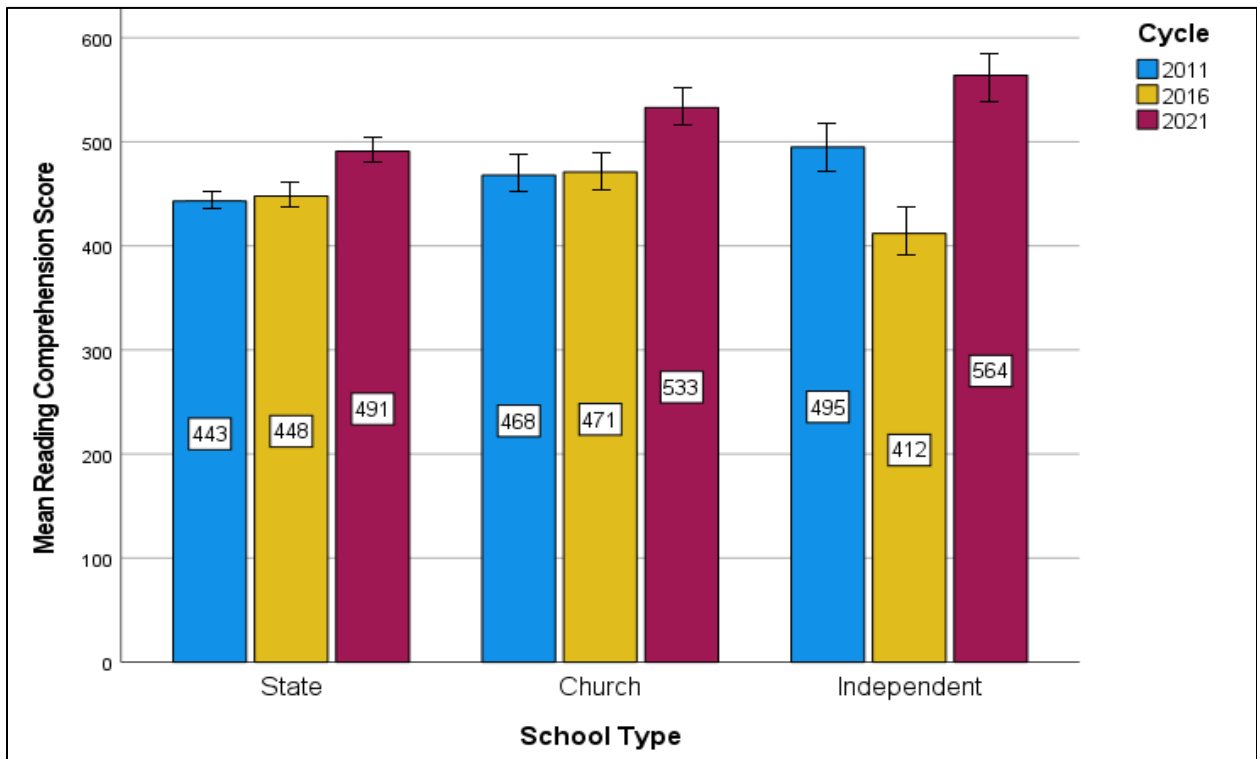
Changes in the mean reading scores from 2016 to 2021 varied significantly between countries. Malta registered the largest increment (63) in the mean reading score, followed by Egypt (48), Qatar (42), Oman (11) and Singapore (11). On the other hand, Azerbaijan (-32) registered the largest decrease in the mean reading score, followed by South Africa (-31), Slovenia (-23), Norway (-20), Netherlands (-18), Poland (-16), Russia (-14), Germany (-13), Sweden (-12) and Italy (-11). Northern Ireland, United

States, Lithuania, Georgia, Australia, New Zealand, Czech Republic, England, France, Hong Kong, Slovak Republic and Belgium (French) registered minor changes in their mean reading scores.

**Figure 2.14:** Reading performance of Maltese students, grouped by gender and cycle



**Figure 2.15:** Reading performance of Maltese students, grouped by school type and cycle





## 3

# Parents' Perspective of Home Support

## 3.1 Introduction

Much research has provided insight into the importance of home environments for reading literacy development. In order to better understand the effects of the home environment on literacy transmission, PIRLS collects data through both the student and parent questionnaire. Through these two questionnaires, information is gathered on the home environment for learning and home emphasis on literacy. Sections 3.2 and 3.3 investigate the home environment for by exploring the home socio-economic status and parents' reading enjoyment. Sections 3.4 and 3.5 investigate the home emphasis on literacy by examining home early literacy activities before primary school and readiness to carry out early literacy tasks when child begins primary school. Section 3.6 investigates parents' perception of their child's school. A scale score is generated for each of these home contexts. Moreover, this chapter investigates the relationship between Maltese students' performance on the PIRLS reading assessment and these home contexts and compares these relationships between State, Church and Independent schools.

## 3.2 Home Socioeconomic Status and Home Resource for Learning

Home resources for learning encompass important socioeconomic characteristics of the parents, such as their education level, together with home support for learning and emphasis on educational activities. In educational research, the most influential background factors on student achievement tend to be those that measure socioeconomic status of the parents or caregivers, often indicated through proxy variables such as parental level of education, occupational class as well as home resources, including books and children's books at home. The 'home resources for learning' scale expands the classic conception of socioeconomic status to include home resources that have the potential to facilitate student learning.

A scale score for Home Resources for Learning was generated by considering four components, which include highest education level and employment status of either parent, the number of books and number of children's books at home as suggested by parents. Tables 3.1 to 3.4 display the responses of the Maltese sample for each of the four items.

**Table 3.1:** Number of books at home as indicated by Maltese parents

About how many books are there in your home (exclude school books)?	Frequency	Percentage
0-10 books	262	9.1%
11-25 books	449	15.6%
26-100 books	1099	38.1%
101-200 books	528	18.3%
More than 200 books	544	18.9%

**Table 3.2:** Number of children's books at home as indicated by Maltese parents

About how many books are there in your home? (Exclude children's books)	Frequency	Percentage
0-10	119	4.2%
11-25	328	11.4%
26-50	861	30.0%
51-100	870	30.35%
More than 100	689	24.0%

**Table 3.3:** Employment status as indicated by Maltese parents/guardians

What kind of work do the child's parents/guardians do for their main job?	Frequency	Percentage
Professional	1588	56.4%
Small business owner	310	11.05%
Clerical	471	16.7%
Skilled worker	226	8.0%
General labourers	83	2.9%
Has never worked for pay	14	0.5%
Not applicable	124	4.4%

**Table 3.4:** Highest Parental Education Level as indicated by parents/guardians

Highest level of education completed by the child's parents/guardians	Frequency	Percentage
Tertiary or higher	1040	36.7%
Post-secondary, non-tertiary education	671	23.7%
Upper secondary education	419	14.8%
Lower secondary education	571	20.1%
Primary or no school	116	4.1%
Not applicable	20	0.7%

The home socio-economic status scale was generated according to the four indicators extracted from the parents' reports. Threshold scores divide the scale into three categories. Students with 'higher' socio-economic status had a score at or above 11.1 corresponding to their parents reporting they had more than 25 books and more than 25 children's books in their home, that at least one parent finished university, and that at least one parent had a professional occupation, on average. Students with 'lower' socio-economic status had a score at or below 8.5 corresponding to their parents reporting they had 25 or fewer books and 25 or fewer children's books in the home, that neither parent had gone beyond upper secondary education, and that neither parent was a small business owner or worked in a clerical or

professional occupation, on average. All other students with 'Middle' socio-economic status had scores between 8.5 and 11.1.

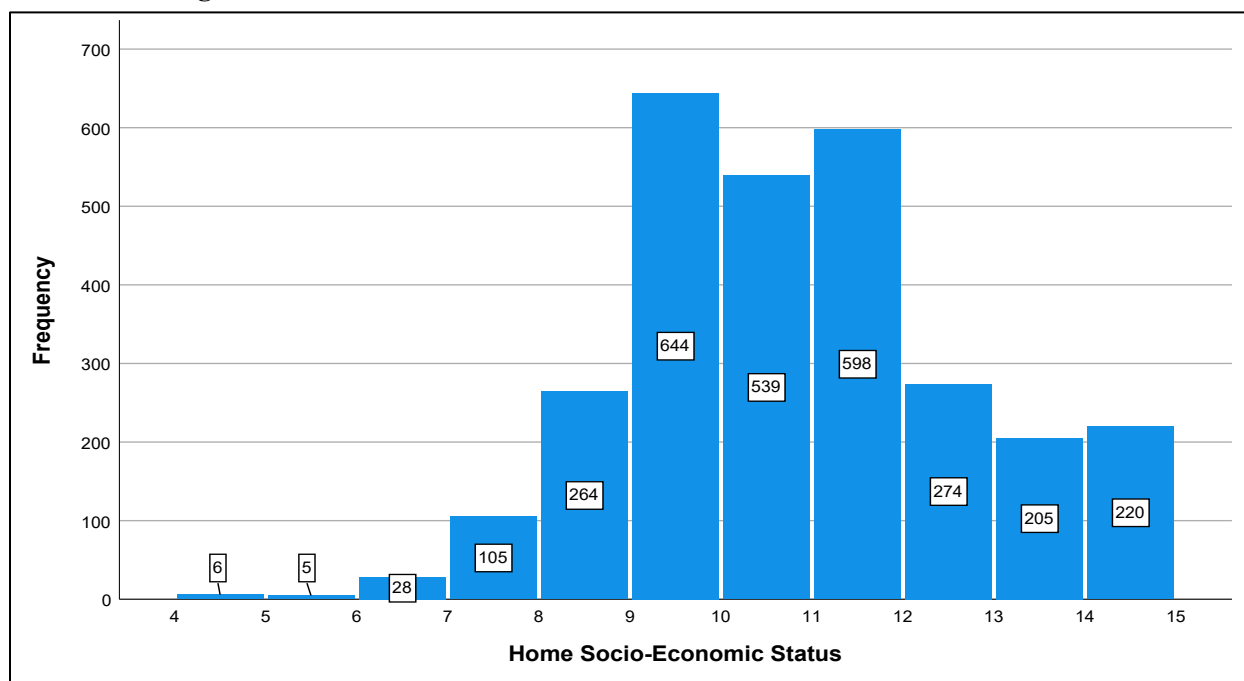
**Table 3.5:** Home socio-economic status clustered by country

Country	Higher SES		Middle SES		Lower SES		Mean scale score
	Perc.	Mean	Perc.	Mean	Perc.	Mean	
Albania	10%	574	35%	531	56%	492	8.4
Austria	41%	568	48%	517	11%	470	10.8
Azerbaijan	8%	486	48%	452	44%	419	8.9
Bahrain	19%	524	57%	464	24%	408	9.6
Belgium (Flemish)	38%	541	48%	504	13%	475	10.5
Belgium (French)	42%	531	45%	482	13%	451	10.7
Brazil	5%	546	31%	474	64%	390	8.1
Bulgaria	34%	589	40%	545	25%	469	9.9
Chinese Taipei	38%	569	48%	537	14%	502	10.5
Croatia	27%	590	56%	555	17%	515	10.1
Cyprus	44%	545	48%	497	8%	450	10.8
Czech Republic	41%	574	51%	531	8%	485	10.8
Denmark	54%	562	41%	520	5%	485	11.2
Egypt	4%	415	42%	398	54%	365	8.4
Finland	50%	571	45%	538	5%	490	11.1
France	37%	553	51%	505	12%	462	10.5
Georgia	34%	521	54%	489	12%	451	10.5
Germany	45%	569	45%	523	10%	478	10.9
Hong Kong SAR	36%	592	46%	572	18%	545	10.4
Hungary	42%	582	42%	537	17%	462	10.6
Iran	7%	493	37%	445	55%	381	8.4
Ireland	49%	608	42%	564	9%	520	11.0
Israel	46%	549	46%	493	9%	444	10.8
Italy	29%	568	50%	537	21%	504	10.1
Jordan	4%	457	48%	403	47%	352	8.6
Kazakhstan	11%	532	71%	505	18%	482	9.7
Kosovo	16%	472	48%	427	36%	392	9.2
Latvia	39%	553	51%	521	11%	487	10.6
Macao SAR	27%	557	52%	532	21%	518	10.0
Malta	45%	549	47%	509	8%	464	10.8
Montenegro	23%	521	56%	489	21%	448	9.9
Morocco	3%	426	22%	401	76%	364	7.1
Netherlands	49%	559	43%	530	7%	497	11.0
New Zealand	55%	566	38%	516	7%	482	11.3
North Macedonia	19%	491	48%	456	33%	399	9.4
Northern Ireland	47%	604	41%	560	11%	521	10.9
Norway	57%	561	37%	522	6%	492	11.3
Oman	11%	480	61%	441	28%	387	9.4
Poland	43%	576	49%	536	9%	505	10.8
Portugal	29%	555	47%	518	25%	488	9.9
Qatar	20%	539	65%	495	15%	434	10.0
Russian Federation	31%	596	58%	561	11%	521	10.4

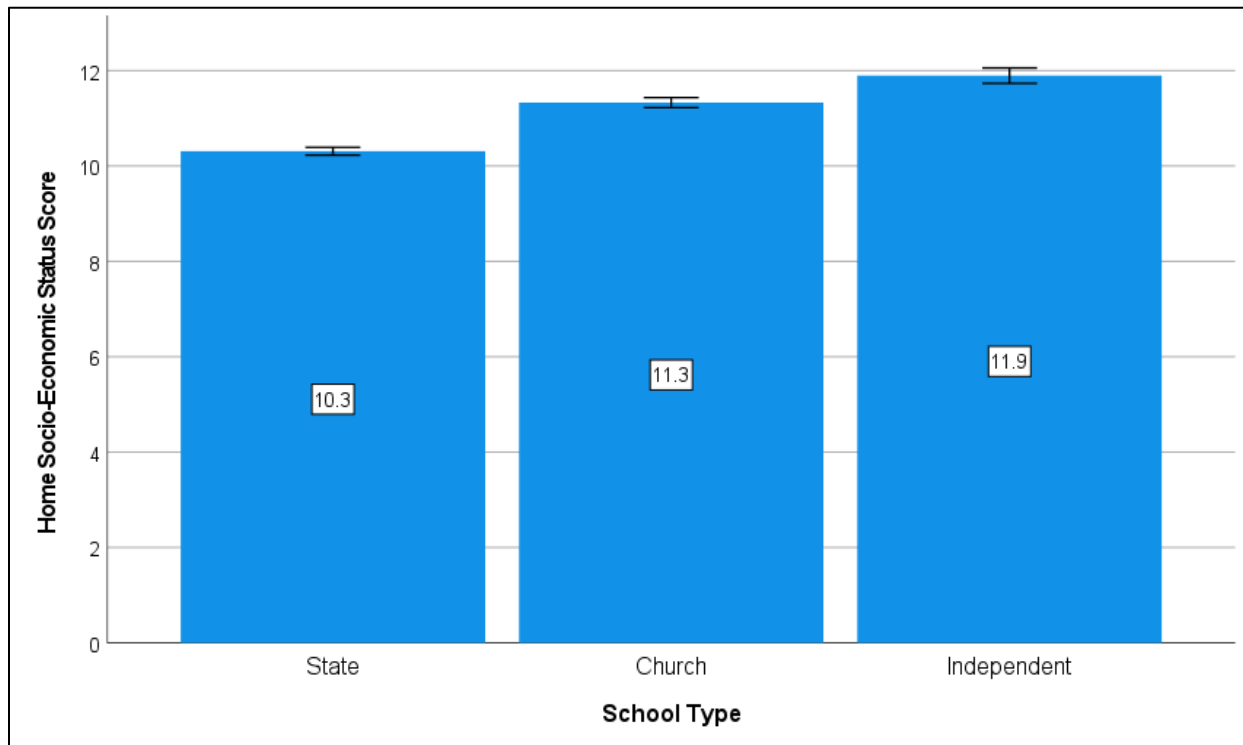
Saudi Arabia	8%	489	62%	460	30%	435	9.2
Serbia	29%	553	49%	512	22%	469	10.0
Singapore	45%	624	49%	572	6%	515	10.9
Slovak Republic	32%	566	48%	532	20%	474	10.1
Slovenia	43%	548	49%	510	8%	470	10.7
South Africa	5%	445	34%	334	61%	265	8.2
Spain	38%	550	46%	514	16%	488	10.4
Sweden	56%	580	38%	535	6%	490	11.3
Turkey	15%	564	46%	516	40%	454	9.1
UAE	23%	563	64%	496	13%	408	10.1
Uzbekistan	6%	474	55%	445	39%	421	8.9
Int. Average	30%	543	48%	501	22%	457	10.0

Table 3.5 shows the home socio-economic scale score of each country. The percentage of Maltese students with 'Higher' socio-economic status (45%) is significantly higher than the international average (30%), the percentage with 'Middle' socio-economic status (47%) is marginally lower than the international average (48%); whereas the percentage with 'Lower' socio-economic status (8%) is significantly lower than the international average (22%). Norway, Sweden and New Zealand have the highest mean scale score (11.3) indicating highest home socio-economic status and Morocco has the lowest mean scale score (7.1). Malta's mean scale score (10.8) is significantly higher than the corresponding PIRLS 2011 mean scale score (10.0). The most striking relationship that emerges is that reading attainment is significantly positively related to the home socio-economic status. Across all countries, the mean attainment reading scores of students with 'Higher', 'Middle' and 'Lower' socio-economic status are (543, 501 and 457) respectively and this pattern applies to all participating countries. The mean reading scores of Maltese students with 'Higher', 'Middle' and 'Lower' socio-economic status are (549, 509 and 464) respectively.

**Figure 3.1:** Score distribution of home socio-economic status of Maltese students



**Figure 3.2:** Mean home socio-economic status score clustered by school type



**Figure 3.3:** Relationship between home socio-economic status and reading attainment by school type

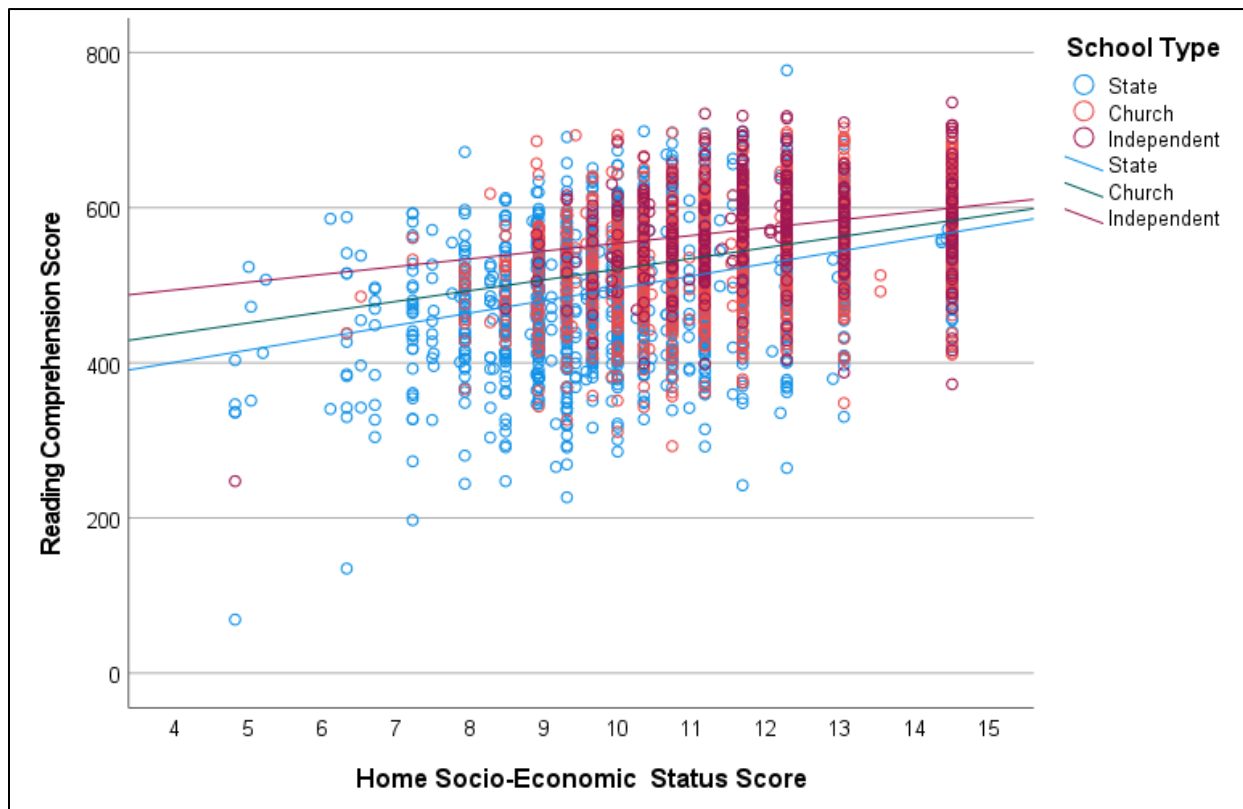


Figure 3.1 displays the score distribution of home socio-economic status of Maltese students, where 45% of Maltese students are in the upper SES category; 47% are in the middle SES category; and 8% are in the lower SES category. Figure 3.2 shows that the mean home socio-economic status scale score of Independent school students is significantly larger than the corresponding mean scale scores of Church and State school students. Figure 3.3 shows that reading attainment is positively and significantly related to home socio-economic status and this applies for all school types. This implies that students with higher home socio-economic status are more likely to perform well in reading comprehension than their counterparts with lower home socio-economic status.

An alternative scale score was generated for Home Resources for Learning using parents' responses. Threshold scores divide the scale into three categories. Students with 'many home resources' had a score at or above 11.7. Students with 'few home resources' had a score at or below 7.5. All other students with 'some home resources' had scores between 7.5 and 11.7.

**Figure 3.4:** Score distribution of home learning resources of Maltese students

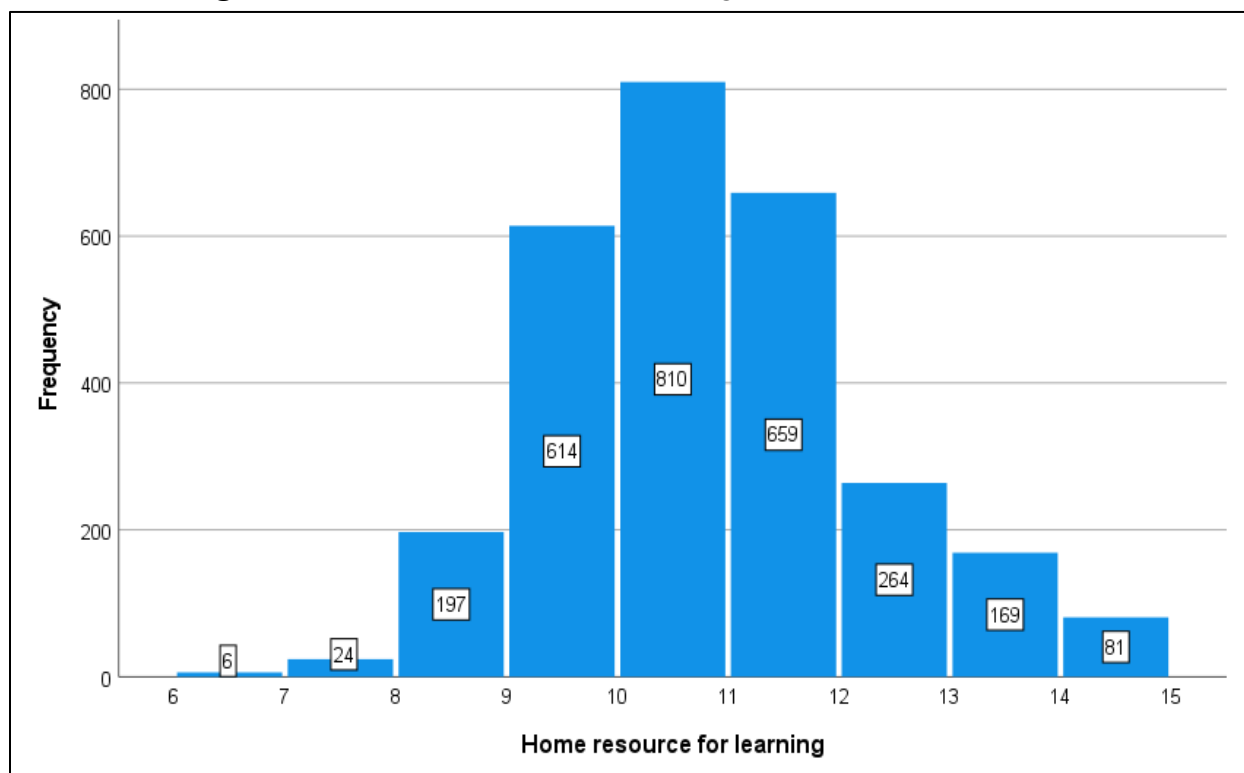


Figure 3.4 displays the score distribution of home resources for learning of Maltese students, where 29% of Maltese students have many home resources; 70% have some home resources; and 1% has few home resources. Figure 3.5 shows that the mean home resources for learning scale score of Independent school students is significantly larger than the mean scale score of Church school students, which in turn is significantly larger than the mean scale score of State school students. Figure 3.6 shows that reading attainment is positively and significantly related to home resources for learning and this applies for all school types. This implies that students with more home learning resources are more likely to perform well in reading comprehension than their counterparts with less home learning resources.

Figure 3.5: Mean home resources for learning, clustered by school type

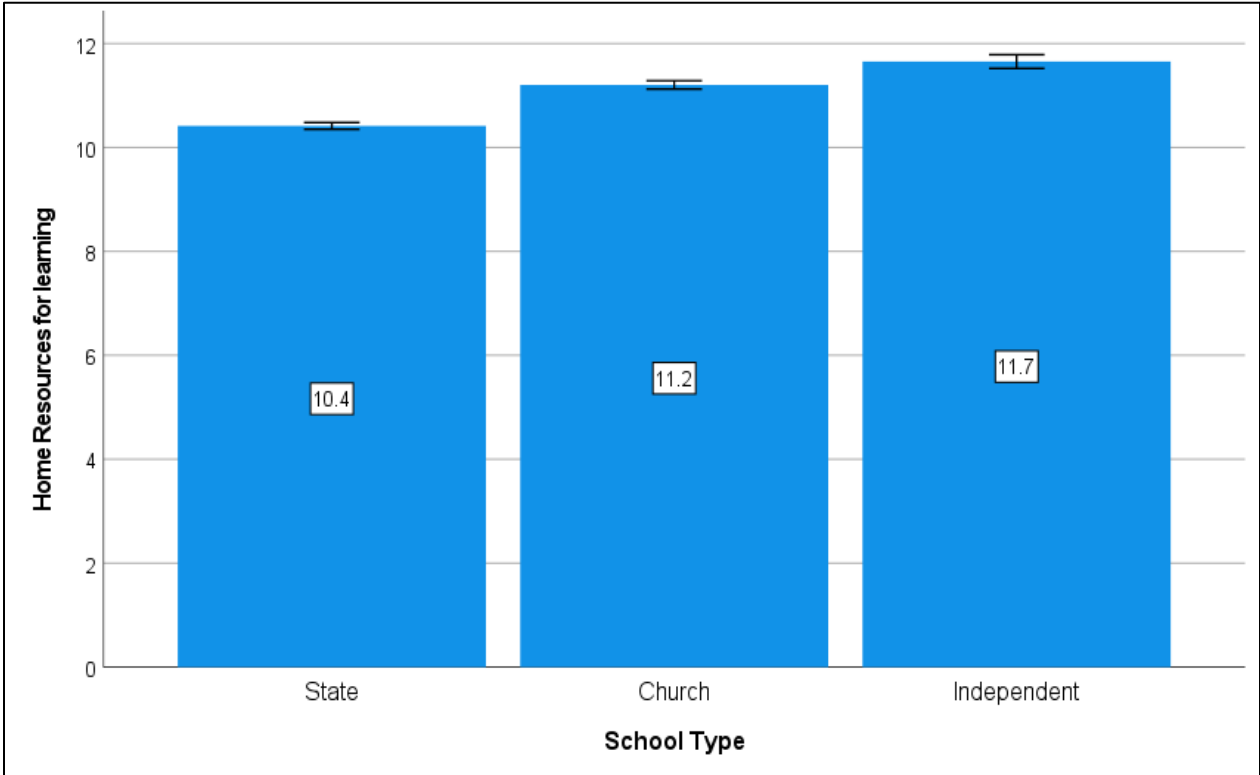
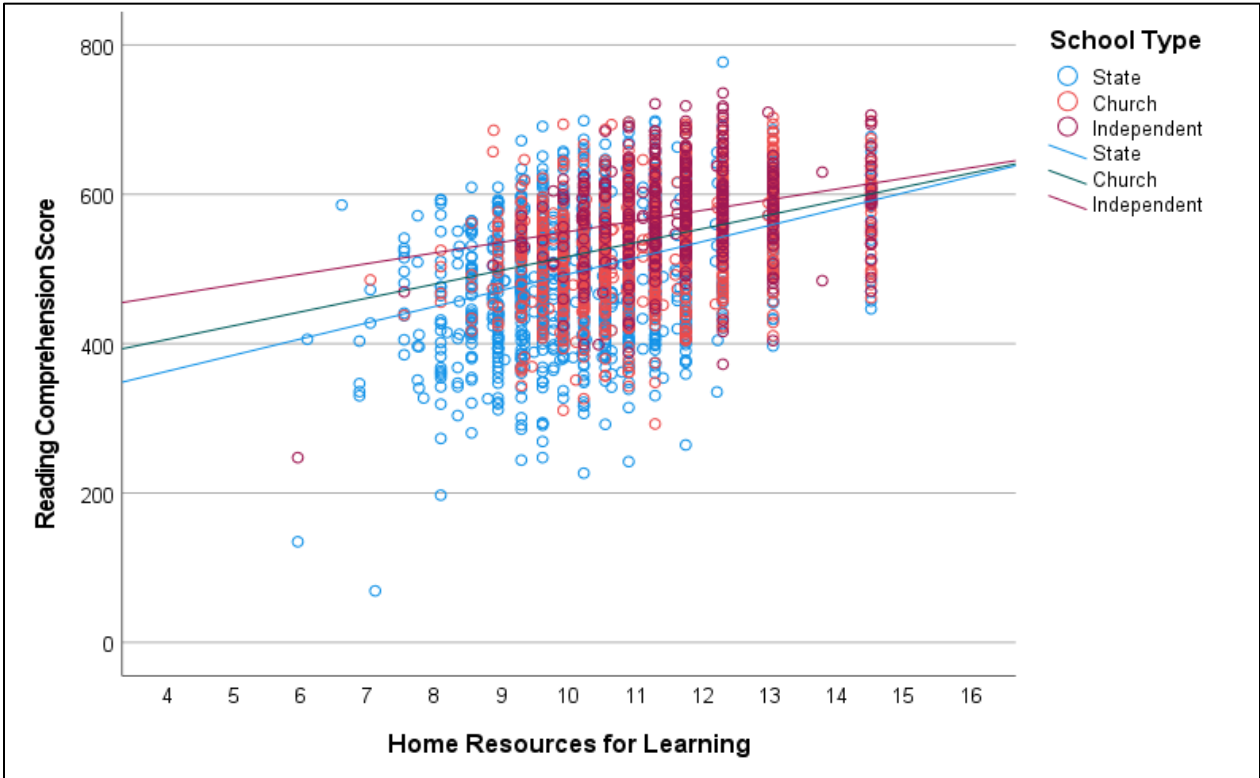


Figure 3.6: Relationship between home resources for learning and reading attainment, by school type



### 3.3 Parents' Reading Enjoyment

Research has found that parental reading behaviour is important in fostering student achievement in reading. Parents who like reading provide important role models for their children. Promoting reading in the home can foster children's motivation to read as well as their reading achievement. Parents own reading behaviours and beliefs about reading can shape their child's motivation to read. This reading socialisation can have long term effects on a student academic performance because young children can learn to appreciate and use printed material by seeing their parents reading.

**Table 3.6:** Statements assessing reading behaviour of Maltese parents

Please indicate how much you agree with the following statements about reading	Agree a lot	Agree a little	Disagree a little	Disagree a lot
I read only if I have to	12.2%	20.6%	20.0%	47.2%
I like talking about what I read with other people	40.9%	39.5%	13.6%	6.0%
I like to spend my spare time reading	34.6%	36.4%	19.8%	9.2%
I read only if I need information	16.2%	23.5%	24.7%	35.6%
Reading is an important activity in my home	54.2%	32.4%	11.1%	2.3%
I would like to have more time for reading	70.8%	20.5%	5.9%	2.8%
I enjoy reading	66.3%	24.7%	5.9%	3.1%
Reading is one of my favourite hobbies	41.7%	32.5%	16.8%	9.0%

**Table 3.7:** Statement assessing reading enjoyment of Maltese parents

When you are at home, how often do you read for your own enjoyment?	Frequency	Percentage
Every day or almost every day	1068	37.0%
Once or twice a week	1012	35.1%
Once or twice a month	410	14.2%
Never or almost never	396	13.7%

Parents' reading enjoyment scale score was generated according to parents' responses to eight statements about reading as well as how often they read for enjoyment. Threshold scores divide the scale into three categories. Parents enjoying reading 'Very much' had a score at or above 10.4 corresponding to parents 'agreeing a lot' with four of the eight statements and 'agreeing a little' with the other four, as well as reading for enjoyment 'every day or almost every day', on average. Parents who 'Do not like' reading had a score at or below 8.1 corresponding to parents 'disagreeing a little' with four of the eight statements and "agreeing a little" with the other four, as well as reading for enjoyment only 'once or twice a month', on average. All other parents who 'Somewhat like 'reading' had scores between 8.1 and 10.4.

Table 3.8 shows the parents' reading enjoyment scale score of each country. The percentage of Maltese parents who enjoy reading considerably (37%) is significantly larger than the international average (31%), while the percentages of Maltese parents who somewhat enjoy reading (47%) or who do not enjoy reading (15%) are marginally lower than the international averages (52% and 17% respectively). This table also shows that parents from Montenegro, Serbia and Azerbaijan (10.4) have the highest mean scale scores indicating higher aptitude and enjoyment to read. Egypt has the lowest mean scale score (8.9). Malta's mean scale score (10.8) is significantly higher than the international mean scale score (10.0). There is evidence of a positive relationship between overall reading

attainment and parents' reading enjoyment. Across all countries, the mean attainment reading scores of students whose parents enjoy reading 'very much', 'moderately' or 'dislike' reading are (526, 498 and 479) respectively and this pattern applies to all participating countries. The corresponding mean attainment reading scores of Maltese students are (539, 515 and 514) respectively.

**Table 3.8:** Parents' reading enjoyment, clustered by country

Country	Very much like reading		Somewhat like reading		Do not like reading		Mean scale score
	Perc.	Mean	Perc.	Mean	Perc.	Mean	
Albania	35%	535	56%	504	9%	493	10.0
Austria	36%	559	44%	524	20%	504	9.7
Azerbaijan	46%	451	46%	437	8%	409	10.4
Bahrain	27%	488	60%	458	14%	427	9.6
Belgium (Flemish)	27%	535	46%	513	27%	498	9.2
Belgium (French)	28%	529	48%	496	24%	470	9.3
Brazil	19%	456	51%	423	29%	401	9.0
Bulgaria	41%	570	41%	537	18%	481	9.8
Chinese Taipei	15%	564	62%	545	23%	528	9.1
Croatia	26%	575	56%	557	18%	535	9.5
Cyprus	37%	535	49%	505	14%	491	9.9
Czech Republic	33%	564	45%	543	22%	522	9.6
Denmark	39%	557	42%	539	19%	514	9.8
Egypt	14%	416	60%	379	27%	367	8.9
Finland	38%	573	44%	547	18%	522	9.9
France	22%	546	57%	514	21%	500	9.3
Georgia	44%	511	50%	486	6%	471	10.2
Germany	33%	562	47%	540	20%	504	9.6
Hong Kong SAR	14%	592	63%	573	24%	567	9.0
Hungary	30%	569	50%	541	20%	509	9.5
Iran	24%	449	62%	405	14%	385	9.5
Ireland	42%	599	42%	574	16%	555	10.0
Israel	32%	542	51%	503	17%	497	9.7
Italy	41%	553	45%	531	13%	520	10.1
Jordan	15%	416	62%	382	23%	358	9.1
Kazakhstan	17%	527	70%	501	13%	493	9.4
Kosovo	42%	441	53%	410	5%	385	10.3
Latvia	24%	553	54%	529	22%	507	9.3
Macao SAR	17%	551	61%	535	22%	526	9.1
Malta	37%	539	47%	515	15%	514	9.8
Montenegro	51%	505	43%	472	6%	455	10.5
Morocco	20%	410	53%	377	27%	338	9.1
Netherlands	39%	557	41%	541	21%	516	9.6
New Zealand	44%	563	40%	532	17%	508	10.0
North Macedonia	41%	467	49%	432	10%	406	10.1
Northern Ireland	39%	595	42%	569	19%	556	9.8
Norway	32%	560	48%	540	19%	520	9.6
Oman	22%	451	68%	428	10%	407	9.5

Poland	36%	566	47%	546	17%	529	9.8
Portugal	30%	543	52%	516	18%	501	9.6
Qatar	22%	512	63%	491	15%	485	9.4
Russian Federation	21%	587	58%	566	21%	550	9.2
Saudi Arabia	23%	469	62%	451	15%	448	9.5
Serbia	51%	532	39%	497	10%	492	10.4
Singapore	21%	622	57%	589	23%	571	9.2
Slovak Republic	32%	554	47%	528	21%	504	9.5
Slovenia	26%	544	57%	520	17%	501	9.4
South Africa	24%	342	62%	283	15%	270	9.6
Spain	40%	540	44%	517	16%	498	10.0
Sweden	34%	575	50%	551	16%	541	9.7
Turkey	31%	531	48%	497	21%	453	9.5
UAE	21%	534	65%	491	13%	488	9.5
Uzbekistan	39%	449	57%	431	4%	404	10.3
Int. Average	31%	526	52%	498	17%	479	10.0

Figure 3.7 displays the score distribution of parents' reading enjoyment, where 37% like reading very much; 47% somewhat like reading, and 16% do not like reading. Figure 3.8 shows that the mean reading enjoyment scale score of parents whose students attend Independent schools is significantly higher than the corresponding mean scale scores of parents whose students attend Church and State schools. Figure 3.9 shows that the relationship between reading attainment and parents' reading enjoyment is weakly positive, and this applies to all school types.

**Figure 3.7:** Score distribution of reading enjoyment of Maltese parents

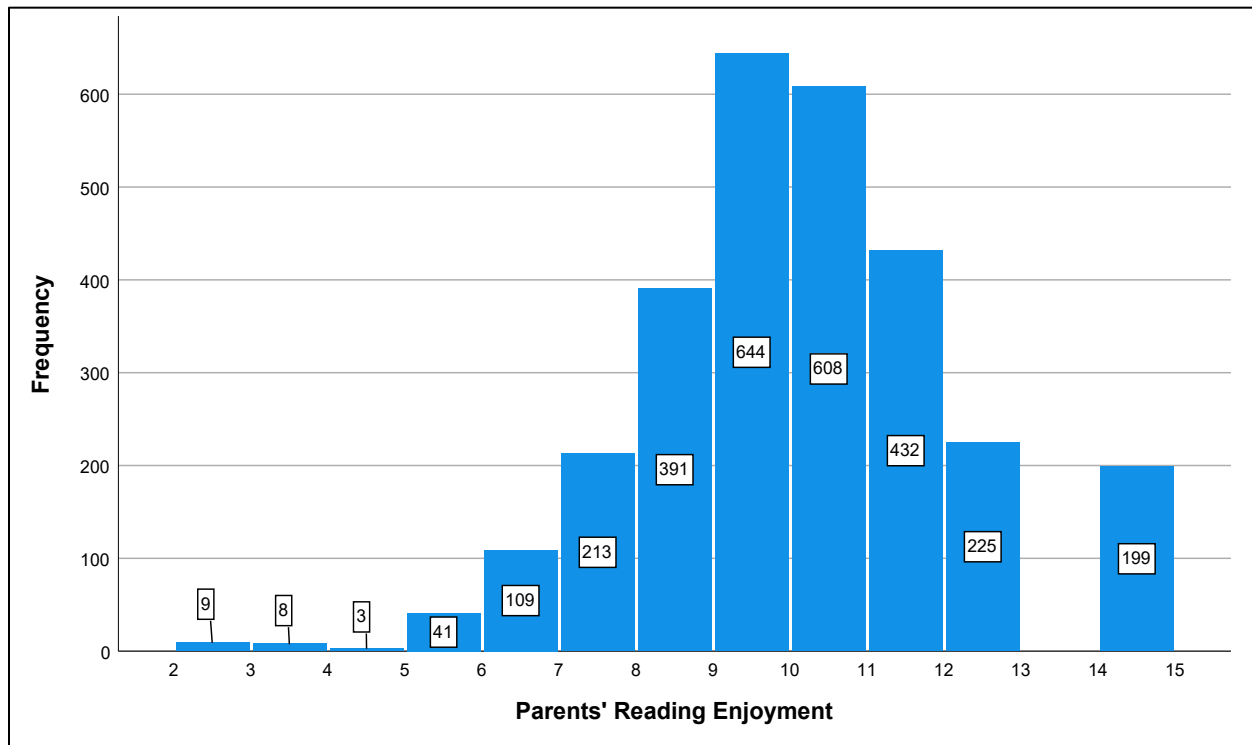


Figure 3.8: Mean parents' reading enjoyment score, clustered by school type

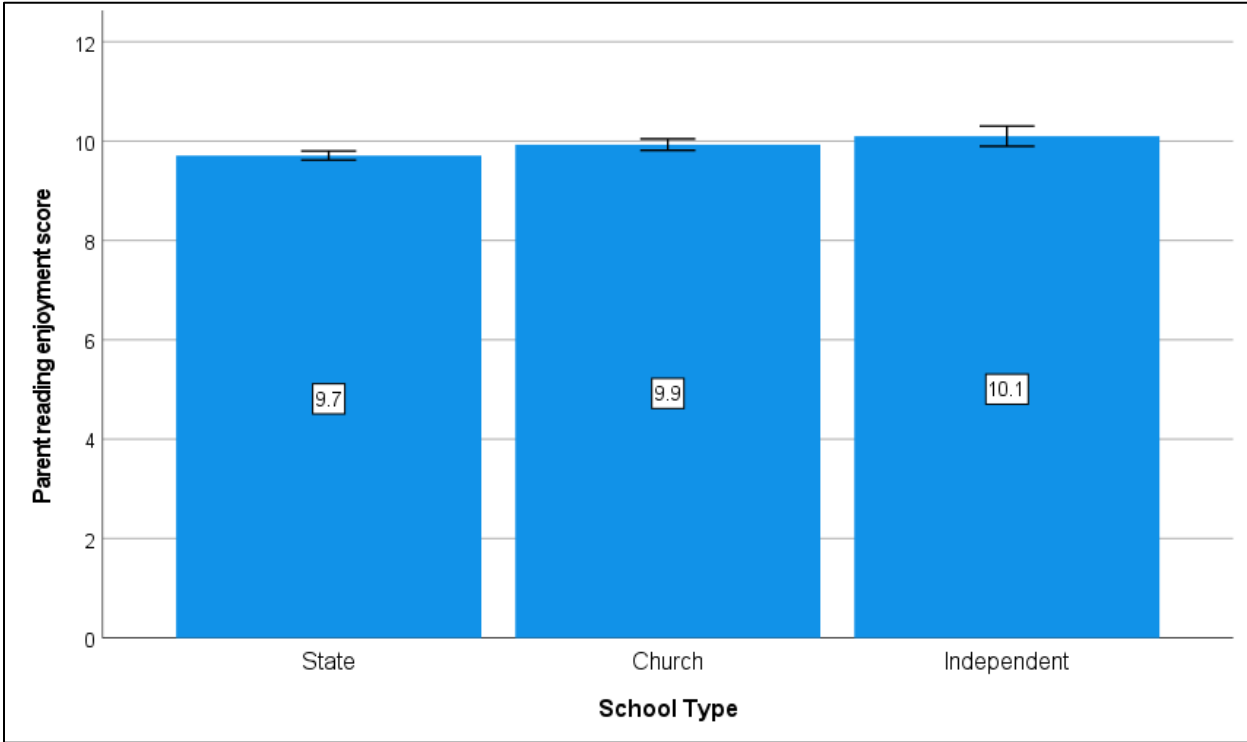


Figure 3.9: Relationship between parents' reading enjoyment and students' reading attainment by school type



### 3.4 Early Literacy Activities before entry in Primary Schools

Considerable research, including results from PIRLS, has documented the importance of early childhood literacy activities in fostering higher student achievement in reading. Early parental involvement in children’s literacy activities can impact early literacy development and can have long-lasting effects on children’s literacy as they age. Perhaps the most common and important early literacy activity involves adults and older children reading aloud with their young children. By reading aloud with children, they are exposed to oral language, which is important for literacy acquisition. Moreover, by reading with children, children are encouraged to engage with the text and pictures in books; they learn that printed text conveys meaning and that being able to read is valuable and worthwhile, and this experience can increase student motivation to read. As children develop their capacity for oral language, they are learning the rules of language use, and this can facilitate the development of literacy skills. PIRLS 2021 asks parents how often they engaged their child in early literacy activities, including reading books, telling stories, singing songs, playing with alphabet toys, talking about things they had done, talking about what they read, playing word games, writing letters or words, and reading aloud signs and labels.

A scale score for early literacy activities before primary schooling was generated by considering the parents’ responses to nine literacy activities, which included reading books, telling stories, sing songs, playing with alphabet toys, talking with their children on things that they have done and read, playing word games with children, helping children write letters or words, and reading aloud signs and label. Tables 3.9 displays the responses of Maltese parents about how frequently each literacy activity was used.

**Table 3.9:** Engagement of Maltese parents in literacy activities prior to Primary school

Before primary schooling, how often did you or someone else in your home do the following activities with him or her?	Often	Sometimes	Never or almost never
Read books	60.8%	37.5%	1.7%
Tell stories	60.5%	36.3%	3.2%
Sing songs	68.6%	26.5%	4.9%
Play with alphabet toys	65.3%	29.2%	5.5%
Talk about things you had done	69.1%	28.6%	2.4%
Talk about what you had read	40.5%	50.4%	9.1%
Play word games	50.9%	42.4%	6.7%
Write letters or words	55.5%	37.9%	6.6%
Read aloud signs and labels	48.5%	43.6%	8.0%

The Early literacy activities scale was generated from parents’ reports regarding the frequency they or someone at home engaged their children in the nine activities described above. Threshold scores divide the scale into three categories. Students who ‘often’ engaged in early literacy activities before primary school had a score at or above 10.7 corresponding to their parents reporting they ‘often’ did five of the nine activities and ‘sometimes’ did the other four, on average. Students who ‘never or almost never’ engaged in early literacy activities before primary school had a score below 6.2 corresponding to their parents reporting they ‘never or almost never’ did five of the nine activities and ‘sometimes’ did the other four, on average. All other students who ‘sometimes’ engaged in early literacy and activities before primary school scored between 6.2 and 10.7.

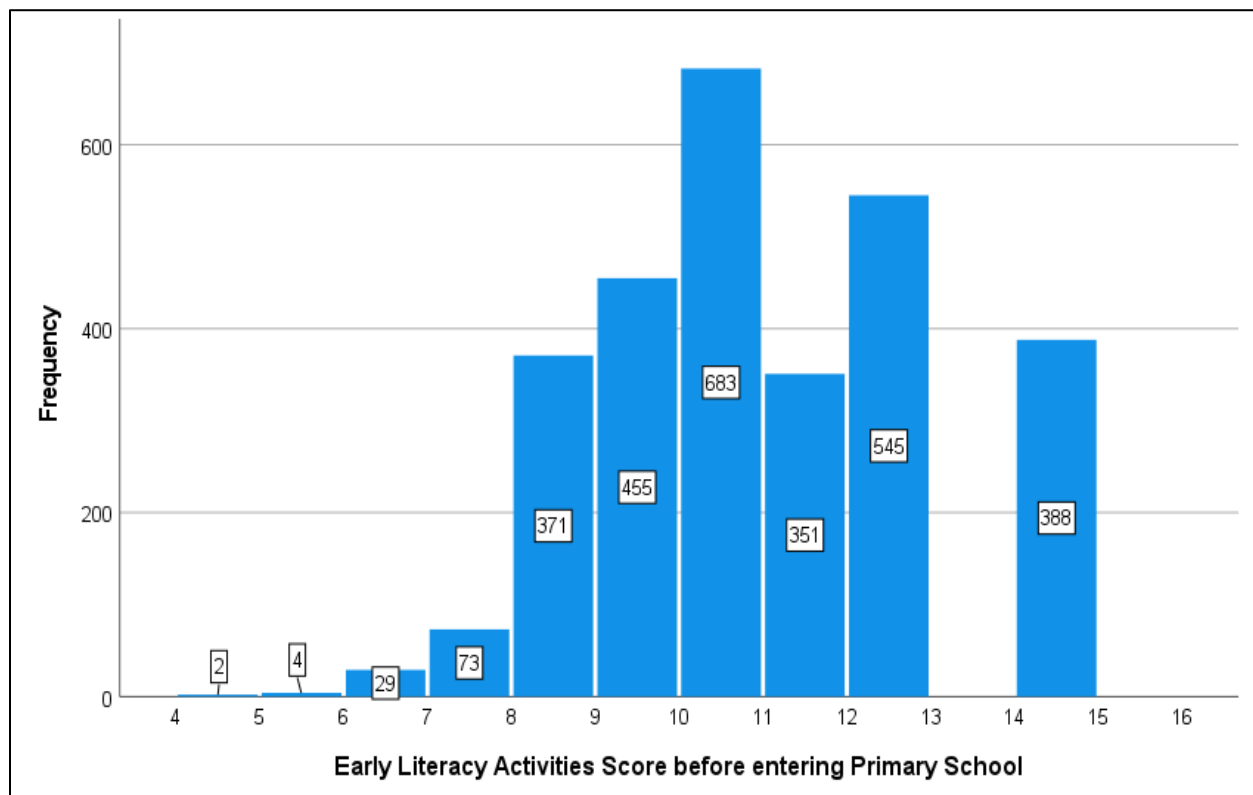
Table 3.10 shows the frequency of early literacy activities before primary schooling of each country. The percentage of Maltese parents who often engaged in literacy activities prior to Primary education (57%) is significantly larger than the international average (42%); the percentage of Maltese parents who sometimes or never engaged in literacy activities (42% and 0% respectively) are significantly lower than the international averages (55% and 3% respectively). Parents from Northern Ireland (11.5), Russia and Kazakhstan (11.3) have the highest mean scale scores indicating higher frequency of literacy activities prior to primary schooling. On the other hand, Morocco (8.2) and Macao (8.4) have the lowest mean scale scores. Malta's mean scale score (11.1) is significantly higher than the corresponding mean international scale score (10.2). There is evidence of positive relationship between overall reading attainment and participation in early literacy activities before primary schooling.

**Table 3.10:** Early Literacy Activities before primary schooling, clustered by country

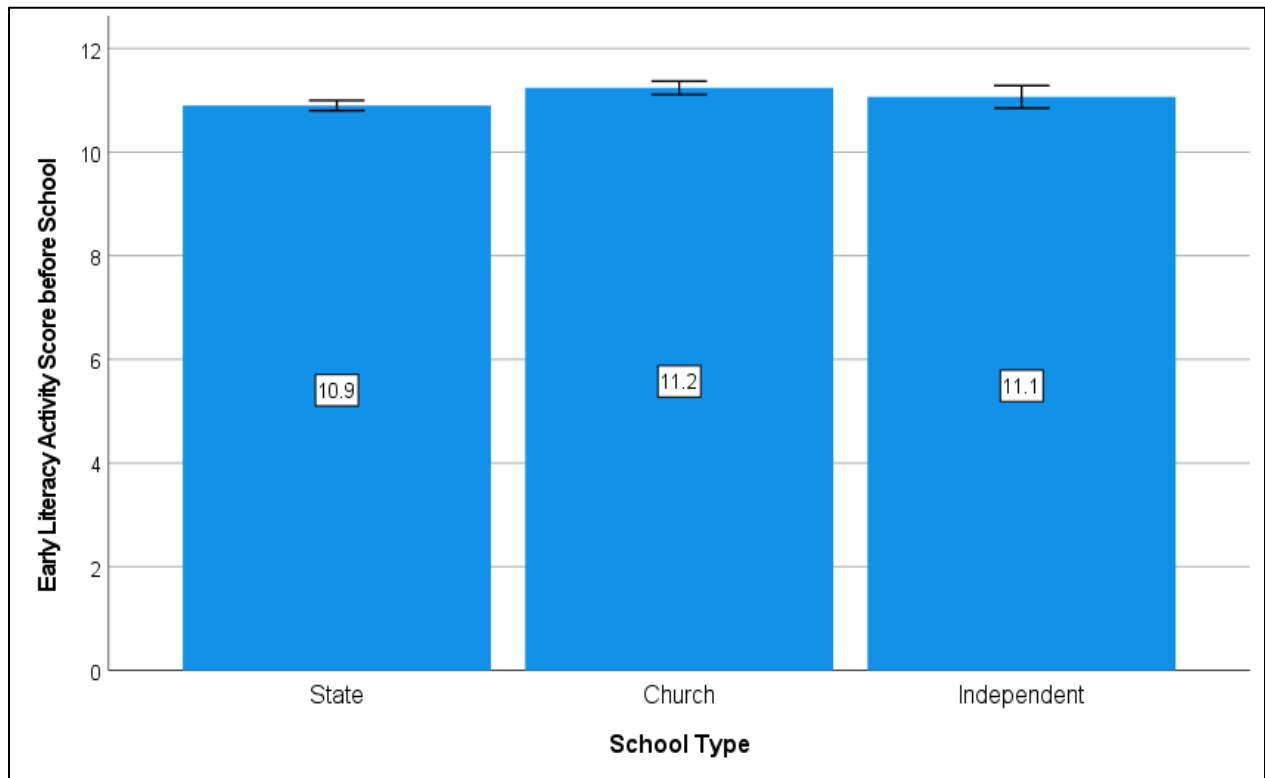
Country	Often		Sometimes		Never or almost never		Mean scale score
	Perc.	Mean	Perc.	Mean	Perc.	Mean	
Albania	57%	528	41%	498	2%	~	10.9
Austria	37%	547	61%	525	1%	~	10.1
Azerbaijan	36%	459	62%	431	2%	~	10.1
Bahrain	38%	489	60%	447	2%	~	10.1
Belgium (Flemish)	27%	525	71%	511	2%	~	9.6
Belgium (French)	30%	514	67%	494	2%	~	9.8
Brazil	30%	456	63%	417	7%	361	9.6
Bulgaria	41%	569	50%	531	9%	457	9.9
Chinese Taipei	18%	567	76%	541	6%	514	9.1
Croatia	58%	569	42%	543	0%	~	11.0
Cyprus	51%	527	48%	501	1%	~	10.7
Czech Republic	46%	550	54%	541	0%	~	10.5
Denmark	41%	551	58%	534	1%	~	10.3
Egypt	27%	400	67%	377	7%	348	9.4
Finland	33%	565	66%	547	1%	~	10.0
France	41%	531	57%	510	2%	~	10.2
Georgia	59%	501	40%	489	1%	~	11.0
Germany	40%	548	59%	535	1%	~	10.3
Hong Kong SAR	16%	591	81%	571	3%	560	9.2
Hungary	47%	551	52%	538	1%	~	10.5
Iran	24%	434	71%	412	5%	338	9.4
Ireland	56%	592	43%	569	1%	~	11.0
Israel	47%	527	52%	504	1%	~	10.6
Italy	52%	547	47%	531	1%	~	10.7
Jordan	29%	406	66%	375	5%	331	9.6
Kazakhstan	66%	510	34%	496	0%	~	11.3
Kosovo	55%	434	44%	410	1%	~	10.8
Latvia	48%	538	51%	522	1%	~	10.5
Macao SAR	10%	547	85%	535	5%	523	8.7
Malta	57%	532	42%	512	0%	~	11.1
Montenegro	55%	499	45%	474	0%	~	10.9
Morocco	13%	410	67%	377	19%	333	8.2

Netherlands	39%	549	60%	539	1%	~	10.2
New Zealand	59%	556	40%	523	1%	~	11.2
North Macedonia	55%	455	43%	435	2%	~	10.9
Northern Ireland	64%	584	35%	565	1%	~	11.5
Norway	39%	556	59%	535	1%	~	10.2
Oman	34%	456	65%	420	2%	~	10.0
Poland	53%	559	47%	541	0%	~	10.8
Portugal	37%	536	62%	514	1%	~	10.1
Qatar	33%	513	65%	488	2%	~	9.9
Russian Federation	64%	573	35%	558	1%	~	11.3
Saudi Arabia	39%	463	58%	448	3%	462	10.2
Serbia	54%	525	46%	503	0%	~	10.8
Singapore	35%	613	62%	582	4%	553	10.0
Slovak Republic	49%	541	49%	527	2%	~	10.5
Slovenia	49%	531	51%	516	1%	~	10.6
South Africa	38%	319	58%	284	4%	233	10.1
Spain	52%	535	47%	510	1%	~	10.7
Sweden	38%	569	61%	551	1%	~	10.2
Turkey	31%	532	57%	497	13%	422	9.3
UAE	42%	522	56%	483	2%	~	10.3
Uzbekistan	57%	445	43%	427	0%	~	10.8
Int. Average	42%	518	55%	495	3%	418	10.2

**Figure 3.10:** Score distribution of Maltese parents' engagement in early literacy activities



**Figure 3.11:** Mean parents' engagement in early literacy activities, clustered by school type



**Figure 3.12:** Relationship between parents' engagement in literacy activities and reading scores by school type

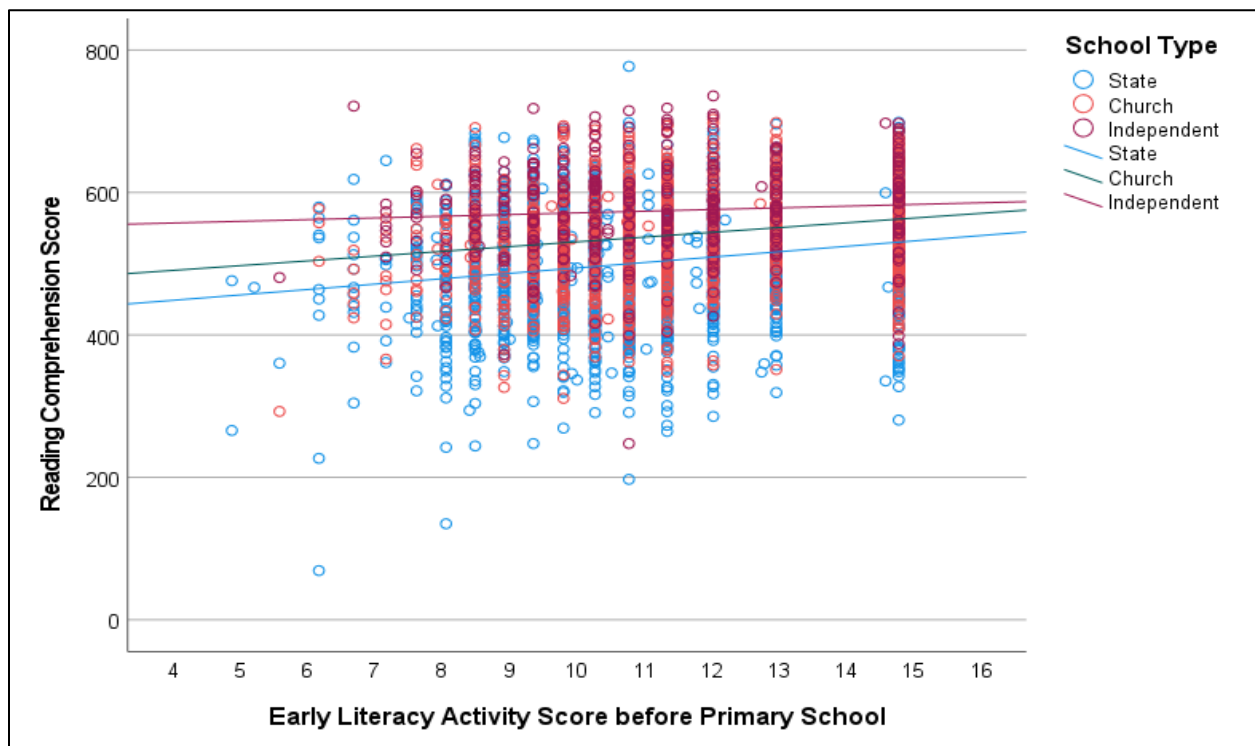


Table 3.10 shows that across all countries, the mean reading scores of students whose parents ‘Often’, ‘Sometimes’ and ‘Never’ engage in early literacy activities are (518, 495 and 418) respectively and this pattern applies to all participating countries. The corresponding mean attainment reading scores of Maltese students are (532 and 512) respectively. The mean reading score of Maltese students whose parents ‘Never’ engaged in early literacy activities could not be computed because of insufficient data.

Figure 3.10 displays the score distribution of parents’ engagement in literacy activities prior primary school, where 57% of Maltese children often engaged in early learning activities; 43% engaged occasionally; and 1% never or almost never engaged in these activities. Figure 3.11 shows that parents whose students attend Church and Independent schools engage significantly more in early literacy activities compared to parents whose students attend State schools. Figure 3.12 shows that reading attainment and parents’ engagement in early literacy activities is weekly positive and this applies to all school types.

### 3.5 Early literacy tasks before entry in Primary Schools

Quality preprimary education and early literacy activities at home help children develop foundational literacy skills that support higher achievement in later grades. Previous PIRLS studies have shown that parents who reported that their children could do basic literacy tasks when beginning primary school had higher reading achievement in fourth grade. PIRLS 2011 supported research findings indicating that preprimary schools can have a positive effect on academic achievement during primary school with longer duration of preprimary education associated with higher achievement. The ‘Ability to carry out literacy tasks when beginning primary school’ scale was generated in 2011, which asks parents to report on how well their child could do in six literacy tasks, such as recognising most of the letters of the alphabet and writing some words. Table 3.11 displays the responses of Maltese parents to how well their children performed in each task.

**Table 3.11:** Maltese students’ performance in literacy tasks at entry into Primary schools

How well could your child do the following when he/she began Year 1 of primary school?	Very well	Moderately well	Not very well	Not at all
Recognise most of the letters of the alphabet	56.7%	32.8%	9.2%	1.3%
Read some words	30.1%	41.4%	21.0%	7.5%
Read sentences	15.1%	33.8%	32.2%	18.9%
Read a story	9.5%	28.3%	35.7%	26.4%
Write letters of the alphabet	45.0%	39.1%	13.1%	2.8%
Write words other than his/her name	53.6%	31.3%	11.1%	4.0%

The ‘Ability to carry out literacy tasks when beginning primary school’ scale was generated using parents’ reports. Threshold values divide the scale into three categories. Students who could do the tasks ‘Very well’ had a score at or above 11.6 corresponding to their parents reporting the students could do three of the six tasks ‘very well’ and the other three ‘moderately well’, on average. Students who could do the tasks ‘Not well’ had a score at or below 9.5 corresponding to their parents reporting the students could do three of the six tasks ‘not very well’ and the other three ‘moderately well’, on average. All other students could do the early literacy tasks ‘Moderately well’ when they began primary school scored between 9.5 and 11.6.

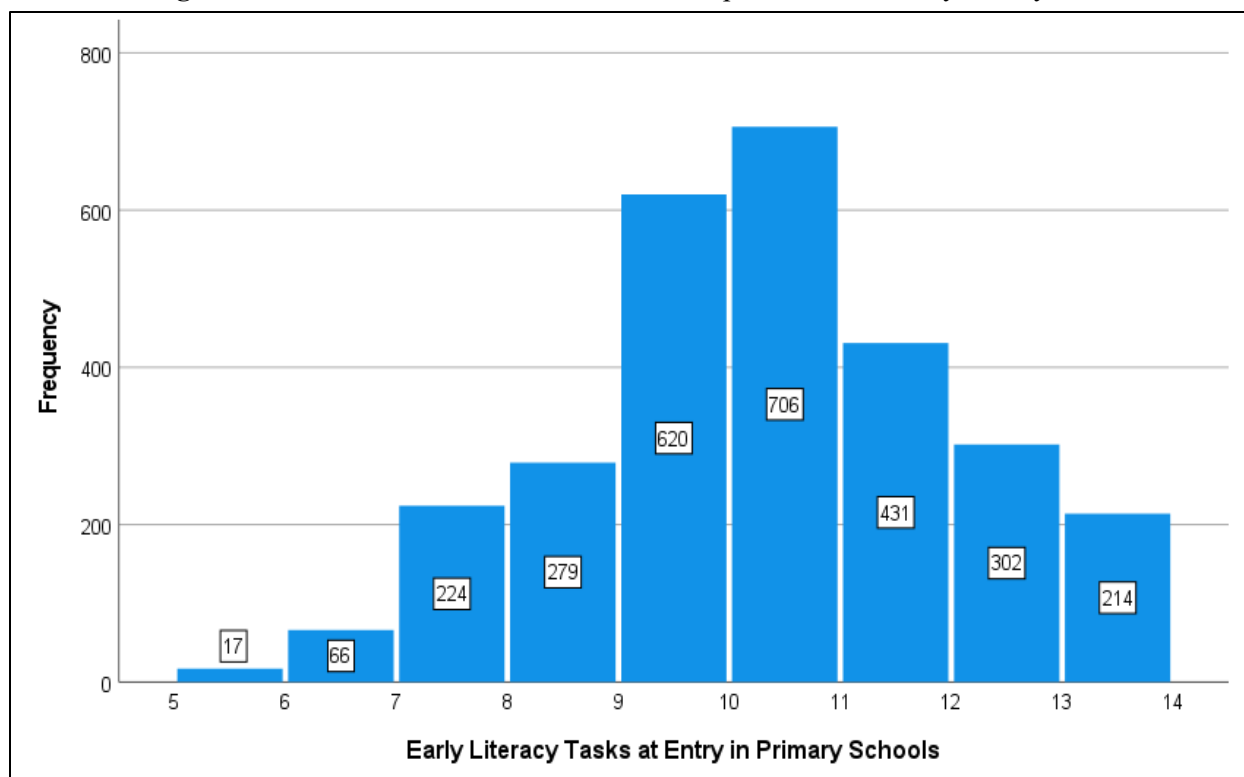
**Table 3.12:** Performance of literacy tasks at entry in Primary schools, clustered by country

Country	Very well		Moderately well		Not well		Mean scale score
	Perc.	Mean	Perc.	Mean	Perc.	Mean	
Albania	47%	532	33%	503	20%	491	11.1
Austria	13%	541	26%	529	62%	533	9.2
Azerbaijan	32%	466	36%	444	32%	418	10.4
Bahrain	54%	484	31%	452	15%	402	11.5
Belgium (Flemish)	10%	519	29%	512	61%	516	9.1
Belgium (French)	11%	516	34%	501	55%	494	9.4
Brazil	24%	475	34%	441	42%	385	10.0
Bulgaria	25%	574	33%	557	42%	509	9.9
Chinese Taipei	31%	570	50%	543	19%	508	10.9
Croatia	44%	580	37%	546	18%	528	11.1
Cyprus	32%	537	35%	511	33%	496	10.5
Czech Republic	19%	567	33%	540	48%	540	9.7
Denmark	28%	572	41%	541	31%	514	10.5
Egypt	38%	402	40%	374	22%	359	10.8
Finland	28%	587	29%	553	44%	530	10.2
France	22%	539	43%	520	35%	504	10.2
Georgia	26%	513	31%	499	43%	488	9.9
Germany	9%	556	24%	539	67%	538	9.0
Hong Kong SAR	46%	596	43%	565	11%	525	11.4
Hungary	9%	571	16%	544	75%	542	8.1
Iran	25%	435	35%	411	40%	403	10.0
Ireland	60%	602	30%	561	10%	521	11.9
Israel	35%	521	34%	513	30%	510	10.6
Italy	13%	559	35%	540	52%	534	9.5
Jordan	42%	417	36%	370	23%	337	11.0
Kazakhstan	49%	514	34%	501	17%	492	11.3
Kosovo	41%	434	39%	420	19%	406	11.1
Latvia	41%	562	39%	520	20%	483	11.1
Macao SAR	23%	565	53%	538	24%	503	10.5
Malta	27%	548	39%	526	34%	502	10.3
Montenegro	23%	512	38%	490	39%	473	10.0
Morocco	30%	421	35%	369	35%	338	10.1
Netherlands	12%	569	33%	547	54%	533	9.5
New Zealand	23%	561	34%	546	43%	529	10.0
North Macedonia	28%	453	38%	452	34%	434	10.3
Norway	12%	577	29%	553	59%	531	9.3
Oman	53%	457	34%	413	13%	370	11.5
Poland	47%	570	35%	541	17%	518	11.3
Portugal	14%	546	35%	524	51%	513	9.6
Qatar	50%	513	35%	489	15%	451	11.4
Russian Federation	28%	594	37%	569	35%	545	10.3
Saudi Arabia	48%	464	34%	449	18%	439	11.3
Serbia	35%	539	41%	508	24%	492	10.7

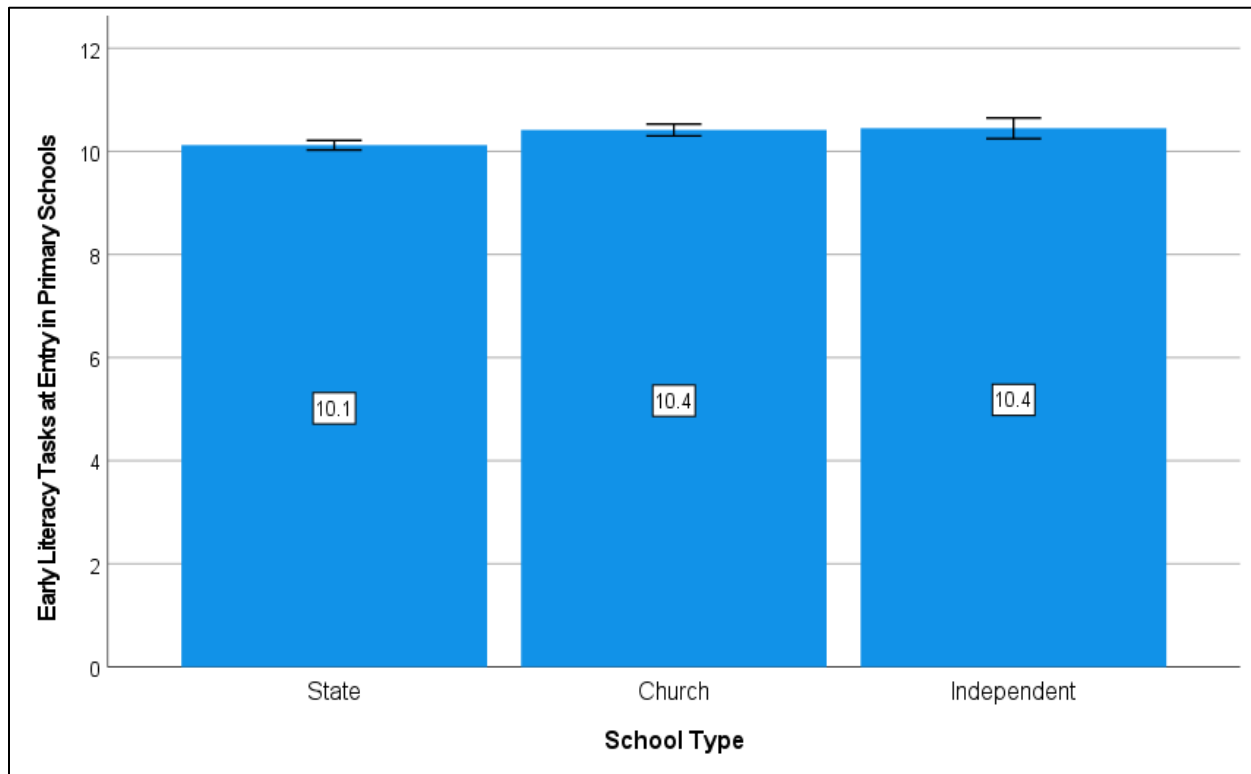
Singapore	52%	619	37%	575	11%	514	11.7
Slovak Republic	10%	549	19%	537	71%	529	8.7
Slovenia	14%	561	26%	531	61%	512	9.1
South Africa	33%	329	40%	304	27%	248	10.7
Spain	43%	547	37%	515	20%	485	11.1
Sweden	31%	588	38%	556	31%	529	10.6
Turkey	22%	521	24%	501	54%	488	9.2
UAE	56%	523	31%	482	13%	440	11.7
Uzbekistan	51%	451	35%	427	14%	415	11.4
Int. Average	31%	525	35%	500	34%	478	10.3

Figure 3.12 shows the performance of students in literacy tasks before primary schooling in each country. According to Maltese parents, the percentage of students who do very well, moderately well and not so well in literacy tasks are 27%, 39% and 34% respectively, which are somewhat similar to the international averages (31%, 35% and 34% respectively). Ireland (11.9), the United Arab Emirates (11.7), Bahrain (11.5), Oman (11.5), Uzbekistan (11.4) and Qatar (11.4) have the highest mean scale scores; while Hungary has the lowest mean scale score (8.1). Malta's mean scale score (10.3) is identical to the international mean scale score (10.3). There is evidence of a positive relationship between the overall reading score and how well students do literacy tasks before primary schooling. Across all countries, the mean reading scores of students who could literacy tasks 'very well', 'moderately well' and 'Not well' prior to entry in Primary schools are 525, 500 and 478 respectively and this pattern applies to all participating countries. The corresponding mean reading scores of Maltese students are 548, 526 and 502 respectively.

**Figure 3.13:** Score distribution of Maltese student performance in early literacy tasks



**Figure 3.14:** Mean student performance score in early literacy tasks, clustered by school type



**Figure 3.15:** Relationship between student performance in early literacy tasks and reading scores by school type

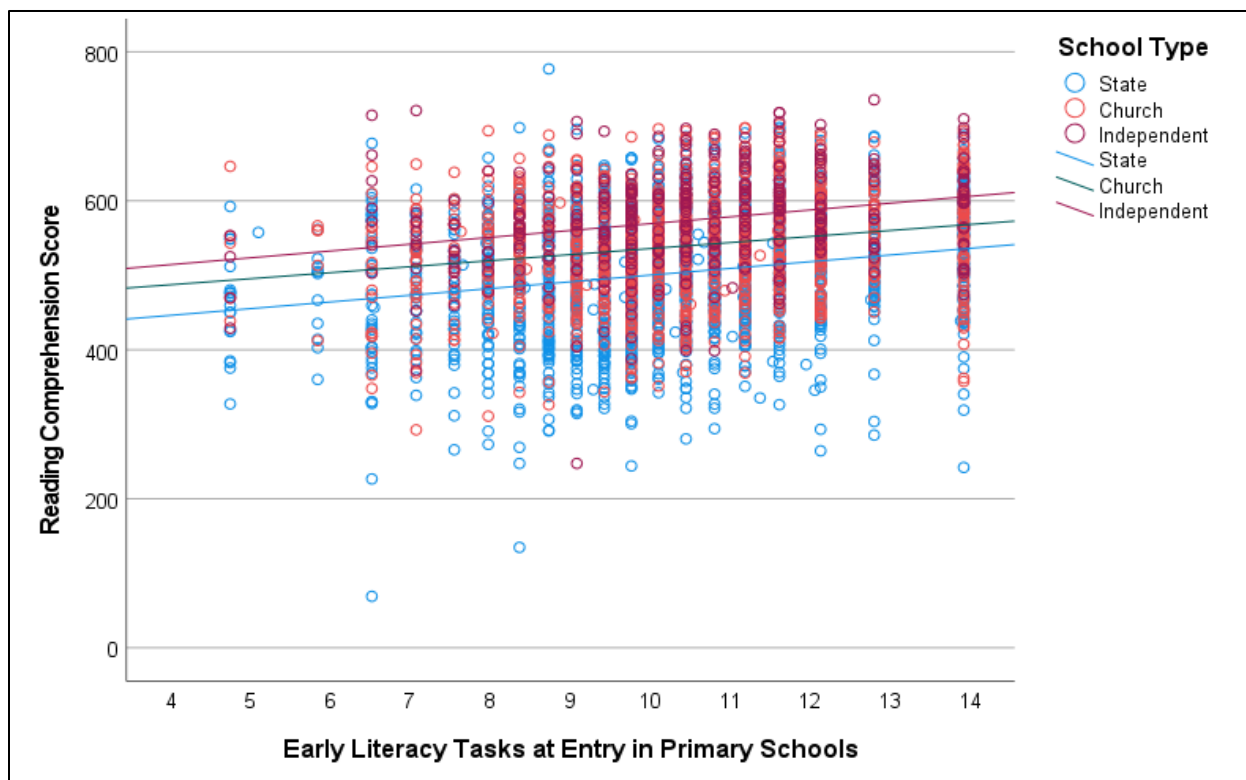


Figure 3.13 displays the score distribution of student' performance in literacy tasks prior to entry in Primary schools. According to parents, 25% of their children could do early literacy tasks very well; 40% moderately well; and 35% could not do these early literacy tasks. Figure 3.14 shows that students attending Independent and Church schools performed significantly better in early literacy tasks than students attending State schools. Figure 3.15 shows that reading attainment is positively and significantly related to students' performance in early literacy tasks and this applies to students attending all school types.

### 3.6 Parents' Perception of Child's School

The PIRLS 2021 Early Learning Survey asked the parents of Year 5 students about the extent to which they are satisfied that their child's school promotes academic standards and fosters a positive school climate. Table 3.13 shows the responses of Maltese parents of students attending Year 5 primary schools to eight items measured on a 4-point likert scale ranging from 'agree a lot' to 'disagree a lot'.

**Table 3.13:** Parents/guardian responses regarding their perception of their child's school

What do you think of your child's school?	Agree a lot	Agree a little	Disagree a little	Disagree a lot
My child's school does a good job including me in my child's education	85.7%	11.9%	2.0%	0.4%
My child's school provides a safe environment	91.9%	7.2%	0.9%	0.1%
My child's school cares about my child's progress in school	87.4%	10.9%	1.5%	0.1%
My child's school does a good job informing me of his/her progress	82.1%	15.0%	2.4%	0.6%
My child's school promotes high academic standards	77.3%	18.8%	3.2%	0.7%
My child's school does a good job in helping him/her become better in reading	79.1%	16.8%	3.0%	1.0%

A scale score for parents' perception of child's school was generated by considering the parents' responses to six statements about their views of the school attended by their child. Tables 3.13 displays the responses of Maltese parents for each statement provided. Threshold scores divide the scale into three categories. Parents who are 'Very satisfied' had a score at or above 9.4 corresponding to parents 'agreeing a lot' with three of the six statements and 'agreeing a little' with the other three, on average. Parents who are 'Less than satisfied' had a score at or below 6.4 corresponding to parents 'disagreeing a little' with three of the six statements and "agreeing a little" with the other three, on average. All other parents who are 'Somewhat satisfied' had scores between 6.4 and 9.4.

Malta's mean score (11.2) is significantly larger than the international average (10.2) indicating that the Maltese parents have a positive perception of their children's schools which is significantly higher than the international average. Figure 3.16 displays the score distribution of the parents' perception of their children's schools, where 89% of Maltese parents were very satisfied; 10% were somewhat satisfied; and 1% are less than satisfied. Figure 3.17 shows that parents of students attending Church schools have a more positive perception of their child's school, compared to parents of students attending State and Independent schools. Figure 3.18 shows that reading attainment is weakly related to parents' perception of their child's school, and this applies to students attending all school types.

Figure 3.16: Score distribution of Maltese parents' perception of their child's school

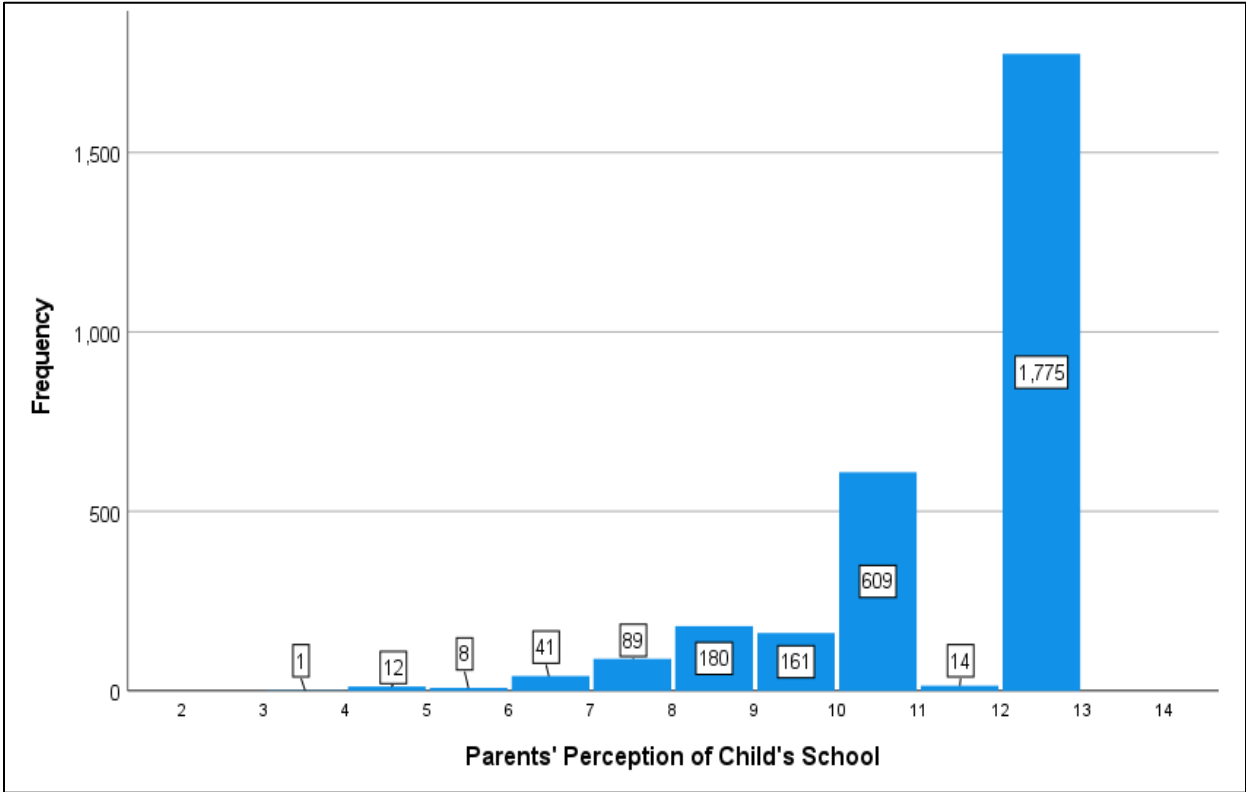
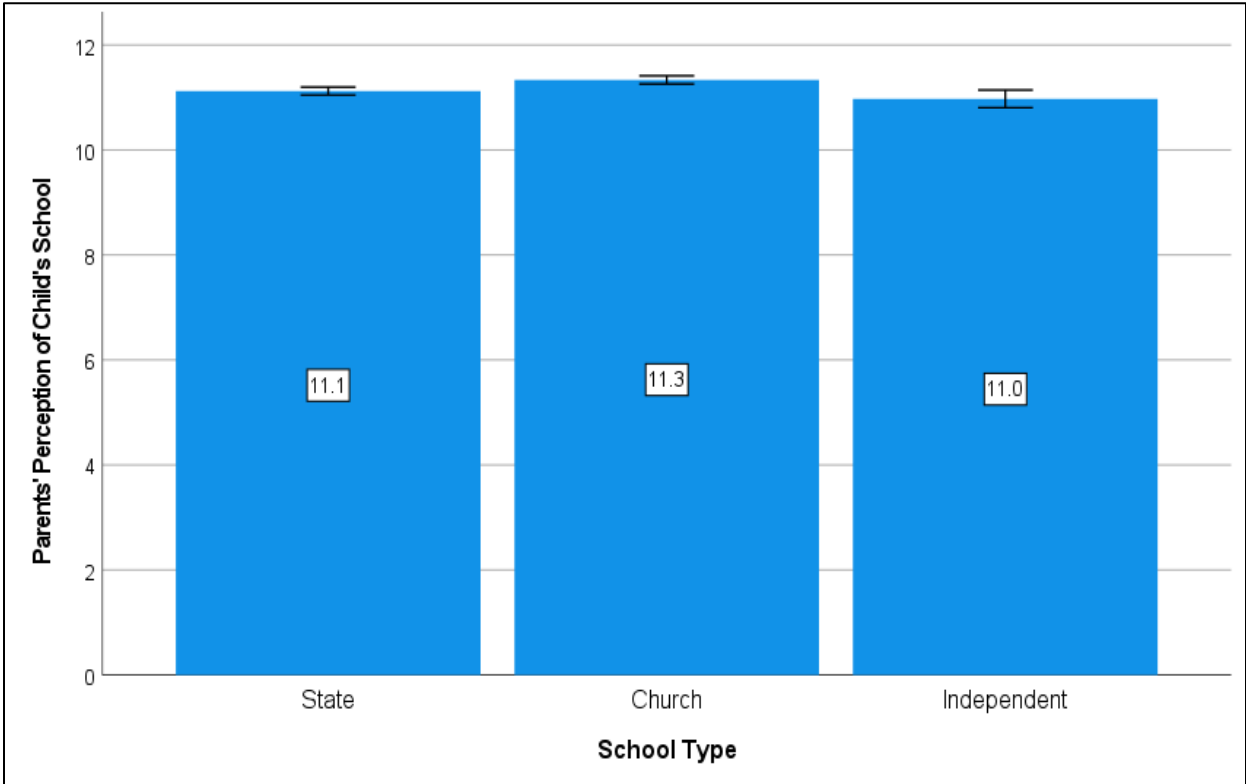
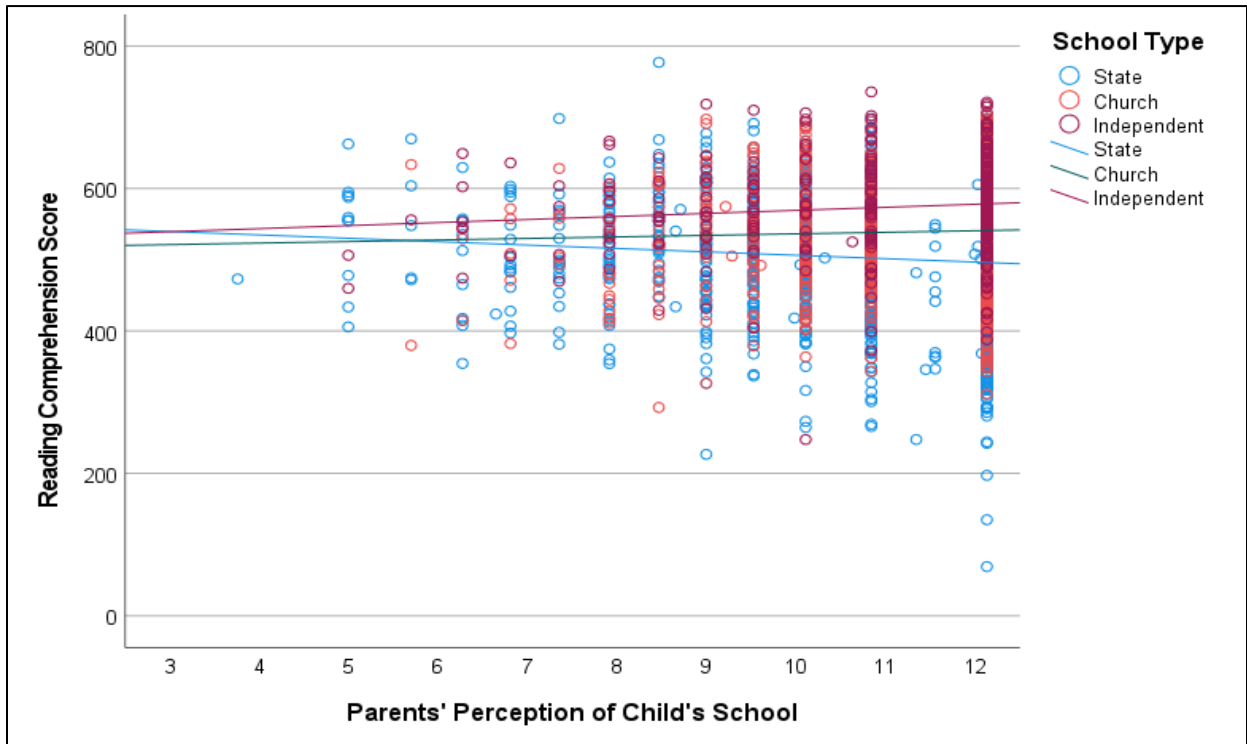


Figure 3.17: Mean parents' perception score of their child's school, clustered by school type



**Figure 3.18:** Relationship between parents' perception of child's school and reading scores by school type



## 4

# Heads' of School Perspective of School Climate

## 4.1 Introduction

The school's environment and organisation contexts can influence the ease and effectiveness of reaching curricular goals. An effective school is not simply a collection of discrete attributes, but rather a well-managed integrated system where each action or policy directly affects all other parts. This chapter provides information about the school environment supplied by the Heads of School. Section 4.2 discusses the school composition by students' socio-economic background; section 4.3 provides the proportion of students having literacy skills at entry in Primary schools; section 4.4 examines how instruction is affected by reading resource shortage at school; section 4.5 investigates school emphasis on academic success; and section 4.6 discusses school discipline and its effect on reading attainment.

## 4.2 School Composition by Student Economic Background

There has been a great emphasis on how the socioeconomic status of the collective students in the school can influence individual student achievement. The correlation between lower socio-economic status and lower achievement may be partially explained by other school factors. For example, in some countries, schools with students from lower socioeconomic status are taught by less qualified teachers. Another theory purports that some schools with many socio-economically disadvantaged students can be overwhelmed by a culture of futility, in which education and schooling are viewed as an antagonistic exercise having little or no future value. Using information provided by the heads of schools, the schools were clustered by students' socio-economic background. It will be assumed that schools where more than 25% of students come from economically affluent homes and less than 25% of students come from economically disadvantaged homes are labelled as 'More Affluent'. On the other hand, schools where more than 25% of pupils come from economically disadvantaged homes and less than 25% of students come from economically affluent homes are labelled as 'More Disadvantaged'. All other possible response combinations are 'Neither more affluent nor more disadvantaged'.

Table 4.1 shows that 45.4% of Maltese schools have more than 25% of students coming from economically affluent homes and 81.4% of Maltese schools have less than 25% of students coming from economically disadvantaged homes.

**Table 4.1:** Maltese School Composition by Student Economic Background

Approximately what percentage of students in your school has the following backgrounds?	0-10%	11-25%	26-50%	51-100%
Coming from economically disadvantaged homes	68.0%	13.4%	13.4%	5.2%
Coming from economically affluent homes	41.2%	13.4%	15.5%	29.9%

**Table 4.2:** School composition by socio-economic background

Country	More Affluent		Neither more affluent nor more disadvantaged		More Disadvantaged	
	Perc.	Mean	Perc.	Mean	Perc.	Mean
Albania	37%	527	30%	516	33%	495
Australia	40%	562	34%	540	26%	508
Austria	30%	543	43%	537	26%	504
Azerbaijan	13%	410	22%	450	64%	444
Bahrain	28%	494	27%	449	44%	439
Belgium (Flemish)	56%	518	29%	512	15%	479
Belgium (French)	47%	511	26%	484	28%	475
Brazil	32%	473	16%	438	51%	389
Bulgaria	37%	572	45%	550	18%	483
Chinese Taipei	25%	558	67%	540	8%	521
Croatia	61%	561	33%	555	6%	521
Cyprus	46%	529	41%	501	13%	471
Czech Republic	48%	550	43%	535	10%	506
Denmark	60%	550	32%	521	8%	525
Egypt	27%	410	25%	389	49%	359
England	32%	578	25%	565	43%	539
Finland	37%	561	52%	548	11%	518
France	46%	530	26%	516	27%	485
Georgia	32%	502	36%	490	32%	489
Germany	29%	543	36%	533	35%	501
Hong Kong SAR	28%	588	28%	572	45%	564
Hungary	53%	563	27%	528	20%	488
Iran	29%	458	21%	422	50%	382
Ireland	42%	595	33%	582	25%	550
Israel	44%	537	26%	520	30%	465
Italy	35%	548	44%	540	22%	517
Jordan	13%	423	33%	385	55%	367
Kazakhstan	78%	509	20%	481	2%	~
Kosovo	50%	423	34%	415	16%	412
Latvia	32%	531	61%	528	7%	509
Lithuania	78%	555	18%	532	4%	525
Macao SAR	39%	546	35%	526	26%	532
Malta	33%	538	61%	506	6%	458
Montenegro	47%	492	34%	486	19%	475
Morocco	7%	452	7%	402	86%	363

## Heads' of School Perspective of the School Climate

Netherlands	58%	536	24%	518	19%	506
New Zealand	38%	553	36%	528	27%	483
North Macedonia	64%	453	27%	436	9%	402
Northern Ireland	38%	587	31%	564	31%	543
Norway	49%	548	45%	533	6%	513
Oman	41%	435	36%	440	24%	403
Poland	29%	555	65%	547	7%	537
Portugal	32%	537	37%	517	32%	506
Qatar	66%	491	26%	483	8%	461
Russian Federation	77%	576	19%	538	5%	547
Saudi Arabia	57%	456	25%	441	18%	450
Serbia	37%	524	43%	513	20%	494
Singapore	57%	600	36%	573	7%	552
Slovak Republic	51%	524	36%	517	13%	508
Slovenia	11%	420	16%	331	73%	264
South Africa	61%	530	28%	515	11%	483
Spain	63%	560	26%	524	10%	514
Sweden	28%	530	21%	505	51%	474
Turkey	56%	519	27%	510	17%	479
UAE	32%	587	12%	555	56%	524
Uzbekistan	73%	442	24%	430	3%	426
Int. Average	43%	521	32%	502	25%	479

**Table 4.3:** Schools clustered by students' socio economic backgrounds and school type

School composition by socio-economic background		School Type		
		State	Church	Independent
More Affluent	Count	21	8	7
	Percentage	33.3%	32.0%	77.8%
Neither more Affluent nor more Disadvantaged	Count	32	17	2
	Percentage	50.8%	68.0%	22.2%
More Disadvantaged	Count	10	0	0
	Percentage	15.9%	0.0%	0.0%

Table 4.2 shows that 6% of Maltese students are categorised as coming from economically disadvantaged homes, which is significantly lower than the international average (25%); 33% of Maltese students are categorised as coming from economically affluent homes which is significantly lower than the international average (43%); while 61% of Maltese students are categorised as coming from homes that are neither affluent nor disadvantaged, which is significantly higher than the international average (32%). This table also shows that reading attainment is strongly related to student's economic background. Students who come from economically affluent backgrounds perform better in reading tasks than those who come from more disadvantaged backgrounds. The mean reading scores of students coming from 'More affluent', 'Neither more affluent nor disadvantaged' and 'More disadvantaged' economic backgrounds are 521, 502 and 479 respectively. This trend is also evident for

Maltese students where the mean reading scores of students coming from the three socio-economic backgrounds are 536, 504 and 456 respectively.

Table 4.3 shows a larger percentage of Independent schools (77.8%) where students come from homes which are economically affluent, compared to Church (32.0%) and State (33.3%) schools. On the other hand, there are larger percentages of Church (68.0%) and State (50.8%) schools where students come from homes that are neither affluent nor disadvantaged. The few schools where students come from homes which are economically disadvantaged are all State schools.

### 4.3 Schools where students had early literacy skills

Before children enter formal schooling, literacy activities at home can complement what the child will learn at school. Parental intervention in literacy activities has been found to be especially efficacious when educators train parents in specific activities that they can do with their child to promote literacy acquisition. Parents can assist their children in their literacy development by listening to them when they tell stories, sing songs, read books and talk about things they have done or read; or by observing them when they play with alphabet toys or play with word games. To investigate early literacy skills, heads of schools were asked to indicate the percentage of students in their schools having basic literacy skills when they begin Year 1 by choosing one of four percentage categories (less than 25%, 25-50%, 51-75%, more than 75%)

**Table 4.4:** Prevalence of students in schools with early literacy skills, clustered by country

Country	More than 75% enter with literacy skills		51%-75% enter with literacy skills		25%-50% enter with literacy skills		Less than 25% enter with literacy skills	
	Perc.	Mean	Perc.	Mean	Perc.	Mean	Perc.	Mean
Albania	28%	526	31%	520	22%	505	19%	497
Australia	20%	556	21%	542	19%	541	40%	532
Austria	2%	~	3%	550	16%	547	80%	525
Azerbaijan	16%	421	32%	437	36%	451	16%	439
Bahrain	49%	489	19%	444	20%	413	12%	434
Belgium (Flemish)	17%	518	17%	528	10%	506	56%	504
Belgium (French)	25%	505	27%	492	21%	490	27%	489
Brazil	16%	475	17%	442	32%	383	35%	415
Bulgaria	21%	564	23%	558	27%	542	29%	508
Chinese Taipei	46%	549	22%	542	20%	534	12%	545
Croatia	9%	561	23%	563	42%	555	26%	553
Cyprus	27%	535	6%	513	13%	522	54%	496
Czech Republic	2%	~	7%	544	24%	541	67%	538
Denmark	49%	542	19%	536	16%	533	15%	535
Egypt	24%	395	35%	370	21%	367	20%	385
England	42%	572	38%	553	11%	540	9%	542
Finland	25%	554	23%	551	36%	547	15%	544
France	30%	525	28%	520	16%	501	26%	508

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Georgia	20%	507	14%	492	22%	497	43%	489
Germany	4%	537	6%	536	13%	544	78%	518
Hong Kong SAR	44%	579	31%	572	18%	557	8%	577
Hungary	6%	538	4%	553	10%	549	80%	536
Iran	29%	425	16%	403	14%	401	42%	412
Ireland	73%	587	18%	554	4%	533	5%	564
Israel	15%	503	14%	529	27%	523	44%	500
Italy	16%	542	11%	538	22%	542	52%	534
Jordan	18%	410	22%	386	26%	382	34%	362
Kazakhstan	32%	513	27%	504	34%	494	8%	500
Kosovo	30%	417	21%	428	29%	430	20%	404
Latvia	31%	534	33%	532	26%	519	10%	515
Lithuania	25%	552	17%	549	30%	552	28%	543
Macao SAR	25%	537	22%	532	15%	525	38%	540
Malta	32%	530	17%	503	15%	507	36%	505
Montenegro	11%	481	1%	~	20%	470	67%	494
Morocco	8%	385	22%	399	35%	367	36%	362
Netherlands	22%	530	28%	525	17%	532	32%	520
North Macedonia	13%	440	8%	446	31%	449	48%	439
Norway	4%	538	6%	543	28%	543	62%	537
Oman	38%	444	21%	424	22%	420	19%	419
Poland	29%	552	19%	546	29%	552	23%	544
Portugal	14%	534	6%	522	21%	522	59%	515
Qatar	50%	505	22%	475	16%	456	11%	464
Russian Federation	11%	601	28%	574	32%	567	29%	548
Saudi Arabia	41%	448	22%	455	19%	455	19%	438
Serbia	9%	516	17%	517	26%	512	47%	512
Singapore	89%	590	6%	565	3%	541	2%	~
Slovak Republic	8%	544	10%	544	26%	537	56%	522
Slovenia	6%	531	6%	508	41%	521	47%	517
South Africa	14%	323	25%	273	29%	275	31%	284
Spain	51%	527	29%	519	9%	515	11%	500
Sweden	44%	554	23%	547	19%	543	14%	521
Turkey	16%	505	5%	497	6%	474	73%	496
UAE	54%	539	17%	501	10%	444	18%	458
United States	46%	574	25%	526	14%	527	15%	521
Uzbekistan	25%	453	20%	430	30%	432	25%	431
Int. Average	26%	511	19%	503	22%	495	33%	491

Table 4.4 shows that 32% of Maltese schools claim that more than 75% of their students enter primary schools with basic literacy skills, which is significantly higher than the international average (26%); 17% of Maltese schools claim that between 51% and 75% of their students have basic pre-primary literacy skills, which is similar to the international average (19%); and 51% of Maltese schools claim that less than half of their students have basic pre-primary literacy skills, which is smaller than the international average (55%).

Table 4.4 shows a weak positive relationship between reading attainment and the percentage of students within a school having early literacy skills. The mean reading scores of students attending schools having ‘more than 75%’, ‘51-75%’, ‘25-50%’ and ‘less than 25%’ of students with early literacy skills are 511, 503, 495 and 491 respectively. This weak positive relationship also applies to Malta where the mean reading scores of students attending schools having ‘more than 75%’, ‘51-75%’, ‘25-50%’ and ‘less than 25%’ of students with early literacy skills are 530, 502, 507 and 505 respectively.

**Table 4.5:** Percentage of schools having students with pre-primary literacy skills, grouped by school type

How many of the students in your school have basic literacy skills when they begin Year 1 of primary school?		School Type		
		State	Church	Independent
Less than 25%	Count	30	6	2
	Percentage	46.9%	24.0%	22.2%
25–50%	Count	13	2	2
	Percentage	20.3%	8.0%	22.2%
51–75%	Count	9	8	1
	Percentage	14.1%	32.0%	11.1%
More than 75%	Count	12	9	4
	Percentage	18.8%	36.0%	44.4%

Table 4.5 shows larger percentages of independent (44.4%) and church (36.0%) schools having more than 75% of their students with basic pre-primary literacy skills, compared to state schools (18.8%). Conversely there is a larger percentage of state schools (67.2%) having less than 50% of their students with basic pre-primary literacy skills, compared to church (32.0%) and independent (44.4%) schools.

#### 4.4 Effects of reading resource shortages on instruction

The extent and quality of school resources also are critical for quality instruction. These may include resources as basic as well-trained teachers or adequate classroom space and other school facilities. Results from PIRLS indicate that students in schools that are well resourced generally have higher achievement than those in schools where shortages of resources affect the capacity to implement the curriculum. Two types of resources (general and subject-specific) affect curriculum implementation.

General resources include teaching materials, supplies, school buildings and grounds, heating/cooling and lighting systems, technologically competent staff, technological and media resources to support teaching and learning, and internet connection. Subject-specific resources for reading include library resources and reading materials such as books and e-books, magazines and periodicals, and digital resources such as educational software/applications (apps) and subscriptions to educational websites. With the importance of online reading for informational purposes, student

access to computers, the internet, and support for their online educational research are increasingly important to expanding literacy competencies. Other subject-specific resources include teachers' specialization in reading and instructional material for reading.

A scale score for Reading Resource Shortages was generated by considering Heads' of school responses concerning thirteen school and classroom resources, that are displayed in Tables 4.6 and 4.7. Instruction is more affected by lack of resource shortages when the scale score decreases.

**Table 4.6:** General resources in Maltese school

How much is your school's capacity to provide instruction affected by a shortage/inadequacy of the following?	Not at all	A little	Some	A lot
Instructional materials	61.2%	12.2%	15.3%	11.2%
Supplies	68.4%	9.2%	13.3%	9.2%
School building and grounds	33.7%	33.7%	20.4%	12.2%
Heating/cooling and lighting systems	34.7%	33.7%	22.4%	9.2%
Instructional space	38.8%	26.5%	19.4%	15.3%
Technologically competent staff	22.4%	35.7%	30.6%	11.2%
Technology and media resources to support teaching	26.5%	36.7%	23.5%	13.3%
Technology and media resources to support learning	27.8%	37.1%	24.7%	10.3%
Internet connection	26.5%	28.6%	24.5%	20.4%

**Table 4.7:** Resources for reading instruction in Maltese schools

How much is your school's capacity to provide instruction affected by a shortage/inadequacy of reading resources?	Not at all	A little	Some	A lot
Teachers with a specialization in reading	23.5%	38.8%	27.6%	10.2%
Computer software/applications for reading instruction	26.5%	43.9%	23.5%	6.1%
Library resources	41.8%	26.5%	22.4%	9.2%
Instructional material for reading	45.9%	24.5%	18.4%	11.2%

Students were scored according to their heads' of schools responses. Students in schools where instruction was not affected by resource shortages had a score on the scale of at least 11.0, which corresponds to their heads of school reporting that shortages affected instruction 'not at all' for seven of the thirteen resources and 'a little' for the other six, on average. Students in schools where instruction was affected a lot had a score less than 7.0, which correspond to their heads of school reporting that shortages affected instruction 'a lot' for seven resources and 'some' for the other six, on average. All other students attended schools where instruction was somewhat affected by resource shortages.

Table 4.8 shows the reading resource shortage scale score of each country. The percentage of Maltese students 'Not Affected' (31%) by reading resource shortages is identical to the international average (31%), the percentage Maltese students who are 'Somewhat Affected' (60%) is comparable to the international average (61%); while the percentage of students who are 'Affected a lot' (9%) by reading resource shortages is similar to the international average (8%). Bulgaria (12.4), the Netherlands (11.7), Australia (11.5), Denmark (11.4), Poland (11.3), Norway (11.2), New Zealand (11.2), United States (11.2) and Sweden (11.2) have the largest mean scale scores indicating that

instruction is least affected by shortages in reading resources in these countries. Macao (7.6), Hong Kong (7.6). Turkey (7.8), North Macedonia (8.0), Jordan (8.2) and Kosovo (8.3) have the smallest mean scale scores. Malta's mean scale score (10.0) is equal to the internal average (10.0). It should be noted that Malta's mean scale score (10.0) in 2021 is larger than the mean scale score (9.7) in 2016, indicating that reading resource shortages have decreased in the last five years, according to Maltese heads of school.

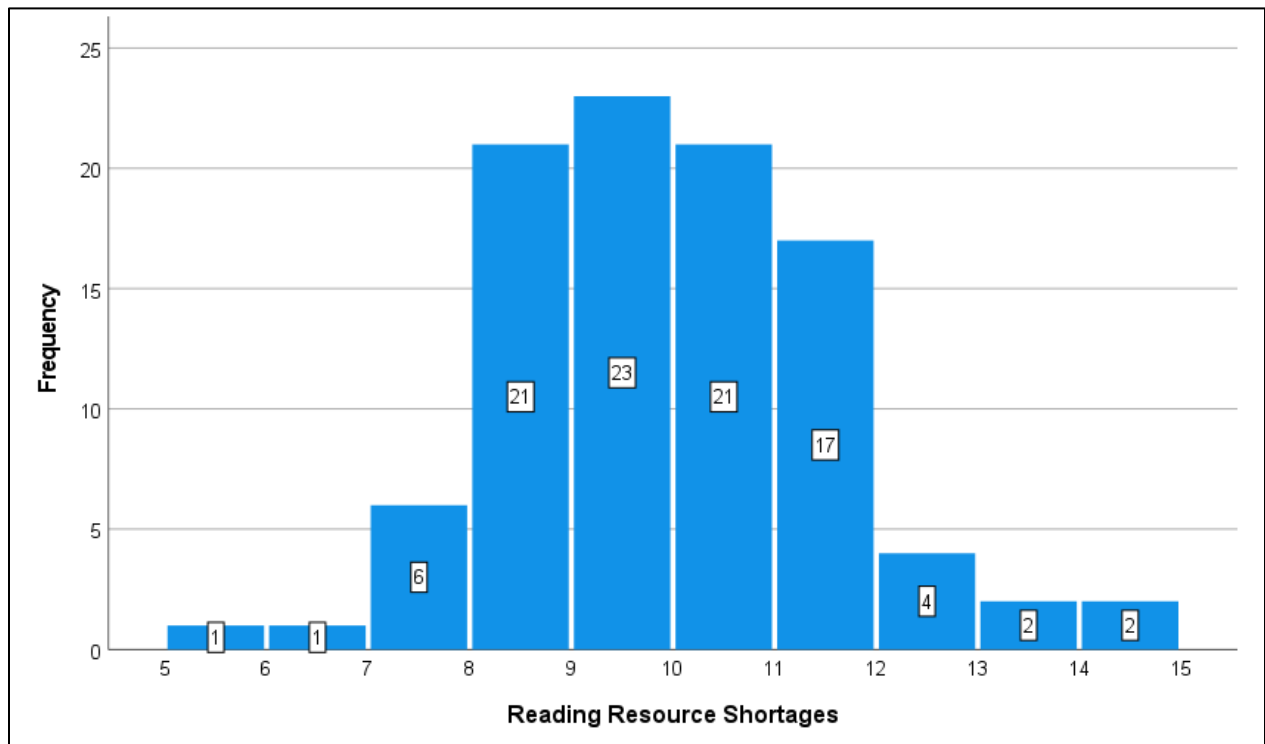
**Table 4.8:** Reading resource shortages affecting instruction, clustered by country

Country	Not Affected		Somewhat Affected		Affected a Lot		Mean scale score
	Perc.	Mean	Perc.	Mean	Perc.	Mean	
Albania	13%	535	66%	507	21%	519	8.8
Australia	65%	545	33%	532	1%	~	11.5
Austria	36%	535	64%	527	0%	~	10.7
Azerbaijan	13%	436	66%	439	20%	445	8.6
Bahrain	39%	477	41%	443	21%	456	9.8
Belgium (Flemish)	25%	516	75%	508	0%	~	10.4
Belgium (French)	11%	500	89%	494	0%	~	9.7
Brazil	26%	481	73%	398	1%	~	10.1
Bulgaria	83%	544	15%	516	2%	~	12.4
Chinese Taipei	11%	549	74%	544	15%	541	8.6
Croatia	42%	559	58%	556	0%	~	10.6
Cyprus	41%	519	57%	504	2%	~	10.7
Czech Republic	51%	542	49%	537	0%	~	11.1
Denmark	55%	538	43%	540	2%	~	11.4
Egypt	11%	407	81%	375	7%	375	9.2
England	42%	563	58%	556	1%	~	10.8
Finland	50%	559	49%	539	1%	~	11.2
France	19%	527	79%	513	2%	~	10.0
Georgia	35%	500	62%	492	3%	482	10.6
Germany	21%	535	79%	520	0%	~	10.3
Hong Kong SAR	2%	~	66%	573	31%	572	7.6
Hungary	36%	539	63%	538	1%	~	10.6
Iran	14%	432	73%	406	13%	431	9.1
Ireland	27%	586	72%	574	1%	~	10.2
Israel	33%	526	58%	510	9%	462	10.0
Italy	11%	546	89%	536	0%	~	9.7
Jordan	2%	~	80%	375	18%	403	8.2
Kazakhstan	42%	506	41%	500	17%	505	10.1
Kosovo	5%	424	74%	420	21%	422	8.3
Latvia	24%	526	75%	528	1%	~	10.3
Lithuania	41%	549	59%	549	1%	~	10.6
Macao SAR	8%	546	55%	534	37%	536	7.6
Malta	31%	525	60%	507	9%	503	10.0
Montenegro	21%	484	77%	488	2%	~	9.7
Morocco	2%	~	91%	367	7%	449	8.8

## Heads' of School Perspective of the School Climate

Netherlands	73%	525	27%	529	1%	~	11.7
New Zealand	52%	532	45%	511	2%	~	11.2
North Macedonia	0%		84%	443	16%	440	8.0
Northern Ireland	18%	558	81%	568	1%	~	10.0
Norway	54%	540	46%	537	0%	~	11.3
Oman	22%	437	59%	423	19%	439	9.2
Poland	57%	553	42%	544	1%	~	11.3
Portugal	17%	534	83%	517	0%	~	10.1
Qatar	53%	496	25%	474	22%	474	10.5
Russian Federation	34%	582	59%	560	7%	554	10.2
Saudi Arabia	13%	458	69%	444	18%	462	8.6
Serbia	30%	524	70%	509	1%	~	10.3
Singapore	56%	586	31%	589	13%	589	10.9
Slovak Republic	35%	540	65%	524	1%	~	10.5
Slovenia	34%	517	66%	520	0%	~	10.8
South Africa	8%	444	89%	272	3%	295	9.2
Spain	38%	531	61%	515	2%	~	10.6
Sweden	55%	547	43%	545	2%	~	11.2
Turkey	7%	513	59%	495	34%	496	7.8
UAE	53%	530	35%	473	12%	506	10.8
United States	53%	558	46%	534	2%	~	11.2
Uzbekistan	30%	441	49%	433	21%	439	9.5
Int. Average	31%	519	61%	498	8%	472	10.0

**Figure 4.1:** Score distribution of reading resource shortages affecting instruction



Across all countries, the mean reading scores of students when instruction is ‘Not Affected’, ‘Somewhat Affected’ and ‘Affected a lot’ by reading resource shortages are 519, 498 and 472 respectively; and this trend also apply to Malta. The mean reading scores of Maltese students when instruction is ‘Not Affected’, ‘Somewhat Affected’ and ‘Affected a lot’ by reading resource shortages are 525, 507 and 503 respectively.

**Figure 4.2:** Reading resource shortage affecting instruction, clustered by school type

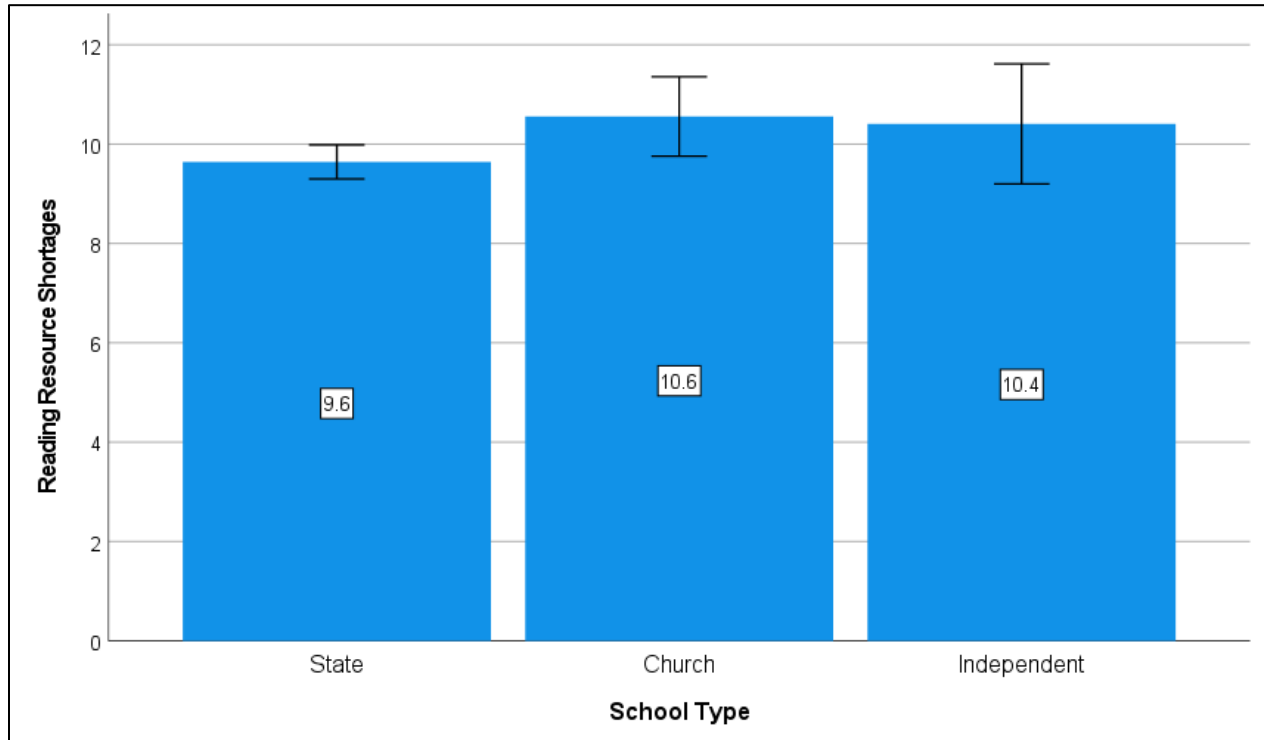


Figure 4.1 displays the score distribution of reading resource shortages in Maltese schools, where 26% of heads of schools claimed that their school is not affected by shortages of resource; 68% are somewhat affected; and 6% are affected considerably by these shortages. Figure 4.2 shows that in State schools, instruction is affected more by shortages in reading resources than in Church and Independent schools.

## 4.5 Heads' of School Perspective on emphasis on academic success

The School Emphasis on Academic Success scale was administered to heads of school of Year 5 students to collect information about the school's expectations toward academic achievement. A scale score for School Emphasis on Academic Success was generated by considering these twelve aspects. Table 4.9 displays the responses of Maltese heads of school regarding the emphasis the school provides to academic success. Students in schools where their head reported a Very High Emphasis on academic success had a score on the scale of at least 12.9 which corresponds to their head of school

characterising six of the twelve aspects as 'Very high' and the other six as 'High', on average. Students in schools with a medium emphasis on academic success had a score no higher than 9.1, which corresponds to their head of schools characterising six of the twelve aspects as 'medium' and the other six as 'high', on average. All other students attended schools with a High Emphasis on academic success.

**Table 4.9:** Responses of Maltese heads of school regarding school emphasis on academic success

How would you characterise each of the following within your school?	Very high	High	Medium	Low	Very low
Teachers' understanding of the school's curriculum goals	23.5%	62.2%	13.3%	1.0%	0.0%
Teachers' expectations for student achievement	17.3%	59.2%	22.4%	1.0%	0.0%
Teachers' degree of success in implementing the school's curriculum	17.3%	58.2%	24.5%	0.0%	0.0%
Teachers' ability to inspire students	18.4%	63.3%	18.4%	0.0%	0.0%
Collaboration between school leadership and teachers to plan instruction	32.7%	52.0%	15.3%	0.0%	0.0%
Parental involvement in school activities	15.3%	36.7%	39.8%	7.1%	1.0%
Parental commitment to ensure that students are ready to learn	7.1%	55.1%	28.6%	6.1%	3.1%
Parental expectations for student achievement	15.3%	58.2%	18.4%	6.1%	2.0%
Parental support for student achievement	5.2%	48.5%	39.2%	4.1%	3.1%
Students' desire to do well in school	11.2%	53.1%	31.6%	3.1%	1.0%
Students' ability to reach school's academic goals	5.1%	42.9%	45.9%	5.1%	1.0%
Students' respect for classmates who excel academically	11.2%	53.1%	34.7%	1.0%	0.0%

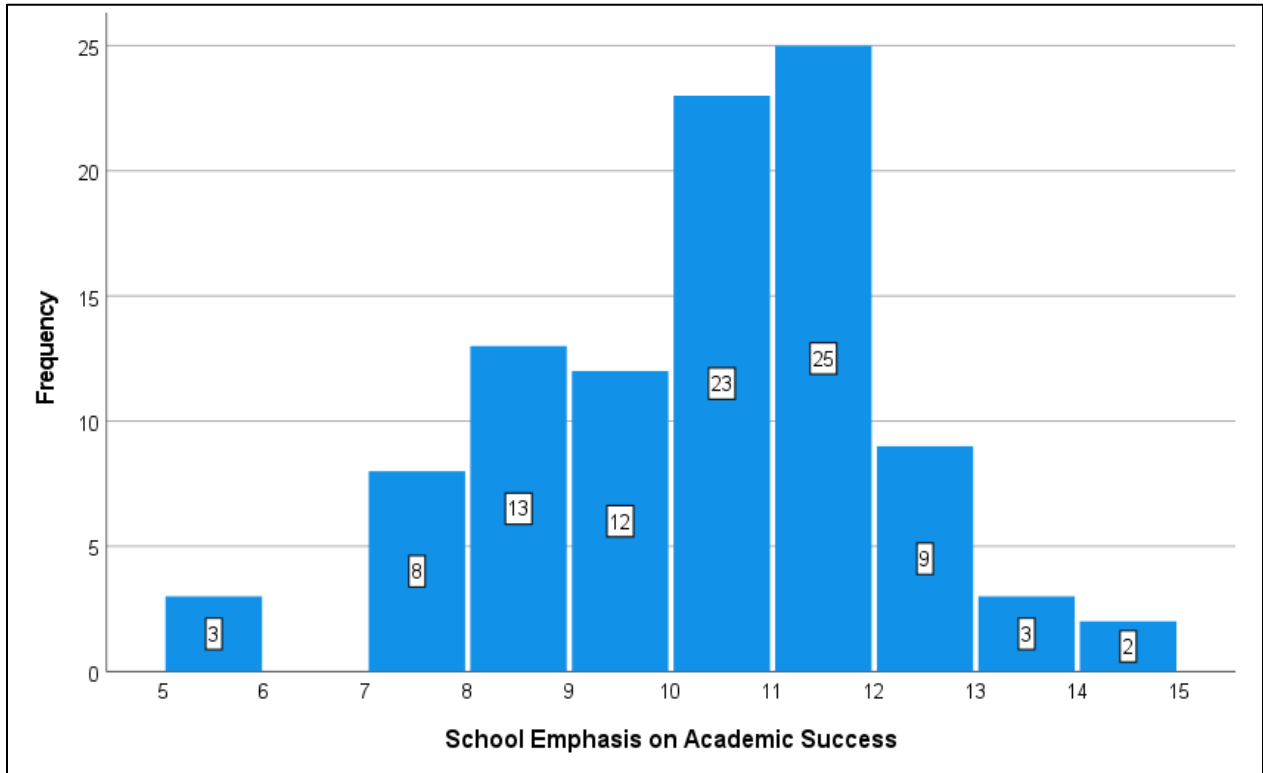
**Table 4.10:** School Emphasis on Academic Success, clustered by country

Country	Very High Emphasis		High Emphasis		Medium Emphasis		Mean scale score
	Perc.	Mean	Perc.	Mean	Perc.	Mean	
Albania	12%	552	66%	514	22%	492	10.7
Australia	13%	566	58%	545	29%	520	10.6
Austria	8%	539	62%	535	30%	516	10.4
Azerbaijan	7%	437	60%	442	33%	438	10.0
Bahrain	37%	474	55%	451	8%	440	12.3
Belgium (Flemish)	1%	~	45%	519	55%	502	9.0
Belgium (French)	4%	525	44%	507	53%	483	9.3
Brazil	4%	474	51%	439	45%	391	9.5
Bulgaria	9%	577	58%	554	33%	505	10.2
Chinese Taipei	12%	564	60%	546	28%	531	10.5
Croatia	5%	560	73%	558	22%	553	10.4
Cyprus	10%	541	51%	518	38%	493	10.0
Czech Republic	1%	~	53%	550	46%	527	9.5
Denmark	7%	562	61%	543	32%	525	10.2
Egypt	8%	404	61%	383	31%	363	10.1
England	12%	580	61%	563	26%	539	10.6
Finland	7%	569	70%	552	23%	536	10.4
France	5%	526	66%	522	29%	495	10.2

Georgia	4%	517	57%	496	39%	492	9.8
Germany	4%	546	61%	534	35%	503	9.7
Hong Kong SAR	5%	582	53%	578	42%	565	9.7
Hungary	3%	584	50%	551	47%	521	9.4
Iran	15%	445	53%	413	32%	397	10.4
Ireland	20%	593	59%	581	21%	551	11.2
Israel	8%	509	66%	516	25%	498	10.4
Italy	1%	~	45%	545	54%	532	9.1
Jordan	10%	405	55%	396	35%	351	10.1
Kazakhstan	17%	512	71%	501	12%	504	11.2
Kosovo	14%	417	63%	427	22%	404	10.7
Latvia	3%	500	54%	536	43%	518	9.5
Lithuania	9%	555	77%	550	13%	536	10.7
Macao SAR	9%	562	51%	542	39%	521	10.1
Malta	2%	533	75%	521	23%	486	10.5
Montenegro	5%	492	75%	487	20%	486	10.4
Morocco	1%	~	33%	392	66%	364	8.5
Netherlands	3%	553	42%	532	56%	520	9.3
New Zealand	18%	562	55%	523	26%	489	10.9
North Macedonia	16%	447	56%	450	28%	426	10.7
Northern Ireland	16%	585	70%	568	14%	538	11.0
Norway	1%	~	51%	548	48%	530	9.4
Oman	31%	441	61%	425	8%	415	11.9
Poland	9%	558	56%	553	35%	540	10.2
Portugal	6%	550	51%	526	43%	508	9.7
Qatar	34%	509	57%	476	9%	455	12.1
Russian Fed.	3%	585	63%	573	34%	555	9.9
Saudi Arabia	43%	459	51%	442	5%	435	12.5
Serbia	10%	514	68%	519	22%	495	10.7
Singapore	11%	615	73%	589	16%	559	10.9
Slovak Republic	3%	564	50%	541	47%	516	9.4
Slovenia	0%	~	46%	522	54%	517	9.3
South Africa	5%	392	37%	302	58%	268	9.2
Spain	10%	529	68%	524	22%	506	10.7
Sweden	7%	583	50%	555	44%	529	9.7
Turkey	12%	539	51%	509	37%	464	10.2
UAE	27%	545	57%	512	16%	430	11.6
United States	13%	587	45%	560	41%	521	10.1
Uzbekistan	10%	449	71%	437	19%	431	10.8
Int. Average	10%	525	58%	509	32%	486	10.2

Table 4.10 shows that 77% of Maltese heads of school reported that academic success is highly emphasized which is significantly higher than the international average (68%). On the other hand the percentage of Maltese pupils attending schools which assign medium emphasis on academic success (23%) is significantly lower than the international average (32%).

**Figure 4.3:** Score distribution for school emphasis on academic success (Heads of school)



**Figure 4.4:** School emphasis on academic success by school type (Heads of school)

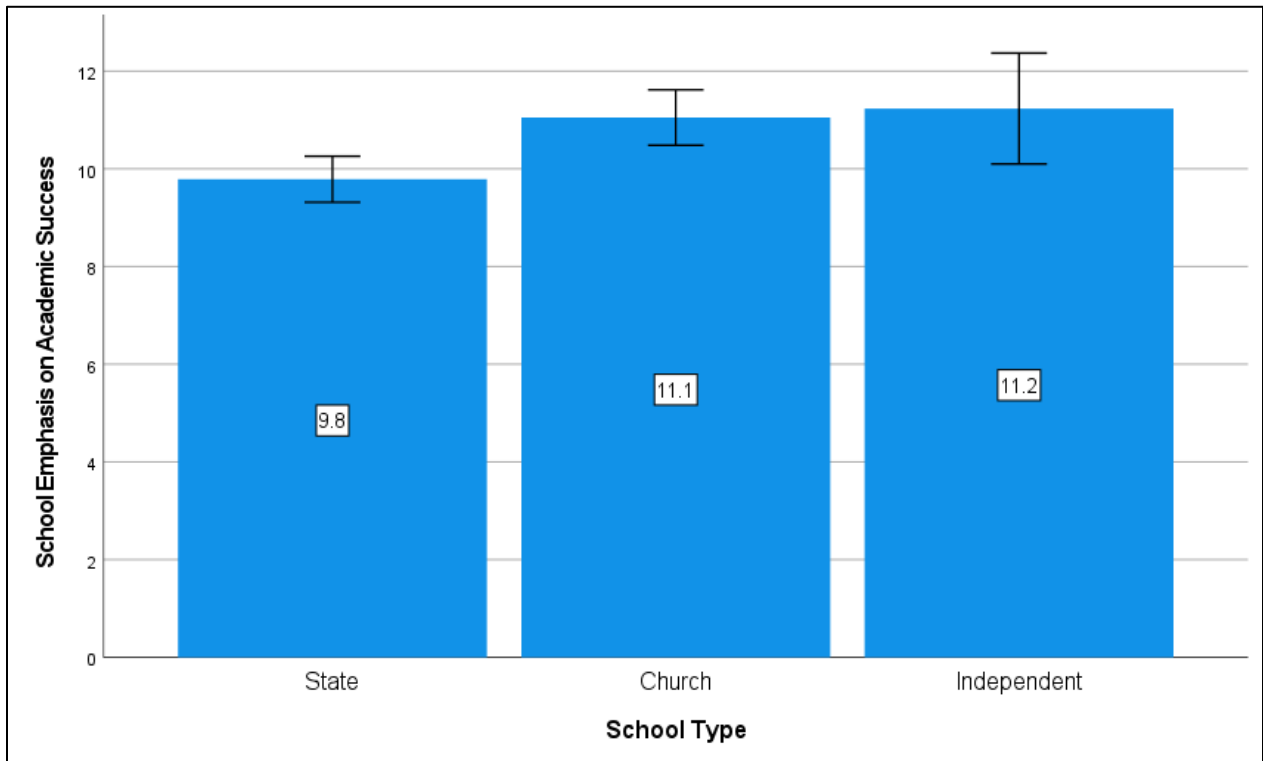


Table 4.10 also shows that the scale score that measures the school emphasis on academic success according to heads of school is highest in Saudi Arabia (12.5), Bahrain (12.3), Qatar (12.1), Oman (11.9), United Arab Emirates (11.6), Ireland (11.2) and Kazakhstan (11.2); and lowest in Morocco (8.5), Flemish speaking Belgium (9.0), Italy (9.1), South Africa (9.2), French speaking Belgium (9.3), Slovenia (9.3) and the Netherlands (9.3). Moreover, this table also shows that Malta's mean score (10.5) for school emphasis on academic success is significantly larger than the international average (10.2). Students attending schools that make very high emphasis on academic success tend to higher attainment in reading comprehension than schools that make moderate emphasis. The mean reading scores of students attending schools that allocate 'Very high emphasis', 'High emphasis' and 'Medium emphasis' are 525, 509 and 486 respectively. The mean reading scores of Maltese students when their schools' emphasis on academic success is 'Very high', 'High' and 'Medium' are 533, 521 and 486 respectively.

Figure 4.3 displays the score distribution of school emphasis on academic success, where 6% of Maltese heads of schools make very high emphasis on academic success; 64% make high emphasis; and 30% make medium emphasis on academic success. Figure 4.4 shows that according to heads of school the emphasis exerted by church and independent schools on academic success is significantly higher than state schools.

## 4.6 School Discipline

A general lack of discipline, especially if students and teachers are afraid for their safety, does not facilitate learning and is associated with lower academic achievement. Schools where there are clear rules and more fairness have an atmosphere of greater discipline and safety, which surely enhances learning. A scale score for School Discipline was generated by considering the heads' of school responses concerning ten potential school problems on the School Discipline scale. Table 4.11 displays the responses of the Maltese heads of school for each of the ten disciplinary problems.

**Table 4.11:** Responses of Maltese heads of school regarding ten disciplinary problems

To what degree is each of the following a problem among Year 5 students in your school?	Not a problem	Minor problem	Moderate problem	Serious problem
Arriving late at school	68.4%	29.6%	1.0%	1.0%
Absenteeism	61.2%	34.7%	3.1%	1.0%
Classroom disturbance	55.1%	38.8%	6.1%	0.0%
Cheating	81.6%	17.3%	1.0%	0.0%
Profanity	86.7%	11.2%	2.0%	0.0%
Vandalism	93.9%	6.1%	0.0%	0.0%
Theft	95.9%	3.1%	1.0%	0.0%
Intimidation or verbal abuse among students	58.2%	35.7%	6.1%	0.0%
Physical fights among students	78.4%	20.6%	1.0%	0.0%
Intimidation or verbal abuse of teachers or staff	94.9%	4.1%	1.0%	0.0%

On the School Discipline scale, students in schools with hardly any problems had a score on the scale of at least 9.7, which corresponds to their head of school reporting 'not a problem' for five of the ten issues and 'minor problem' for the other five, on average. Students in schools with moderate to severe problems had a score less than 7.7, which correspond to their heads of school reporting 'moderate problem' for five of the ten issues and 'minor problem' for the other five, on average. All other students attended schools with minor problems. The larger the scale scores the larger the higher is the school disciplinary order.

**Table 4.12: School discipline, clustered by country**

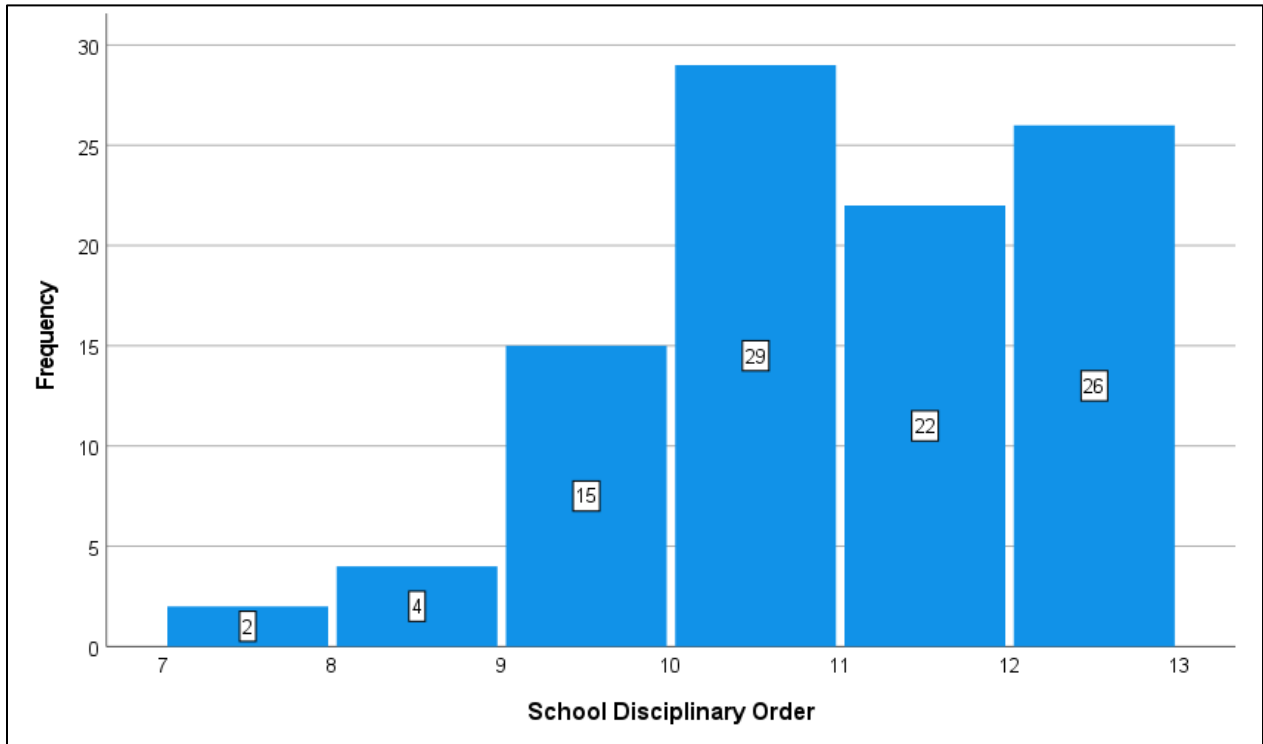
Country	Hardly any problems		Minor problems		Moderate to severe problems		Mean scale score
	Perc.	Mean	Perc.	Mean	Perc.	Mean	
Albania	82%	515	11%	502	8%	512	11.1
Australia	69%	548	29%	525	2%	~	10.4
Austria	53%	534	42%	524	4%	529	10.0
Azerbaijan	69%	436	14%	469	18%	431	10.1
Bahrain	85%	462	9%	445	6%	426	11.1
Belgium (Flemish)	57%	517	37%	506	6%	477	10.2
Belgium (French)	59%	503	37%	485	4%	467	10.2
Brazil	72%	427	25%	397	3%	411	10.7
Bulgaria	80%	549	15%	515	4%	458	11.0
Chinese Taipei	81%	545	18%	541	1%	~	11.2
Croatia	77%	559	20%	554	3%	521	10.7
Cyprus	62%	518	34%	498	4%	502	10.0
Czech Republic	81%	542	17%	526	1%	~	10.8
Denmark	62%	543	36%	532	3%	514	10.2
Egypt	24%	406	40%	362	37%	378	8.3
England	76%	564	22%	542	2%	~	10.5
Finland	68%	554	30%	541	2%	~	10.3
France	59%	523	37%	505	4%	466	10.2
Georgia	77%	494	15%	495	7%	500	10.7
Germany	42%	538	52%	516	6%	492	9.6
Hong Kong SAR	93%	574	7%	550	0%	~	12.0
Hungary	58%	554	36%	522	7%	492	10.0
Iran	65%	421	28%	395	7%	410	10.3
Ireland	79%	584	20%	552	2%	~	10.9
Israel	46%	519	43%	506	11%	489	9.5
Italy	53%	543	31%	535	16%	522	9.6
Jordan	30%	399	41%	363	30%	386	8.6
Kazakhstan	77%	504	9%	512	13%	496	10.8
Kosovo	48%	426	32%	417	20%	413	9.4
Latvia	62%	529	37%	525	1%	~	10.2
Lithuania	75%	550	24%	547	1%	~	10.7
Macao SAR	77%	539	13%	531	9%	515	10.9
Malta	87%	515	12%	496	2%	483	11.4

Montenegro	83%	489	14%	486	2%	~	11.4
Morocco	16%	367	23%	378	61%	373	7.2
Netherlands	43%	529	50%	524	7%	518	9.5
New Zealand	54%	540	40%	503	6%	470	10.1
North Macedonia	77%	451	18%	422	5%	396	11.1
Northern Ireland	84%	571	15%	540	1%	~	11.1
Norway	49%	544	48%	535	3%	534	9.8
Oman	55%	438	22%	416	23%	423	9.5
Poland	61%	551	37%	546	2%	~	10.1
Portugal	55%	525	37%	514	8%	510	10.0
Qatar	84%	487	12%	473	4%	486	11.1
Russian Fed.	68%	568	30%	568	2%	~	10.4
Saudi Arabia	45%	463	13%	430	41%	439	9.0
Serbia	80%	516	20%	506	0%	~	11.0
Singapore	81%	589	19%	580	0%	~	11.1
Slovak Republic	74%	536	22%	515	4%	504	10.6
Slovenia	65%	519	31%	517	4%	535	10.3
South Africa	30%	347	55%	268	15%	240	9.0
Spain	80%	524	14%	504	5%	511	11.0
Sweden	42%	555	58%	540	0%	~	9.6
Turkey	43%	504	27%	492	30%	489	8.9
UAE	79%	523	14%	449	7%	474	10.8
United States	69%	566	30%	506	1%	~	10.3
Uzbekistan	58%	435	7%	455	35%	438	9.3
Int. Average	64%	510	27%	493	9%	465	10.2

Table 4.12 shows that 87% of Maltese heads of school claimed almost no disciplinary problems in their schools, 12% claimed minor problems and 2% claimed moderate to severe disciplinary problems. The corresponding international averages (64%, 27% and 9%) indicate that disciplinary problems in primary Maltese schools are significantly less frequent compared to other schools abroad. Hong Kong (12.0), Malta (11.4), Montenegro (11.4) and Chinese Taipei (11.2) have the highest mean scale scores indicating fewer disciplinary problems in these countries. On the other hand, Morocco (7.2), Egypt (8.3), Jordan (8.6), Turkey (8.9), Saudi Arabia (9.0) and South Africa (9.0) have the lowest mean scale scores, indicating more severe disciplinary problems in these countries.

Table 4.12 also shows that Malta's mean scale score (11.4) in 2021 is significantly larger than the mean scale score (10.2) in 2016, implying significant improvement in disciplinary climate in Maltese schools. Students attending schools that have almost no disciplinary problems tend to higher attainment in reading comprehension than students attending schools with severe disciplinary problems. The mean reading scores of students attending schools with 'Hardly any problems', 'Minor problems' and 'Moderate to Severe problems' are 510, 493 and 465 respectively. This trend also applies to Maltese schools, where the mean reading comprehension scores of Maltese students are 515, 496 and 483 respectively.

**Figure 6.5:** Score distribution of school disciplinary order, according to Maltese heads of school



**Figure 6.6:** Mean scale scores of disciplinary order in Maltese schools, by school type

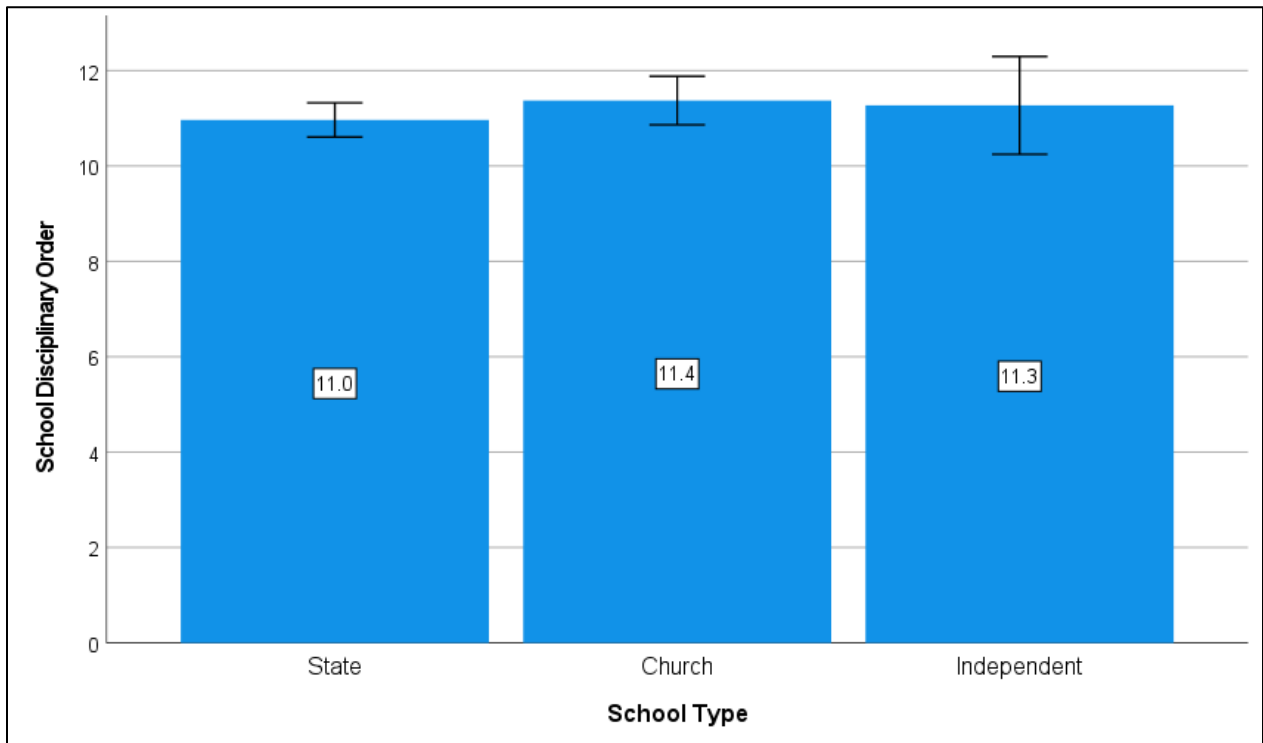


Figure 6.5 displays the score distribution of Maltese heads' of school perceptions of disciplinary problems in their schools, where 87% of Maltese heads of schools hardly claim any problems; 12% claim minor problems; and 1% claim moderate to severe disciplinary problems. Figure 6.6 shows that mean scale scores for disciplinary problems vary marginally between State, Church and Independent schools, implying that disciplinary problems exist in all school types.

# 5

## Students' Perspective of their Attitudes/Behaviours

### 5.1 Introduction

Students who are motivated to read and have a strong reading self-concept tend to read more than their peers and have better reading comprehension. The process can be recurring, because students who are good readers, with strong reading skills, tend to read recreationally, which contributes to consolidating their reading ability by improving vocabularies and spelling abilities, amongst other skills. Recreational reading habits often are supported by the family and friends of young readers; thus, a supportive home environment can be influential in fostering children's reading habits. However, home support is not only important for children prior to their entry into primary school; home support also can be influential in promoting reading throughout children's schooling. Sections 5.2, 5.3 and 5.4 examine students' reading enjoyment, their confidence in their reading comprehension skills, and their engagement in reading lessons. Section 5.5 investigates students' use of digital devices to find and read information and their self-efficacy in using these digital resources. Sections 5.6 and 5.7 examine students' bullying at school and disorderly behaviour during reading lessons. Moreover, section 5.8 investigates students' sense of school belonging.

### 5.2 Students' Reading Enjoyment

Students who find reading enjoyable are likely to read more than others who do not derive any enjoyment from reading. In terms of developing skills, children with a positive attitude are more likely to practise the reading skills they are learning at school. To assess students' enjoyment for reading, a scale score was generated using students' responses according to their degree of agreement with eight statements related to reading and how often they did two reading activities outside of school, which are displayed in Tables 5.1 and 5.2.

**Table 5.1:** Reading attitudes of Maltese students

How often do you do these things outside of school?	Every day	1-2 times a week	1-2 times a month	Almost never
I read for fun	46.3%	27.9%	12.7%	13.2%
I read to find out about things I want to learn	48.2%	28.2%	13.0%	10.6%

**Table 5.2:** Responses of Maltese student regarding reading behaviour

What do you think about reading? Tell how much you agree with each of these statements	Agree a lot	Agree A little	Disagree a little	Disagree a lot
I like talking about what I read with other people	42.2%	29.8%	15.5%	12.5%
I am happy if someone gives me a book as a present	48.8%	29.3%	12.1%	9.7%
I think reading is boring	10.9%	17.9%	19.5%	51.7%
I would like to have more time for reading	36.8%	31.7%	17.5%	14.0%
I enjoy reading	51.9%	30.6%	9.1%	8.4%
I learn a lot from reading	69.1%	20.8%	6.7%	3.4%
I like to read things that make me think	60.1%	24.1%	8.7%	7.2%
I like it when a book helps me imagine other worlds	74.9%	15.9%	4.4%	4.9%

Students were scored on the Students like Reading scale according to their degree of agreement with eight statements and how often they did two reading activities outside of school. Students who Like Reading Very Much had a score at or above 10.4 corresponding to ‘agreeing a lot’ with four of the eight statements and ‘agreeing a little’ with the other four, as well as doing one of the two reading activities outside of school ‘every day or almost every day’, on average. On the other hand, students who Do Not Like Reading had a score at or below 8.3 corresponding to ‘disagreeing a little’ with four of the eight statements and ‘agreeing a little’ with the other four, as well as doing one of two the reading activities only ‘once or twice a month’, on average. All other students who scored between 8.3 and 10.4 in the Students like Reading scale somewhat like reading.

**Table 5.3:** Reading enjoyment, clustered by country

Country	Like reading very much		Somewhat like reading		Do not like reading		Mean scale score
	Perc.	Mean	Perc.	Mean	Perc.	Mean	
Albania	81%	517	17%	503	2%	~	12.1
Australia	29%	562	45%	542	26%	517	9.4
Austria	32%	539	46%	530	22%	517	9.6
Azerbaijan	63%	446	32%	439	5%	421	11.2
Bahrain	51%	474	39%	452	10%	437	10.6
Belgium (Flemish)	27%	516	43%	512	29%	505	9.3
Belgium (French)	31%	498	45%	498	24%	484	9.6
Brazil	47%	425	39%	426	14%	436	10.4
Bulgaria	51%	548	37%	541	12%	511	10.6
Chinese Taipei	39%	560	43%	537	19%	526	9.9
Croatia	23%	560	52%	557	25%	554	9.3
Cyprus	37%	517	41%	511	21%	501	9.8
Czech Republic	27%	540	49%	545	23%	530	9.4
Denmark	14%	566	50%	545	36%	524	8.7
Egypt	44%	406	45%	370	12%	346	10.3
England	29%	570	48%	562	24%	536	9.4
Finland	23%	563	46%	555	30%	533	9.1
France	36%	526	47%	514	17%	490	9.9
Georgia	59%	498	34%	493	7%	504	10.9
Germany	34%	544	44%	530	22%	509	9.6

## Students' Perspective of their Attitudes and Behaviours

Hong Kong SAR	30%	590	47%	573	23%	550	9.6
Hungary	27%	555	46%	539	28%	527	9.3
Iran	66%	424	29%	400	5%	356	11.2
Ireland	31%	593	45%	578	23%	556	9.5
Israel	40%	519	41%	507	19%	507	9.9
Italy	41%	541	42%	536	17%	533	10.0
Jordan	55%	394	34%	369	10%	356	10.7
Kazakhstan	53%	501	39%	504	7%	518	10.6
Kosovo	85%	426	13%	407	2%	~	12.4
Latvia	16%	538	47%	533	37%	520	8.8
Lithuania	22%	555	48%	555	30%	548	9.1
Macao SAR	31%	553	48%	535	21%	512	9.6
Malta	46%	516	39%	517	15%	510	10.3
Montenegro	59%	495	33%	483	8%	472	11.0
Morocco	62%	388	33%	353	5%	318	11.1
Netherlands	17%	543	46%	535	37%	511	8.8
New Zealand	38%	532	44%	521	18%	511	9.9
North Macedonia	70%	446	24%	443	6%	435	11.5
Northern Ireland	28%	585	47%	570	25%	542	9.4
Norway	13%	556	46%	547	41%	528	8.6
Oman	58%	447	36%	415	6%	387	10.9
Poland	23%	555	49%	556	28%	536	9.2
Portugal	60%	520	34%	518	6%	525	11.0
Qatar	49%	500	40%	477	11%	467	10.5
Russian Fed.	35%	564	47%	570	18%	567	9.8
Saudi Arabia	61%	462	32%	432	7%	438	11.1
Serbia	45%	516	40%	514	16%	508	10.2
Singapore	33%	607	47%	586	20%	560	9.6
Slovak Republic	29%	530	45%	534	26%	523	9.4
Slovenia	28%	530	50%	521	23%	507	9.4
South Africa	50%	312	40%	275	11%	262	10.6
Spain	54%	527	35%	517	11%	509	10.7
Sweden	18%	544	47%	550	35%	539	8.8
Turkey	62%	503	32%	486	6%	487	11.2
UAE	53%	501	37%	469	10%	464	10.6
United States	25%	559	50%	557	24%	530	9.4
Uzbekistan	83%	446	15%	403	2%	~	12.5
Int. Average	42%	513	40%	501	18%	491	10.1

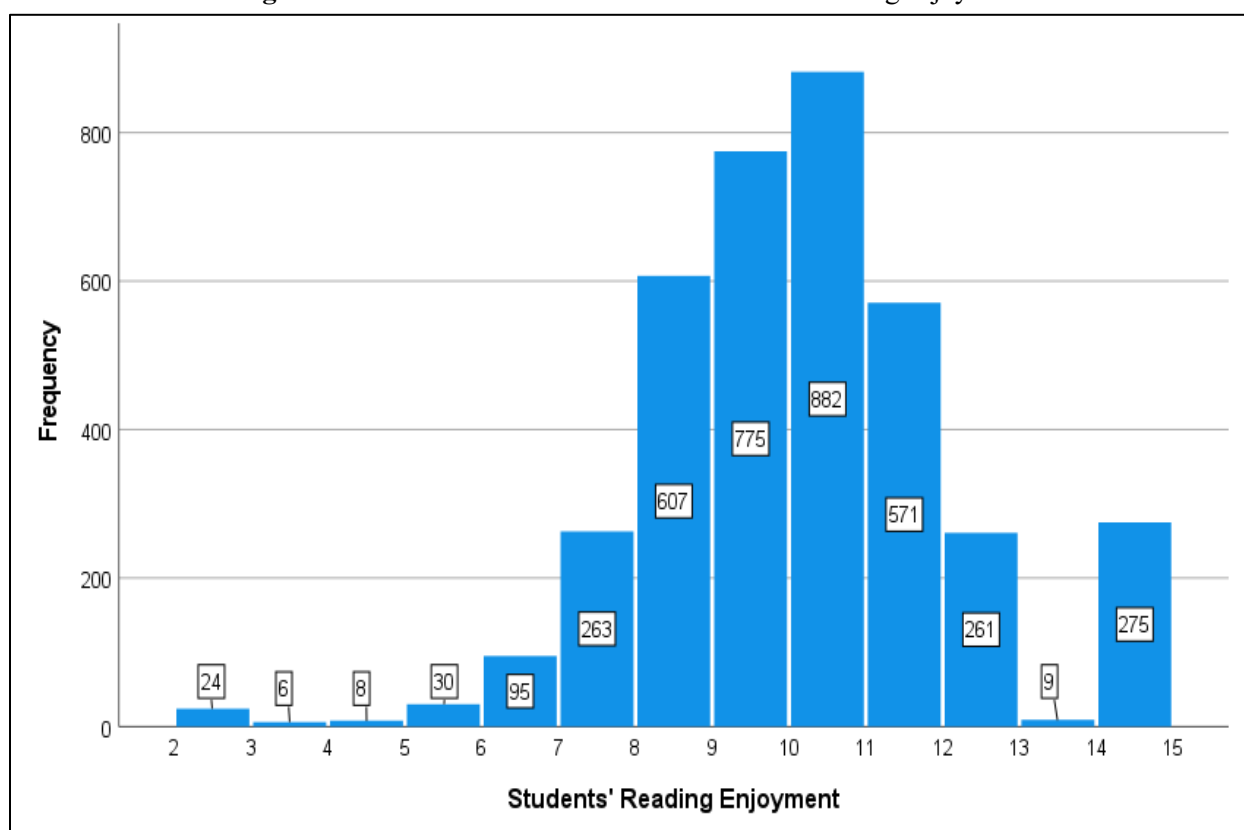
Table 5.3 shows students' reading enjoyment across participating countries. The percentage of Maltese students who enjoy reading a lot (46%) is significantly higher than the international average (42%). Kosovo (85%) tops the list, followed by Uzbekistan (83%), Albania (81%), North Macedonia (70%), Iran (66%), Azerbaijan (63%), Turkey (62%), Morocco (62%) and Saudi Arabia (61%). The percentage of Maltese students who somewhat enjoy reading (39%) is comparable to the international average (40%). Croatia (52%) tops the list, followed by Slovenia (50%), Denmark (50%), United States

(50%), Czech Republic (49%) and Poland (49%). The percentage of Maltese students who do not enjoy reading (15%) is significantly lower than the international average (18%). Norway (41%) tops the list; followed by Latvia (37%), the Netherlands (37%), Denmark (36%), Sweden (35%), Lithuania (30%) and Finland (30%).

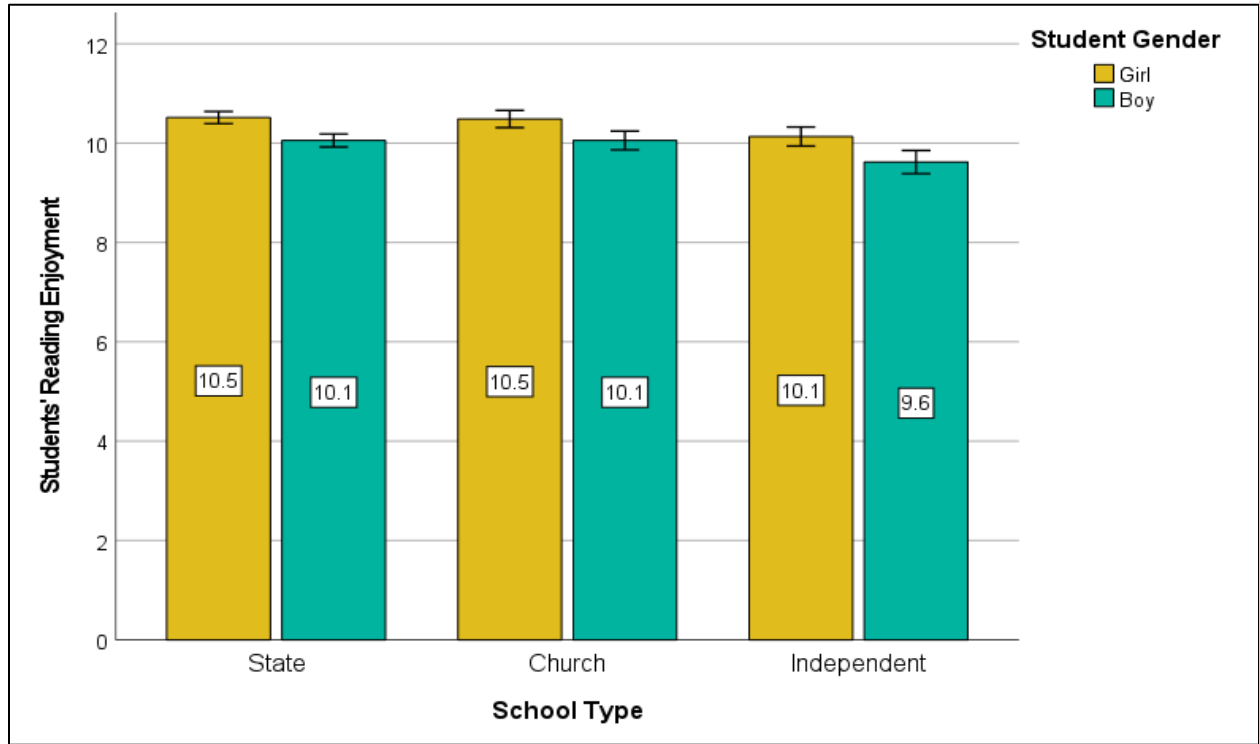
Table 5.3 also shows that Uzbekistan (12.5), Kosovo (12.4), Albania (12.1) and North Macedonia (11.5), have the highest mean scale scores indicating that students in these countries enjoy reading more than other countries. Malta's mean scale score (10.3) is marginally higher than the PIRLS 2011 mean score (10.2) but marginally lower than the PIRLS 2016 mean score (10.2). There is a positive relationship between reading enjoyment and reading attainment, where across all countries, the mean reading scores of students who 'enjoy reading a lot', 'somewhat enjoy reading' and 'do not enjoy reading' are 513, 501 and 491 respectively. However, this pattern is not very clear for Malta, where the corresponding mean reading scores of Maltese students are 516, 517 and 510 respectively.

Figure 5.1 displays the score distribution of reading enjoyment of Maltese students, where 45% of these students like reading very much; 40% somewhat like reading; and 15% do not like reading. Figure 5.2 shows that Maltese female students score significantly higher in reading enjoyment than their male counterparts, and this applies to all school types. Figure 5.3 shows that reading attainment is positively and significantly related to students' reading enjoyment and this applies to all school types. This implies that students who enjoy reading are more likely to perform well in reading comprehension.

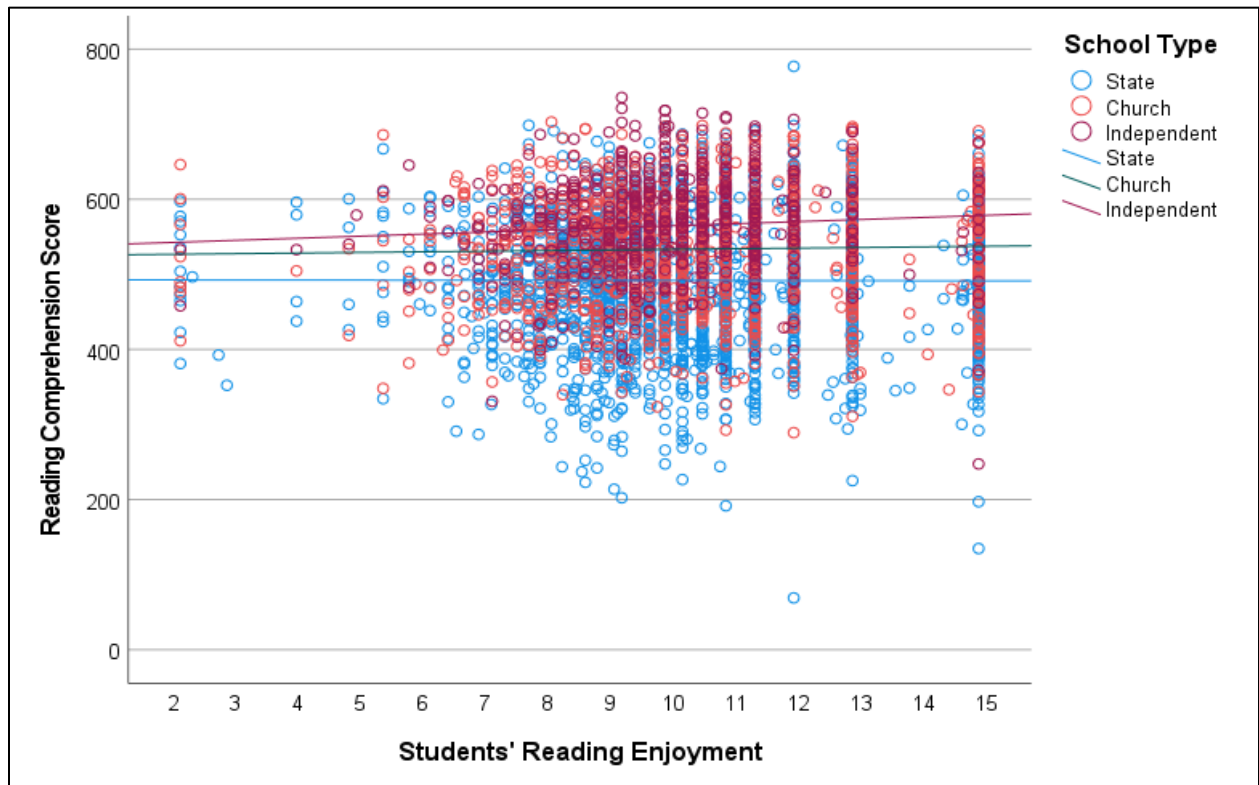
**Figure 5.1:** Score distribution of Maltese students' reading enjoyment



**Figure 5.2:** Mean reading enjoyment scores of Maltese students, by school type and gender



**Figure 5.3:** Relationship between reading attainment and enjoyment scores, by school type



### 5.3 Students' Confidence in Reading

With a positive attitude toward reading, a student who approaches reading confidently is more likely to seek out opportunities to read more frequently and more widely. To assess students' confidence in reading, a scale score was generated using students' responses evaluating the degree of agreement with six statements on students' confidence in reading, displayed in Table 5.4.

**Table 5.4:** Confidence of Maltese pupils in reading

How well do you read? Tell how much you agree with each of these statements	Agree a lot	Agree A little	Disagree a little	Disagree a lot
I usually do well in reading	64.6%	27.9%	4.0%	3.5%
Reading is easy for me	53.0%	32.5%	7.6%	6.8%
I have trouble reading stories with difficult words	35.5%	32.3%	12.1%	20.1%
Reading is harder for me than for many of my classmates	11.1%	17.9%	15.9%	55.1%
Reading is harder for me than any other subject	11.7%	12.2%	13.5%	62.5%
I am just not good at reading	9.1%	12.7%	13.9%	64.2%

Students were scored according to their responses to six statements on the Students Confident in Reading scale. Cut scores divide the scale into three categories. Students who are very confident in reading had a score at or above 10.2 corresponding to 'agreeing a lot' with three of the six statements and 'agreeing a little' with the other three, on average. Students who were not confident in reading had a score at or below 8.2 corresponding to 'disagreeing a little' with three of the six statements and 'agreeing a little' with the other three, on average. All other students scoring between 8.2 and 10.2 were somewhat confident in reading.

**Table 5.5:** Confidence in reading, clustered by country

Country	Very confident in reading		Somewhat confident in reading		Not confident in reading		Mean scale score
	Perc.	Mean	Perc.	Mean	Perc.	Mean	
Albania	56%	535	26%	502	18%	467	10.5
Australia	43%	582	38%	528	19%	477	9.9
Austria	51%	560	34%	514	15%	469	10.3
Azerbaijan	39%	475	35%	443	26%	406	9.7
Bahrain	42%	510	35%	455	23%	386	9.9
Belgium (Flemish)	42%	540	34%	507	23%	466	9.9
Belgium (French)	44%	531	36%	483	20%	439	9.9
Brazil	29%	496	37%	445	34%	357	9.2
Bulgaria	61%	567	26%	521	13%	460	10.5
Chinese Taipei	31%	580	38%	545	31%	506	9.4
Croatia	46%	583	38%	552	16%	503	10.0
Cyprus	55%	537	30%	496	15%	449	10.4
Czech Republic	39%	571	39%	539	21%	494	9.7
Denmark	45%	576	36%	530	19%	479	10.1
Egypt	22%	435	37%	385	41%	359	9.0
England	45%	594	34%	544	21%	504	9.9

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Finland	57%	574	30%	534	13%	488	10.5
France	43%	543	40%	509	17%	458	9.9
Georgia	42%	531	33%	487	24%	456	9.8
Germany	53%	561	31%	513	16%	469	10.3
Hong Kong SAR	32%	605	39%	573	29%	539	9.4
Hungary	43%	579	35%	533	23%	481	9.9
Iran	50%	454	31%	391	19%	346	10.2
Ireland	49%	609	34%	564	17%	516	10.1
Israel	45%	561	30%	501	25%	449	9.9
Italy	49%	560	36%	529	15%	489	10.2
Jordan	27%	425	39%	390	33%	341	9.2
Kazakhstan	43%	526	34%	509	24%	465	9.9
Kosovo	59%	445	25%	412	16%	360	10.7
Latvia	24%	567	43%	539	32%	489	9.1
Lithuania	38%	590	38%	552	25%	503	9.7
Macao SAR	22%	575	43%	542	35%	503	9.0
Malta	40%	557	36%	508	23%	464	9.8
Montenegro	56%	515	28%	477	16%	430	10.3
Morocco	31%	420	42%	378	27%	312	9.4
Netherlands	47%	556	32%	516	21%	482	9.9
New Zealand	34%	577	38%	527	28%	466	9.5
North Macedonia	56%	473	26%	437	19%	382	10.5
Northern Ireland	47%	603	37%	550	16%	501	10.1
Norway	44%	575	36%	530	19%	484	10.0
Oman	36%	478	37%	427	27%	382	9.6
Poland	55%	572	34%	539	11%	482	10.5
Portugal	42%	554	37%	513	21%	465	9.8
Qatar	46%	533	32%	480	23%	423	10.1
Russian Fed.	39%	596	40%	569	21%	520	9.7
Saudi Arabia	38%	498	31%	458	30%	425	9.7
Serbia	58%	537	29%	500	14%	452	10.4
Singapore	51%	622	33%	574	16%	514	10.3
Slovak Republic	43%	559	33%	530	24%	486	9.8
Slovenia	46%	550	37%	512	17%	462	10.2
South Africa	18%	402	35%	301	47%	247	8.8
Spain	39%	554	41%	517	20%	474	9.7
Sweden	56%	573	32%	526	12%	478	10.5
Turkey	48%	529	36%	484	17%	435	10.0
UAE	44%	552	30%	483	26%	404	9.9
United States	44%	594	36%	542	21%	486	9.9
Uzbekistan	47%	461	32%	440	21%	384	10.1
Int. Average	43%	541	35%	498	22%	449	9.9

Table 5.5 shows students' confidence in reading across participating countries. The percentage of Maltese students who are very confident in reading (40%) is lower than the international average (43%). Bulgaria (61%) tops the list, followed by Kosovo (59%), Serbia (58%), Finland (57%),

Sweden (56%), Albania (56%) and Montenegro (56%). The percentage of Maltese students who are somewhat confident in reading (36%) is marginally higher than the international average (35%). Latvia and Macao (43%) tops the list, followed by Morocco (42%), Spain (41%), Russia (40%) and France (40%). The percentage of Maltese students who are not confident in reading (23%) is marginally higher than the international average (22%). South Africa (47%) tops the list, followed by Egypt (41%), Macao (35%), Brazil (34%), Jordan (33%) and Latvia (32%).

Kosovo (10.7), North Macedonia (10.5), Finland (10.5), Albania (10.5), Bulgaria (10.5), Sweden (10.5) and Poland (10.5) have the highest mean scale scores. Malta's mean score (9.8) is marginally higher than the PIRLS 2016 mean score (9.7), but lower than the PIRLS 2011 mean score (10.1). There is a strong positive relationship between confidence in reading and reading attainment. Across all countries, the mean reading scores of students who are 'very confident', 'somewhat confident' and 'not confident' are 541, 498 and 449 respectively and this pattern applies to most participating countries. The corresponding mean reading scores of Maltese students are 557, 508 and 464 respectively.

Figure 5.4 displays the score distribution of confidence in reading of Maltese students, where 40% are very confident in reading, 37% are somewhat confident; while the remaining 23% are not confident in reading. Figure 5.5 shows that female students score higher in reading confidence than their male counterparts and this applies to all school types, particularly State schools. Figure 5.6 shows that reading attainment is positively and significantly related to confidence in reading and this applies to all school types. This implies that students who are confident in reading are more likely to perform well in reading comprehension.

**Figure 5.4:** Score distribution of confidence in reading of Maltese students

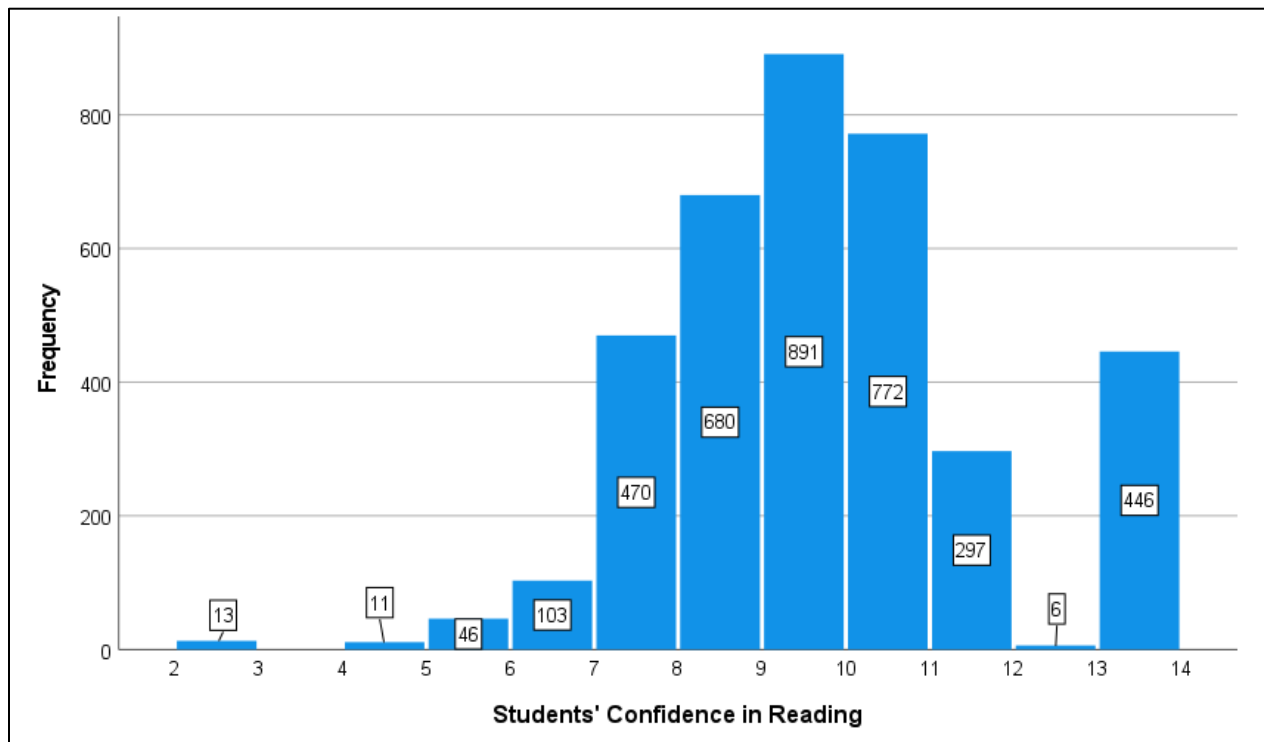


Figure 5.5: Mean confidence in reading scores of Maltese students, by school type and gender

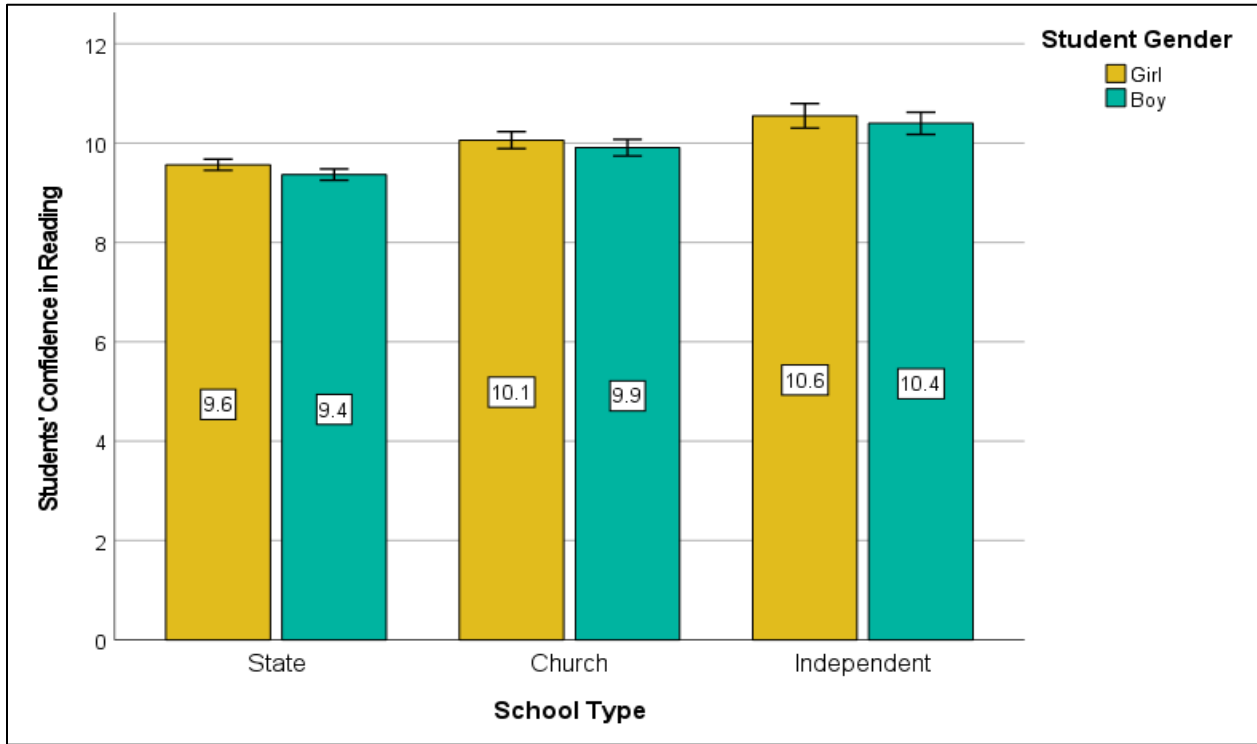
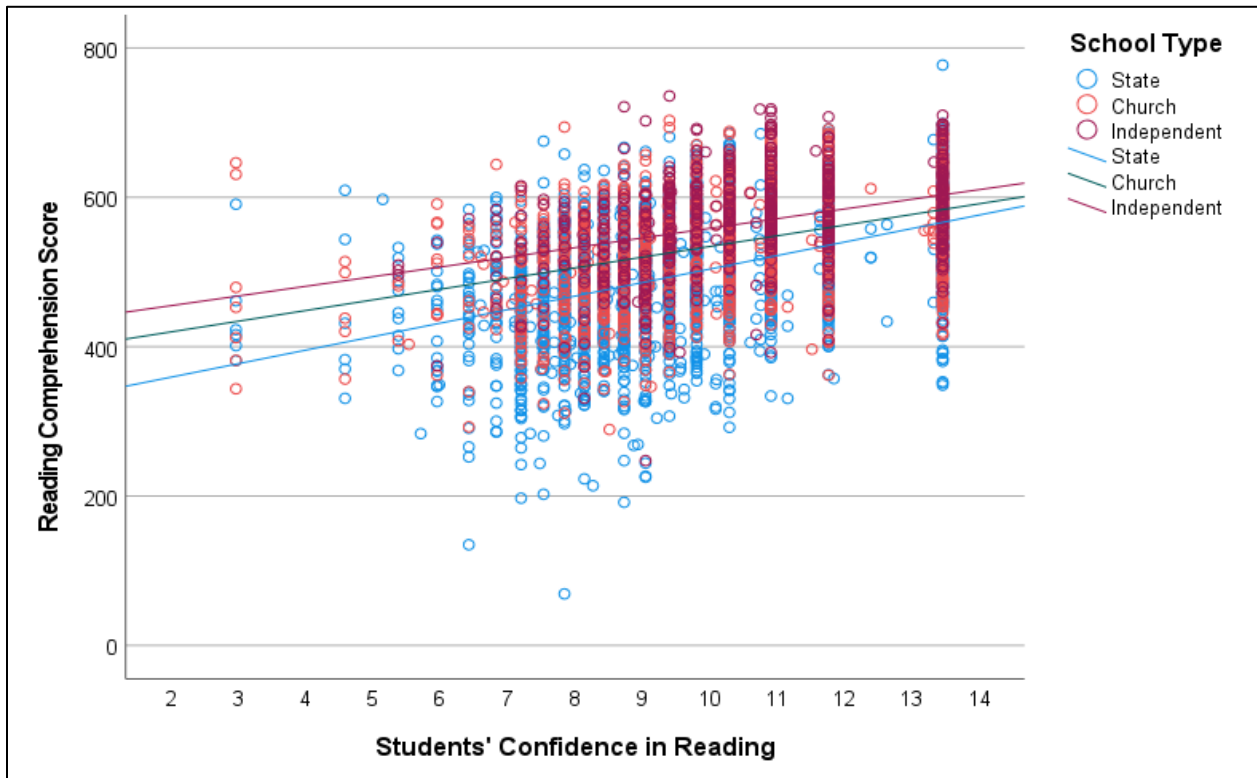


Figure 5.6: Relationship between reading attainment and confidence in reading scores, by school type



## 5.4 Students' Engagement in Reading

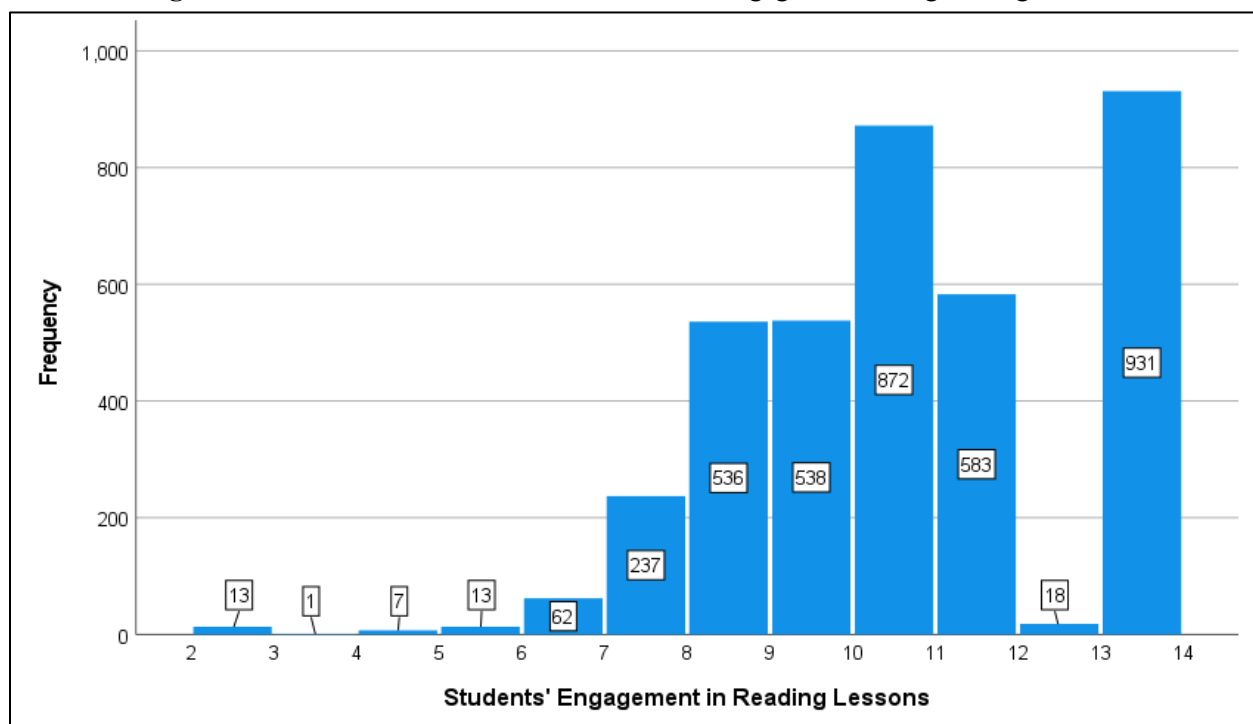
To assess how much teachers engage students in reading lessons, a scale score was generated by using students' responses to how much they agree with nine statements related to reading lessons, which are displayed in Table 5.6.

**Table 5.6:** Engaging Maltese students during reading lessons

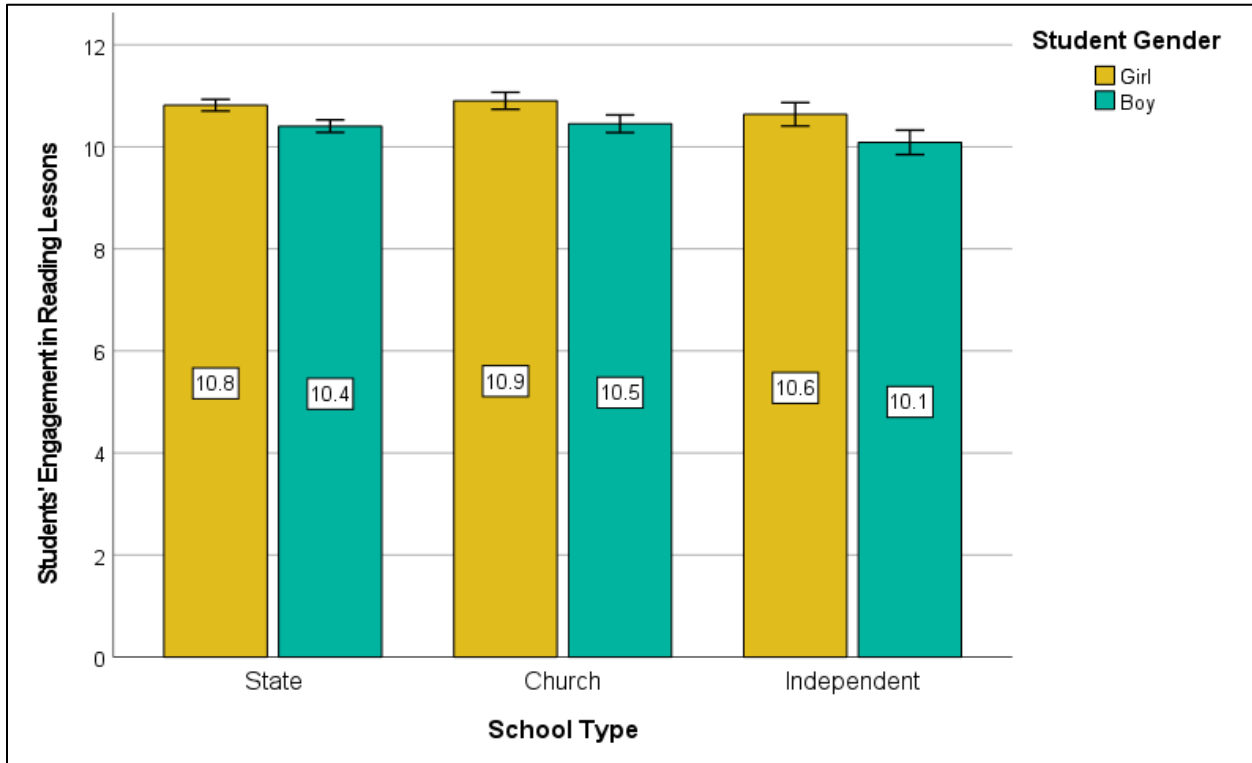
How much do you agree with these statements about your reading lessons?	Agree a lot	Agree A little	Disagree a little	Disagree a lot
I like what I read about in school	63.4%	27.1%	5.2%	4.2%
My teacher gives me interesting things to read	71.6%	19.8%	5.0%	3.6%
I know what my teacher expects me to do	67.6%	23.4%	5.5%	3.4%
My teacher is easy to understand	66.5%	24.9%	5.6%	2.9%
I am interested in what my teacher says	74.2%	18.4%	4.0%	3.4%
My teacher encourages me to say what I think about what I read	64.3%	23.9%	6.2%	5.6%
My teacher lets me show what I have learned	67.4%	22.1%	6.4%	4.0%
My teacher does a variety of things to help us learn	88.4%	8.2%	1.8%	1.6%
My teacher tells me how to do better when I make a mistake	87.6%	8.5%	1.9%	1.9%

Students who are very engaged in reading lessons had a score on the scale of at least 9.5, which corresponds to their 'agreeing a lot' with five of the nine statements and 'agreeing a little' with the other four, on average. Students who were less than engaged had a score less than 7.1, which corresponds to their 'disagreeing a little' with five of the nine statements and 'agreeing a little' with the other four, on average. All other students scoring between 7.1 and 9.5 were somewhat engaged in reading lessons.

**Figure 5.7:** Score distribution of Maltese students' engagement during reading lessons



**Figure 5.8:** Mean engagement reading scores of Maltese students, by school type and gender



**Figure 5.9:** Relationship between reading attainment and engagement scores, by school type

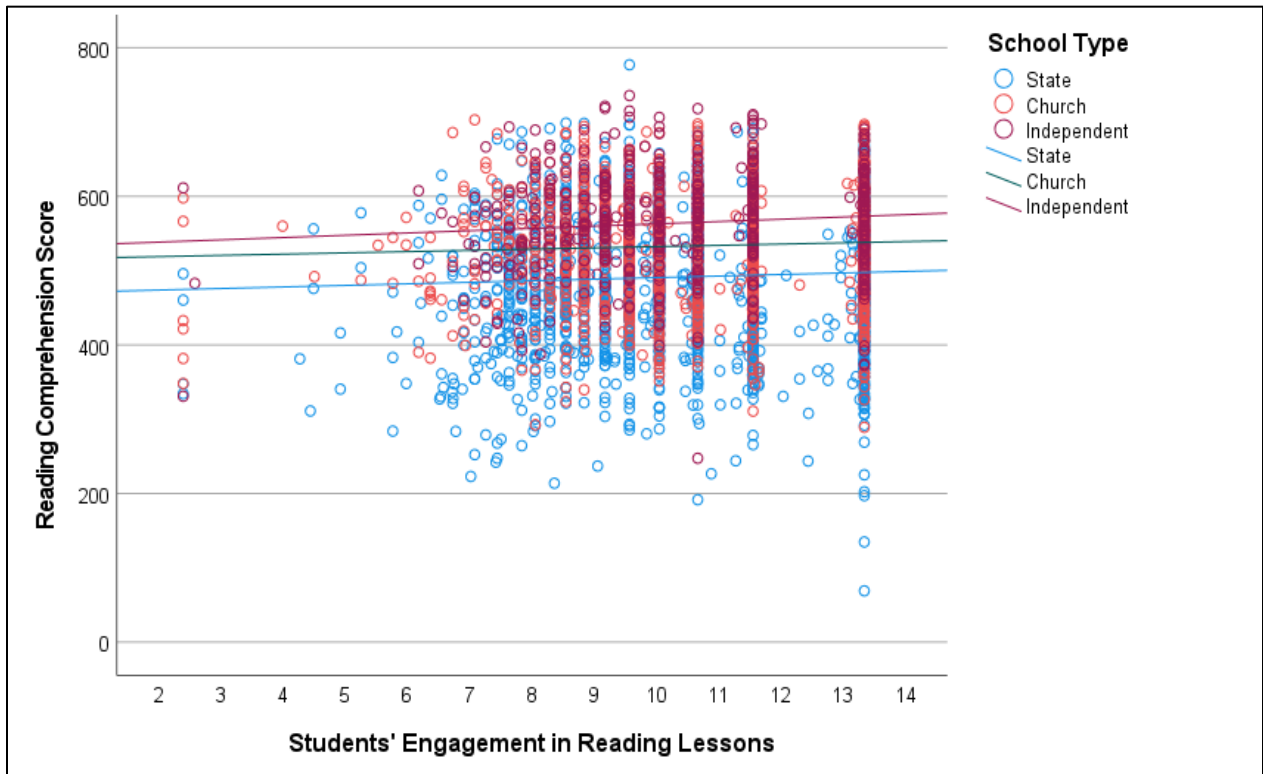


Figure 5.7 displays the score distribution of engagement during reading lessons of Maltese students, where 71% are very engaged in reading lessons; 26% are somewhat engaged, and 3% are less than engaged. Figure 5.8 shows that female students score significantly higher in engagement during reading lessons than their male counterparts, and this applies to all school types. Figure 5.9 shows that reading attainment is positively related to engagement during reading lessons and this applies to all school types. This implies that students who are more engaged during reading lessons are more likely to perform well in reading comprehension.

## 5.5 Students' Use of Digital Devices to Find and Read Information

Research shows that there exists a relationship between access to digital devices and academic achievement in general, as well as increased reading literacy in particular. It is believed that, if used correctly, educational applications for mobile and other media devices also can be effective, supplementary early learning tools for young children. As such, there is concern that students with less access to these digital resources are further disadvantaged in the classroom environment, leading to greater inequity in educational systems. Table 5.7 shows the percentage of students of each participating country who use digital devices to find and use information for 'more than 30 minutes', for 'less than 30 minutes' and for 'no time at all'.

**Table 5.7:** Use of digital devices by student to find and read information, clustered by country

Country	More than 30 minutes per school day		30 minutes or less per school day		No time per school day	
	Perc.	Mean	Perc.	Mean	Perc.	Mean
Albania	29%	513	57%	521	14%	489
Australia	27%	545	57%	547	17%	516
Austria	17%	508	46%	533	36%	538
Azerbaijan	25%	443	46%	456	29%	422
Bahrain	38%	464	50%	473	12%	412
Belgium (Flemish)	16%	506	55%	508	30%	519
Belgium (French)	14%	478	35%	491	51%	502
Brazil	25%	420	47%	456	29%	395
Bulgaria	25%	542	50%	554	25%	515
Chinese Taipei	16%	542	52%	549	32%	539
Croatia	25%	545	64%	566	12%	536
Cyprus	16%	508	51%	521	33%	499
Czech Republic	19%	531	49%	548	32%	537
Denmark	24%	534	57%	543	19%	541
Egypt	25%	392	36%	389	39%	376
England	23%	554	61%	565	17%	543
Finland	18%	538	60%	556	22%	544
France	11%	496	38%	517	52%	517
Georgia	32%	496	57%	505	11%	459
Germany	17%	513	48%	530	35%	535

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Hong Kong SAR	21%	576	66%	578	13%	541
Hungary	24%	530	53%	552	23%	528
Iran	24%	415	40%	426	36%	400
Ireland	16%	565	57%	580	27%	582
Israel	26%	506	50%	520	24%	504
Italy	17%	523	32%	531	51%	548
Jordan	30%	390	43%	395	26%	357
Kazakhstan	40%	503	46%	517	14%	467
Kosovo	40%	430	47%	428	13%	388
Latvia	26%	524	63%	535	11%	504
Lithuania	24%	547	63%	559	13%	536
Macao SAR	21%	541	62%	542	16%	506
Malta	28%	514	58%	523	14%	495
Montenegro	27%	486	51%	498	22%	476
Morocco	26%	381	46%	387	28%	346
Netherlands	23%	527	57%	529	20%	523
New Zealand	28%	528	53%	531	19%	499
North Macedonia	33%	441	53%	461	14%	398
Northern Ireland	20%	562	66%	572	13%	547
Norway	29%	540	61%	545	10%	516
Oman	33%	437	52%	444	15%	398
Poland	30%	537	59%	559	11%	535
Portugal	23%	511	53%	524	24%	522
Qatar	35%	495	51%	495	15%	450
Russian Federation	26%	563	54%	578	20%	549
Saudi Arabia	31%	457	48%	461	21%	429
Serbia	33%	512	49%	520	17%	503
Singapore	28%	594	57%	592	15%	561
Slovak Republic	19%	532	58%	542	23%	504
Slovenia	22%	509	53%	529	25%	512
South Africa	27%	325	34%	313	39%	262
Spain	25%	518	57%	526	18%	517
Sweden	27%	543	62%	549	12%	534
Turkey	32%	495	56%	509	12%	450
UAE	36%	504	51%	498	13%	409
United States	23%	545	60%	555	17%	535
Uzbekistan	22%	434	35%	448	43%	433
Int. Average	25%	502	52%	512	23%	486

Table 5.7 shows that the percentage of Maltese students who use digital devices to find and read information for more than 30 minutes (28%) is higher than the international average (25%). Kosovo and Kazakhstan (40%) tops the list, followed by Bahrain (38%), United Arab Emirates (36%), Qatar (35%), North Macedonia (33%), Oman (33%) and Serbia (33%). The percentage of Maltese students who use digital devices for 30 minutes or less (58%) is significantly higher than the international average (52%). Hong Kong and Northern Ireland (66%) tops the list, followed by Croatia (64%),

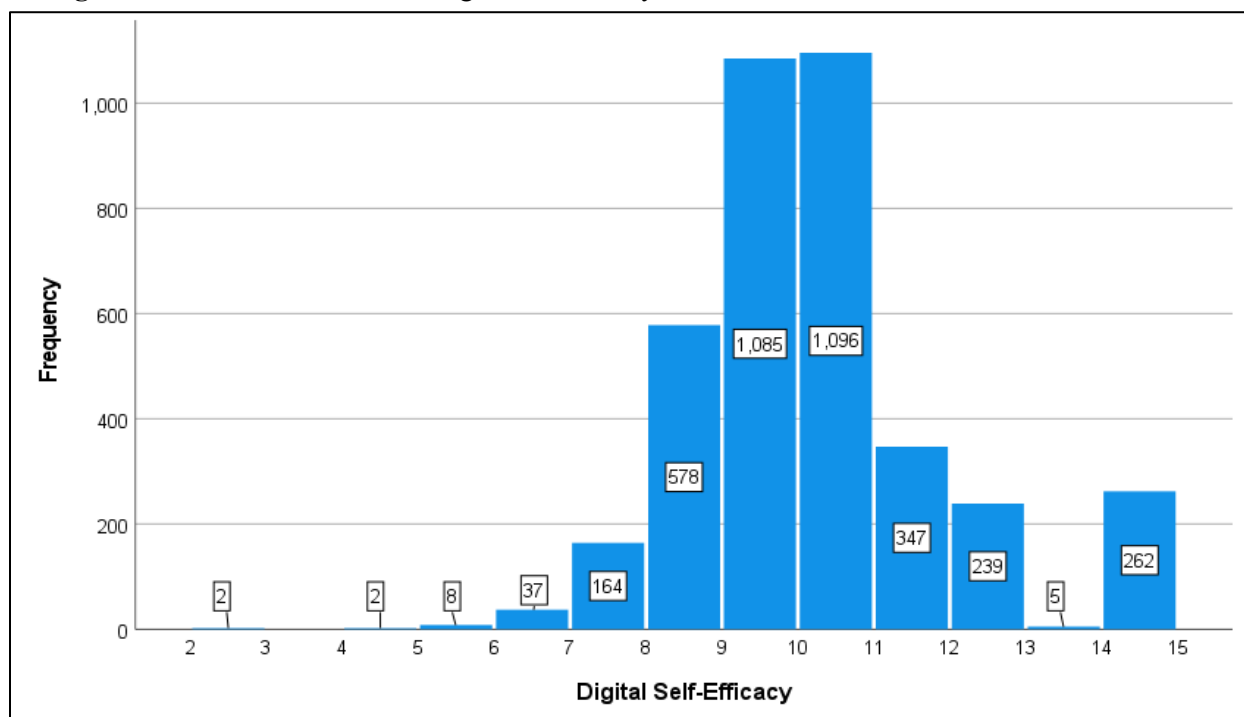
Latvia (63%), Lithuania (63%), Sweden (62%) and Macao (62%). The percentage of Maltese students who do not use digital devices to find and read information (14%) is significantly lower than the international average (23%). France (52%) tops the list, followed by French speaking Belgium (51%), Italy (51%), Uzbekistan (43%), Egypt (39%) and South Africa (39%).

A scale score for Digital Self Efficacy was generated by considering eight items that measure self-efficacy in digital devices. Students with a high digital self-efficacy had a score at or above 10.5 corresponding to ‘agreeing a lot’ with four of the eight items and ‘agreeing a little’ with the other four, on average. Students with a low digital self-efficacy had a score at or below 8.4 corresponding to ‘disagreeing a little’ with four of the eight items and ‘agreeing a little’ with the other four, on average. All other students scoring between 8.4 and 10.5 had medium digital self-efficacy. Table 5.8 displays the responses of the Maltese sample for each of the eight items.

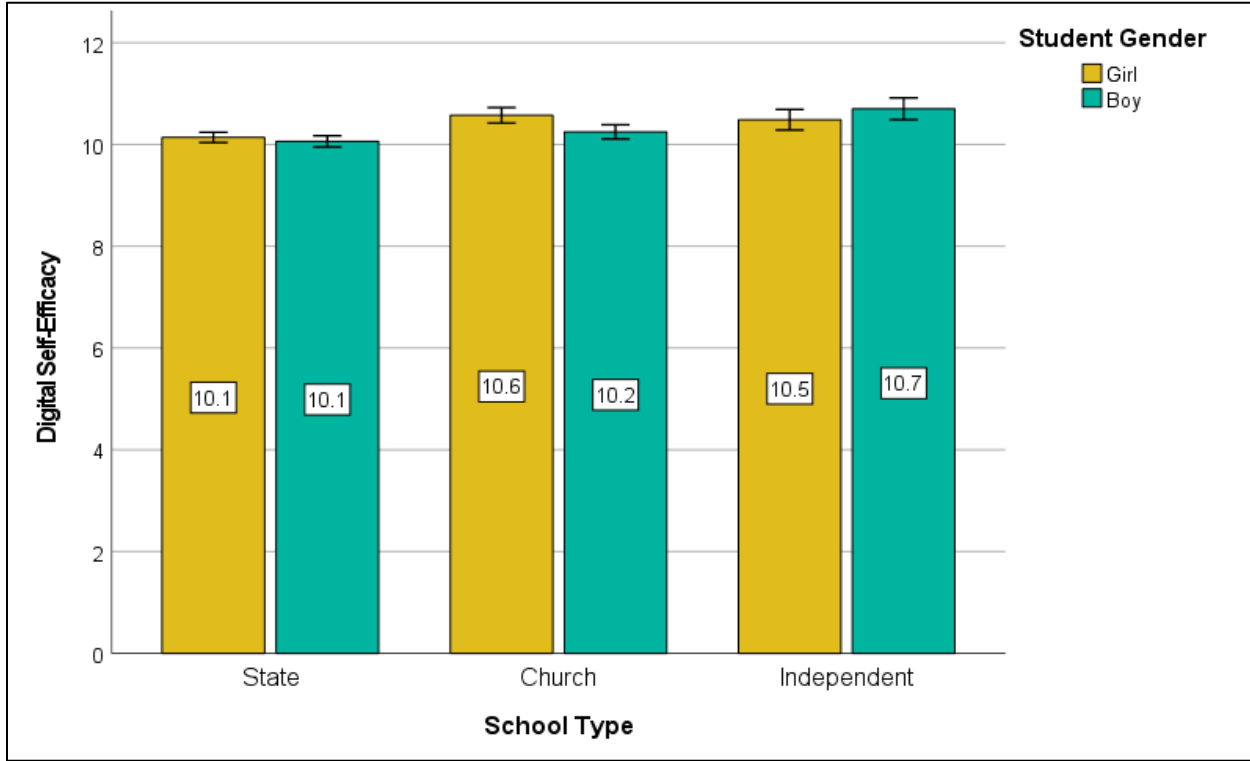
**Table 5.8:** Digital self-efficacy of Maltese students

How much do you agree with these statements about using computers, tablets, or smartphones?	Agree a lot	Agree a little	Disagree a little	Disagree a lot
I am good at using a computer or tablet	75.6%	2.4%	2.7%	1.3%
I am good at typing	54.0%	32.7%	8.9%	4.5%
It is easy for me to find information on the internet	54.3%	28.5%	12.1%	5.1%
I know how to create written stories or reports	39.4%	31.8%	15.3%	13.6%
I know how to create presentations	46.7%	29.7%	12.9%	10.8%
I can recognise a website that is useful to me	55.0%	29.4%	9.1%	6.5%
I can tell if a website is trustworthy	39.7%	33.0%	16.1%	11.1%
I know how to make and share a video	55.5%	18.7%	10.6%	15.1%

**Figure 5.10:** Score distribution of digital self-efficacy of Maltese students’ to read and find information



**Figure 5.11:** Mean self-efficacy scores in digital use of Maltese students, by school type and gender



**Figure 5.12:** Relationship between reading attainment and digital self-efficacy, by school type

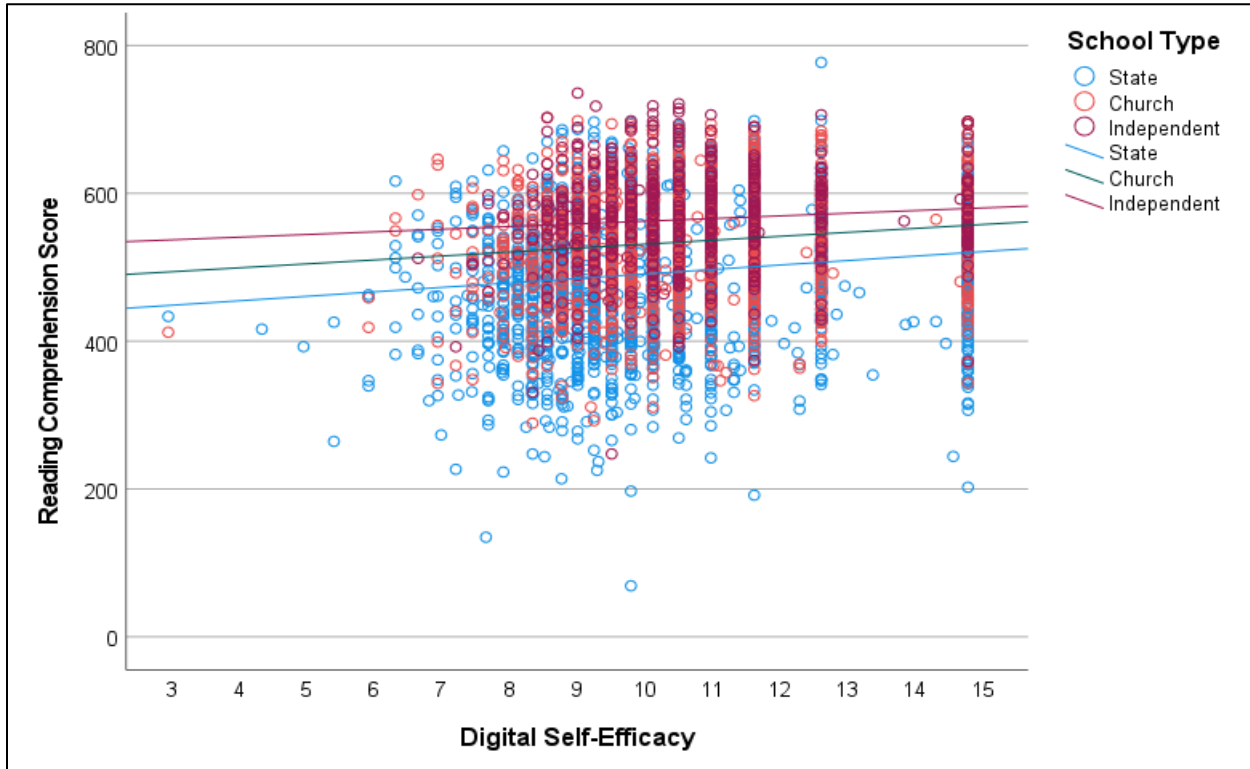


Figure 5.10 displays the score distribution of digital self-efficacy of Maltese students, where 42% have high digital self-efficacy; 47% have medium self-efficacy, and 11% have low digital self-efficacy. Figure 5.11 shows that in Church and State schools, girls score significantly higher than boys in digital self-efficacy; while in Independent schools boys score significantly than girls in digital self-efficacy. Figure 5.9 shows that reading attainment is positively and significantly related to digital self-efficacy, and this applies to all school types. This implies that students who more skills in using digital resources are more likely to perform well in reading comprehension.

## 5.6 Student Bullying

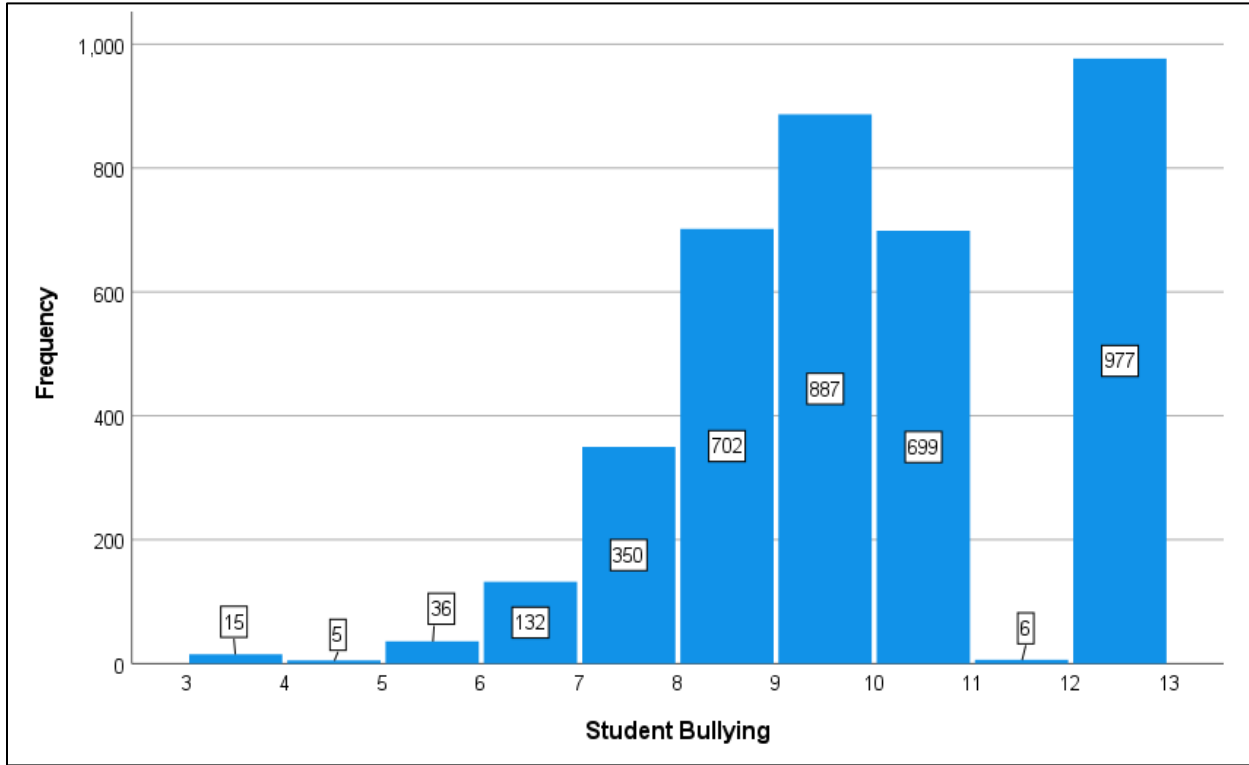
Bullying among students is a threat to the school learning environment. Bullying is aggressive behaviour that is intended to harm students who are physically or psychologically less strong and takes a variety of forms ranging from name calling to inflicting physical harm. Bullying causes distress to victims, leads to low self-esteem, and makes victims feel like they do not belong. Research shows that bullied students are less likely to achieve in school. With the prevalence of the internet, cyberbullying is a new form of bullying that unfortunately appears to be common among students; and, like other bullying, cyberbullying leads to low self-esteem, distress, and poor achievement. Unlike bullying, the process of cyberbullying can be shrouded in a cloud of anonymity for the internet bully. Table 5.9 displays the Maltese students' responses regarding school bullying.

**Table 5.9:** Responses of Maltese students regarding school bullying

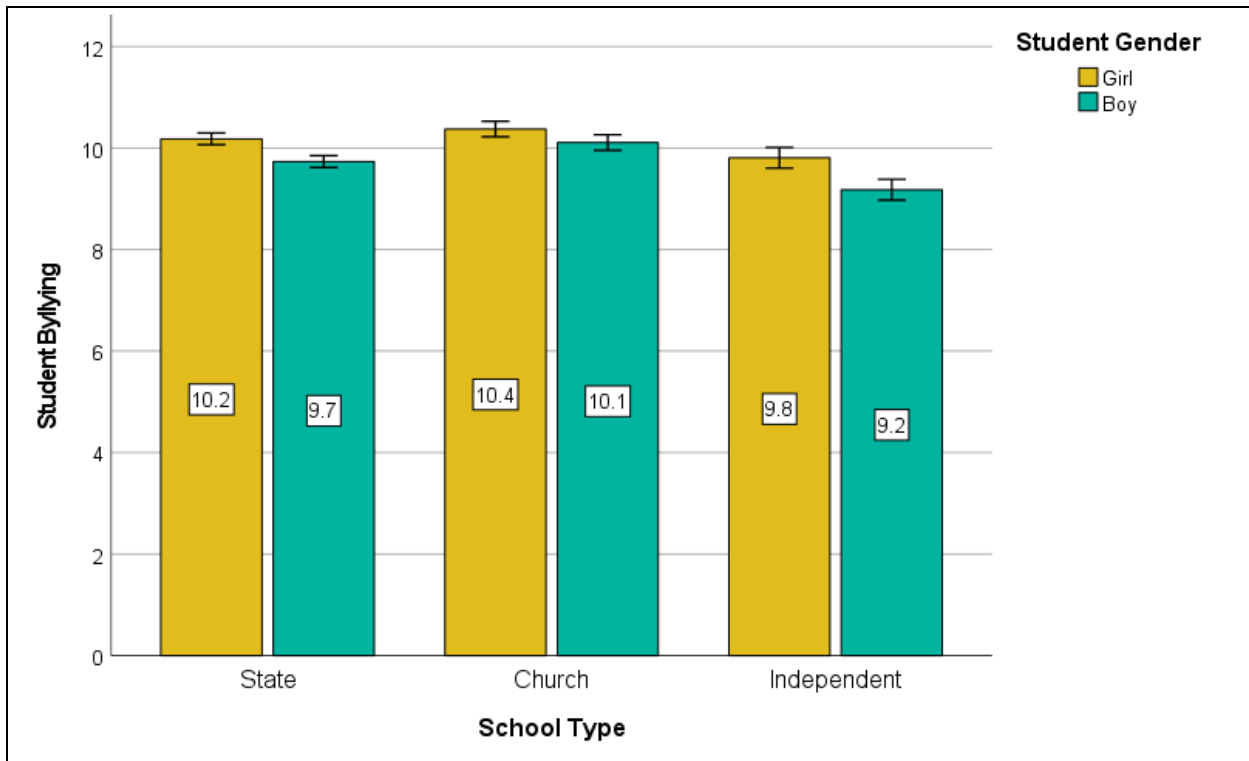
During this year, how often have other students from your school done any of the following things to you?	Few times a week	1-2 times a month	Few times a year	Never
Made fun of me or called me names	14.3%	8.6%	20.7%	56.3%
Left me out of their games or activities	11.6%	11.8%	19.8%	56.8%
Spread lies about me	10.9%	9.8%	16.4%	62.9%
Stole something from me	4.7%	3.8%	10.4%	81.1%
Damaged something of mine on purpose	5.7%	5.3%	12.0%	77.0%
Hit or hurt me (shoving, hitting, kicking)	12.5%	8.1%	19.9%	59.6%
Made me do things I didn't want to do	8.8%	8.4%	16.6%	66.2%
Sent me nasty or hurtful messages online	5.9%	5.6%	10.4%	78.1%
Shared embarrassing information about me	3.8%	3.0%	5.3%	87.8%
Threatened me	6.5%	5.8%	12.5%	75.2%

A scale score for Student Bullying was generated by considering ten items that measure bullying at school. Students who almost never experienced bullying had a score at or above 9.2 corresponding to 'never experiencing' five of the ten items and 'experiencing a few times a year' the other five, on average. Students who experience bullying about weekly had a score at or below 7.7 corresponding to 'experience bullying a few times a week' with five of the ten items and 'experiencing bullying 1-2 times a month' the other four, on average. All other students scoring between 7.7 and 9.2 experienced bullying about monthly. It should be noted that lower scores in the Student Bullying scale indicate more severe bullying experiences; while higher scores indicate no or rare bullying experiences.

**Figure 5.13:** Score distribution of bullying experiences of Maltese students



**Figure 5.14:** Mean scores of bullying experiences of Maltese students, by school type and gender



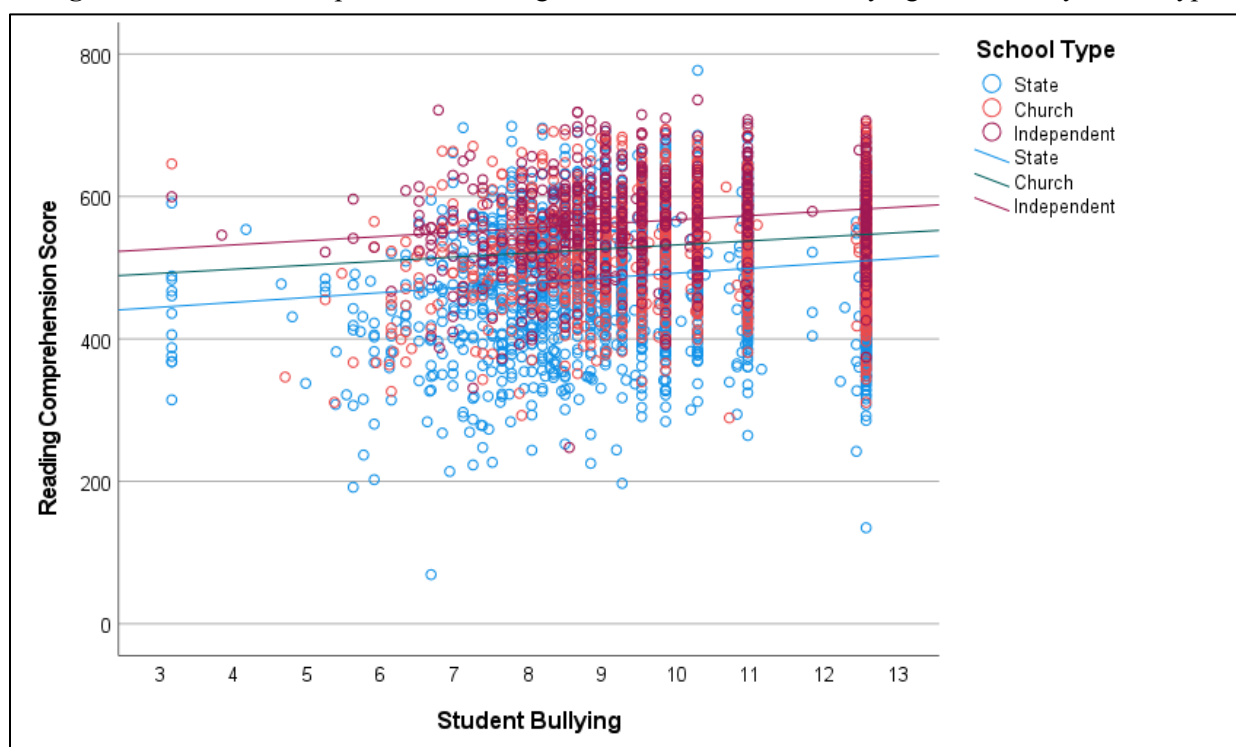
**Figure 5.15:** Relationship between reading attainment and school bullying, clustered by school type

Figure 5.13 displays the score distribution of bullying experience of Maltese students, where 63% rarely experience bullying, 26% experience bullying monthly and 11% experience bullying weekly. Figure 5.14 shows that bullying is more prevalent amongst boys than girls; and is more prevalent in Independent schools than Church and State schools. Figure 5.15 shows that there is a positive relationship between reading attainment and the absence or lack of bullying, and this applies to all school types.

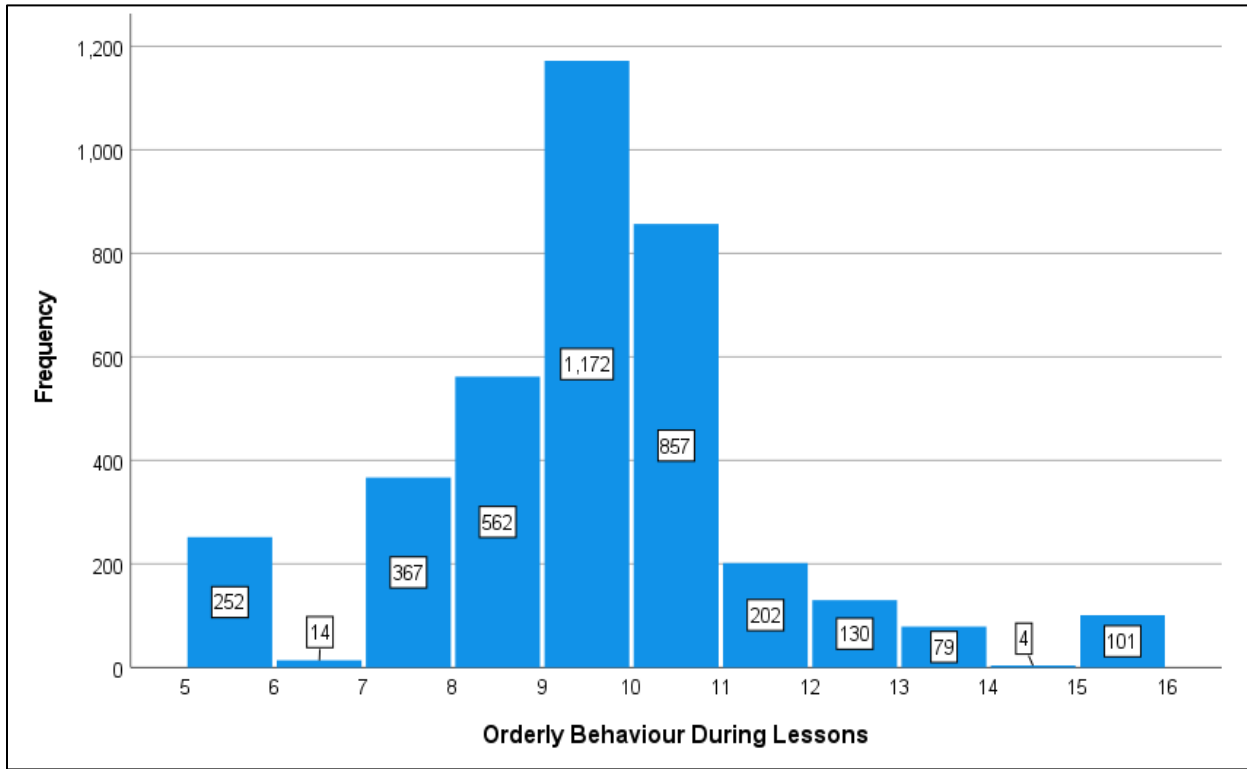
## 5.7 Orderly Behaviour during Reading Lessons

Students were asked to report the extent to which their classroom instruction in reading was hampered by their disorderly behaviour. To assess disorderly behaviour during lessons, a scale score was generated by using students' responses to five occurrences in class, displayed in Table 5.10.

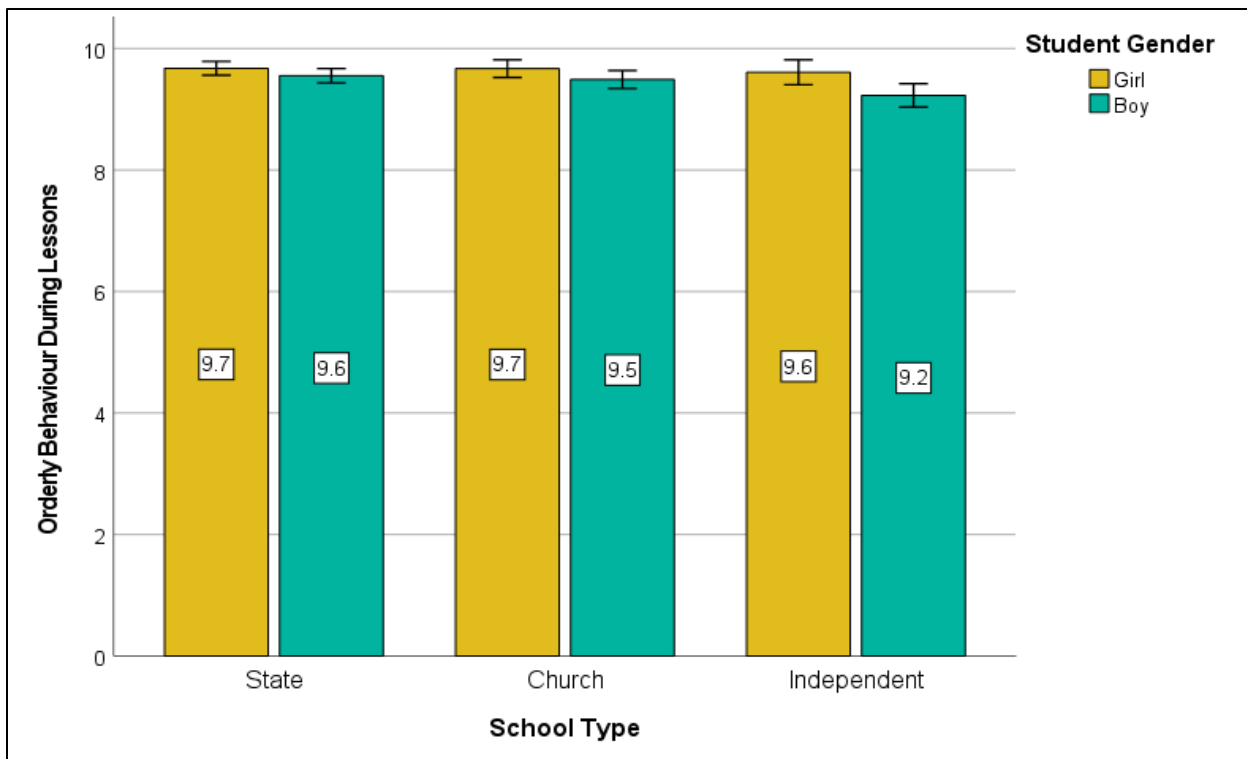
**Table 5.10:** Disorderly behaviour during lessons in Maltese schools

What do you think about reading? Tell how much you agree with each of these statements	Every lesson	About half the lessons	Some lessons	Never
Students don't listen to what the teacher says	20.3%	16.5%	43.5%	19.6%
There is too much noise for students to work well	31.5%	20.7%	32.5%	15.3%
My teacher has to wait a long time for students to be quiet	37.0%	16.6%	31.2%	15.2%
Students interrupt the teacher	33.1%	17.6%	31.9%	17.4%
My teacher has to keep telling us to follow the classroom rules	38.8%	13.4%	27.4%	20.4%

**Figure 5.16:** Score distribution of orderly behaviour during lessons of Maltese students



**Figure 5.17:** Mean scores of orderly behaviour of Maltese students, by school type and gender



A scale score for Student Disorderly Behaviour during lessons was generated by considering five items that measure disruptive conduct in class. Students who rarely engaged in disorderly behaviour during lessons had a score on the scale of at least 12.0, which corresponds to students who never engage in disorderly behaviour during lessons in three items and engage in disorderly behaviour in some lessons in the other two items, on average. Students who engaged in disorderly behaviour during most lessons had a score on the scale of at most 8.0, which corresponds to students who engage in disorderly behaviour in every lesson in three items and engage in disorderly behaviour in about half the lessons in the other two items, on average. All other students scoring between 8.0 and 12.0 engaged in disorderly behaviour in some lessons. It should be noted that lower scores in the Student Disorderly Behaviour scale indicate more disruptive behaviour; while higher scores indicate more orderly behaviour in class.

**Figure 5.18:** Relationship between reading attainment and orderly behaviour, clustered by school type

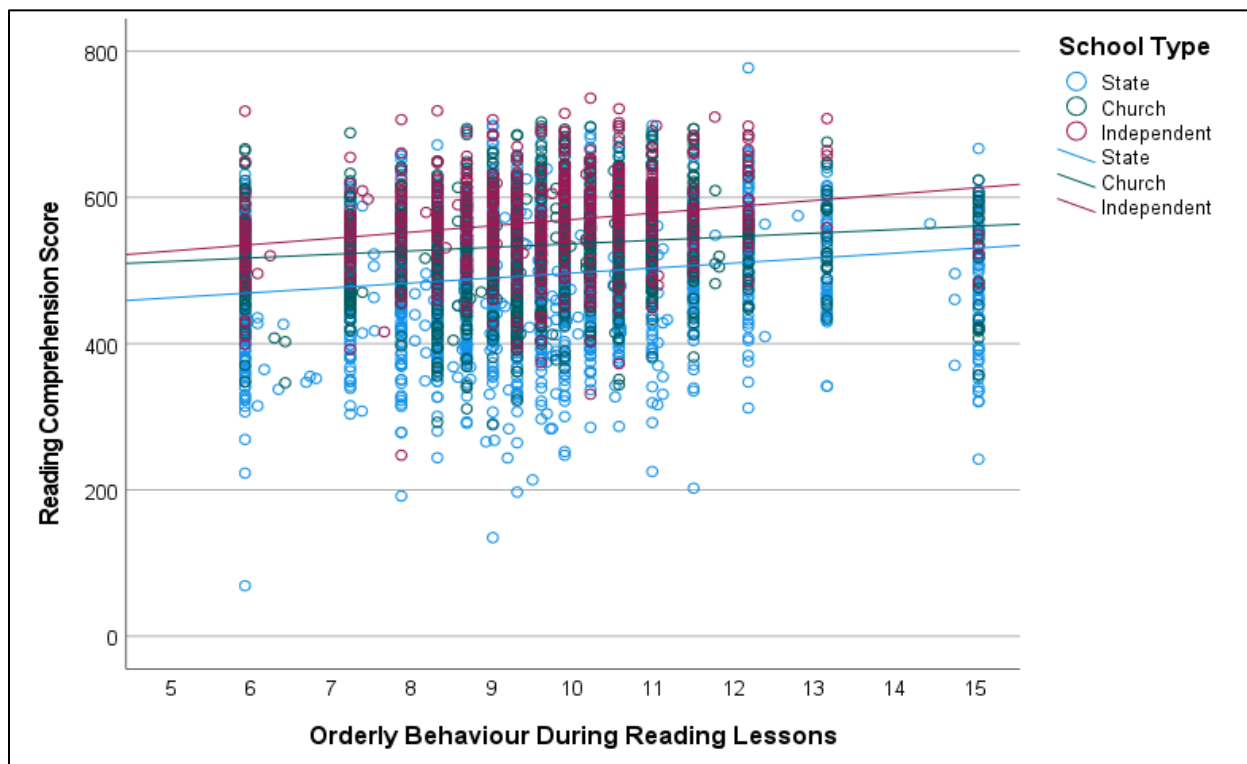


Figure 5.16 displays the score distribution of disorderly behaviour during lessons of Maltese students, where 16% engage in disorderly behaviour in most lessons, 75% engage in disorderly behaviour in some lessons, and 8% rarely or never engage in disruptive conduct during lessons. Figure 5.17 shows that disorderly behaviour is more prevalent amongst boys than girls; however, it varies marginally between school types. Figure 5.18 shows that there is a positive relationship between reading attainment and orderly behaviour during lessons, and this applies to all school types. This implies that reading attainment is enhanced when students engage in orderly behaviour during lessons, by reducing interruptions and disruptions

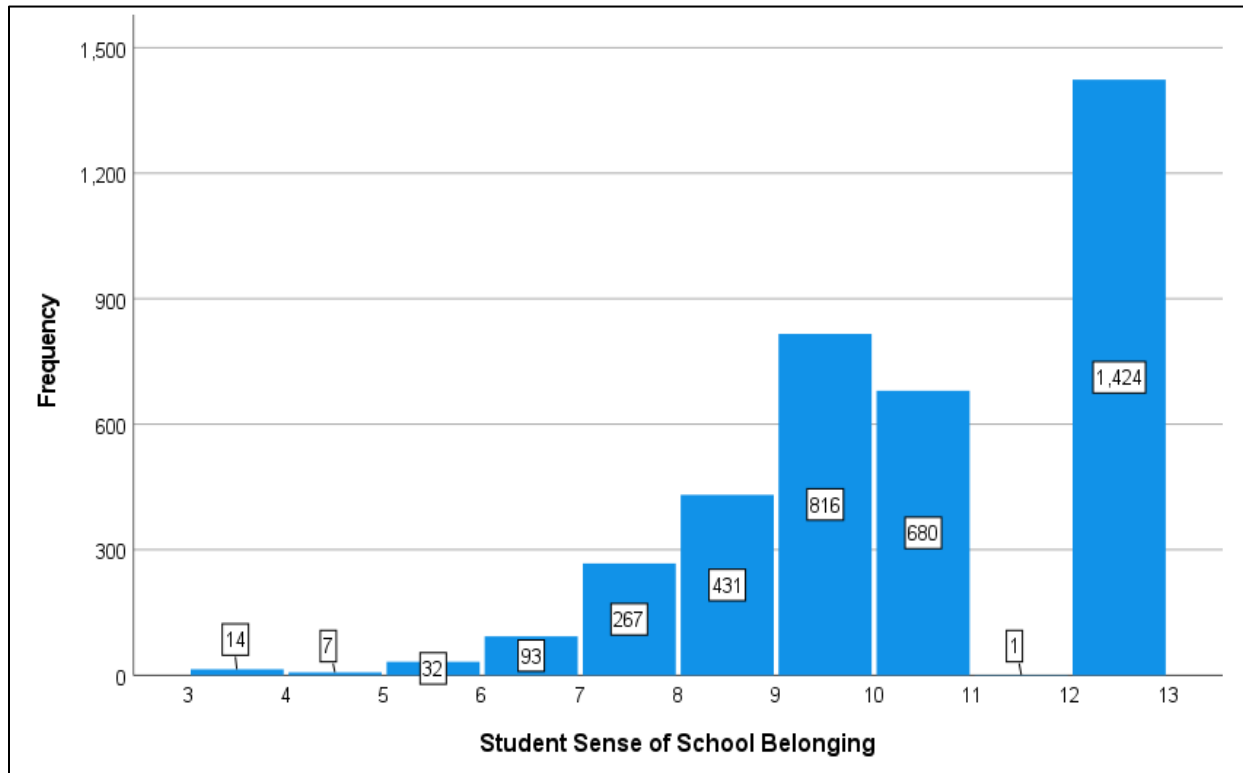
## 5.8 Students' Sense of School Belonging

Students' sense of school belonging is central to both their psychosocial well-being and their academic success. Students' sense of school belonging is a psychological state in which students 'view schooling as essential to their long-term well-being, as reflected in their participation in academic and nonacademic pursuits' and 'relations with school staff and other students'. Students with a higher sense of school belonging frequently show higher cognitive and psychosocial functioning. Adolescents with a higher sense of school belonging tend to show higher academic performance, higher intrinsic motivation, more positive attitudes toward school, and tend to have fewer psychological health and social problems, specifically lower rates of delinquency, reduced social rejection from peers, lower depression, fewer incidences of dropping out of school, and less use of illicit drugs.

**Table 5.11:** Sense of School Belonging of Maltese students

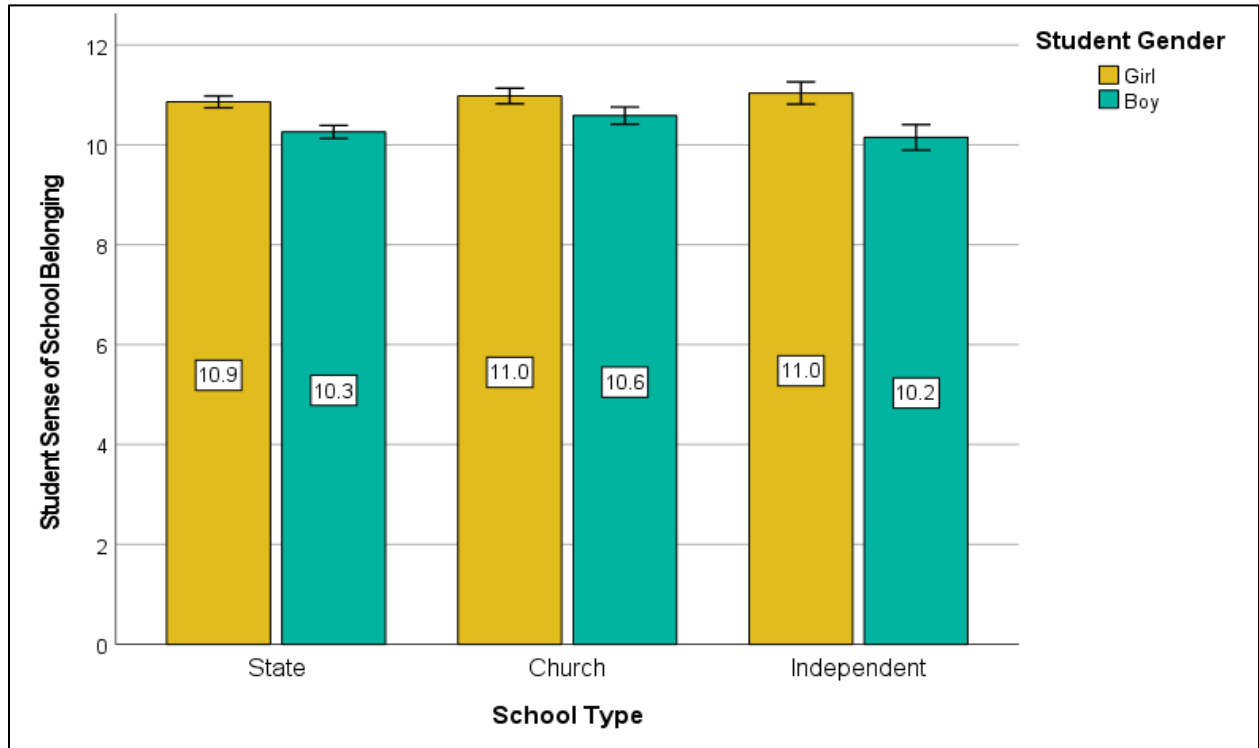
What do you think about your school? Tell how much you agree with these statements	Agree a lot	Agree a little	Disagree a little	Disagree a lot
I like being in school	59.6%	28.6%	6.4%	5.4%
I feel safe when I am at school	67.7%	22.1%	6.3%	3.8%
I feel like I belong at this school	68.5%	18.2%	7.7%	5.6%
Teachers at my school are fair to me	79.6%	14.2%	3.6%	2.6%
I am proud to go to this school	80.6%	1.4%	2.9%	2.6%
I have friends at this school	92.0%	5.4%	1.5%	1.0%

**Figure 5.19:** Score distribution of sense of school belonging of Maltese students

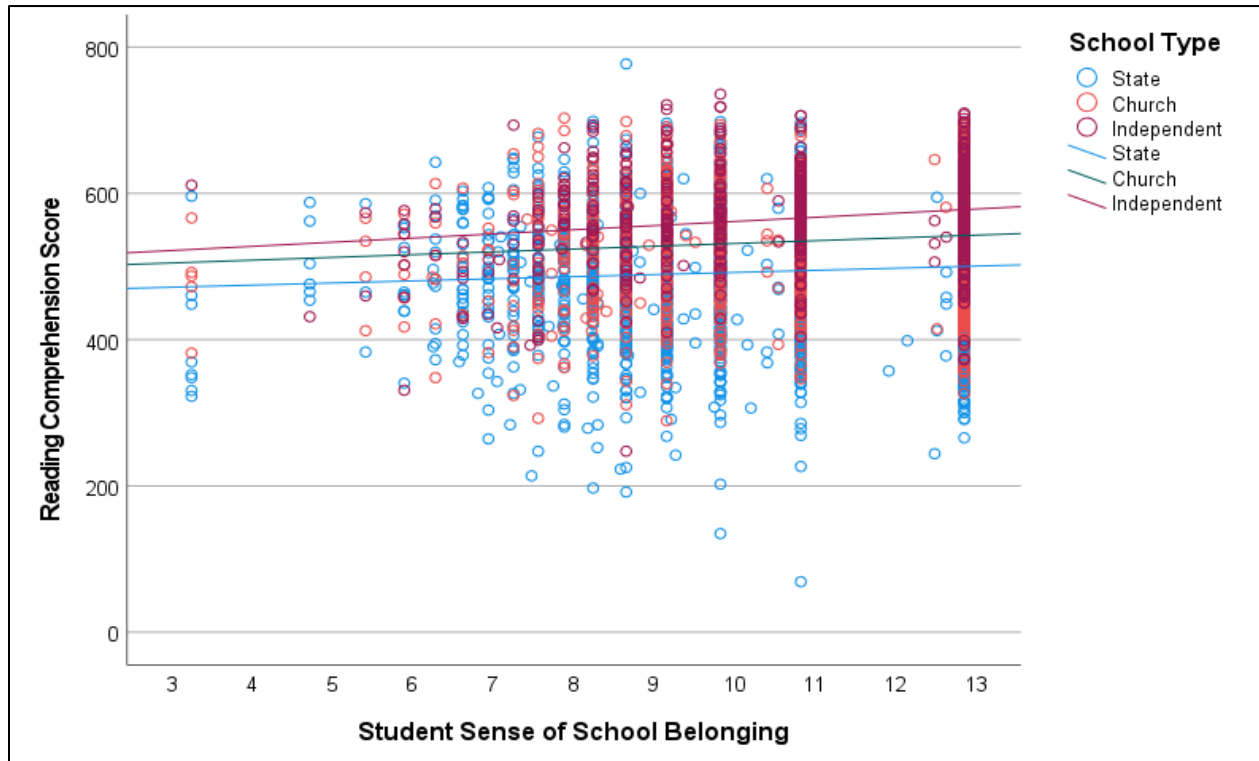


**Figure 5.17:** Mean scores of orderly behaviour of Maltese students, by school type and gender

**Figure 5.20:** Mean scores of sense of school belonging of Maltese students, by school type and gender



**Figure 5.21:** Relationship between reading attainment and sense of school belonging, by school type



To measure the students' sense of school belonging, a scale score was generated by considering students' agreement with six statements about their Sense of School Belonging, displayed in Table 5.11. Students with a high sense of school belonging had a score on the scale of at least 9.8, which corresponds to their 'agreeing a lot' to three of the six statements and 'agreeing a little' to each of the other three statements, on average. Students with little sense of school belonging had a score less than 7.3, which corresponds to their 'disagreeing a little' to three of the six statements and 'agreeing a little' to each of the other three statements, on average. All other students scoring between 7.3 and 9.8 had some sense of school belonging.

Figure 5.19 displays the score distribution of the sense of school belonging of Maltese students, where 69% have a high sense of school belonging, 26% have some sense, and 5% have little sense of school belonging. Figure 5.20 shows that girls have a higher sense of school belonging than boys; however, this varies marginally between school types. Figure 5.21 shows that there is a positive relationship between reading attainment and sense of school belonging and this applies to all school types.



## 6

# Teachers' Perspective of School Climate

## 6.1 Introduction

A positive school climate is an essential condition for a good learning environment, where safety is guaranteed, teachers' perceptions of the school and job satisfaction are high and students enjoy their time at school. In several studies, it has also been found that the climate in a school relates strongly with achievement. This chapter describes the views of teachers regarding a number of school and job-related aspects. Section 6.2 highlights teachers' perspectives regarding emphasis on academic success; section 6.3 investigates safety and order in Maltese schools; section 6.4 examines teachers' job satisfaction; and section 6.5 investigates the extent to which teaching is hindered by students who are not ready to learn. A scale score is generated for these four aspects which will be used to identify differences between genders and school types for the local context.

## 6.2 Teachers' perspectives on emphasis on academic success

Research has found that teacher collaboration can increase student learning. Teachers who discuss their work with colleagues and collaborate in planning and implementing lessons usually feel less isolated and are less likely to leave teaching. The collective education of a school's teachers also can be essential to its academic success. From as early as first grade, research has linked the collective teacher education in a school to student achievement, suggesting that collaboration among teachers with strong educational backgrounds can create an emphasis on academic success within the school and facilitate the implementation of the curriculum. In addition to testing and value-added models, research has found that classroom observations and student surveys can provide important information about the effectiveness of teaching practices.

To measure the school emphasis on academic success using the teachers' responses, a scale score was generated by considering twelve aspects of the school emphasis on academic success scale, displayed in Table 6.1. Students in schools where their teachers reported a very high emphasis on academic success had a score on the scale of at least 12.7, which corresponds to their teachers characterizing six of the twelve aspects as 'very high' and the other six as 'high', on average. Students in schools with a medium emphasis on academic success had a score less than 9.3, which correspond to their teachers characterising six of the twelve aspects as 'medium' and the other six as 'high', on

average. All other students scoring between 9.3 and 12.7 attended schools with a high emphasis on academic success.

**Table 6.1:** Responses of Maltese teachers regarding the school emphasis on academic success

How would you characterise each of the following within your school?	Very high	High	Medium	Low	Very low
Teachers' understanding of the school's curriculum goals	40.6%	52.7%	5.8%	1.0%	0.0%
Teachers' success in implementing the school's curriculum	34.8%	53.6%	11.1%	0.5%	0.0%
Teachers' expectations for student achievement	36.7%	54.6%	8.2%	0.5%	0.0%
Teachers' ability to inspire students	35.7%	54.1%	9.7%	0.5%	0.0%
Collaboration of heads of school with teachers to plan instruction	30.0%	31.9%	30.4%	5.8%	1.9%
Parental involvement in school activities	13.2%	41.5%	38.0%	3.9%	3.4%
Parental commitment to ensure that students are ready to learn	10.2%	33.7%	41.0%	9.8%	5.4%
Parental expectations for student achievement	22.0%	44.4%	26.8%	6.3%	0.5%
Parental support for student achievement	5.4%	35.8%	44.1%	9.8%	4.9%
Students' desire to do well in school	9.3%	42.4%	43.9%	2.4%	2.0%
Students' ability to reach school's academic goals	5.4%	44.4%	46.3%	3.9%	0.0%
Students' respect for classmates who excel academically	11.7%	45.4%	37.6%	3.9%	1.5%

**Figure 6.1:** Score distribution of school emphasis on academic success, according to teachers

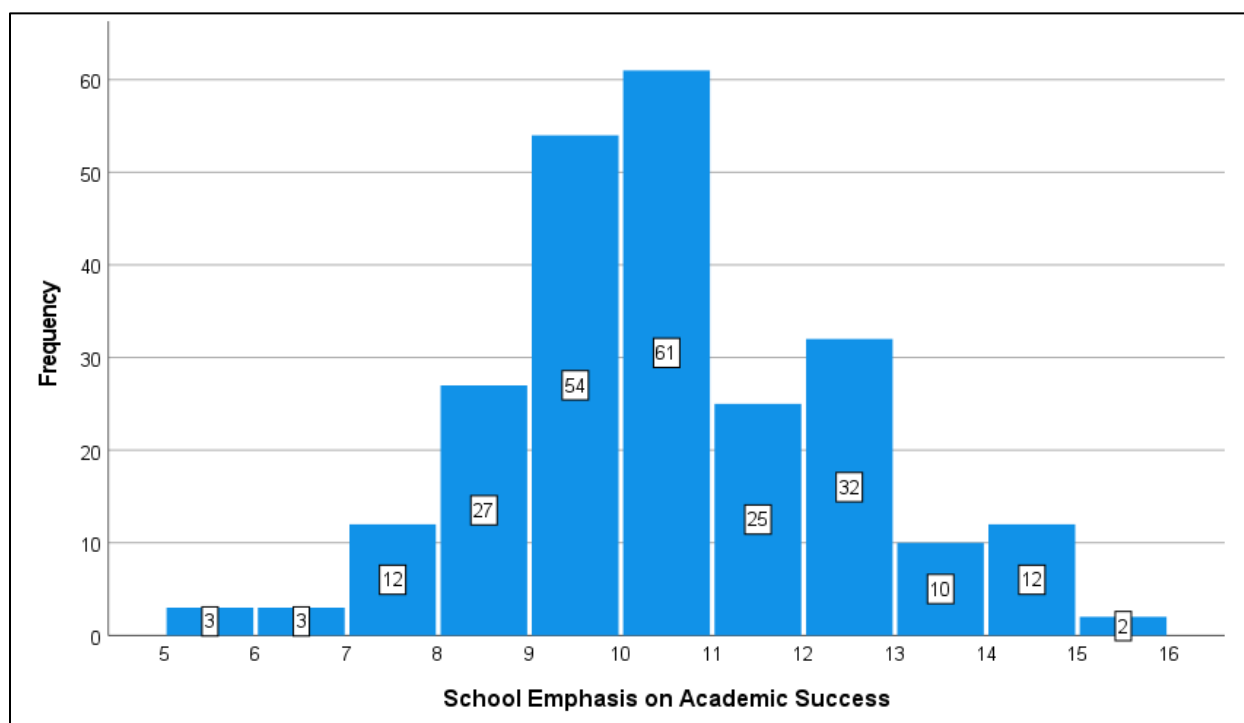
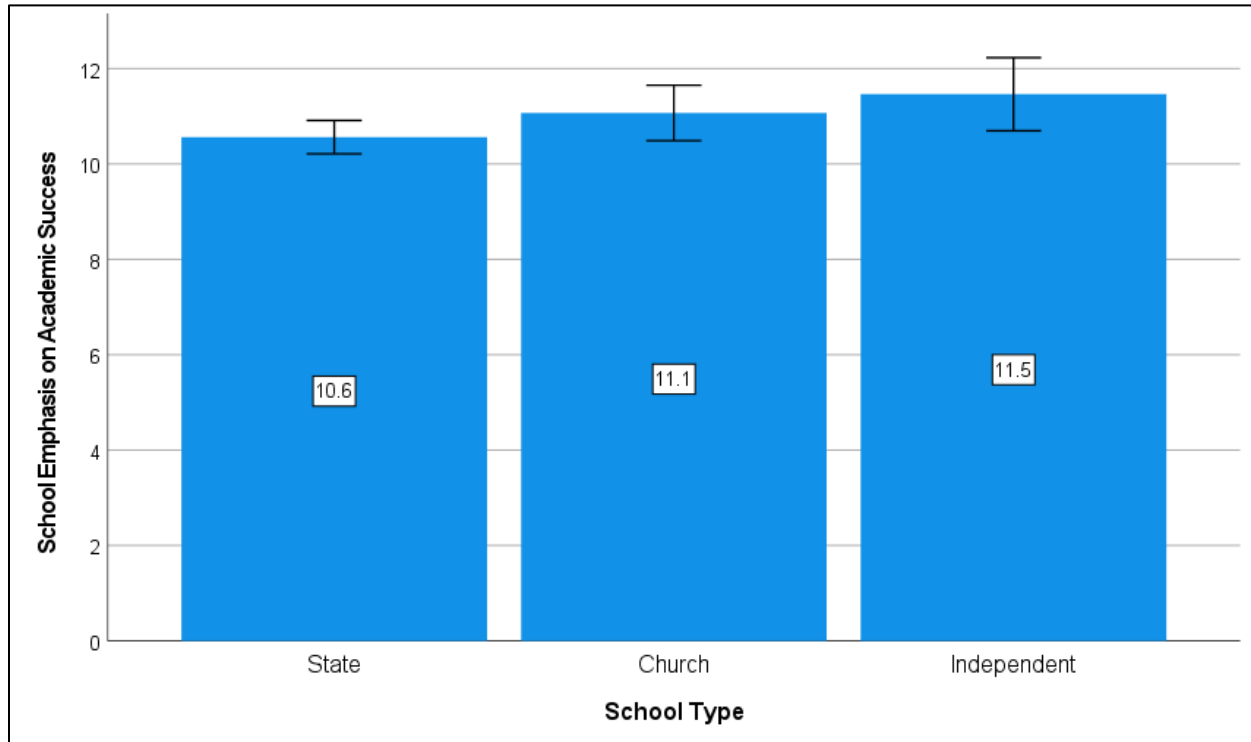


Figure 6.1 displays the score distribution of school emphasis on academic success, where 17% of teachers claim that their school makes very high emphasis on academic success; 61% claim high emphasis; and 22% of teachers claim medium emphasis on academic success. Figure 6.2 shows that according to teachers, Independent and Church schools make significantly more emphasis on academic than State schools.

**Figure 6.2:** Mean scale score of school emphasis on academic success by school type (teachers)



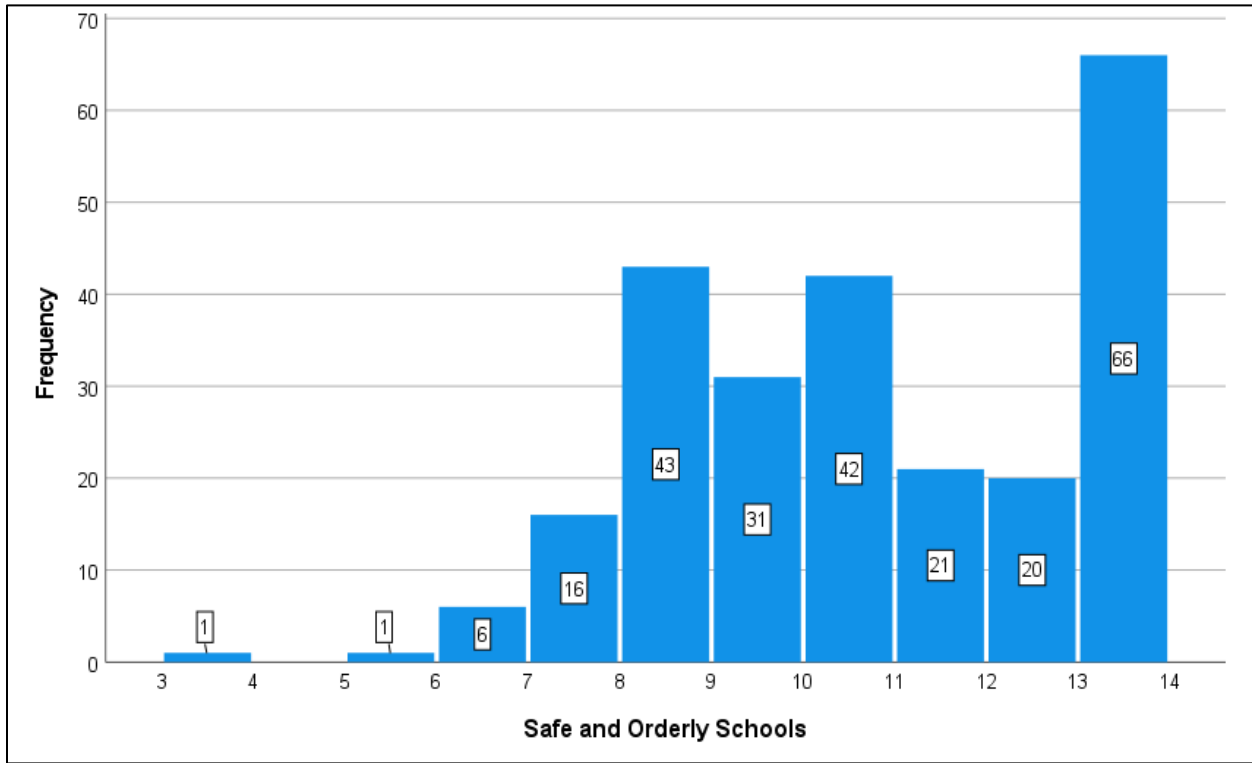
### 6.3 Safe and Orderly Schools

Respect for individual students and teachers, a safe and orderly environment and constructive interactions among administrators, teachers, parents, and students all contribute to a positive school climate and lead to higher student achievement. The sense of security that comes from having few behavioral problems and little or no concern about student or teacher safety at school promotes a stable learning environment. Table 6.2 displays the responses of the Maltese teachers regarding safety and order in their schools.

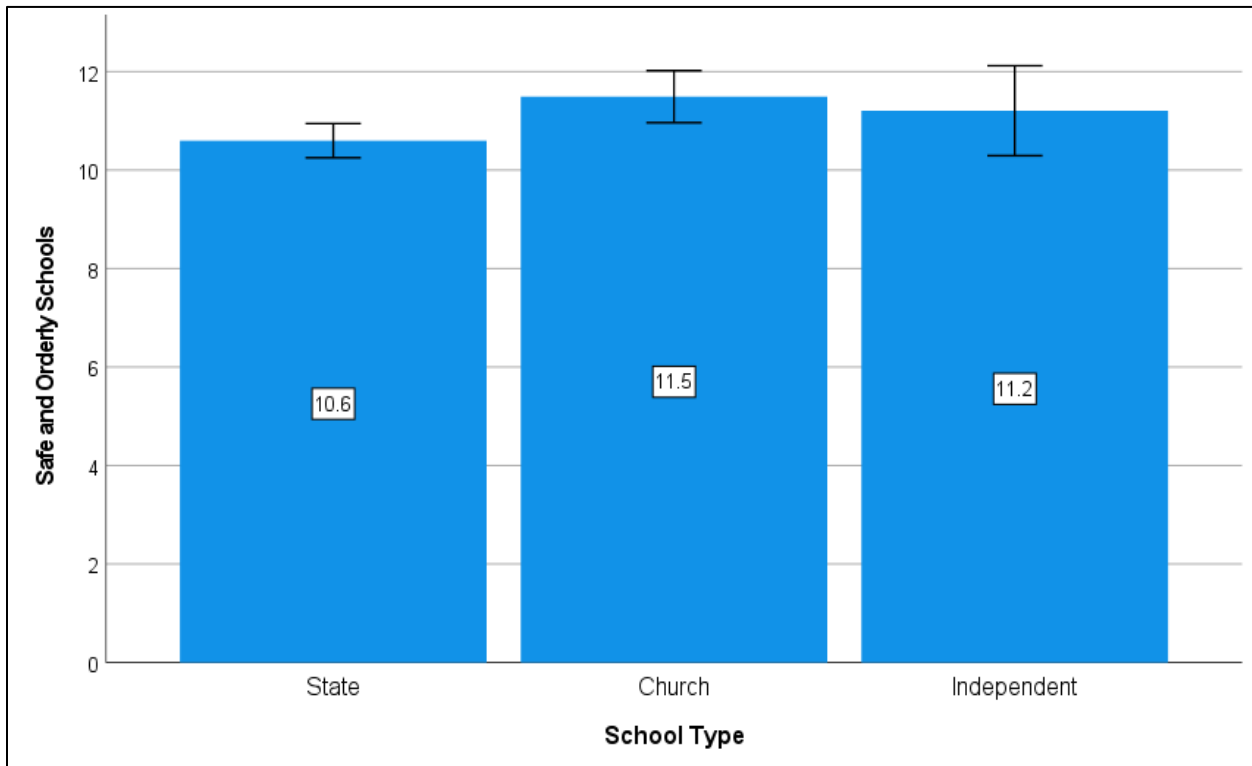
**Table 6.2:** Responses of Maltese teachers regarding safety and order in their schools

Indicate the extent to which you agree or disagree with the following statements?	Agree a lot	Agree a little	Disagree a little	Disagree a lot
This school is located in a safe neighbourhood	79.8%	17.0%	2.8%	0.4%
I feel safe at this school	86.2%	12.1%	1.2%	0.4%
This school's security policies and practices are sufficient	73.7%	21.9%	4.0%	0.4%
The students behave in an orderly manner	55.1%	34.4%	9.3%	1.2%
The students are respectful of the teachers	52.2%	36.0%	10.1%	1.6%
The students respect school property	54.3%	36.0%	7.7%	2.0%
This school has clear rules about school conduct	62.8%	27.1%	7.3%	2.8%
School's rules are enforced in a fair/consistent manner	57.5%	31.2%	8.9%	2.4%
The students are respectful of each other	40.1%	51.8%	6.9%	1.2%

**Figure 6.3:** Score distribution of Maltese teachers' perceptions of safety and order in their schools



**Figure 6.4:** Mean scale scores of teachers' perceptions of safety and order in their schools, by school type



Students with teachers who attended very safe and orderly schools had a score on the scale of at least 10.1, which corresponds to their teachers 'agreeing a lot' with five of the nine qualities of a safe and orderly school and 'agreeing a little' with the other four, on average. Students with teachers who attended less safe and orderly schools had a score less than 6.4, which correspond to their teachers 'disagreeing a little' with five of the nine qualities and 'agreeing a little' with the other four, on average. All other students with teachers scoring between 6.4 and 10.1 attended somewhat safe and orderly schools. The larger the scale scores the safer and orderly are the schools.

Figure 6.3 displays the score distribution of Maltese teachers' perceptions regarding safety and order in their schools, where 60% of the teachers consider their schools very safe and orderly; 38% consider their school somewhat safe; and 2% consider their schools less than safe and orderly. Figure 6.4 shows that mean scale score for safety and order in State schools is significantly lower than Church and Independent schools, which implies that safety and order in State schools is more problematic than in Church and Independent schools.

## 6.4 Teaching limited by students' lack of readiness to learn

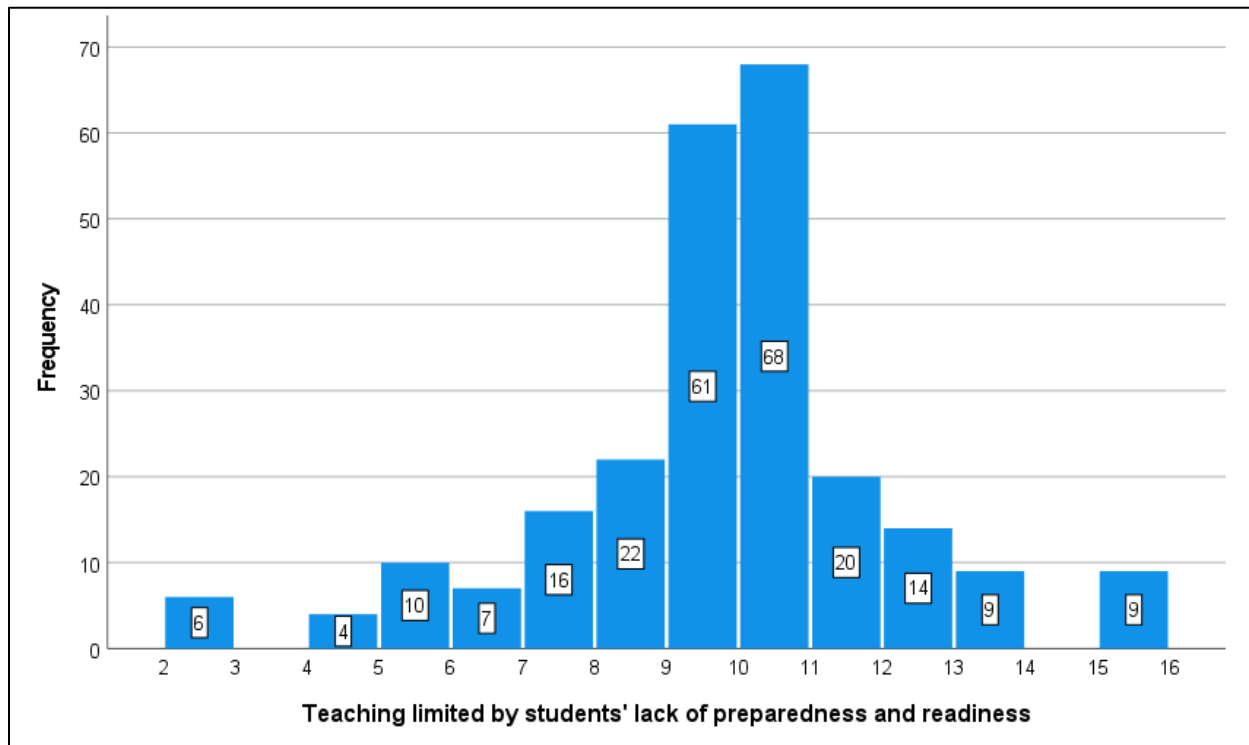
Teachers were asked to report the extent to which their classroom instruction in reading was limited by students' preparedness and readiness to learn. To assess classroom instruction limitations, a scale score was generated by using teachers' responses to eight attributes of their students that could limit how they teach their class, which are displayed in Table 6.3.

**Table 6.3:** Teaching limited by students' lack of preparedness and readiness to learn in Maltese schools

In your view, to what extent do the following limit how you teach this class?	Not at all	Some	A lot
Students lacking prerequisite knowledge or skills	13.8%	62.2%	24.0%
Students suffering from lack of basic nutrition	76.0%	18.7%	5.3%
Students suffering from not enough sleep	45.1%	43.1%	11.8%
Students absent from class	45.9%	40.7%	13.4%
Disruptive students	39.0%	42.3%	18.7%
Uninterested students	26.9%	55.5%	17.6%
Students with mental/emotional/psychological impairment	46.7%	42.3%	11.0%
Students needing extra support in reading	11.8%	67.1%	21.1%

Students with teachers who felt their teaching was hardly limited by the students' lack of preparedness and readiness had a score on the scale of at least 10.5, which corresponds to their teachers feeling 'not at all' limited by four student attributes and to 'some extent' by the other four attributes, on average. Students with teachers who felt greatly limited had a score lower than 6.2, which correspond to their teachers feeling limited 'a lot' by four attributes and to 'some extent' by the other three attributes. All other students with teachers scoring between 6.8 and 10.5 felt their teaching was limited to some extent by the students' lack of preparedness and readiness.

**Figure 6.5:** Score distribution of teaching limitations affected by Maltese students' lack of readiness



**Figure 6.6:** Mean scale scores for teaching limited by lack of students' readiness, by school type

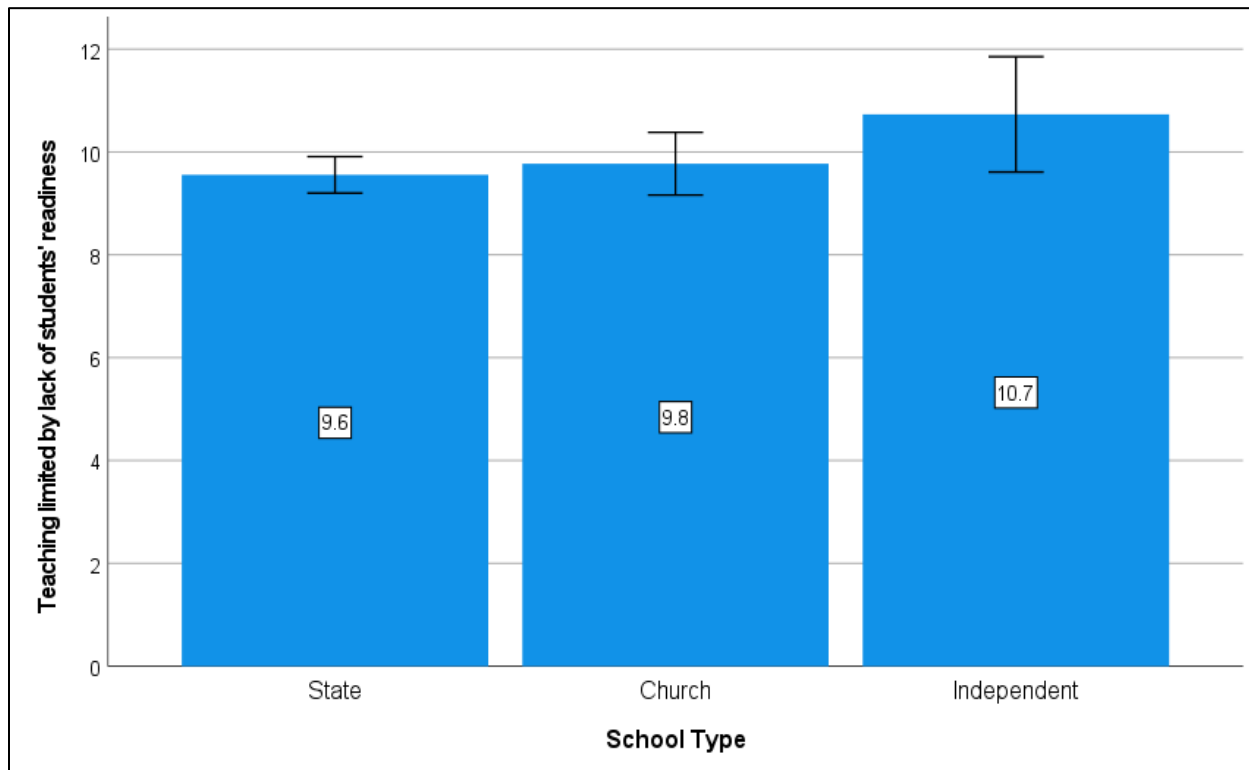


Figure 6.5 displays the score distribution of teaching limited by students' lack of readiness to learn, where 36% of the teachers claim that lack of preparedness and readiness to learn (lack of skills, lack of sleep, poor nutrition, absence from class, disruptive, uninterested, has learning impairments) has very little impact on teaching; 53% claim that it has some impact; and 11% claim it has a lot of impact on instruction. Figure 6.6 shows that according to teachers, Independent school students are less impacted on classroom instruction due to their lack of preparedness and readiness to learn than State and Church school students.

## 6.5 Teachers' Job Satisfaction

Research showed higher achievement for schools that provide good working conditions for teachers. A manageable workload, adequate facilities, and the availability of instructional materials are important ingredients to fostering productive working conditions and promoting teacher satisfaction. In addition, a positive school environment can lead to greater job satisfaction and teacher self-efficacy, which in turn can increase student learning. Schools can support teachers and increase retention by providing competitive salaries, a reasonable number of teaching hours, adequate workspace, and good equipment.

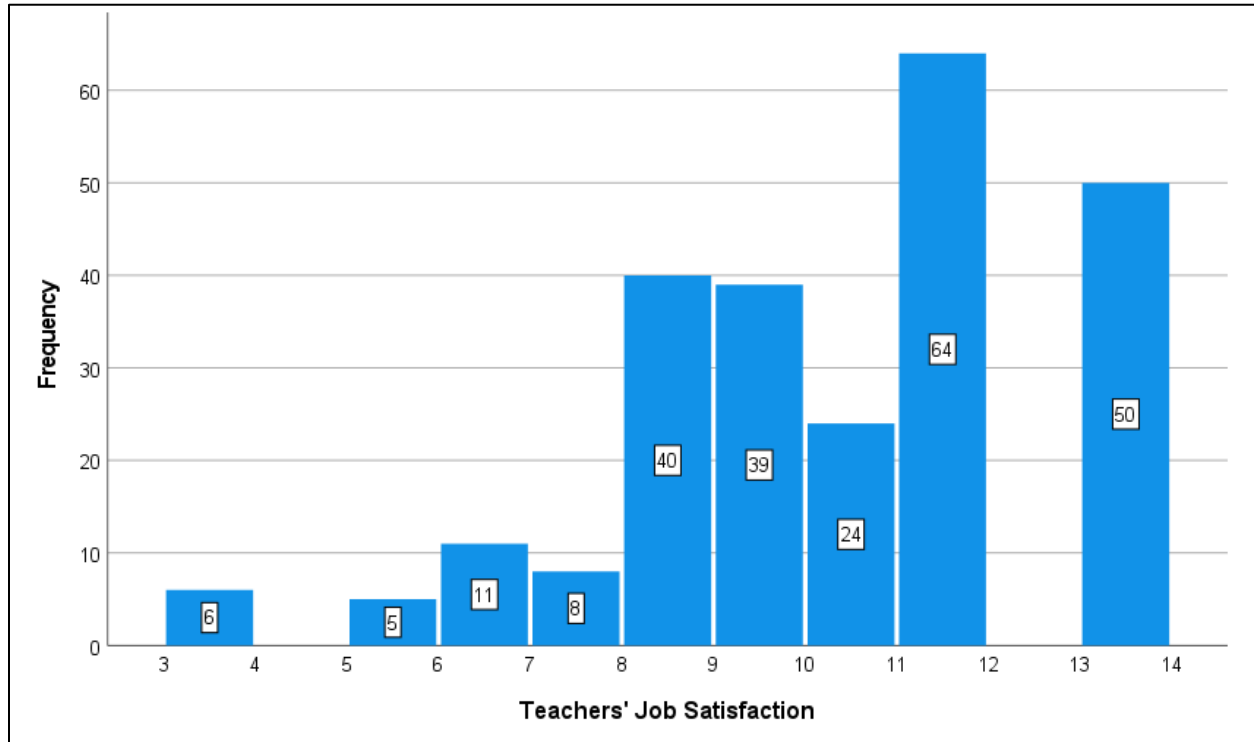
While the physical conditions of the school are important, the social conditions of the school can be essential to retaining teachers and fostering student achievement. Important social factors in a school include a positive school culture, collaboration among teaching staff, and the leadership of the head of school. The transition from university to a school teaching position can be difficult. Consequently, in many countries a large percentage of new teachers leave the profession after only a few years of teaching. The extent to which schools take an active role in the acculturation and transition of new teachers may be important for maintaining a stable teaching force.

**Table 5.4:** Responses of Maltese teachers regarding their job satisfaction

How often do you feel the following way about being a teacher?	Very often	Often	Sometimes	Never or rarely
I am content with my profession as a teacher	54.3%	37.2%	6.9%	1.6%
I find my work full of meaning and purpose	56.7%	33.2%	8.9%	1.2%
I am enthusiastic about my job	60.3%	32.0%	6.1%	1.6%
My work inspires me	57.9%	32.4%	8.1%	1.6%
I am proud of the work I do	70.4%	23.9%	4.9%	0.8%
I feel appreciated as a teacher	24.3%	33.2%	37.7%	4.9%

To measure the teachers' job satisfaction, a scale score was generated by considering how teachers responded positively to the five statements on the Teacher Job Satisfaction scale, displayed in Table 5.4. Very satisfied teachers had a score on the scale of at least 10.1, which corresponds to responding 'very often' to three of the six statements and responding 'often' to the other two, on average. Less satisfied teachers had a score less than 7.0, which corresponds to responding 'sometimes' to three of the six statements and 'often' to the other two, on average. All other teachers who scored between 7.0 and 10.1 were somewhat satisfied with their job.

**Figure 6.7:** Score distribution of Maltese teachers' job satisfaction



**Figure 6.8:** Mean scale score of Maltese teachers' job satisfaction, clustered by school type

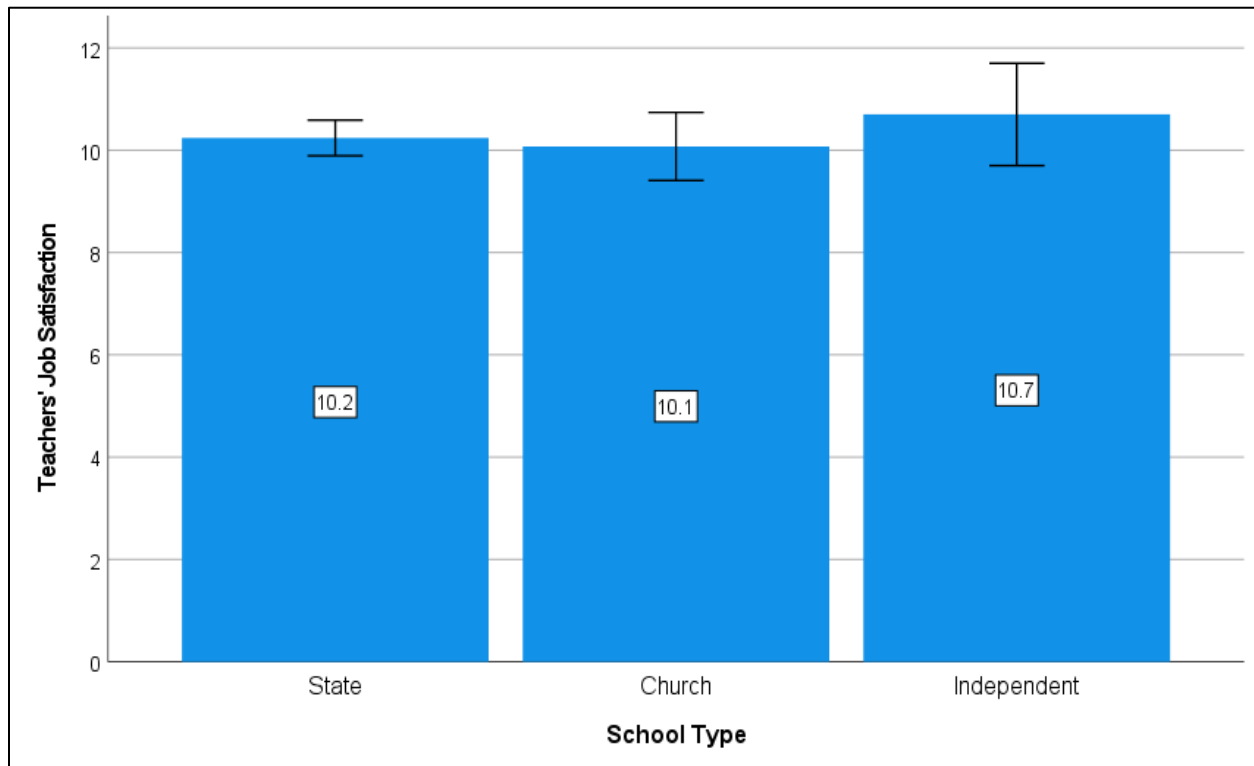


Figure 6.7 displays the score distribution of Maltese teachers' job satisfaction, where 56% of the teachers are very satisfied; 35% are somewhat satisfied; and 9% are less than satisfied. Figure 6.8 shows that the mean job satisfaction scores of State and Church school teachers are lower than the mean job satisfaction score of Independent school teachers, however the difference is not significant.



## 7

# Summarising Results

## 7.1 Introduction

Chapter 7 summarises the main results of the PIRLS 2021 survey. Section 7.2 displays the results of the regression analysis, where the reading comprehension scores are related to all the scales generated from the students' and parents' questionnaires collectively. Section 7.3 provides the mean scores for all scales generated from students' parents', teachers and heads' of schools questionnaires, clustered by school type.

## 7.2 Regression Analysis

**Table 7.1:** Regression coefficients, standard errors and p-value

Model	Unstandardized Coefficients				
	B	Std. Error	Beta	t	P-value
Constant	160.115	19.690		8.132	<0.001
Digital self-efficacy	4.682	0.802	0.106	5.840	<0.001
Students' sense of school belonging	3.229	0.835	0.082	3.866	<0.001
Lack of students' bullying	2.041	0.776	0.049	2.631	0.009
Students' engagement in reading	1.794	0.881	0.045	2.036	0.042
Orderly behaviour during lessons	3.541	0.782	0.082	4.529	<0.001
Students' reading enjoyment	3.198	0.740	0.087	4.323	<0.001
Students' confidence in reading	13.359	0.728	0.332	18.352	<0.001
Home resources for learning	14.032	0.835	0.243	18.120	<0.001
Home socio-economic status	5.643	1.699	0.125	3.320	<0.001
Early literacy activities before school	0.463	0.757	0.012	0.612	0.541
Early literacy tasks before school	6.441	0.766	0.153	8.413	<0.001
Parents' perception of child's school	1.117	0.959	0.021	1.165	0.244
Parents' reading enjoyment	0.754	0.784	0.018	0.961	0.337

Table 7.1 displays the regression coefficients, standard error and p-values of the regression model for the Maltese data set. These regression coefficients are the effect sizes that measure the relationship between the dependent variable (reading comprehension score) and each explanatory variable (predictor). A positive regression coefficient indicates a positive relationship between the dependent variable and the predictor. Moreover, a p-value smaller than the 0.05 level of significance indicates that the relationship is significant and not attributed to chance. This table also shows that students' confidence in reading and home resources are the best predictors of reading comprehension. These are followed by early literacy tasks before school, digit self-efficacy, orderly behaviour during lessons, students' reading enjoyment, students' sense of school belonging, home socio-economic status, lack of students' bullying, and students' engagement in reading. Moreover, an improvement in these ten predictors will significantly enhance reading comprehension. Early literacy activities before school, parents' perception of the children's schools and parents' reading enjoyment had negligible impact on reading comprehension achievement.

### 7.3 Indices generated from questionnaires

**Table 7.2:** Mean scores for scales generated from the four questionnaires, clustered by school type

Scales	Mean Scale Score			
	All schools	State schools	Church schools	Independent schools
Digital self-efficacy	10.3	10.1	10.4	10.6
Students' sense of school belonging	10.6	10.6	10.8	10.6
Lack of students' bullying	10.0	10.0	10.2	9.5
Students' engagement in reading	10.6	10.6	10.7	10.4
Orderly behaviour during lessons	9.6	9.6	9.6	9.4
Students' reading enjoyment	10.1	10.2	10.2	9.9
Home resources for learning	10.8	10.4	11.2	11.7
Students' confidence in reading	9.8	9.5	10.0	10.5
Home socio-economic status	10.8	10.2	11.3	11.9
Early literacy activities before school	11.0	10.9	11.2	11.1
Early literacy tasks before school	10.3	10.1	10.4	10.4
Parents' perception of child's school	11.2	11.1	11.3	11.0
Parents' reading enjoyment	9.8	9.7	9.9	10.1
Lack of reading resource shortages	9.9	9.6	10.6	10.4
School Discipline	11.3	11.2	11.6	11.5
Emphasis on academic success	10.8	10.6	11.1	11.5
Safe and orderly schools	10.9	10.6	11.5	11.2
Teaching limited by students' lack of readiness	9.7	9.6	9.8	10.7
Teachers' Job satisfaction	10.2	10.2	10.1	10.7

The indices (scale scores) created from the student, parent and head of school questionnaires were generated by using latent modelling within the framework of confirmatory factor analysis (CFA). CFA treats items as indicators of unobservable personal characteristics of respondents and uses combinations of items to develop a model of the latent construct. After testing and confirming a stable latent construct model, scale scores are estimated to serve as numeric values for the latent variables. Moreover, measurement invariance testing was carried out to test school comparability. Across the four instruments (head of school, teacher, student and parent questionnaires), the scales reached the metric level of invariance allowing comparisons between schools. These scale scores have means close to 10, which represents the international average.

Table 7.2 displays the mean score of each generated scale for State, Church and Independent schools and for all schools combined. Boxes highlighted in yellow indicate that Malta's school performance is significantly better than the international average (around 10); while boxes highlighted in red indicate that Malta's school performance is significantly poorer than this international average and this is where the schools could improve their performance. Boxes highlighted in white indicate that the Malta's school performance is similar (comparable) to the international average. Overall, Malta is performing significantly better than average in most scales. Recommendations include, improving students' orderly behaviour during lessons in all school types, reducing student bullying in Independent schools and improving preparedness and readiness of students to learn in State schools.



# APPENDIX

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## A. Head of School Questionnaire

What is the total enrolment of student in your school in 2021?	Frequency	Percentage
1-100	3	3.2%
101-200	25	26.3%
201-300	17	17.9%
301-400	19	20.0%
401-500	12	12.6%
More than 500	19	20.0%

What is the total enrolment of Year 5 students in your school in 2021?	Frequency	Percentage
1-20	23	23.5%
21-40	24	24.5%
41-60	24	24.5%
61-80	18	18.4%
81-100	4	4.1%
More than 100	5	5.1%

Approximately what percentage of students in your school has the following backgrounds?	0-10%	11-25%	26-50%	51-100%
Coming from economically disadvantaged homes	68.0%	13.4%	13.4%	5.2%
Coming from economically affluent homes	41.2%	13.4%	15.5%	29.9%

How many people live in the city, town or area where your school is located?	Frequency	Percentage
More than 15000 people	17	17.3%
3000-15000 people	56	57.1%
Less than 3000 people	25	25.5%

Which best describes the immediate area in which your school is located?	Frequency	Percentage
Medium size city or large town	41	41.8%
Small town or village	55	56.1%
Remote rural area	2	2.0%

How many days per year is your school open for instruction?	Frequency	Percentage
141-160	28	28.6%
161-170	38	38.8%
171-180	21	21.4%
181-200	5	5.1%
More than 200	6	6.1%

What is the total instructional time, excluding breaks, in a typical day?	Frequency	Percentage
101-200	2	2.0%
201-300	21	21.4%
301-400	73	74.5%
401-500	2	2.0%

In one calendar week, how many days is the school open for instruction?	Frequency	Percentage
5 ½ days	2	2.0%
5 days	96	98.0%

Does your school have a school library?	Frequency	Percentage
Yes	72	73.5%
No	26	26.5%

Approximately how many books with different titles does your school library have?	Frequency	Percentage
2000 books or fewer	43	59.7%
More than 2000 books	29	40.3%

Can students borrow print and digital material from the library to take home?	Frequency	Percentage
Yes	67	93.1%
No	5	6.9%

Does the school provide access students to digital learning resources?	Frequency	Percentage
Yes	87	88.8%
No	11	11.2%

How many computers/tablets does your school have for use by Year 5 students?	Frequency	Percentage
0-10	10	10.2%
11-20	17	17.3%
21-30	15	15.3%
31-50	19	19.4%
51-75	23	23.5%
76 or more	14	14.3%

How much is your school's capacity to provide instruction affected by a shortage/inadequacy of the following?	Not at all	A little	Some	A lot
Instructional materials	61.2%	12.2%	15.3%	11.2%
Supplies	68.4%	9.2%	13.3%	9.2%
School building and grounds	33.7%	33.7%	20.4%	12.2%
Heating/cooling and lighting systems	34.7%	33.7%	22.4%	9.2%
Instructional space	38.8%	26.5%	19.4%	15.3%
Technologically competent staff	22.4%	35.7%	30.6%	11.2%
Technology and media resources to support teaching	26.5%	36.7%	23.5%	13.3%
Technology and media resources to support learning	27.8%	37.1%	24.7%	10.3%
Resources for students with learning disabilities	17.3%	38.8%	29.6%	14.3%
Internet connection	26.5%	28.6%	24.5%	20.4%

How much is your school's capacity to provide instruction affected by a shortage/inadequacy of reading resources?	Not at all	A little	Some	A lot
Teachers with a specialisation in reading	23.5%	38.8%	27.6%	10.2%
Computer software/applications for reading instruction	26.5%	43.9%	23.5%	6.1%
Library resources	41.8%	26.5%	22.4%	9.2%
Instructional material for reading	45.9%	24.5%	18.4%	11.2%

How would you characterise each of the following within your school?	Very high	High	Medium	Low	Very low
Teachers' understanding of the school's curriculum goals	23.5%	62.2%	13.3%	1.0%	0.0%
Teachers' degree of success in implementing the school's curriculum	17.3%	58.2%	24.5%	0.0%	0.0%
Teachers' expectations for student achievement	17.3%	59.2%	22.4%	1.0%	0.0%
Teachers' ability to inspire students	18.4%	63.3%	18.4%	0.0%	0.0%
Collaboration between school leadership and teachers to plan instruction	32.7%	52.0%	15.3%	0.0%	0.0%
Parental involvement in school activities	15.3%	36.7%	39.8%	7.1%	1.0%
Parental commitment to ensure that students are ready to learn	7.1%	55.1%	28.6%	6.1%	3.1%
Parental expectations for student achievement	15.3%	58.2%	18.4%	6.1%	2.0%
Parental support for student achievement	5.2%	48.5%	39.2%	4.1%	3.1%
Students' desire to do well in school	11.2%	53.1%	31.6%	3.1%	1.0%
Students' ability to reach school's academic goals	5.1%	42.9%	45.9%	5.1%	1.0%
Students' respect for classmates who excel academically	11.2%	53.1%	34.7%	1.0%	0.0%

To what degree is each of the following a problem among Year 5 students in your school?	Not a problem	Minor problem	Moderate problem	Serious problem
Arriving late at school	68.4%	29.6%	1.0%	1.0%
Absenteeism	61.2%	34.7%	3.1%	1.0%
Classroom disturbance	55.1%	38.8%	6.1%	0.0%
Cheating	81.6%	17.3%	1.0%	0.0%
Profanity	86.7%	11.2%	2.0%	0.0%
Vandalism	93.9%	6.1%	0.0%	0.0%
Theft	95.9%	3.1%	1.0%	0.0%
Intimidation or verbal abuse among students	58.2%	35.7%	6.1%	0.0%
Physical fights among students	78.4%	20.6%	1.0%	0.0%
Intimidation or verbal abuse of teachers or staff	94.9%	4.1%	1.0%	0.0%

About how many of the students in your school have basic literacy skills when they begin Year 1 of primary school?	Less than 25%	25-50%	51-75%	More than 75%
Basic literacy skills	38.8%	17.3%	18.4%	25.5%

At which year do these reading skills and strategies first receive a major emphasis in instruction?	Year 1	Year 2	Year 3	Year 4	After Year 4
Knowing letters of the alphabet	100.0%	0.0%	0.0%	0.0%	0.0%
Knowing letter-sound relationships	100.0%	0.0%	0.0%	0.0%	0.0%
Reading words	99.0%	1.0%	0.0%	0.0%	0.0%
Reading isolated sentences	97.9%	2.1%	0.0%	0.0%	0.0%
Reading connected text	85.4%	14.6%	0.0%	0.0%	0.0%
Locating information within the text	58.2%	36.7%	5.1%	0.0%	0.0%
Identifying the main idea of a text	41.8%	40.8%	14.3%	3.1%	0.0%
Explaining or supporting understanding of a text	48.0%	33.7%	16.3%	2.0%	0.0%
Comparing a text with personal experience	31.6%	27.6%	27.6%	13.3%	0.0%
Comparing different texts	8.2%	28.6%	37.8%	15.3%	10.2%
Making predictions about what will happen next in a text	38.8%	19.4%	27.6%	13.3%	1.0%
Making generalisations and drawing inferences based on a text	25.5%	19.4%	27.6%	17.3%	10.2%
Evaluating and critiquing the style/structure of a text	2.0%	13.3%	20.4%	29.6%	34.7%
Determining the author's perspective or intention	4.1%	13.3%	15.3%	36.7%	30.6%

By the end of this year, how long have you been a head of school altogether?	Frequency	Percentage
1-5 years	27	27.6%
6-10 years	34	34.7%
11-15 years	23	23.5%
16-20 years	8	8.2%
More than 20 years	6	6.1%

By the end of this year, how long have you been a head of school at this school?	Frequency	Percentage
1-5 years	46	46.9%
6-10 years	36	36.7%
11-15 years	10	10.2%
16-20 years	1	1.0%
More than 20 years	5	5.1%

What is the highest level of formal education you have completed?	Frequency	Percentage
Did not complete ISCED 6 (Bachelor's degree or equivalent)	0	0.0%
Completed ISCED 6 (Bachelor's degree or equivalent)	21	22.1%
Completed ISCED 7 (Master's degree)	72	75.8%
Completed ISCED 8 (Doctor or equivalent)	2	2.1%

Do you hold the following professional qualifications in educational leadership?	Frequency	Percentage
Certificate or license	62	64.6%
Master's or equivalent level	53	55.8%
Doctorate or equivalent level	1	1.0%

Estimate the number of weeks during the current academic year where normal primary school operations have been affected by the COVID-19 pandemic.	Frequency	Percentage
Normal primary school operations have not been affected by the COVID-19 pandemic	8	8.3%
Less than two weeks of instruction	13	13.5%
Two weeks to four weeks of instruction	58	60.4%
Five weeks to eight weeks of instruction	8	8.3%
More than eight weeks of instruction	9	9.4%

Does your school provide remote instruction or distance learning resources when normal school operations are affected by the COVID-19 pandemic?	Frequency	Percentage
Yes	95	99.0%
Does not apply	1	1.0%

When normal primary school operations are affected by the COVID-19 pandemic, does your school support remote learning through the following?	Frequency	Percentage
Delivery of printed learning materials to students	37	38.9%
Internet-based resources for students	94	98.9%
Access to digital devices for students	85	89.5%
Recommendations for teachers about how to provide online instruction	94	98.9%
Technical support for teachers	91	95.8%
Access to digital devices for teachers	89	93.7%

## B. Teacher Questionnaire

By the end of this year, how long have you been teaching altogether?	Frequency	Percentage
1-5 years	73	29.4%
6-10 years	70	28.2%
11-15 years	20	8.1%
16-20 years	36	14.5%
More than 20 years	49	19.8%

What is your gender?	Frequency	Percentage
Female	211	85.4%
Male	34	13.8%

What is your age?	Frequency	Percentage
Under 25 years	21	8.5%
25-29 years	55	22.4%
30-39 years	80	32.5%
40-49 years	69	28.0%
50-59 years	18	7.3%
60 years or more	3	1.2%

What is the highest level of formal education you have completed?	Frequency	Percentage
Did not complete ISCED 3 (Upper secondary education)	0	0.0%
Completed ISCED 3 (Upper secondary education)	4	1.6%
Completed ISCED 4 (Post-secondary, non-tertiary education)	4	1.6%
Completed ISCED 5 (Short-cycle tertiary)	19	7.7%
Completed ISCED 6 (Bachelor's degree or equivalent)	169	68.1%
Completed ISCED 7 (Master's degree)	51	20.6%
Completed ISCED 8 (Doctor or equivalent)	1	0.4%

During your post-secondary education, what was your major area(s) of study?	Frequency	Percentage
Education (Primary level)	198	81.8%
Education (Secondary level)	58	24.2%
English/Maltese	91	37.4%
Other	115	47.7%

How often do you read for enjoyment?	Frequency	Percentage
Every day or almost every day	116	46.8%
Once or twice a week	88	35.5%
Once or twice a month	32	12.9%
Never or almost never	12	4.8%

As part of your formal education and/or training, to what extent did you study the following areas?	Not at all	Introduction to topic	It was an area of emphasis
English/Maltese	3.3%	27.3%	69.4%
Literature	18.6%	51.1%	30.4%
Pedagogy/teaching reading	3.7%	19.0%	77.3%
Educational psychology	3.3%	27.8%	68.9%
Remedial reading	3.8%	51.9%	44.4%
Reading theory	12.4%	50.2%	37.3%
Special education	10.0%	62.5%	27.5%
Second language learning	28.7%	42.1%	29.2%
Assessment methods in reading	10.8%	52.9%	36.3%
Early childhood education	16.9%	36.8%	46.3%
Digital literacies	17.8%	55.8%	26.4%

In the past two years, have you participated in formal professional development in reading (e.g., workshops, seminars, lesson studies)?	Yes	No
Teaching reading comprehension skills or strategies	58.9%	41.1%
Integrating literacies across the curriculum	59.3%	40.7%
Addressing students' language needs in teaching reading	43.5%	56.5%
Integrating technology into reading instruction	58.5%	41.5%
Instruction related to digital literacies	65.0%	35.0%
Addressing differentiation of instruction for students' needs and interests	56.7%	43.3%
Assessing students' reading	50.8%	49.2%

How would you prioritise your need for future professional development?	High	Medium	Low
Teaching reading comprehension skills or strategies	46.5%	44.9%	8.6%
Integrating literacies across the curriculum	43.0%	47.1%	9.8%
Addressing students' language needs in teaching reading	55.1%	39.2%	5.7%
Integrating technology into reading instruction	44.5%	46.5%	9.0%
Instruction related to digital literacies	40.0%	49.0%	11.0%
Addressing differentiation of instruction for students' needs and interests	52.2%	42.4%	5.3%
Assessing students' reading	51.0%	40.4%	8.6%

How helpful is each type of professional development?	Helpful	Fairly helpful	Not helpful
Workshops	81.0%	18.1%	0.8%
Seminars	49.6%	48.4%	2.0%
Access to a mentor (e.g. literacy coach)	61.7%	34.3%	4.0%
Teacher professional learning communities	53.6%	43.1%	3.2%
Online professional development	50.8%	44.4%	4.8%

To what extent are each of these a disincentive to participate in professional development?	Not at all	Some	A lot
Financial costs	29.3%	54.5%	16.3%
Time conflicts	4.9%	30.1%	65.0%
Content is not relevant	21.6%	60.8%	17.6%
Lack of support from school administrators	64.9%	27.8%	7.3%

How would you characterise each of the following within your school?	Very high	High	Medium	Low	Very low
Teachers' understanding of the school's curriculum goals	41.9%	49.2%	8.5%	0.4%	0.0%
Teachers' degree of success in implementing the school's curriculum	35.9%	54.8%	8.5%	0.8%	0.0%
Teachers' expectations for student achievement	39.5%	51.6%	8.1%	0.8%	0.0%
Teachers' ability to inspire students	44.0%	42.3%	12.5%	0.8%	0.4%
Collaboration between school leadership and teachers to plan instruction	39.9%	36.7%	15.3%	6.0%	2.0%
Parental involvement in school activities	18.0%	35.7%	33.2%	10.2%	2.9%
Parental commitment to ensure that students are ready to learn	18.4%	28.6%	41.6%	7.3%	4.1%
Parental expectations for student achievement	25.7%	42.0%	26.5%	5.3%	0.4%
Parental support for student achievement	16.7%	29.8%	42.4%	9.8%	1.2%
Students' desire to do well in school	17.7%	38.7%	40.7%	2.5%	0.4%
Students' ability to reach school's academic goals	13.5%	39.6%	44.5%	2.0%	0.4%
Students' respect for classmates who excel academically	15.5%	46.5%	35.5%	2.4%	0.0%

Indicate the extent to which you agree or disagree with the following statements?	Agree a lot	Agree a little	Disagree a little	Disagree a lot
This school is located in a safe neighbourhood	79.8%	17.0%	2.8%	0.4%
I feel safe at this school	86.2%	12.1%	1.2%	0.4%
This school's security policies and practices are sufficient	73.7%	21.9%	4.0%	0.4%
The students behave in an orderly manner	55.1%	34.4%	9.3%	1.2%
The students are respectful of the teachers	52.2%	36.0%	10.1%	1.6%
The students respect school property	54.3%	36.0%	7.7%	2.0%
This school has clear rules about school conduct	62.8%	27.1%	7.3%	2.8%
School's rules are enforced in a fair/consistent manner	57.5%	31.2%	8.9%	2.4%
The students are respectful of each other	40.1%	51.8%	6.9%	1.2%

How often do you feel the following way about being a teacher?	Very often	Often	Sometimes	Never or rarely
I am content with my profession as a teacher	54.3%	37.2%	6.9%	1.6%
I find my work full of meaning and purpose	56.7%	33.2%	8.9%	1.2%
I am enthusiastic about my job	60.3%	32.0%	6.1%	1.6%
My work inspires me	57.9%	32.4%	8.1%	1.6%
I am proud of the work I do	70.4%	23.9%	4.9%	0.8%
I feel appreciated as a teacher	24.3%	33.2%	37.7%	4.9%

How many students are in this class?	Frequency	Percentage
5-10	17	8.1%
11-15	64	30.3%
16-20	70	33.2%
21-25	44	20.9%
More than 25	16	7.6%

How many students in this class are in Year 5?	Frequency	Percentage
3-10	22	11.3%
11-15	54	27.7%
16-20	67	34.4%
21-25	37	19.0%
More than 25	15	7.7%

How many Year 5 students in this class experience difficulties in reading?	Frequency	Percentage
0-1	38	15.7%
2	56	23.1%
3	40	16.5%
4-5	61	25.2%
6-10	34	14.1%
More than 10	13	5.4%

In your view, to what extent do the following limit how you teach this class?	Not at all	Some	A lot
Students lacking prerequisite knowledge or skills	13.8%	62.2%	24.0%
Students suffering from lack of basic nutrition	76.0%	18.7%	5.3%
Students suffering from not enough sleep	45.1%	43.1%	11.8%
Students absent from class	45.9%	40.7%	13.4%
Disruptive students	39.0%	42.3%	18.7%
Uninterested students	26.9%	55.5%	17.6%
Students with mental/emotional/psychological impairment	46.7%	42.3%	11.0%
Students needing extra support in reading	11.8%	67.1%	21.1%

In a typical week, how much time do you spend on English/Maltese language instruction and/or activities with the students?	Frequency	Percentage
0-150 minutes	15	6.4%
151-200 minutes	36	15.5%
201-250 minutes	77	33.0%
251-300 minutes	63	27.0%
301-400 minutes	23	9.9%
More than 400 minutes	19	8.2%

Regardless of whether or not you have formally scheduled time for reading instruction, in a typical week about how much time do you spend on reading instruction and/or activities with the students?	Frequency	Percentage
0-50 minutes	23	9.6%
51-100 minutes	98	40.8%
101-150 minutes	50	20.8%
151-200 minutes	37	15.4%
201-300 minutes	21	8.8%
More than 300 minutes	11	4.6%

When you have reading instruction and/or do reading activities, how often do you organise students?	Always	Often	Sometimes	Never
I teach reading as a whole-class activity	35.6%	42.9%	18.2%	3.2%
I create same-ability groups	8.9%	23.1%	46.2%	21.9%
I create mixed-ability groups	7.3%	22.3%	49.0%	21.5%
I use individualized instruction for reading	13.4%	28.9%	45.9%	11.8%
Students work independently on an assigned plan/goal	16.2%	34.8%	44.9%	4.0%

When you have reading instruction and/or do reading activities with the students?	Everyday	1-2 times a week	1-2 times a month	Never or rarely
Short stories	19.0%	69.2%	11.7%	0.0%
Longer fiction books with chapters	6.9%	47.0%	35.2%	10.9%
Plays	0.8%	11.3%	56.7%	31.2%
Poems/poetry	1.2%	17.6%	68.2%	13.1%

How often do you have the students read the following informational reading materials?	Everyday	1-2 times a week	1-2 times a month	Never or rarely
Nonfiction subject area books or textbooks	25.9%	48.6%	23.1%	2.4%
Longer nonfiction books with chapters	4.1%	31.8%	42.4%	21.6%
Nonfiction articles (e.g. newspaper articles, brochures)	4.0%	21.8%	54.3%	8.9%
Non-continuous texts (e.g. diagrams, maps, tables)	5.3%	29.1%	48.2%	17.4%

When you have reading instruction and/or do reading activities with students, how often do you do the following?	Everyday	1-2 times a week	1-2 times a month	Never or rarely
Read aloud to students	66.0%	31.2%	2.4%	0.4%
Ask students to read aloud	66.4%	32.4%	1.2%	0.0%
Ask students to read silently on their own	51.6%	39.8%	6.1%	2.4%
Teach students strategies for decoding sounds/words	23.9%	44.9%	22.3%	8.9%
Teach students new vocabulary systematically	34.8%	53.4%	10.5%	1.2%
Provide opportunities for students to develop fluency	36.0%	53.4%	8.1%	2.4%
Teach or model skimming or scanning strategies	19.4%	45.3%	25.1%	10.1%
Teach digital literacy skills	24.7%	42.1%	24.3%	8.9%

How often do you do the following in teaching reading to this class?	Every lesson	About half the lessons	Some lessons	Never
Provide reading materials that match students' interest	40.7%	37.0%	22.0%	0.4%
Provide materials that are appropriate for the reading levels of individual students	57.7%	29.3%	12.6%	0.4%
Link new content to students' prior knowledge	66.3%	22.8%	11.0%	0.0%
Encourage students to develop understandings of the text	70.3%	22.0%	7.3%	0.4%
Encourage student discussions of texts	74.8%	18.3%	6.5%	0.4%
Encourage students to challenge the opinion expressed in the text	52.0%	31.3%	14.2%	2.4%
Encourage student to read text with multiple perspectives	30.5%	33.7%	29.3%	6.5%
Give students time to read books of their own choosing	34.1%	26.8%	35.4%	3.7%
Give individualised feedback to each student	40.4%	32.7%	25.3%	1.6%

How often do you ask students to do the following things to help develop reading comprehension skills/strategies?	Everyday	1-2 times a week	1-2 times a month	Never or rarely
Locate information within the text	51.2%	46.3%	2.0%	0.4%
Identify the main ideas of what they have read	57.6%	40.3%	1.2%	0.8%
Explain or support their understanding of what they read	58.1%	36.9%	4.6%	0.4%
Compare what they have read with experiences they had	44.2%	43.4%	10.7%	1.7%
Compare what they have read with other things they read	38.8%	40.9%	14.9%	5.4%
Make predictions about what will happen next in the text they are reading	44.9%	43.6%	10.3%	1.2%
Make generalisations/draw inferences based of the text	29.9%	43.4%	22.5%	4.1%
Evaluate and critique the style or structure of the text	19.3%	41.0%	29.9%	9.8%
Determine the author's perspective or intention	21.4%	38.3%	30.0%	10.3%
Self-monitor their reading when they don't understand	45.1%	36.1%	14.3%	4.5%
Determine if a website is useful for a specific purpose	14.8%	29.5%	34.0%	21.7%
Evaluate the credibility of a website	15.6%	16.0%	33.6%	34.8%

After students have read something, how often do you ask them to do the following?	Everyday	1-2 times a week	1-2 times a month	Never or rarely
Write something about or in response to what they read	17.6%	55.9%	22.0%	4.5%
Answer oral questions to summarise what they have read	56.7%	35.1%	6.9%	1.2%
Talk with each other about what they have read	28.2%	46.9%	18.4%	6.5%
Take a written quiz/test about what they have read	11.9%	43.6%	33.7%	10.7%
Create a multi-modal response (e.g. image, audio, video)	6.9%	23.7%	36.3%	33.1%

Do the students in this class ever have digital devices (desktop computers, laptops, or tablets) available to use during reading instruction?	Frequency	Percentage
Yes	226	92.2%
No	19	7.8%

What access do the students have to digital devices?	Yes	No
The school provides each student with a digital device	96.0%	4.0%
The class has digital devices that students can share	24.9%	75.1%
The school has digital devices that the class can use sometimes	49.3%	50.7%
Students bring their own digital devices	32.4%	67.6%

When doing reading activities with the whole class, how often do you have students use digital devices?	Frequency	Percentage
At least once or twice a year	150	67.0%
Once or twice a month	44	19.6%
A few times a year	23	10.3%
Never or almost never	7	3.1%

How often do you have specific groups of students do personalised reading activities using digital devices?	Often	Sometimes	Never
Low-performing students	36.4%	55.6%	8.0%
High-performing students	39.6%	52.0%	8.4%
Students with special needs	38.6%	49.8%	11.7%

During reading instruction, how often do you have students use digital devices to do the following?	Everyday	1-2 times a week	1-2 times a month	Never or rarely
Read digital texts	22.9%	48.0%	21.5%	7.6%
Look up facts and definitions	13.8%	49.8%	30.2%	6.2%
Do a research project on a particular topic or problem	4.4%	24.0%	60.0%	11.6%
Write stories or other texts	6.7%	45.3%	39.6%	8.4%
Create a presentation or communication (e.g., video)	2.7%	14.2%	59.6%	23.6%

Do you have a library or reading corner in your classroom?	Frequency	Percentage
Yes	152	62.3%
No	92	37.7%

About how many books with different titles are in your classroom library?	Frequency	Percentage
0-25	5	3.3%
26-50	54	35.8%
51-100	56	37.1%
More than 100	36	23.8%

How many magazines with different titles are in your classroom library?	Frequency	Percentage
0	72	47.7%
1-2	37	24.5%
3-5	16	10.6%
More than 5	26	17.2%

How often do you give your students time to use the classroom library?	Frequency	Percentage
Every day or almost every day	60	39.7%
Once or twice a week	78	51.7%
Once or twice a month	9	6.0%
Never or almost never	4	2.6%

Can the students borrow books from the classroom library to take home?	Frequency	Percentage
Yes	121	80.1%
No	30	19.9%

How often do you take/send students to school or local library?	Frequency	Percentage
At least once or twice a year	87	35.8%
Once or twice a month	52	21.4%
A few times a year	16	6.6%
Never or almost never	88	36.2%

How often do you assign reading as part of homework (for any subject)?	Frequency	Percentage
I do not assign reading for homework	11	4.5%
Less than once a week	21	8.6%
1-2 times a week	87	35.7%
3-4 times a week	29	11.9%
Every day	96	39.3%

In general, how much time do you expect students to spend on homework involving reading (for any subject) each time you assign it?	Frequency	Percentage
15 minutes or less	23	9.9%
16-30 minutes	139	59.7%
31-60 minutes	65	27.9%
More than 60 minutes	6	2.6%

How often do you do the following with the reading homework assignments for this class?	Always or almost always	Sometimes	Never or almost never
Correct assignments and give feedback to students	79.4%	17.6%	3.0%
Discuss the homework in class	73.4%	24.5%	2.1%
Monitor whether or not the homework was completed	90.1%	8.6%	1.3%

How much importance do you place on the following assessment strategies in reading?	A lot	Some	None
Observing students as they work	89.7%	10.3%	0.0%
Asking students to answer questions during class	94.3%	5.7%	0.0%
Short, regular written assessments (paper or digital)	72.1%	27.0%	0.8%
Longer tests (e.g., unit tests or exams)	39.8%	55.7%	4.5%
Long-term projects (e.g., reading logs)	28.7%	57.0%	14.3%

How often students in this class take reading assessments on digital devices?	Frequency	Percentage
More than once a month	63	25.9%
Once a month	75	30.9%
Twice a year	33	13.8%
Once a year	20	8.2%
Never	52	21.4%

## C. Student Questionnaire

What is your gender?	Frequency	Percentage
Female	1850	48.3%
Male	1928	50.3%
Other	56	1.5%

In which month were you born?	Frequency	Percentage
January	358	9.3%
February	293	7.6%
March	322	8.4%
April	271	7.1%
May	291	7.6%
June	294	7.7%
July	337	8.8%
August	346	9.0%
September	359	9.4%
October	343	8.9%
November	306	8.0%
December	314	8.2%

In which year were you born?	Frequency	Percentage
2010	67	1.7%
2011	3762	98.1%
2012	5	0.1%

How often do you speak Maltese at home?	Frequency	Percentage
I always speak language of test at home	1060	27.9%
I almost always speak language of test at home	709	18.6%
I sometimes speak language of test and sometimes another language at home	1697	44.6%
I never speak language of test at home	337	8.9%

About how many books are there in your home (exclude school books)?	Frequency	Percentage
0-10 books	301	7.9%
11-25 books	857	22.6%
26-100 books	1498	39.5%
101-200 books	633	16.7%
More than 200 books	500	13.2%

About how many often are you absent from school?	Frequency	Percentage
Once a week	265	7.0%
Once every two weeks	67	1.8%
Once a month	144	3.8%
Once every two months	264	7.0%
Never or almost never	3033	80.4%

Do you have any of these things at your home?	Yes	No
A shared computer or tablet that you can use	76.8%	23.2%
Study desk/table for your use	85.0%	15.0%
Your own room	77.1%	22.9%
Access to the internet	95.6%	4.4%
A shared smartphone that you can use	46.8%	53.2%
Your own computer or tablet	78.6%	21.4%
Your own smartphone	54.1%	45.9%
Swimming pool	22.5%	77.5%
Yacht or sailing boat	14.0%	86.0%

How often do you feel this way when you arrive at school?	Everyday	Almost every day	Sometimes	Never
I feel tired	23.2%	17.8%	44.6%	14.4%
I feel hungry	29.5%	18.0%	35.2%	17.4%

How much time do you spend using a computer, tablet, or smartphone to do these activities for your schoolwork?	No time	30 minutes or less	30 minutes or more
Finding and reading information	13.7%	59.4%	26.9%
Preparing reports and presentations	23.5%	35.9%	40.5%

How much do you agree with these statements about using computers, tablets, or smartphones?	Agree a lot	Agree a little	Disagree a little	Disagree a lot
I am good at using a computer or tablet	75.6%	2.4%	2.7%	1.3%
I am good at typing	54.0%	32.7%	8.9%	4.5%
It is easy for me to find information on the internet	54.3%	28.5%	12.1%	5.1%
I know how to create written stories or reports	39.4%	31.8%	15.3%	13.6%
I know how to create presentations	46.7%	29.7%	12.9%	10.8%
I can recognize a website that is useful to me	55.0%	29.4%	9.1%	6.5%
I can tell if a website is trustworthy	39.7%	33.0%	16.1%	11.1%
I know how to make and share a video	55.5%	18.7%	10.6%	15.1%

What do you think about your school? Tell how much you agree with these statements	Agree a lot	Agree a little	Disagree a little	Disagree a lot
I like being in school	59.6%	28.6%	6.4%	5.4%
I feel safe when I am at school	67.7%	22.1%	6.3%	3.8%
I feel like I belong at this school	68.5%	18.2%	7.7%	5.6%
Teachers at my school are fair to me	79.6%	14.2%	3.6%	2.6%
I am proud to go to this school	80.6%	1.4%	2.9%	2.6%
I have friends at this school	92.0%	5.4%	1.5%	1.0%

During this year, how often have other students from your school done any of the following things to you?	Few times a week	1-2 times a month	Few times a year	Never
Made fun of me or called me names	14.3%	8.6%	20.7%	56.3%
Left me out of their games or activities	11.6%	11.8%	19.8%	56.8%
Spread lies about me	10.9%	9.8%	16.4%	62.9%
Stole something from me	4.7%	3.8%	10.4%	81.1%
Damaged something of mine on purpose	5.7%	5.3%	12.0%	77.0%
Hit or hurt me (shoving, hitting, kicking)	12.5%	8.1%	19.9%	59.6%
Made me do things I didn't want to do	8.8%	8.4%	16.6%	66.2%
Sent me nasty or hurtful messages online	5.9%	5.6%	10.4%	78.1%
Shared embarrassing information about me	3.8%	3.0%	5.3%	87.8%
Threatened me	6.5%	5.8%	12.5%	75.2%

How much do you agree with these statements about your reading lessons?	Agree a lot	Agree A little	Disagree a little	Disagree a lot
I like what I read about in school	63.4%	27.1%	5.2%	4.2%
My teacher gives me interesting things to read	71.6%	19.8%	5.0%	3.6%
I know what my teacher expects me to do	67.6%	23.4%	5.5%	3.4%
My teacher is easy to understand	66.5%	24.9%	5.6%	2.9%
I am interested in what my teacher says	74.2%	18.4%	4.0%	3.4%
My teacher encourages me to say what I think about what I read	64.3%	23.9%	6.2%	5.6%
My teacher lets me show what I have learned	67.4%	22.1%	6.4%	4.0%
My teacher does a variety of things to help us learn	88.4%	8.2%	1.8%	1.6%
My teacher tells me how to do better when I make a mistake	87.6%	8.5%	1.9%	1.9%

What do you think about reading? Tell how much you agree with each of these statements	Every lesson	About half the lessons	Some lessons	Never
Students don't listen to what the teacher says	20.3%	16.5%	43.5%	19.6%
There is too much noise for students to work well	31.5%	20.7%	32.5%	15.3%
My teacher has to wait a long time for students to be quiet	37.0%	16.6%	31.2%	15.2%
Students interrupt the teacher	33.1%	17.6%	31.9%	17.4%
My teacher has to keep telling us to follow the classroom rules	38.8%	13.4%	27.4%	20.4%

In school, how often do these things happen?	Everyday	1-2 times a week	1-2 times a month	Never or rarely
I read silently on my own	65.5%	22.1%	6.3%	6.2%
I read things that I choose myself	55.5%	21.2%	8.3%	15.1%
My teacher asks us in class to talk what we have read	31.8%	22.9%	18.1%	27.1%

How often do you borrow books or e-books from your school or local library?	Frequency	Percentage
At least once a week	1367	36.6%
Once or twice a month	667	17.9%
A few times a year	614	16.4%
Never or almost never	1087	29.1%

How much time do you spend reading outside school on a normal school day?	Frequency	Percentage
Less than 30 minutes	1508	40.3%
30 minutes up to 1 hour	1676	44.8%
1 hour to 2 hours	316	8.4%
More than 2 hours	245	6.5%

How well do you read? Tell how much you agree with each of these statements	Agree a lot	Agree A little	Disagree a little	Disagree a lot
I usually do well in reading	60.9%	31.6%	5.1%	2.4%
Reading is easy for me	54.2%	32.6%	8.9%	4.2%
I have trouble reading stories with difficult words	26.9%	32.3%	19.4%	21.4%
Reading is harder for me than for many of my classmates	14.4%	17.8%	23.1%	44.8%
Reading is harder for me than any other subject	10.6%	13.6%	18.2%	57.6%
I am just not good at reading	9.4%	12.7%	18.0%	59.9%

How often do you do these things outside of school?	Every day	1-2 times a week	1-2 times a month	Almost never
I read for fun	46.3%	27.9%	12.7%	13.2%
I read to find out about things I want to learn	48.2%	28.2%	13.0%	10.6%

What do you think about reading? Tell how much you agree with each of these statements	Agree a lot	Agree A little	Disagree a little	Disagree a lot
I like talking about what I read with other people	42.2%	29.8%	15.5%	12.5%
I am happy if someone gives me a book as a present	48.8%	29.3%	12.1%	9.7%
I think reading is boring	10.9%	17.9%	19.5%	51.7%
I would like to have more time for reading	36.8%	31.7%	17.5%	14.0%
I enjoy reading	51.9%	30.6%	9.1%	8.4%
I learn a lot from reading	69.1%	20.8%	6.7%	3.4%
I like to read things that make me think	60.1%	24.1%	8.7%	7.2%
I like it when a book helps me imagine other worlds	74.9%	15.9%	4.4%	4.9%

## D. Parent Questionnaire

Before primary schooling, how often did you or someone else in your home do the following activities with him or her?	Often	Sometimes	Never or almost never
Read books	60.8%	37.5%	1.7%
Tell stories	60.5%	36.3%	3.2%
Sing songs	68.6%	26.5%	4.9%
Play with alphabet toys	65.3%	29.2%	5.5%
Talk about things you had done	69.1%	28.6%	2.4%
Talk about what you had read	40.5%	50.4%	9.1%
Play word games	50.9%	42.4%	6.7%
Write letters or words	55.5%	37.9%	6.6%
Read aloud signs and labels	48.5%	43.6%	8.0%
Say counting rhymes or sing counting songs	64.5%	29.7%	5.8%
Play with number toys	67.3%	27.2%	5.5%
Count different things	73.2%	25.2%	1.6%
Play games involving shapes	70.1%	26.9%	3.0%
Play with building blocks or construction toys	74.9%	21.7%	3.3%
Play board or card games	48.2%	43.9%	7.9%
Write numbers	63.4%	32.2%	4.4%
Draw shapes	54.7%	39.8%	5.5%
Measure and weigh things	19.7%	49.3%	31.0%

Was your child born in Malta?	Frequency	Percentage
Yes	2614	89.8%
No	293	10.1%

How old was your child when he/she came to Malta?	Frequency	Percentage
Younger than 3 years	79	27.1%
3-5 years old	101	34.7%
6-7 years old	57	19.6%
8 years old or more	54	18.6%

Did your child speak the language of the test before he/she began school?	Frequency	Percentage
Yes	2454	85.1%
No	430	14.9%

How often does your child speak language of test at home?	Frequency	Percentage
Always	1057	36.8%
Almost always	773	26.9%
Sometimes	969	33.7%
Never	73	2.5%

Did your child attend the following before Year 1?	Frequency	Percentage
Early childhood educational development (program for children under 3 years)	1450	54.4%
Pre-primary education (program for children aged 3 years or older)	2758	96.5%

Approximately, how long was your child in these programs altogether?	Frequency	Percentage
Less than 1 year	103	3.7%
1 year	217	7.8%
2 years	1295	46.8%
3 years	846	30.6%
4 years or more	306	11.1%

How old was your child when he/she began Year 1 of primary school?	Frequency	Percentage
5 years old or younger	2563	88.7%
6 years old	312	10.8%
7 years old	9	0.3%
8 years old or more	5	0.2%

How well could your child do the following when he/she began Year 1 of primary school?	Very well	Moderately well	Not very well	Not at all
Recognize most of the letters of the alphabet	56.7%	32.8%	9.2%	1.3%
Read some words	30.1%	41.4%	21.0%	7.5%
Read sentences	15.1%	33.8%	32.2%	18.9%
Read a story	9.5%	28.3%	35.7%	26.4%
Write letters of the alphabet	45.0%	39.1%	13.1%	2.8%
Write his/her name	53.6%	31.3%	11.1%	4.0%
Write words other than name	25.4%	38.9%	25.1%	10.6%

What do you think of your child's school?	Agree a lot	Agree a little	Disagree a little	Disagree a lot
My child's school does a good job including me in my child's education	85.7%	11.9%	2.0%	0.4%
My child's school provides a safe environment	91.9%	7.2%	0.9%	0.1%
My child's school cares about my child's progress in school	87.4%	10.9%	1.5%	0.1%
My child's school does a good job informing me of his/her progress	82.1%	15.0%	2.4%	0.6%
My child's school promotes high academic standards	77.3%	18.8%	3.2%	0.7%
My child's school does a good job in helping him/her become better in reading	79.1%	16.8%	3.0%	1.0%

In a typical week, how much time do you usually spend reading for yourself at home, including books, magazines, newspapers and materials for work?	Frequency	Percentage
Less than one hour a week	478	16.5%
1-5 hours a week	1448	50.1%
6-10 hours a week	572	19.8%
More than 10 hours a week	393	13.6%

When you are at home, how often do you read for your own enjoyment?	Frequency	Percentage
Every day or almost every day	1068	37.0%
Once or twice a week	1012	35.1%
Once or twice a month	410	14.2%
Never or almost never	396	13.7%

Please indicate how much you agree with the following statements about reading	Agree a lot	Agree a little	Disagree a little	Disagree a lot
I read only if I have to	12.2%	20.6%	20.0%	47.2%
I like talking about what I read with other people	40.9%	39.5%	13.6%	6.0%
I like to spend my spare time reading	34.6%	36.4%	19.8%	9.2%
I read only if I need information	16.2%	23.5%	24.7%	35.6%
Reading is an important activity in my home	54.2%	32.4%	11.1%	2.3%
I would like to have more time for reading	70.8%	20.5%	5.9%	2.8%
I enjoy reading	86.3%	24.7%	5.9%	3.1%
Reading is one of my favourite hobbies	41.7%	32.5%	16.8%	9.0%

About how many books are there in your home? (Exclude children's books)	Frequency	Percentage
0-10	262	9.1%
11-25	449	15.6%
26-100	1099	38.1%
101-200	528	18.3%
More than 200	544	18.9%

About how many children's books are there in your home? (Exclude school books)	Frequency	Percentage
0-10	119	4.2%
11-25	328	11.4%
26-50	861	30.0%
51-100	870	30.3%
More than 100	689	24.0%

Do you have any of these things in your home?	Frequency	Percentage
Access to the internet	2873	99.8%
A computer, tablet, or e-reader	2857	99.2%
A smartphone	2746	95.3%

Highest level of education completed by the child's parent/guardian A	Frequency	Percentage
Did not go to school	13	0.5%
Primary education (ISCED Level 1)	125	4.4%
Lower secondary education (ISCED Level 2)	796	28.3%
Upper secondary education (ISCED Level 3)	426	15.2%
Post-secondary, non-tertiary education (ISCED Level 4)	290	10.3%
Short cycle tertiary education (ISCED Level 5)	301	10.7%
Bachelor's or equivalent level (ISCED Level 6)	441	15.7%
Master's or equivalent level (ISCED Level 7)	323	11.5%
Doctorate or equivalent level (ISCED Level 8)	76	2.7%
Not applicable	18	0.6%

Highest level of education completed by the child's parent/guardian B	Frequency	Percentage
Did not go to school	12	0.5%
Primary education (ISCED Level 1)	178	6.7%
Lower secondary education (ISCED Level 2)	831	31.4%
Upper secondary education (ISCED Level 3)	403	15.2%
Post-secondary, non-tertiary education (ISCED Level 4)	298	11.2%
Short cycle tertiary education (ISCED Level 5)	228	8.6%
Bachelor's or equivalent level (ISCED Level 6)	315	11.9%
Master's or equivalent level (ISCED Level 7)	276	10.4%
Doctorate or equivalent level (ISCED Level 8)	65	2.5%
Not applicable	44	1.7%

What kind of work does the child's parent/guardian A do for their main job?	Frequency	Percentage
Has never worked for pay	72	2.6%
Small business owner	257	9.3%
Clerk	379	13.7%
Service or sales worker	251	9.1%
Skilled agricultural or fishery worker	9	0.3%
Craft or trade worker	111	4.0%
Plant or machine operator	107	3.9%
General labourers	124	4.5%
Corporate manager or senior official	338	12.2%
Professional	733	26.5%
Technician or associate professional	176	6.4%
Not applicable	213	7.7%

What kind of work does the child's parent/guardian B do for their main job?	Frequency	Percentage
Has never worked for pay	37	1.4%
Small business owner	301	11.5%
Clerical worker	183	7.0%
Service or sales worker	224	8.6%
Skilled agricultural or fishery worker	28	1.1%
Craft or trade worker	233	8.9%
Plant or machine operator	131	5.0%
General labourers	155	5.9%
Corporate manager or senior official	386	14.8%
Professional	494	18.9%
Technician or associate professional	204	7.8%
Not applicable	232	8.9%

How far in his/her education do you expect your child to go?	Frequency	Percentage
Lower secondary education (ISCED Level 2)	76	2.7%
Upper secondary education (ISCED Level 3)	263	9.3%
Post-secondary, non-tertiary education (ISCED Level 4)	266	9.4%
Short cycle tertiary education (ISCED Level 5)	696	24.5%
Bachelor's or equivalent level (ISCED Level 6)	584	20.5%
Postgraduate degree – Master's or Doctorate (ISCED Level 7 or 8)	958	33.7%

Did your child stay home at any time because of the COVID-19 pandemic?	Frequency	Percentage
Yes	2042	70.8%
No	842	29.2%

When your child was not in school, how did your child's school engage with your child's home-based learning?	Yes	No
Reading assignments	66.6%	33.4%
Online activities	93.5%	6.5%
Printed learning materials	73.0%	27.0%

Did you provide more educational resources for your child during COVID-19?	Yes	No
Books	83.7%	16.3%
Digital devices	76.1%	23.9%
Digitally-based learning activities	68.0%	32.0%
Online instruction or tutoring	53.5%	46.5%

Do you think your child's learning progress has been adversely affected?	Frequency	Percentage
A lot	291	14.4%
Somewhat	1236	61.2%
Not at all	493	24.4%