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FACTORS INFLUENCING LEARNER ENGAGEMENT: A CASE STUDY OF MIDDLE AND HIGH SCHOOL STUDENTS

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ABSTRACT

The article investigates the factors influencing student engagement in educational institutions in Ouezzane, Morocco. Student engagement refers to the extent to which learners invest in their learning, actively participate in school activities, and persevere in pursuing their academic goals. High levels of engagement are associated with better academic outcomes and overall satisfaction with learning. The study used the Student Engagement Instrument (SEI) to measure cognitive and psychological engagement among 248 students aged 13 to 18 from middle and high schools in Ouezzane. The research explored factors such as teacher-student relationships, consequences and relevance of schoolwork, peer support for learning, future aspirations and goals, and family support for learning. The findings revealed that positive teacher-student relationships, perceived relevance of schoolwork, peer support, and future aspirations and goals significantly influenced student engagement. The availability of family support during educational challenges was also identified as a crucial factor affecting engagement. Additionally, the study found that student age and gender played a role in engagement. Students tended to decrease their engagement over time and female students generally displayed higher levels of engagement compared to male students, potentially influenced by gender-related socialization processes and expectations. Interestingly, socioeconomic factors such as family financial situation and parental education level seemed to have little to no effect on student engagement in this study.

INTRODUCTION

Student engagement, a crucial concept in education, is currently gaining heightened attention from researchers and educators (Bae & Lai, 2020). Internationally recognized as a current and topical issue, research findings indicate that positively engaged students can be up to seven months ahead of their peers (Pedler et al., 2020). According to the High Council of Education (HCE), student engagement is defined as the interrelation between the importance an individual places on studies and school life, the effort they exert to acquire knowledge, and the connections they establish with their environment (HCE, 2008). It refers to the extent to which learners invest in their learning, are motivated to actively participate in school activities, and persevere in pursuing their academic goals.

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Studies have indicated that elevated levels of engagement are linked to various favorable educational outcomes, such as school completion and academic success (Söderholm et al., 2023, Lee et al., 2016). To understand the different aspects of student engagement, several theoretical models have been proposed by researchers such as Fredricks, Blumenfeld, and Paris (2004) and Deci & Ryan (1985). Fredricks et al.'s model emphasizes three dimensions of engagement: emotional, behavioural, and cognitive engagement. On the other hand, Deci & Ryan's self-determination theory underscores the significance of intrinsic, extrinsic, and amotivation in student engagement.

Studying the concept of student engagement and the factors influencing it is crucial for designing learning environments conducive to engagement. This may involve using interactive teaching methods, creating a positive and stimulating learning climate, and considering learners' individual interests and needs. Thus, it is important to measure students' level of engagement and identify the factors influencing their engagement in the classroom.

In this context, we will explore several research questions, such as the degree of student engagement, the factors influencing their engagement, the relationship between the social environment and student engagement, gender differences in engagement, and the impact of family financial situation on engagement. By addressing these questions, educators can better understand how to foster student engagement and create an educational environment that is more conducive to their academic success and personal development.

METHODOLOGY

1. Location and Participants

This study is part of an action research project conducted by four trainee teachers as part of their training at the CRMEF in Tangier. It was conducted in November 2022 in two middle schools and two high schools belonging to the regional delegation of Ouezzane, Morocco. The choice of these schools is justified by the active involvement of these teachers in teaching at these institutions (Table 1).

The study sample, comprising all the students of these trainee teachers, included 248 students aged 13 to 18, with a distribution of 41% boys and 59% girls. Among these students, 48% were in middle school, and 52% were in high school. Regarding geographical origin, 54% of the students came from rural areas, while 46% came from semi-urban areas.

Table 1. Respondent Statistics

Delegation	Level	Schools	Environment	Females	Males	Total
Ouezzane	High School	Al Khawarizmi	Semi-urban	42	24	66
		Mohamed 5 High School Annex	Rural	35	29	64
	middle School	Khalid Bno Loualid	Semi-urban	28	19	47
		Omar Ben Jelloun	Rural	41	30	71
Total				146	102	248

2. Research Instrument

To measure the engagement of our students, we relied on the Student Engagement Instrument (SEI), developed, and validated by James Appleton and his team (Appleton et al., 2006). The SEI is designed to assess both the cognitive and psychological engagement of students in educational settings. It allows us to measure how actively students participate in their learning (cognitive engagement and how emotionally and psychologically invested they are in the learning process (affective engagement).

The instrument was translated into Arabic to ensure accessibility for the students, and it was administered to them in paper format during regular class sessions. The students responded to the questionnaire in their respective classrooms under the supervision of their teachers.

The SEI consists of 33 items, divided into five sections (Table 2). Items were rated on a 5-point Likert scale, ranging from 1 (totally disagree) to 5 (totally agree). This approach allowed us to comprehensively assess the various factors influencing students' engagement in their learning.

$$\text{Standard Deviation} = \sqrt{\frac{\sum_{i=1}^{n}(\text{Number of Students}_i \text{ x } (\text{Likert Scale}_i - \text{Mean})^2}{\sum_{i=1}^{n} \text{Number of Students}_i - 1}}$$

In addition, inferential statistics such as ANOVA were used.

To facilitate the interpretation of the results of descriptive statistics, we followed the categorization method proposed by Le Poultier (1986). This method allows us to classify the mean scores into three categories: low (scores ranging from 1 to 2.33), moderate (scores ranging from 2.34 to 3.67), and high (scores ranging from 3.68 to 5).

Table 2. Components of the various parts of the measurement tool, the Student Engagement Instrument (SEI).

Sections of the instrument	items
1. Factors related to teacher-student relationships (TSR)	From 1 to 9
2. Factors related to the consequences and relevance of schoolwork (CRSW)	From 10 to 18
3. Factors related to peer support in learning (PSL)	From 19 to 24
4. Factors related to aspirations and future goals (FG)	13 and from 25 to 29
5. Factors related to family support and learning engagement (FSL)	From 30 to 33

The teacher-student relationship, peer support, and family support represent affective engagement, while the relevance of schoolwork, as well as aspirations and future goals, represent cognitive engagement.

1. Data Analysis

Quantitative data were analyzed using descriptive statistics, including mean ($\bar{x}$) and standard deviation(sd).

$$\text{Mean} = \frac{\sum_{i=1}^{n}(\text{Likert Scale}_i \times \text{Number of Students}_i)}{\sum_{i=1}^{n} \text{Number of Students}_i}$$

ANOVA was employed to identify the categorical variables that influenced the students' responses. All analyses were conducted using SPSS version 20 software.

RESULTS

1. Factors related to Teacher-Student Relationships (TSR)

The results pertaining to factors associated with teacher-student relationships, as presented in Table 3, reveal an overall mean of 3.84 with a standard deviation of 1.11. These results highlight the high impact of these factors on student engagement. Out of the nine questions asked, six were categorized as "high," while three were categorized as "moderate." The most influential factors are students' desire to communicate with their teachers within the school (mean: 4.05; standard deviation: 0.98), genuine interest of teachers towards their students (mean: 4.04; standard deviation: 0.98), and the honesty of teachers in their interactions with students (mean: 4.02; standard deviation: 1.05). These results suggest that the majority of students perceive their relationships with their teachers in an overall positive manner (Table 3).

Table 3. Results of students' responses to items related to teacher-student relationships.

Items		1	2	3	4	5	$\bar{x}$	sd	Ranking	Category
1- Overall, adults at my school treats students fairly.	Number of Students	16	20	53	92	67	3.70	1.14	7	Moderate
	Percentage	6.5	8.1	21.4	37.1	27.0				
2- Adults at my school listen to the students.	Number of Students	9	37	48	84	70	3.68	1.14	8	Moderate
	Percentage	3.6	14.9	19.4	33.9	28.2				
3-At my school, teachers care about students.	Number of Students	6	14	35	102	91	4.04	0.98	2	High
	Percentage	2.4	5.6	14.1	41.1	36.7				
4- My teachers are there for me when I need them.	Number of Students	8	17	43	96	84	3.93	1.04	4	High
	Percentage	3.2	6.9	17.3	38.7	33.9				
5- The school rules are fair.	Number of Students	16	24	30	95	83	3.83	1.18	6	High
	Percentage	6.5	9.7	12.1	38.3	33.5				
6 - Overall, my teachers are open and honest with me.	Number of Students	9	17	28	101	93	4.02	1.05	3	High
	Percentage	3.6	6.9	11.3	40.7	37.5				
7- I enjoy talking to the teachers here.	Number of Students	5	18	30	102	93	4.05	0.98	1	High
	Percentage	2.0	7.3	12.1	41.1	37.5				
8- I feel safe at school.	Number of Students	16	25	25	82	100	3.91	1.22	5	High
	Percentage	6.5	10.1	10.1	33.1	40.3				
9-Most teachers at my school are interested in me as a person, not just as a student.	Number of Students	23	45	49	75	56	3.39	1.27	9	Moderate
	Percentage	9.3	18.1	19.8	30.2	22.6				
All items							3.84	1.11		High

5: totally agree; 4: agree; 3: neutral; 2: disagree; 1: totally disagree; $\bar{x}$: mean; sd: standard deviation.

After conducting the analysis of the ANOVA results regarding the students' responses to items related to Teacher-Student Relationships (TSR), as presented in Table 4, we observe that the significance level is below the commonly used reference value, $\alpha = 0.05$, for the following categorical variables: School, Grade level, Gender, Age, and the number of siblings.

Table 4. Univariate ANOVA analysis of teacher-learner relationships as a function of categorical variables

Categorical variable	F	Sig.
School	1.73	**0.02**
Area	1.06	0.39
School level	1.90	**0.01**
Gender	1.73	**0.02**
Age	2.17	**0.00**
Siblings	1.64	**0.03**
Family income	1.33	0.14
Father's level of education	1.18	0.25
Mother's level of education	1.30	0.15

F: F-statistic ; Sig.: Significance Level

The type of school significantly influences the results, with higher scores recorded in colleges ($\bar{x}$=4.07) compared to high schools ($\bar{x}$=3.61). Concerning the grade level, students in the first year of college obtain the highest score ($\bar{x}$=4.19), while this score gradually decreases until reaching the lowest value among second-year baccalaureate students ($\bar{x}$=3.41).

Regarding the gender of the students, girls obtain a higher score ($\bar{x}$=3.97) compared to boys ($\bar{x}$=3.64). The age of the learners also plays a role, with the highest score recorded among 13-year-old students, gradually decreasing as their age increases (Fig 1).

As for the number of siblings, the results show that only children obtain the lowest score ($\bar{x}$=3.09), while this score exceeds 3.83 when the student has at least one sibling.

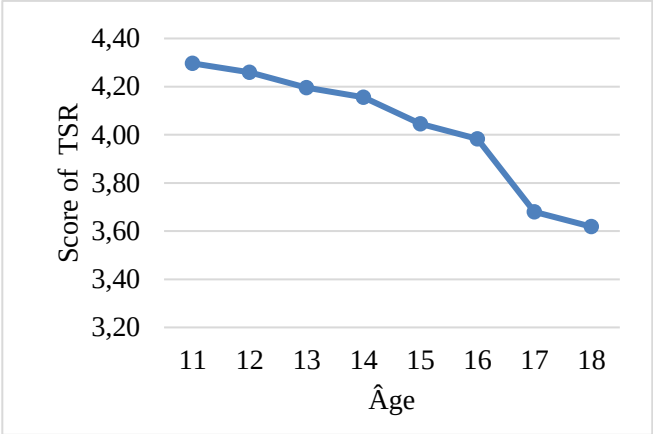


Figure 1. Evolution of the average score for teacher-learner relations (TSR) according to learner age

2. Factors related to the Consequences and Relevance of Schoolwork (CRSW)

These factors obtained an overall mean of 4.01 with a standard deviation of 1.13, highlighting their high impact on student engagement (Table 5).

Table 5. Results of student responses to items relating to the consequences and relevance of schoolwork

Items		1	2	3	4	5	$\bar{x}$	sd	Ranking	Category
10- The tests in my classes do a good job of measuring what I'm able to do.	Number of Students	13	22	30	114	69	3.82	1.10	7	High
	Percentage	5.2	8.9	12.1	46.0	27.8				
11-Most of what is important to know you learn in school.	Number of Students	10	14	42	101	81	3.92	1.04	6	High
	Percentage	4.0	5.6	16.9	40.7	32.7				

12-The grades in my classes do a good job of measuring what I'm able to do.	Number of Students	13	37	40	90	68	3.66	1.18	8	Moderate
	Percentage	5.2	14.9	16.1	36.3	27.4				
13-What I'm learning in my classes will be important in my future.	Number of Students	11	8	21	75	133	4.25	1.04	4	High
	Percentage	4.4	3.2	8.5	30.2	53.6				
14-After finishing my schoolwork I check it over to see if it's correct	Number of Students	5	14	24	99	106	4.27	2.01	3	High
	Percentage	2.0	5.6	9.7	39.9	42.7				
15-When I do schoolwork, I check to see whether I understand what I'm doing.	Number of Students	6	7	21	114	100	4.19	0.89	5	High
	Percentage	2.4	2.8	8.5	46.0	40.3				
16-Learning is fun because I get better at something.	Number of Students	7	6	24	84	127	4.28	0.94	2	High
	Percentage	2.8	2.4	9.7	33.9	51.2				
17-When I do well in school it's because I work hard.	Number of Students	3	4	22	80	139	4.40	0.81	1	High
	Percentage	1.2	1.6	8.9	32.3	56.0				
18-I feel like I have a say about what happens to me at school.	Number of Students	25	34	75	77	37	3.27	1.17	9	Moderate
	Percentage	10.1	13.7	30.2	31.0	14.9				
All items							4.01	1.13		**High**

5: totally agree; 4: agree; 3: neutral; 2: disagree; 1: totally disagree; $\bar{x}$: mean; sd: standard deviation.

Table 6. Results of student responses to items relating to peer support for learning

Among these factors, the importance attributed to hard work for achieving good results stands out as the most influential factor (mean: 4.40; standard deviation: 0.81). Additionally, learners consider learning to be stimulating and enjoyable as it allows for self-improvement (mean: 4.28; standard deviation: 0.94).

However, learners attach less importance to the belief that grades accurately measure their abilities (mean: 3.66; standard deviation: 1.18) and to the idea that they have a say in decisions concerning the school (mean: 3.27; standard deviation: 1.17), considering these two aspects as less influential.

These results underscore the importance of promoting a positive perspective on learning among students, emphasizing the value of effort and personal growth rather than solely focusing on assessments and numerical results.

Regarding the ANOVA results, only the categorical variable "students' age" showed a degree of significance below 0.05, suggesting that this variable had a statistically significant influence on the students' responses. As observed in the previous section, the CPTS score decreases progressively as the students' age increases.

3. Factors related to Peer Support in Learning (PSL)

The factors related to peer support in learning (PSL) obtained an overall mean of 3.56 with a standard

deviation of 1.20, indicating a moderate impact of these factors on students' engagement (Table 6).

Items		1	2	3	4	5	$\bar{x}$	Sd	Ranking	Category
19- Other students at school care about me.	Number of Students	27	21	58	83	59	3.51	1.25	3	Moderate
	Percentage	10.9	8.5	23.4	33.5	23.8				
20- Students at my school are there for me when I need them.	Number of Students	27	49	40	74	58	3.35	1.32	4	Moderate
	Percentage	10.9	19.8	16.1	29.8	23.4				
21- Other students here like me the way I am.	Number of Students	29	31	76	65	47	3.28	1.24	6	Moderate
	Percentage	11.7	12.5	30.6	26.2	19.0				
22- I enjoy talking to the students here.	Number of Students	18	32	25	115	58	3.66	1.18	2	High
	Percentage	7.3	12.9	10.1	46.4	23.4				
23-Students here respect what I have to say.	Number of Students	28	39	59	70	52	3.32	1.28	5	Moderate
	Percentage	11.3	15.7	23.8	28.2	21.0				
24- I have some friends at school.	Number of Students	9	6	21	99	113	4.21	0.96	1	High
	Percentage	3.6	2.4	8.5	39.9	45.6				
All items							**3.56**	**1.20**		**Moderate**

5: totally agree; 4: agree; 3: neutral; 2: disagree; 1: totally disagree; $\bar{x}$: mean; sd: standard deviation.

Among these factors, "friendship at school" (mean: 4.21; standard deviation: 0.96) was considered the most influential factor. This suggests that friendly relationships play a significant role in peer support and can have a positive influence on students' engagement and well-being. The item, "I enjoy talking to other students here," is also placed in the "high" category, highlighting the importance of the social aspect and enjoyment in interactions with other students at school. When students find discussions enjoyable and pleasant, it can contribute to creating a positive and stimulating learning environment.

However, the statement "Other students here like me for who I am" (mean: 3.28; standard deviation: 1.24) is considered less influential. Although this aspect received less attention from students, it is still important to note that some students still value being accepted and liked for who they are by their peers.

These results suggest that friendships at school and enjoyable social interactions play a crucial role in peer support for learning. Additionally, respect and mutual support among students also seem to be important factors in fostering a school environment conducive to students' engagement and well-being. These findings emphasize the importance of promoting positive relationships among students and fostering an inclusive and encouraging school climate for academic success and socio-emotional development of the learners.

Regarding the results of the ANOVA, two categorical variables showed a significance level below 0.05: age of the students and family income (Table 7).

For the categorical variable "age," a gradual decrease in the satisfaction with learning (PSL) score was observed as students' age increased. The average PSL score decreased from $\bar{x}$=4.55 for 13-year-old students to $\bar{x}$=3.28 for 18-year-old students. This trend suggests that with age, some students may perceive their satisfaction with learning less positively, which may require specific attention to maintain their engagement and motivation throughout their academic journey.

Regarding the "family income" variable, the results show that students from high-income families obtained a higher PSL score ($\bar{x}$=3.64), while students from low-income families recorded a lower score ($\bar{x}$=3.33). This disparity in scores suggests that family income level can influence satisfaction with learning among students. Students from high-income families may have access to additional resources and a more supportive learning environment, contributing to their overall satisfaction with learning.

These findings emphasize the importance of addressing age-related changes in learners' satisfaction with learning and considering the influence of family income in educational settings. Providing targeted support and resources to students from diverse backgrounds can help foster a positive learning environment and enhance learners' engagement and academic success.

Table 7. Univariate ANOVA analysis of peer support for learning as a function of categorical variables

Categorical variable	**F**	**Sig.**
Age	1.633	0.041
Family income	1.796	0.018

Regarding the factors related to future aspirations and goals (FG), all items associated with these factors are situated in the "high" category, indicating that students attribute significant importance to these factors concerning their future aspirations and goals (Table 8).

Table 8. Results of student responses to items relating to future aspirations and goals

Items		1	2	3	4	5	$\bar{x}$	sd	Ranking	Category
13-What I'm learning in my classes will be important in my future.	Number of Students	11	8	21	75	133	4.25	1.04	3	High
	Percentage	4.4	3.2	8.5	30.2	53.6				
25-I plan to continue my education following high school.	Number of Students	9	10	42	65	122	4.13	1.07	5	High
	Percentage	3.6	4.0	16.9	26.2	49.2				
26-Going to school after high school is important.	Number of Students	21	22	47	65	93	3.75	1.28	6	High
	Percentage	8.5	8.9	19.0	26.2	37.5				
27- School is important for achieving my future goals.	Number of Students	6	3	22	69	148	4.41	0.89	1	High
	Percentage	2.4	1.2	8.9	27.8	59.7				
	Number of Students	7	6	25	60	150	4.37	0.96	2	High

28-My education will create many future opportunities for me.	Percentage	2.8	2.4	10.1	24.2	60.5				
29-I am hopeful about my future.	Number of Students	12	6	37	79	114	4.12	1.06	4	High
	Percentage	4.8	2.4	14.9	31.9	46.0				
All items							**4.17**	**1.05**		**High**

5 : totally agree; 4: agree; 3: neutral; 2: disagree; 1: totally disagree; $\bar{x}$: mean; sd: standard deviation

4. Factors Related to Future Aspirations and Goals (FG)

The attainment of future goals through schooling (mean: 4.41; standard deviation: 0.89) is considered the most influential factor, highlighting the importance students place on their studies and academic work in achieving their aspirations and realizing their dreams.

The second item in the ranking, "My education will create many opportunities for me," also received a high number of votes, indicating that students are aware that their educational journey can open multiple opportunities for success in their future lives.

The third and fourth items, which relate to the importance of what students learn in their classes and their optimism for the future, also obtained significant recognition. This highlights students' awareness of the influence of their current learning on their future and their confidence in their future and abilities to succeed.

Lastly, the fifth item, "Going to college after high school is important," was also considered a crucial factor for students. This emphasizes their willingness to pursue higher education and their recognition of the importance of continuing their studies after high school to achieve their future aspirations and goals.

These results indicate that students have high future aspirations and goals, and they recognize the significance of school, their current education, and access to higher education in realizing these aspirations. These findings underscore the importance of encouraging and supporting students in pursuing their educational and career aspirations, as well as promoting a school environment that fosters motivation and engagement in achieving their future goals.

The analysis of variance (ANOVA) on students' responses regarding factors related to future aspirations and goals revealed a significant influence of the following variables: Grade level, Gender, and Age (Table 9).

Table 9. Univariate ANOVA analysis of future aspirations and goals as a function of categorical variables

Categorical variable	F	Sig.
School level	1.752	0.035
Gender	2.396	0.002
Age	2.530	0.001

Regarding the Grade Level, students in the second year of baccalaureate obtained the lowest score ($\bar{x}$=3.68), while students in other grade levels exceeded the average of 4.14.

Regarding Gender, female students' responses showed an average of 4.37, while male students obtained an average of 3.88.

As for Age, the results revealed a gradual decrease in future aspirations and goals based on students' age. Students aged 13 years recorded the highest average ($\bar{x}$=4.50), while this average decreased to ($\bar{x}$=3.79) among 18-year-old students.

It appears that students in grade levels other than the second year of baccalaureate, female students, and younger students expressed higher average future aspirations and goals. These results highlight the importance of identifying and understanding the factors that may influence students' aspirations to better support them in their academic and personal development.

5. Factors related to Family Support for Learning (FSL)

All items related to family support for learning were classified in the "high" category, highlighting the significant importance of family support on student engagement (Table 10). Among these factors, the statement "When I have problems at school, my family is ready to help me" (mean: 4.49; standard deviation: 0.80) is considered the most influential factor, emphasizing the crucial importance of practical and emotional support that the family provides to the student when facing academic difficulties. This result suggests that feeling supported by the family during challenging times can have a positive impact on the student's confidence and motivation to overcome academic obstacles.

The second-ranked item, "My family wants me to keep trying when things are difficult at school," also received a high number of votes, highlighting the significance of family support and encouragement to persevere in the face of academic challenges. Family support can play an essential role in promoting the student's resilience and maintaining their motivation for learning.

The items in the 3rd and 4th positions, concerning the family's availability when the student needs them and the family's interest in the student's academic successes, were also classified in the "high" category. This emphasizes the importance of emotional presence and unconditional support from the family, as well as celebrating the student's academic achievements.

These results clearly reveal that family support for learning is of paramount importance for students. Practical support, encouragement, interest, and emotional presence from the family are all essential factors that foster an environment conducive to learning and academic success. These findings underscore the significance of recognizing and valuing the role of families in students' educational journey and encourage efforts to promote close collaboration between schools and families to support students' development and well-being.

Table 10 : Results of student responses to items relating to family support for learning

Items		1	2	3	4	5	$\bar{x}$	sd	Ranking	Category
30- My family/guardian(s) are there for me when I need them.	Number of Students	5	5	21	59	158	4.45	0.88	3	High
	Percentage	2.0	2.0	8.5	23.8	63.7				
31-When I have problems at school my family/guardian(s) are willing to help me.	Number of Students	5	1	16	72	154	4.49	0.80	1	High
	Percentage	2.0	0.4	6.5	29.0	62.1				
32-When something good happens at school, my family/guardian(s) want to know about it.	Number of Students	7	13	29	96	103	4.11	0.99	4	High
	Percentage	2.8	5.2	11.7	38.7	41.5				
33-My family/guardian(s) want me to keep trying when things are tough at school.	Number of Students	5	6	16	56	165	4.49	0.88	2	High
	Percentage	2.0	2.4	6.5	22.6	66.5				
All items							**4.39**	**0.89**		**High**

5 : totally agree; 4: agree; 3: neutral; 2: disagree; 1: totally disagree; $\bar{x}$: mean; sd: standard deviation

In the context of the analysis of variance (ANOVA) of students' responses to items related to family support for learning, the obtained results reveal the significant influence of the following variables: Gender and Age (Table 11).

Table 11 : Univariate ANOVA analysis of family support for learning as a function of categorical variables

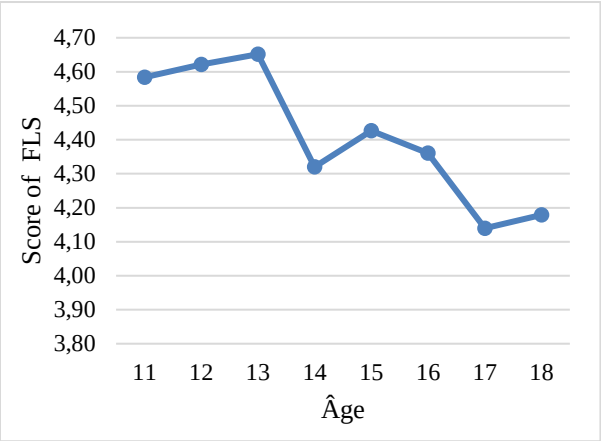
Categorical variable	**F**	**Sig.**
Gender	2.561	0.004
Age	2.239	0.013

Regarding Gender, the results indicate that female students obtained an average score of 4.50, while male students presented an average score of 4.20. This suggests that girls tend to perceive slightly higher family support for their learning compared to boys.

Regarding Age, the highest scores were recorded among students aged between 11 and 13 years, while the lowest scores were observed among student aged over 17 years (Figure 2). This highlights a relationship between students' age and their perception of family support for learning, with a decrease in the average score as age increases.

These findings underscore the importance of gender and age as determinant variables in students' perception of family support for learning. They can be valuable for guiding interventions aimed at strengthening family support and students' engagement in their educational journey.

Figure 2. Change in average Family Learning Support (FLS) score as a function of learner age



DISCUSSION

Learner engagement is a crucial concept in the field of education, as it plays a determining role in students' academic success and overall development. In this study, we examined several factors that could influence learner engagement, including school-related, family-related, and personal factors. The results obtained highlight the significance of these factors in shaping students' engagement in their educational journey.

Factors related to teacher-student relationships (TSR) were identified as having a significant impact on learner engagement (mean = 3.84; standard deviation = 1.11). The results show that positive and constructive relationships between teachers and students, characterized by a willingness to communicate with teachers in the institution, genuine interest of teachers in their students, and honesty in how teachers treat students, contribute to higher learner engagement. These findings are consistent with previous research that has also emphasized the importance of teacher-student relationships in students' motivation and academic achievement (Bae et al., 2020; Pedler et al., 2020).

On the other hand, factors related to the consequences and relevance of schoolwork (CRSW) were also identified as playing a significant role in learner engagement (mean = 4.01; standard deviation = 1.13). The results indicate that the importance

attributed to hard work to achieve good results and the idea that learning is enjoyable because it facilitates improvement are strongly linked to higher learner engagement. These results corroborate earlier work that demonstrated that students are more engaged when they perceive the relevance of their studies and are intrinsically motivated by the learning process (Söderholm et al., 2023; Pintrich & Schunk, 2014).

Regarding peer support for learning (PSL), the results indicate that this factor has a moderate impact on learner engagement (mean = 3.56; standard deviation = 1.20). Friendship at school is identified as the most influential factor, while the notion of being appreciated by peers as one is perceived as less influential. These findings are in line with previous research that has shown that social support from peers is associated with better school adjustment and higher engagement in students (Söderholm et al., 2023; Bae et al., 2020).

Factors related to future aspirations and goals (FG) were identified as having a high impact on learner engagement (mean = 4.17; standard deviation = 1.05). The results highlight the importance that learners place on achieving their future goals through their current educational journey. Attaining future goals through school is the most influential factor, indicating that learners are motivated by the prospect of realizing their dreams and creating future opportunities through academic success. These findings are consistent with previous studies that showed that students' future goals are strongly

related to their motivation and academic engagement (Söderholm et al., 2023; Wang et al., 2017).

Regarding family support for learning (FSL), the results indicate a high impact of this factor on learner engagement (mean = 4.39; standard deviation = 0.89). The availability of family to help in case of school-related problems is identified as the most influential factor, highlighting the crucial importance of family support during educational challenges. These findings are consistent with previous research that has shown that family support is a significant predictor of students' engagement and academic success (Söderholm et al., 2023; Delfino, 2019; Wang & Sheikh-Khalil, 2014).

Furthermore, the analysis of variance (ANOVA) revealed that students' age and gender play a significant role in their level of engagement. Consistent with previous research by Wang and Eccles (2012), we found that students tend to decrease their engagement over time. Wang and Fredricks' (2015) study even presented evidence suggesting an increasing disengagement among students as they progress through secondary education, estimating that 40% to 60% of young individuals exhibit signs of disengagement. This trend may be interpreted as a discrepancy between their personal development and the opportunities offered in the high school context, which often become larger and more performance-oriented, offering fewer chances to develop positive personal relationships with school adults, thereby altering their subjective perception of learning (Wang & Eccles, 2012).

Regarding the gender effect, the results indicate that female students generally display a higher level of engagement than male students. This finding aligns with studies by Bae & Lai (2020) and Bru et al. (2019), who observed a similar trend. Wang and Eccles (2012) attribute this gender effect to gender-related socialization processes and varying expectations from parents and teachers towards girls and boys. Girls may receive more encouragement to focus on academic performance and develop positive engagement with school. Additionally, Bru et al. (2019) found that girls exhibit higher levels of engagement due to elevated self-discipline skills, more effective learning strategies, a stronger orientation towards learning goals, and a preference for educational support that enhances their learning process.

However, the analysis of variance (ANOVA) revealed that socioeconomic factors such as family financial situation and parental education level seem to have no effect on students' engagement, at least in the context of this study.

CONCLUSION

Learner engagement in the context of education is a fundamental topic in the fields of psychology and pedagogy, especially when linked to academic achievement, which varies from one individual to another. Numerous studies have confirmed a positive correlation between learner engagement and academic success.

The results of this study, which focused on different factors influencing learner engagement in learning (family and learning support, future aspirations and goals, peer support for learning, consequences and relevance of academic work), highlight the high impact of these factors on learner engagement. Among them, family and learning support factors have a particularly significant influence, with an average score of 4.39.

These results underscore the importance of family support and the family environment in promoting learner engagement. Family members' interest,

encouragement, and availability when needed play a key role in developing intrinsic engagement in learners. Additionally, factors related to future aspirations and goals, as well as consequences and relevance of academic work, are also crucial elements in strengthening learner engagement.

It is essential to consider these findings in the educational context to foster learner engagement. Teachers, schools, and families can collaborate to create an environment conducive to engagement by encouraging positive interactions between learners and teachers, emphasizing the relevance and consequences of academic work, promoting peer support, and maintaining strong family support.

However, it is important to note that this study is limited to a specific context, and other variables may also influence learner engagement. Further research is needed to explore these aspects and deepen our understanding of learner engagement. Nevertheless, the obtained results reinforce the importance of considering the identified factors to foster sustained and positive engagement among learners.

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