Language teacher practices predicting students' reading self-efficacy: Jordanian students' participation in PISA 2018

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Abstract

This study investigated the ability of language teachers' practices to predict self-efficacy in reading among Jordanian students participating in PISA 2018. The study adopted the secondary analysis method by analyzing the responses of 8,963 15-year-old males and females in 313 schools who participated in PISA 2018. Statistically significant differences in students' perceptions were found in teacher-directed instruction, teacher support for students, teacher motivating students to engage in reading, and enjoyable reading. Additionally, female students exhibited more reading self-efficacy than male students. There were statistically significant differences in students' perceptions of controlling the classroom environment, and feedback in favor of males. The multiple linear regression analysis indicated that five factors explained a statistically significant proportion of the variance in self-efficacy in reading (14.7%). Enjoyment of reading was the factor that contributed the most with a percentage of 10.2%, followed by teacher enthusiasm with 3.6%.

Keywords: reading self-efficacy; Jordanian students; PISA 2018

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1. Introduction

1.1. Concept

Self-efficacy is regarded as one of the most vital foundations for self-learning since it is the leading source of psychological and motivational energy that drives and directs behavior (Bandura, 2020). Self-efficacy has emerged as one of the concepts of social cognitive theory, referring to individuals' ability to control their behavior through their beliefs about their ability to perform a task (Bo et al., 2018). Every individual has a self-belief system that allows them to manage the cognitive processes, and managing the cognitive processes leads to controlling the emotional and behavioral aspects and directing the individual toward his goals (Bandura, 2005; Ursache et al., 2012). However, individuals' beliefs about their ability to accomplish a task directly affect their motivation to perform it. Indeed, how individuals think and feel automatically impacts how they act, as these processes constitute the main starting point for the driving forces of behavior. Many scholars believe individuals with high self-efficacy perform the task with high confidence of success and overcoming challenges. Conversely, a lack of self-efficacy leads to avoiding facing challenges and difficulties for fear of failure (Ormrod et al., 2019). According to Bandura (2005), individuals' self-efficacy motivates them to perform the task actively and with vitality and focus, and perseverance allows individuals to manage and direct their behavior away from external directives and interventions (Eniola, 2007). Reading skills influence the capacity to comprehend texts in particular and academic achievement in general. Individual disparities in reading comprehension abilities are primarily attributable to differences in reading self-efficacy, which determines whether the learner continues to exert effort when exposed to a particular reading task (Shang, 2010).

Self-efficacy is defined as the ability to flexible plan, monitor, and make feedback. It also assists individuals in gaining a clear understanding of their goals, strengths, and weaknesses, objectively evaluating their performance, directing their behavior, and maintaining an appropriate level of achievement (Moilanen, 2007; Avci, 2013). Bandura (2020) stated that self-efficacy refers to individuals' belief in their capacity to execute behaviors necessary to produce specific performance attainments. It influences individuals' choice of activities since they tend to choose activities that they think they will succeed in performing and avoid choosing activities in which they may fail. Bandura added that individuals with a high perception of self-efficacy tend to exert more effort and perseverance, whereas individuals with a low perception of self-efficacy tend to be lazy and lethargic.

Generally, learning self-efficacy refers to students' belief and confidence in their ability to successfully cope with educational tasks (Elias, 2008), through which the level of effort, perseverance, and inclination toward learning is determined (Baird et al., 2009). According to Schunk (2019), it is the outcome of the interaction between experience and the educational environment. In addition, it is affected by the feedback, the reactions of others, the prevailing emotional state, and the subjective experiences of success experienced by individuals (Ormrod et al., 2019; Pajares, 2003). Bandura (1991) identified three behavioral components of self-efficacy: self-observation, self-evaluation, and self-response. Baumeister et al. (2012) identified three main components of learning self-efficacy: planning, self-monitoring and behavior, and the ability to evaluate performance. Furthermore, Zimmerman (1990) suggested that there are five behavioral components of self-efficacy for learning: planning, self-monitoring, self-reinforcement, self-instruction, and self-evaluation.

Reading is a critical skill that impacts the ability to comprehend texts and to achieve better academic scores. Individual disparities in reading comprehension abilities are primarily attributable to differences in reading self-efficacy, as it determines whether or not the learner continues to exert effort when exposed to a particular reading task (Shang, 2010). Studies on self-efficacy confirm that when learners

believe they are successful readers, this idea motivates them to continue and engage in the learning process to attain more learning and greater determination to tackle reading challenges. Conversely, when learners do not have confidence in their reading ability, they will inevitably be less engaged in the reading task and less able to continue achieving it or overcoming its challenges, as students with less reading proficiency tend to the easy academic tasks that do not require much effort and perseverance (Mills et al., 2006).

Self-efficacy in reading has been defined by several experts in this field. For example, it was defined by Henk and Melnick (1998) as learners' awareness of their reading ability to do certain reading tasks, such as guessing the meaning of an ambiguous word, extracting the article's conclusion, and drawing it out. According to Wigfield (2004), self-efficacy is an assessment of a learner's capacity to complete a single reading assignment. Schunk (1995) argued that assisting learners in mastering the reading task is the best tool to increase their reading self-efficacy. Zimmerman and Cleary (2006) added that learners' reading self-efficacy is affected by the verbal reinforcement they receive in various educational situations, whether inside the classroom by comparing them with their peers, or outside the classroom when preparing for homework.

Reading self-efficacy is linked to several variables associated with the teaching-learning process. Song and Song (2000) and Barkley (2006) found that reading self-efficacy is positively correlated with academic accomplishment. Barnes (2010) found that there are statistically significant differences in reading achievement attributed to reading self-efficacy. Yusheng and Yang (2010) conducted a study to identify the relationship between reading self-efficacy and using reading strategies. Their results indicated a close relationship between reading self-efficacy and the use of reading strategies, social/cognitive strategies, and cognitive strategies. Naseri and Zaferanieh's (2012) study demonstrated a positive relationship between reading self-efficacy and using reading comprehension strategies. Wiltgen (2011) indicated that reading self-efficacy is positively correlated with motivation; highly motivated students read more, and this positively affects their reading skills and strategies, which, in turn, affects their beliefs about themselves as readers and thus their self-efficacy in reading. On the other hand, Schunk and Rice (1993) suggested that self-efficacy in reading can be developed through training. They found that students who received training on reading strategies gained more self-efficacy in reading.

According to Peura et al. (2019), reading self-efficacy is positively associated with reading comprehension and reading fluency, that is, "speed and accuracy of reading words, sentences or text", and its development among learners. Other studies also confirmed the relationship between self-efficacy in reading and reading comprehension and fluency skills among students in the fifth grade (Mercer et al., 2011; Guthrie et al., 2009) and seventh grade (Ho & Guthrie, 2013) with emphasis on competence. In the early years of school, reading subjectivity may be correlated with reading fluency and comprehension in several ways. The results of Carroll and Fox's (2017) study indicated that reading self-efficacy in younger students (8–11 years) was positively related to reading fluency and not related to reading comprehension. Moreover, several studies on middle school and high school students found a strong association between reading fluency and reading self-efficacy (Ho & Guthrie, 2013; Mercer et al., 2011; Guthrie et al., 2009). Other studies indicated that high self-efficacy is strongly associated with high reading achievement among primary school students (Hornstra et al., 2016; Smith et al., 2012; Solheim, 2011; Hornstra et al., 2013).

Since 2000, the Department of Education of the Organization for Economic Cooperation and Development (OECD) has been striving to measure the quality of educational systems in different nations using the Program for International Student Assessment (PISA). This assessment is conducted

every three years to measure the abilities in reading, mathematics, and science among tenth-grade students, and to determine the readiness of students who are about to finish the compulsory education stage to integrate and contribute to building society. It should be noted that this study is applied every three years, and Jordan participated in the study for the first time in its third cycle in 2006. PISA is based on the foundations of elaborate international assessment, which is developed by the participating countries and applied to students at the age of 15 years.

In total, 43 countries participated in the first cycle that was implemented in 2000, 41 countries in the second cycle in 2003, and 56 countries in the third cycle in 2006. The number of students who participated in this test was 1,000–4,500 students for each country participating in the program. The content of this assessment covers three areas, namely, reading, mathematics, and science, and it is based on the knowledge and skills that students need at the target age and not on traditionally mastering the school curriculum. It also focuses on mastering the processes, understanding the principles, and being able to apply them in different situations in each of the areas covered by the assessment. The assessment framework in the PISA study included three areas: reading, mathematics, and science. Reading here is defined as understanding, using, and comprehending written texts to achieve the same goals of developing knowledge and capabilities and for participation in society, that is, literacy involves understanding, employing, and reflecting on written information for different purposes. It considers the interactive role of the reader in obtaining any of the written texts (OECD, 2019a). Literacy is seen as an expansion of the range of knowledge, skills, and strategies that the learner develops during the educational process within multiple interactive contexts and is based on the understanding and employment of written texts (Al-Momani et al., 2017; National Center for Human Resources Development, 2013; 2017; Abu-Ghazleh, 2016).

Reading was the main subject that PISA focused on in its 2018 cycle in addition to mathematics and science. The test was applied using the computer, and 79 countries participated in it, including Jordan, where 8,963 15-year-old students from 313 schools participated. Some Arab countries also participated in this program (The United Arab Emirates, Qatar, Saudi Arabia, Lebanon, Tunisia, and Algeria). The test included an assessment of knowledge in digital reading, understanding, using, thinking, and interacting with texts, and measuring attitudes in reading knowledge and self-efficacy (OECD, 2019a). A wide range of assessments, questionnaires, and psychological and social measures related to the student, the reading teacher, the school, and the community were applied. The student questionnaire for PISA 2018 was the Student Well-Being Questionnaire, which covered a large number of variables (derived scores), such as general self-efficacy, fear of academic failure, attitudes toward school affiliation, family support, group cooperation, student competition, attitudes toward competition between students, academic ambition, perseverance, meaning in life, satisfaction with school life, the value of school, school bullying, feelings toward school, and mental flexibility. It also included different variables concerning self-efficacy in reading that measure students' opinions about the teachers who teach reading, such as feedback, enjoyment of reading, teacher's enthusiasm, teacher stimulation of students to read, teacher support, and teacher-guided instruction (OECD, 2019b). The application of these tools aims to achieve the integration of both mathematics and reading science assessments with information on students' social and economic backgrounds, learning approaches, learning environments, and activities. Furthermore, the tools aim to gain adequate knowledge and awareness of the factors that affect the growth of students' knowledge and skills, and attitudes related to the student, school, family, and community, and the interaction between these variables and their impact on educational systems (Abdelfattah, 2016). Reading for enjoyment is achieved in the international PISA test by shifting from the traditional teaching methods prevalent in the classroom environment to the application of strategies based on multiple and different classifications of reading text. Connected texts consist of sentences organized into paragraphs

within magazines, comics, literature, novels, and informational and documentary books, whereas unconnected texts are presented in the form of tables, lists, graphics, and figures. In addition, the strategy of displaying connected and non-connected texts (National Center for Human Resources Development, 2017) is applied.

Reading skills in the international PISA test include remembering and retrieval, integration and interpretation, and reflection and evaluation. Remembering and retrieval involves comparing the information presented in the question using similar words or synonymous information in the text to reach the desired solution. Integration and interpretation require the learners to deal with the text with a comprehensive perspective and a general understanding so that they can identify the general idea and link the causes with the results. Reflection and evaluation require linking the information contained in the text with the knowledge possessed by the reader, making appropriate judgments related to the accuracy and validity of the content, and distinguishing between facts and opinions (OECD, 2019a). Generally, researchers believe that reading strategies comprise three basic skills: knowledge, metacognition, and compensation. The knowledge skill includes the ability to make predictions based on prior knowledge, take notes, translate, summarize, conclude, and analyze (Oxford, 1992). This skill is based on three dimensions: recitation or repetition, which involves using aids to remember or say out loud, and details, which include summarizing what was read, taking notes, interpreting ideas, and asking and answering questions. The cognitive skill is a learner-centered approach that considers the context in which the learner learns, such as the learner's cognitive basis, motivation, and ability to process information (Winstead, 2004). Organizing includes deducing the main idea from the text and defining the outlines (Weinstein & Mayer, 1991). This skill plays a significant role in reading proficiency and students' academic performance. It assists the learner to develop simple memory skills, such as retrieving some words or information, and more complex memory skills that require understanding and comprehension of parts of the text (Pintrich, 1999). The metacognition skill helps the learner to enhance reading proficiency and reduces reading deficits. It is based on planning, monitoring, and evaluation. The planning skill is based on organizing the contents of the text to facilitate its comprehension through a set of procedures, such as setting goals for the reading task, scanning the text, and asking questions before reading the text. The observation skill includes focusing during reading and asking questions after reading the text to determine the extent of the text's comprehension. The assessment skill includes the learner performing multiple activities, such as asking questions to determine the final comprehension of the contents of the text after completing the reading of the text or deciding to read the text again (Shang, 2010; Chamot & Kupper, 1989; Pintrich, 1999; Whyte, 1993). The compensatory skill is an important factor in the development of vocabulary knowledge for the learner. Oxford (1992) classified the compensatory skill into two groups: linguistic cues, such as guessing the meanings of words, and hints that depend on the text structure, such as the introduction, the theoretical framework, and the summary. The learner develops vocabulary and knowledge of its meanings.

The development of self-efficacy in reading is linked to several variables, including those related to the teachers who teach reading, such as the teacher's enthusiasm, guidance and support for the student, and the feedback they provide to students. International studies in this regard highlighted the role of teacher classroom practices in improving student self-efficacy in the areas of mathematics, science, and reading. A study conducted by Fonseca et al. (2011) on Portugal's participation in the 2006 PISA test indicated that self-efficacy is associated with several personality traits, such as the value of knowledge, and the enjoyment of knowledge. The findings of this study showed a negative correlation between the value of science and general performance in science and a negative correlation between non-classroom activities and performance on the science test.

Usta (2016) conducted a study to analyze factors impacting the classroom interaction of students and their self-efficacy in mathematics in four countries that participated in the PISA test in its 2012 cycle. The findings indicated a positive correlation between teacher support for students' attitudes, students' attitudes toward school, self-confidence and mathematics self-efficacy. They also indicated a negative correlation between social and cultural variables, educational opportunities at home and mathematics self-efficacy. Mathematical anxiety was negatively correlated with students' mathematics self-efficacy in China, Shanghai, and Greece, and positively correlated with students' self-efficacy in mathematics in Turkey. Interest in mathematics was negatively correlated with mathematics self-efficacy only in China and Shanghai.

1.2. Previous Studies

Numerous studies have investigated the predictors of students' self-efficacy and its impact on academic achievement. Stankov et al.'s (2015) study identified the best predictors of academic achievement in mathematics and language through six factors related to the self-confidence of students aged 15 years in Singapore, namely, mathematics self-efficacy, mathematical anxiety, mathematical self-concept, academic self-concept, memory self-efficacy, and logic self-concept, as these factors explained 54.8% of the variance in academic achievement in mathematics and English. Akgul et al. (2016) examined the predictors of teacher support of students in Turkey and Shanghai who participated in PISA 2012. The results revealed that teacher support in Turkey is predicted by a sense of belonging to school, mathematics instrumental motivation, attitude toward school, and mathematics self-efficacy. In Shanghai, factors predicting teachers' support included teacher's classroom management, student orientation, interest in mathematics, attitude toward school (learning outcomes), educational resources at home and mathematics self-efficacy. In Turkey, the five affective variables explained only 13% of the variance, whereas in Shanghai, the six affective variables explained 24% of the variance. Ozel et al. (2013) examined how affective factors such as attitude and motivation contributed to science achievement in PISA 2006. The findings suggested that affective factors have a significant positive or negative impact on the science achievement of 15-year-old students, and that affective factors were found to be predictors of science achievement; however, they were not good predictors due to their low magnitude.

Moreover, Bati et al. (2019) sought to identify the extent to which affective characteristics, cognitive beliefs, motivation to learn science, self-efficacy, and a sense of belonging to school predict the performance of students in science at three levels of the countries (Korea, Japan, Spain, Sweden, Turkey, and Hungary) participating in PISA 2015. The results of the regression analysis indicated that affective characteristics (interest, attitude, motivation), cognitive beliefs, and self-efficacy explained 27% of the expected performance in science regardless of the level of achievement in science in the six countries as a whole (Korea 29%, Japan 24%, Spain 29%, Sweden 25%, Turkey 27%, Hungary 28%). Coban (2020) studied the correlations between students' impeding behaviors, teachers' impeding behaviors, socioeconomic level, parental support, and educational performance. The study found that socioeconomic level, students' genders, teachers' impeding behaviors, students' impeding behaviors, parental support, and students' reading competence scores had significant associations. In addition, through students' impeding behaviors, there is an indirect association between teachers' impeding behaviors and students' reading competence scores.

Govorova et al. (2020) conducted a study to analyze the network of correlations and interactions between cognitive, psychological, and social variables to determine student well-being in 26 countries participating in PISA 2018 using the R software. The results indicated that psychological, cognitive, and

social variables constitute a solid material in building well-being in the educational context, as they showed strong correlations between the components of psychological well-being: self-efficacy, life satisfaction, meaning in life, positive feelings, and mental flexibility. They also revealed a strong correlation between learning goals and the motivation to master learning, and a negative correlation between these variables and fear of failure. Moreover, they showed a strong and direct correlation between psychological well-being variables and social well-being variables, namely, attitudes toward competition, student cooperation, a sense of belonging to the school, and emotional support from parents, through strong and direct correlations with other variables. Furthermore, Coffman et al.'s (2002) study indicated that social support, diligence, and self-efficacy contributed to achieving life satisfaction and achieving academic success among undergraduate students in American universities.

After reviewing the previous studies on reading self-efficacy, we can recognize the relationship between students' reading self-efficacy and their use of reading (Shang, 2010; Yusheng & Yang, 2010; Chamot & Robbins, 1993; Naseri & Zaferanieh, 2012; Alwan & Mahasneh, 2011), as well as the role of reading self-efficacy in predicting academic achievement in general and reading achievement in particular (Shell, Colvin & Bruning, 1995; Barkley, 2006; Nevill, 2011; Barnes, 2010). We also note that self-efficacy in reading can be developed through training on strategies (Schunk & Rice, 1993; Schunk, 1995; Zimmerman & Cleary, 2006).

Studies and theoretical literature have highlighted several factors that are related to students' beliefs and perceptions of their ability to perform tasks in learning settings, which will promote their self-efficacy (Govorova et al., 2020). Bandura (1997) suggested that the behavioral, social, and emotional dimensions critically impact self-efficacy through experiences of success and interaction, and the student's sense of being able to do tasks that others can do.

Self-efficacy includes psychological, social, and interactive factors that lead to students' confidence in their ability to perform tasks and build their self-efficacy, which, in turn, promotes their motivation, achievement, and academic achievement. International studies that examined the results of countries' participation in PISA 2018 indicated that psychological, cognitive, and social factors constitute a solid material in building student self-efficacy in the educational and social contexts. The studies conducted by Govorova et al. (2020) and Coban (2020) showed strong associations between self-efficacy and psychological and social factors such as life satisfaction, meaning in life, positive feelings, mental flexibility, ambition, perseverance, a sense of belonging to the school, and family emotional support. The international study of PISA 2018 also described several factors concerning the educational, social, and family context of the student in the school (OECD, 2019c), which enable the countries participating in the test to understand the psychological, classroom, and social environment surrounding students that may affect their performance in reading, mathematics, and science subjects. It also urged them to identify these factors, review their educational systems, and improve the classroom and social settings in addition to achieving progress in PISA in subsequent sessions.

After reviewing the abovementioned studies, we notice that few studies explored the contribution of teacher practices to students' reading self-efficacy. Therefore, this study sought to identify the classroom practices of the teacher that predict students' self-efficacy in reading, and to explain it by attempting to answer the main study question: To what extent do the classroom practices of the teacher (teacher enthusiasm, control of the classroom environment in language tests and lessons, teacher-guided instruction, teacher support for students in reading lessons, teacher feedback, teacher motivating students to engage in reading, and enjoyable reading) contribute to predicting and explaining students' self-efficacy in reading. The significance of the current study is manifested in its quest to reveal the extent to which students at the end of the basic stage in Jordan benefit from

international test models in enhancing their reading skills. Furthermore, the results of the current study may add new data regarding the actual reality of teachers' practices that impact students' self-efficacy in reading. School administrations, teachers, students' families, and educators may benefit from the results of this study in designing programs that improve the classroom and social environment for students in the school setting, as well as enhancing students' self-efficacy in reading to improve the level of students' performance and academic achievement to reach better levels on the global ranking in international tests. We hope, through this study, to enrich the educational theoretical literature in this field, especially since this study examines self-efficacy in reading in light of the results of an international test.

1.3. Study Questions

1.3.1. First question: Are there statistically significant differences at the $\alpha \leq 0.05$ level in students' perceptions of the practices of a language teacher and their self-efficacy within Jordan's participation in PISA 2018 attributed to the gender of students (male and female)?

1.3.2. Second question: To what extent do the practices of a language teacher (teacher enthusiasm, disciplinary classroom climate in language tests and lessons, teacher-directed instruction, teacher support for students in reading lessons, teacher feedback, teacher stimulation of student engagement in reading, and enjoyment of reading) contribute to predicting and explaining the student's self-efficacy in reading?

1.4. Study Goal

This study aimed to identify students' perceptions of the language teacher's practices (teacher enthusiasm, disciplinary classroom climate in language tests and lessons, teacher-directed instruction, teacher support, teacher feedback, teacher stimulation of student engagement in reading, and enjoy reading), and to determine how these practices contribute to students' self-efficacy in reading by considering their participation in PISA 2018.

2. Method and Materials

2.1 Research Model

The current study used the secondary data analysis method to investigate large-scale data at an international level that were collected by international bodies and organizations (Donnellan & Lucas, 2013). It is based on re-analyzing the responses of Jordanian students to several variables derived from the Student Well-Being Questionnaire in PISA 2018.

2.2. Participants

The participants in this study were 8,963 students, of which 4,344 were male (48.5%) and 4,619 were female (51.5%), aged approximately 16 years (15.86 years), born in 2002, from 313 schools. The subjects were selected by a multi-class stratified random method by type of school, region and population, gender, and immigration status constituting 901,114 male and female students aged 15 years, representing 79% of government schools from the sample and 21% of private schools, and schools of the United Nations Relief and Works Agency (UNRWA) for Palestine Refugees in the various governorates of the Hashemite Kingdom of Jordan (OECD, 2019a).

2.3. Data Collection Tools

The Student Well-Being Questionnaire for PISA 2018, which was supplied in paper form with the reading, science, and mathematics tests, comprises 68 main questions that included demographic variables related to the student, such as their social family background; health and well-being; and economic, social, and cultural status, in addition to indicators from derived scores. It included topics related to the school environment; teaching and classroom practices; educational, psychological, and social factors related to the student; and students' classroom interaction, school behavior, absence, school bullying, and others (https://www.oecd.org/pisa/data/2018database). The variables of the current study are related to the classroom practices of the reading teacher, namely, the teacher's enthusiasm, disciplinary classroom climate in language tests and lessons, teacher-directed instruction, teacher support, teacher feedback, teacher stimulation of reading engagement, enjoyment of reading, and student self-efficacy. Table 1 includes a detailed description of each variable based on the Technical Report for PISA 2018 (OECD, 2019b).

Table 1. Detailed description of each variable (OECD, 2019b)

Variable	Code	Acronym	N	Scale
Perceived teacher's interest and enthusiasm	ST213	TEACHINT	4	4-point scale: strongly agree, agree, disagree, strongly disagree
Discipline in language lessons environment	ST097	DISCLIMA	5	4-point scale: every lesson, most lessons, some lessons, never or hardly ever
Teacher-directed instruction	ST102	DIRINS	5	4-point scale: never or hardly ever, some lessons, most lessons, every lesson
Teacher support in language lessons	ST100	TEACHSUP	4	4-point scale: every lesson, most lessons, some lessons, never or hardly ever
Perceived teacher's feedback	ST104	PERFEED	3	4-point scale: never or hardly ever, some lessons, most lessons, every lesson or almost every lesson
Teacher's stimulation of engagement in reading	ST152	STIMREAD	4	4-point scale: never or hardly ever, some lessons, most lessons, all lessons
Enjoy/Like reading	ST160	JOY READ	5	4-point scale: strongly agree, agree, disagree, strongly disagree
Self-concept of reading: perception of competence	161ST	SCREADCOMP	6	4-point scale: not at all, very little, somewhat, a lot

The Technical Report for PISA 2018 (https://www.oecd.org/pisa/data/pisa2018technicalreport) contains information on the procedures for developing the tests and accompanying questionnaires, as well as for confirming their reliability characteristics for use in the various participating countries, which is based on rigid and high-quality criteria to ensure translations do not include any potential biases that could affect international comparisons, twofold translation of the target language based on broad guidelines, matching of two third-party translations into a single national version, re-translation of tools from the national language to English, and follow-up and auditing by independent committees, in addition to analyzing items based on experimental samples to detect items with inappropriate psychometric properties and then modifying or deleting them. The Technical Report also provides indicators of the construct validity of the questionnaires, as it reached 39 of the derived variables through the item response theory. The reliability coefficients of the derived variables using Cronbach's alpha for internal consistency indicated a coefficient of between 0 and 1, with cut-off scores of 0.90 – high internal consistency; 0.80 – good internal consistency; and 0.70 – acceptable internal consistency, where high or close values for each measure across countries are a good indicator of reliability. The reliability of the derived variables used in this study was also verified based on the data of Jordanian

students, and the internal consistency coefficients were acceptable and high according to the cut-off scores approved by the Technical Report, as illustrated in Table 2.

Table 2. Cronbach's alpha coefficients for internal consistency

Study variables	No.	Internal consistency
Teacher's enthusiasm	4	0.87
The disciplinary climate in tests and language lessons	5	0.86
Teacher-directed instruction	5	0.81
Teacher support	4	0.88
Teacher feedback	3	0.84
Teacher's stimulation of engagement in reading	4	0.86
Enjoyment of reading	5	0.71
Self-efficacy in reading	6	0.79

2.4. Data Collection Process

Available data on the study variables used in PISA 2018 were found on the website of the OECD (https://www.oecd.org/pisa/data/2018database/). This site provides data for all expressions and variables using a code and an abbreviated name for each variable for all individuals in the countries participating in PISA 2018. It is available in SAS and SPSS, which provide sums for derived variables (z-score). Jordanian students' data were downloaded with a detailed file. The analyses were carried out on standardized scores, and multiple regression analysis was utilized to determine the extent to which classroom practices of reading science predict the student's reading self-efficacy and to ascertain the relative contribution of each variable to the interpretation of the student's reading self-efficacy.

2.5. Data Analysis

The study includes the following variables. Gender is a taxonomic variable, and the independent variables (predictors) are the reading teacher's classroom practices, which include teacher's enthusiasm, disciplinary classroom climate in language tests and lessons, teacher-directed instruction, teacher support, teacher feedback, and teacher's stimulation of engagement in reading, as well as enjoyment of reading. Each variable carries a code in the assigned questionnaire and an abbreviated name in the data analysis, as shown in Table 1 based on the Technical Report and User Guide for PISA 2018 (OECD, 2018b). The dependent variable (predicted) is student's reading self-efficacy.

3. Results and Discussion

3.1. Results and Discussion of the First Question

The first question is: Are there statistically significant differences at the $\alpha \leq 0.05$ level in students' perceptions of the practices of a language teacher and their self-efficacy within Jordanian students' participation in PISA 2018 attributed to the gender of students (male and female)?

Table 3. T-test for the differences between the averages of students' self-efficacy

Topics	Gender	N	Mean	SE	MD	SED
Teacher's enthusiasm	Female	4567	0.284	0.014	0.035	0.022
	Male	4144	0.248	0.017		
Disciplinary climate in tests and language lessons	Female	4560	0.279	0.015	−0.053*	0.025
	Male	4110	0.332	0.020		
Teacher-directed instruction	Female	4570	0.688	0.015	0.065*	0.023
	Male	4165	0.623	0.018		
Teacher support	Female	4564	0.633	0.012	0.104*	0.020
	Male	4168	0.528	0.016		
Teacher feedback	Female	4531	0.317	0.015	−0.093*	0.023
	Male	4082	0.411	0.017		
Teacher's stimulation of engagement in reading	Female	4569	0.583	0.015	0.199*	0.024
	Male	4137	0.384	0.018		
Enjoyment of reading	Female	4565	0.631	0.012	0.309*	0.016
	Male	4143	0.322	0.010		
Self-efficacy of reading	Female	4385	0.458	0.013	0.110*	0.022
	Male	3869	0.348	0.018		

Notes: SE = standard error, MD = mean difference, SED = standard error of the difference. * $p < 0.05$.

The results in Table 3 indicate statistically significant differences in teacher-guided instruction, teacher support for students in reading lessons, teacher's stimulation of engagement in reading, enjoyment of reading, and self-efficacy in reading in favor of females. This indicates the superiority of perceptions of female students participating in PISA 2018 regarding the reading teacher's practices in teacher-guided instruction, teacher support, teacher's stimulation of engagement in reading, enjoyment of reading, and self-efficacy in reading. Conversely, the students' perceptions of the role of the teacher in teaching reading in controlling the classroom environment, and feedback from the teacher were in favor of males. However, there are no statistically significant differences in the students' perceptions in the field of teacher enthusiasm. This result may be explained in light of the differences between the genders due to cultural factors. In Jordan, the societal cultural milieu tends to pay more attention to and focus on female behavior than male behavior, making female students more inclined to seriousness and devotion in the classroom than male students, which makes it easier for the teacher to exercise guidance, support, and motivation to make the reading process an enjoyable activity for the students, which, in turn, increases their sense of self-efficacy in reading. Male classroom teachers, on the other hand, may face the problem of male pupils' lack of seriousness and devotion to the standards of the classroom setting. The teacher of male students may spend a significant amount of time controlling the classroom environment and providing feedback to students at the expense of other tasks, such as guidance, support, motivation, creating an enjoyable learning environment, and strengthening self-efficacy in reading.

3.2. Results and Discussion of the Second Question

The second question is: To what extent do the practices of a language teacher (teacher enthusiasm, disciplinary classroom climate in language tests and lessons, teacher-directed instruction, teacher support for students in reading lessons, teacher feedback, teacher's stimulation of engagement in

reading, and enjoyment of reading) contribute to predicting and explaining the student's self-efficacy in reading?

Table 4. Pearson's correlation coefficients between reading self-efficacy and the teacher's practices

	Self-efficacy in reading	Teacher's enthusiasm	Disciplinary climate	Teacher-directed instruction	Teacher support	Teacher feedback	Teacher's stimulation of engagement in reading	Enjoyment of reading
Self-efficacy in reading	1.000	*0.243	*0.143	*0.095	*0.115	*0.156	*0.225	*0.319
Teacher's enthusiasm		1.000	*0.395	*0.412	*0.411	*0.572	*0.608	*0.179
Disciplinary climate			1.000	*0.287	*0.281	*0.316	*0.331	*0.095
Teacher-directed instruction				1.000	*0.641	*0.421	*0.455	*0.081
Teacher support					1.000	*0.368	*0.415	*0.107
Teacher feedback						1.000	*0.576	*0.098
Teacher's stimulation of engagement in reading							1.000	*0.159
Enjoyment of reading								1.000

* $p < 0.05$

The results in Table 4 show a positive, statistically significant correlation at the $\alpha = 0.05$ level between self-efficacy in reading and teacher enthusiasm, disciplinary climate, teacher-directed instruction, teacher support, teacher feedback, teacher stimulation of engagement in reading, and enjoyment of reading. Pearson's correlation coefficients ranged between 0.081 and 0.608. The highest correlation was between students' perceptions of teacher's enthusiasm and teacher's stimulation of engagement in reading (0.608), while the weakest correlation was between students' perceptions of teacher-guided instruction and enjoyment of reading (0.081). To determine the predictive and explanatory ability of these variables with self-efficacy in reading, multiple regression analysis was performed utilizing the stepwise input method (see Table 5).

Table 5. Results of the multiple regression analysis of self-efficacy

Predicted variables	R	R Square	F Change	Sig. F Change	A	B	β	t	Sig.
Enjoyment of reading	0.319	0.102	880.366	0.000	0.229	0.419	0.319	29.671	0.000
Enjoyment of reading & teacher's enthusiasm	0.371	0.138	321.098	0.000	0.197	.374	0.285	26.590	0.000
						0.185	0.192	17.919	0.000
Enjoyment of reading & teacher's enthusiasm & teacher's stimulation of engagement in reading	0.380	0.144	57.696	0.000	0.170	0.367	0.280	26.136	0.000
						0.127	0.132	9.902	0.000
						0.090	0.101	7.596	0.000
Enjoyment of reading & teacher's enthusiasm, teacher's stimulation of engagement in reading & disciplinary climate in tests and language lessons	0.381	0.145	10.854	0.001	0.166	0.366	0.279	26.086	0.000
						0.116	0.120	8.736	0.000
						0.085	0.095	7.138	0.000
						0.033	0.038	3.294	0.001
Enjoyment of reading & teacher's enthusiasm, teacher's stimulation of engagement in reading, disciplinary climate in tests and language lessons & teacher-directed instruction	0.383	0.147	11.816	0.001	0.182	0.366	0.279	26.056	0.000
						0.123	0.128	9.172	0.000
						0.097	0.108	7.806	0.000
						0.037	0.043	3.684	0.000
						0.039	0.042	3.437	0.001

The results of the multiple regression analysis showed that five variables of students' perceptions of language teacher practices predicted students' reading self-efficacy, namely enjoyment of reading, teacher's enthusiasm, teacher's stimulation of engagement in reading, disciplinary climate in tests language lessons, and teacher-directed instruction. The multiple correlation coefficient between these combined variables and reading self-efficacy was 0.383, and the cumulative explained variance in reading self-efficacy, which is due to the five combined variables (14.7%), is statistically significant at the $\alpha = 0.05$ level. The percentage of the explained variance in reading self-efficacy, which is due to the enjoyment of reading factor (10.2%), and teacher's enthusiasm factor added to the overall variance in reading self-efficacy (3.6%). The teacher's stimulation of engagement in reading factor added 1% to the explanatory variance in self-efficacy in reading, and the percentage of what was added by the two factors disciplinary climate in tests and language lessons and teacher-directed instruction to the overall variance in self-efficacy is less than 0.5%. The two variables teacher feedback and teacher support in reading lessons were left out of the equation and did not add any statistically significant differences.

The standard beta value of the regression coefficient revealed the contribution of each of the variables to self-efficacy in reading. For instance, enjoyment of reading contributed to an increase in self-efficacy in reading of 0.279 standard units when enjoyment of reading increased by one standard unit. Teacher's enthusiasm contributed to an increase in self-efficacy in reading of 0.128 standard units when teacher's enthusiasm increased by one standard unit. Teacher's stimulation of engagement in reading contributed to an increase in self-efficacy in reading of 0.108 standard units when students were motivated to engage in reading increased by one standard unit. Furthermore, disciplinary classroom climate in language tests and lessons contributed to an increase in self-efficacy in reading of 0.043 standard units when the classroom disciplinary climate in language tests and lessons increased by one unit. Finally, teacher-directed instruction contributed to an increase in self-efficacy in reading of 0.042 standard units when teacher-directed instruction increased by one unit. All the regression coefficients were statistically significant at the $\alpha = 0.05$ level. The nature of self-efficacy for learning, which is the product of the interaction between experience and the components of the educational environment, may explain this result. Therefore, students' sense of control and confidence in their capacity to successfully fulfil the demands of educational tasks determines their reading self-efficacy. This feeling results from the teacher's practices inside the classroom and the associated enthusiastic interaction with students, their control of the classroom environment, their continuous guidance to students, the creation of an enjoyable learning environment, and their provision of corrective and reinforcement feedback that supports normal student practices and punitive feedback that controls abnormal student practices. The effectiveness of the teacher in the classroom has an important role in helping learners build a positive belief about their self-efficacy in reading. This result is consistent with the finding of Mills et al. (2006) that the learners' belief that they are successful readers increases their motivation to continue and engage in the reading process to achieve more learning and more determination to meet reading challenges. This result is also consistent with the result of Schunk's (1995) study, which emphasized the role of effective teacher practices in the classroom in strengthening the learner's reading self-efficacy by helping the learner master the reading task, and with the result of Zimmerman and Cleary's (2006) study, which revealed that learners' reading self-efficacy is impacted by the verbal reinforcement they receive in multiple educational situations within the classroom by comparing them with their peers. Additionally, this result aligns with that of Wiltgen (2011), which indicated that self-efficacy in reading is positively related to learner motivation; students with high motivation read more, and this positively affects their reading skills and strategies, which, in turn, affects themselves as readers and their self-efficacy in reading. Furthermore, this result is consistent with that of Schunk and Rice's (1993) study, which indicated that self-efficacy in reading can be developed through training. Students who are exposed to effective teacher practices such as encouragement, motivation, and active feedback become better readers and thus increase their self-efficacy in reading.

4. Conclusion

Based on the results of the study, we conclude that the perceptions of Jordanian students participating PISA 2018 of the language teacher's classroom practices, and the factors related to the educational and social context in the school impact their beliefs concerning their abilities in performance and achievement in general and in the subjects of PISA (reading, mathematics, and science) in particular, which led to the conclusion that the classroom practices of the language teacher, namely, teacher enthusiasm, disciplinary classroom climate in language tests and lessons, teacher-directed instruction, teacher support for students in reading lessons, teacher feedback, teacher's stimulation of engagement in reading, and reading for enjoyment, constitute a solid material in building the students' reading self-efficacy, which, in turn, improves the level of their academic achievement.

5. Recommendations

Considering the results and conclusions of the study, the study recommends giving more attention to reading self-efficacy and the factors related to the teacher and student in the school context by creating a fertile social and psychological environment that provides students with adequate opportunities for interaction and learning, improving classroom practices and quality of school life, providing group-based activities, such as role-playing and discussions, and competitive activities, and elevating the attachment to school within the framework of a supportive and influential environment in the student's school life. In addition, it recommends employing reading for enjoyment methods represented in displaying connected texts that consist of sentences organized in paragraphs within magazines, stories, novels, and informative books, as well as non-connected texts presented in the form of tables, lists, graphics, and shapes, and the strategy of displaying a combination of connected and non-connected texts. Furthermore, the study recommends paying attention to the teacher's enthusiasm, teachers motivating students to participate in reading lessons, and controlling the classroom environment. Moreover, it recommends conducting further studies to address more areas related to the teacher and the student reading lessons, such as the student's feeling about reading tasks, the student's evaluation of text comprehension and memorization strategies, summarizing, enjoyable reading time, reading activities, and reading materials, and the role of these factors in the student's reading self-efficacy, and studying the differences between the factors that are related to the classroom practices of the language teacher according to different variables, such as the type of school participating in the international study (public, private, and UNRWA schools); high and low performers in the international study, the males/females variable based on the international average of the participating countries, and the local average in PISA to reveal the network of relationships between the factors affecting the student's reading self-efficacy.

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