DOI: https://doi.org/10.20372/JSSHR.V1.i1.02
ISSN: 2226-7522 (Print) and 2305-3372 (Online)
Journal of Social Science & Humanities Research
J. Soci. Sci. & Hum. Res., Jan. – June, 2025, 1(1), 18-30
Journal Homepage: https://journals.wgu.edu.et
Original Research

Grade Level Differences in School Engagement among Public Secondary School Students

Lelisa Chala

Department of Behavioural Sciences, College of Education and Behavioural Sciences, Wollega University, Ethiopia

Abstract

This study investigates differences in school engagement among public secondary school students concerning behavioural, emotional, and cognitive dimensions. Data were collected across grades 9, 10, and 11 using a validated questionnaire translated and adapted to the local context employing a cross-sectional research design. A total of 310 randomly selected students were surveyed. Descriptive statistics and ANOVA were used to analyse the data. The findings indicate that, in all dimensions of school engagement, major declines were found from grade to grade, and the steepest declines were in grade 11. Overall, all grades had behavioural engagement as the highest and emotional engagement as the lowest. The level of behavioural school engagement differed substantially between grades 9 and 11 and grades 10 and 11 and decreased with grades, from grade 9 to 11. The emotional, cognitive, and overall school engagement levels were significantly different between grades 9 and 10, 9 and 11, and 10 and 11, and decreased by increasing grade levels. The findings highlight the importance of focused efforts to keep students engaged, especially during the transition from one grade level to the next.

Copyright@2025 JSSHR, Wollega University. All Rights Reserved.

Article Information

Article History:
Received: 19-02-2025
Revised : 19-03-2025
Accepted : 19-04-2025

Keywords:
Behavioural engage ment, cognitive enga gement, emotional en gagement, grade level

*Corresponding Author:

Lelisa Chala

E-mail: lelisaha@gmail.com

INTRODUCTION

Scholars have repeatedly shown that school involvement is an essential component that has a significant impact on the academic achievement of students as well as their overall well-being (Estévez et al. 2021; Lara et al. 2022; Paik et al. 2024). School engagement is defined as students' involvement and attachment to the educational experience in the behavioural, emotional, and cognitive aspects (Fredricks et al. 2004; Fredricks et al., 2016). Student behavioural engagement involves the student's participation in academic and extracurricular activities; student emotional engagement means the student's sense of belonging to the educational institution; and student cognitive engagement is the student's commitment to learning and problem-solving (Estévez et al., 2021; Lara et al., 2022; Paik et al., 2024).

At the heart of the study of school engagement lie multiple theoretical models.

In the tradition of Bronfenbrenner (1979), the interplay among the individual, school, and societal context is stressed as shaping student engagement. Just as Deci and Ryan (1985) developed their self-determination theory in which intrinsic motivation driven by autonomy, competence and relatedness needs is assumed to be necessary for sustained engagement, so too is independent motivation driven by fulfilment of autonomy, competence and relatedness needs is assumed to be necessary for sustained engagement. By developing these frameworks, they offer a lens to understand the ways that grade differences could occur based on developmental, contextual, and other changes.

School engagement is a strong predictor of academic achievement, reduced dropout rates, and more positive social behaviour (Appleton et al., 2008). Higher engagement levels are linked to better grades and higher standardized test scores and increased persistence at difficult tasks, researchers found (Wang & Eccles, 2012). Consistent with this, it may be that variations in engagement between grade levels can provide insight into what interventions might work best to help students.

In terms of variations in school engagement, grade-level differences have become an important dimension of interest. There are extensive cognitive, emotional, and social changes that occur with adolescence, which range from around age 10 to around age 18 (Eccles et al., 1993). Often due to changes, students experience fluctuations during their school engagement as they move from one grade level to the next. With increased grade level, engagement drops, especially for the transition from middle to high school (Li & Lerner 2011). Academic demands are growing, peer relationships are changing, and school environments are not congruent with adolescents' developmental needs (Wigfield et al., 2007), which accounts for this trend.

It turns out that empirical studies show that behavioural engagement tends to decline throughout secondary school. More specifically, in Wang and Eccles (2012), it was found that middle school students tend to exhibit higher levels of behavioural engagement than do high school students. There has been a decline that is generally patriarchal to increasing academic demands and reduced teacher support as well as a heightened peer influence in higher grades (Fredricks et al., 2004). Studies also find that older secondary school students are less emotionally engaged than younger students (Roeser et al., 2002). We link this pattern to the transition from a more nurturing middle school environment to a rather impersonal and competitive one in high school (Eccles et al., 1993). However, research shows that cognitive engagement also has a subtle trajectory; some high school research shows cognitive disengagement from the curriculum (Marks, 2000). Although other work suggests that students who disengage cognition, even during ostensibly relevant work, are those who think the work is not connected to future goals (Wigfield & Eccles, 2002).

Systemic factors, including resource availability, teacher-student relationships, and curriculum design, compound variability in school engagement across grade levels in public secondary schools (Finn & Zimmer, 2012; Fredricks et al., 2016). The dynamics of this issue are better understood through the prism of public schools that serve often

diverse student populations in what are often economically less affluent contexts. This process provides the opportunity for educators and policymakers interested in creating spaces that support learning to understand grade-level differences in engagement within this setting.

In this way, this study seeks to determine grade level differences in school engagement of public secondary school students in terms of emotional, behavioural, and cognitive dimensions. Research focuses on identifying the patterns and underlying factors and how they can be used to inform strategies to increase engagement and promote equitable educational outcomes in grades K to 12.

Statement of the Problem

Fredricks et al. (2004) found that active school participation is a key predictor of academic performance, social development, and long-term results for students. Although research on school participation across grades consistently shows its relevance, a complex, at times even contradictory picture results. Though much is known, there have been few definitive findings (Archambault et al., 2009; Arlinkasari, 2017; Estévez et al., 2021; Korpershoek et al., 2019; Wang & Eccles, 2012; Yang, 2018). For example, some suggest that participation decreases during the transition from middle school to high school (Archambault et al., 2017; Wang & Eccles, 2012), while others predict that participation levels will be higher in high school (Estévez et al., 2021). These variations highlight a need for a more fine-grained understanding of school involvement as a multidimensional construct supported by unique environmental and contextual variables.

Although the overall relevance of school involvement is well-documented, there is a considerable gap in knowing how engagement changes between grade levels in particular local settings. Additionally, insufficient information exists on the causes generating these variances. Addressing these gaps is critical to building tailored, school- and educator-led interventions that promote engagement at various phases of students' educational journeys.

In the context of public secondary schools in Nekemte Town, active school participation is considered a predictor of academic performance. However, these institutions have had difficulty in preparing pupils for higher education, raising worries about the general level of student participation. This problem needs an evaluation of students' school involvement levels to establish if there is any change and to analyze whether school engagement substantially varies between grade levels.

Therefore, this research intends to give evidence-based insights for boosting school involvement throughout developmental stages. And the results will contribute to the larger educational dialogue around how to increase student involvement. To do this, the study attempts to answer the following research questions:

1. What are the levels of school engagement among public secondary schools in Nekemte?
2. What differences exist in school engagement (overall, behavioural, emotional, and cognitive) over grade levels of 9, 10, and 11 in Nekemte public secondary schools?

MATERIALS AND METHODS

Research Design

In this present study, cross-sectional descriptive research was used to undertake the study. In this perspective, cross-sectional studies are highly relevant for obtaining data from surveys that were compiled at one time, which allows us to understand certain characteristics or the behaviour of a particular population of interest over the time when the data was collected (Hilviu et al., 2020; Setia, 2016). This approach enables the researchers to analyze differences or patterns in the data other than the temporal dimension, a function that does not need subsequent monitoring. Moreover, the cross-sectional research design was useful in determining differences in the level of students' engagement in learning activities across different grades to establish how these levels depend on educational development phases (Thoma, 2023).

Population and sample

The study population consisted of grade nine, grade ten, and grade eleven public school students in Nekemte Town. The main reason for excluding Grade 12 students from the study was that they had fewer concerns about classroom learning, for joining classroom learning is not a priority task for the students in this grade since they are thinking about the national examination. During the 2024/2025 academic year, there were a total of 8,250 students enrolled across nine public secondary schools in the town (grade 9 = 3869, grade 10 = 1948, grade 11 = 2433). With Yemane's (1967) sample size determination formula, a sample of 385 students was determined. Then, by employing a proportional selection technique, from the 9 secondary schools, 385 students were selected.

Data collection instrument

The study used a questionnaire with items on background information and measures of school engagement to collect the data. The background section had the participants' sex and grade level. Ramadhani and Purwono (2023) adapted the 'School Engagement Measure' from Fredricks et. al. (2004) originally, which was then adapted by Chala (2024) by using translations and modifications to fit the local context to gather data about the student's level of school engagement. This instrument assessed three dimensions of school engagement: behaviour, emotion, and cognition. Of the included 19, five were measures of behavioural engagement, six measured emotional engagement, and eight assessed cognitive engagement. The items were rated on a 5-point Likert scale that ranged from "never" to "always."

Ramadhani and Purwono (2023) showed that the tool possessed the capability to measure the school engagement construct in its three dimensions and across the overall scale. Reliability coefficients of $\alpha = 0.82$ were obtained for the total scale; however, 0.83 for the emotional, 0.78 for the cognitive, and 0.66 for the behavioural dimensions were also reported. More significantly, in Chala's (2024) local context, his instrument was found to have alpha reliability coefficients of 0.77, 0.80, and 0.86 for the behavioural, emotional, and cognitive domains. For these results, the instrument was suitable for measuring levels of school engagement in the specified context of this study.

The procedure of data collection and analysis

A letter was sent from the College of Education and Behavioral Sciences at Wallaga University to public secondary schools to commence contact. School principals were then approached and briefed about the intent of the study. As part of the data collection process, each principal chose a teacher to help with data collection from students.

Responses to the questionnaire were reviewed carefully for completeness and entered into SPSS (version 25) for analysis. Once data were checked for accuracy and appropriateness for statistical examination, it was entered into a computer. Again, checks were made on assumptions for ANOVA, and extreme outlier responses were excluded from the further analysis.

Descriptive statistics were determined on data analysis, with means and standard deviations calculated for the three dimensions of school engagement and also for the overall school engagement scale. Based on the magnitude of the means and standard deviations, the levels of school engagement among the students were determined.

Significant differences in behavioural, emotional, and cognitive school engagement among grades 9, 10, and 11 were evaluated utilizing a one-way analysis of variance (ANOVA). The same analysis was also conducted with the overall scale. It was found to be statistically significant at alpha = 0.05.

Ethical issues

All participants in the study were asked to give their consent to participate in the research before the data collection survey was done. Participants were explicitly informed that their responses would not be used for anything other than academic research and analysis and that no individual participant would be identified or quoted in any conclusions or published reports arising from the study. Even if they felt uncomfortable, uneasy, or emotionally distressed, participants received clear information about the right to end the questionnaire or the right to withdraw from the interview at any time. The data collected from the survey was entered carefully in a comfortable computer system; the confidentiality of participants was preserved and no personal info about participants, such as their private identity or what they had told us, was given to anyone.

RESULTS AND DISCUSSION

Results

SPSS version 25 was used for data analysis. To perform the analysis, the data was carefully checked for appropriateness. Therefore, 75 of the total 385 responses (19.5%) were excluded from the final analysis for reasons such as incompleteness, outliers, or patterns of responses that indicated other than serious or inconsistent responses. The final dataset was formed by 310 student responses. The demographic background of the respondents is presented in Table 1.

Table 1

Background information of the respondents

Variables	Category	Response frequency	Per cent
Sex	Male	161	51.9
	Female	149	48.1
	Total	310	100
Grade	9th	104	33.5
	10th	101	32.6
	11th	105	33.9
	Total	310	100

Table 1 presents the backgrounds of the respondents. Of the 310 participants, 51.9% were male and the remaining 48.1% were female, showing equivalent gender participation in the study. Similarly, the respondent distribution regarding the grade level also shows equivalent representation. That is, 33.5%, 32.6%, and 33.9% were from grades 9, 10, and 11, respectively. Thus, the variable grade level is found to be suitable for a parametric test, as equivalence of samples is required. Table 2 presents the descriptive statistics of school engagement across grade levels.

Table 2

Descriptive statistics on school engagement across grade levels (N = 310)

School Engagement	Mean and Standard Deviation by Grade Level							
	9th		10th		11th		Total Engagement	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Behavioural Engagement	3.82	0.04	3.66	0.05	3.08	0.07	3.52	0.64
Emotional Engagement	3.33	0.05	2.74	0.08	2.05	0.06	2.70	0.83
Cognitive Engagement	3.75	0.05	3.39	0.07	2.82	0.07	3.32	0.75
Overall Engagement	3.60	0.03	3.20	0.04	2.58	0.04	3.12	0.57

Table 2 portrays that the mean score on behavioural school engagement was consistently decreasing from grade 9 (M = 3.60, SD = 0.30) to grade 10 (M = 3.20, SD = 0.04) to grade 11 (M = 2.58, SD = 0.04). In addition, the mean scores on emotional school engagement have shown a decrease from grade 9 (M = 3.33, SD = 0.05), grade 10 (M = 2.74, SD = 0.08), and grade 11 (M = 2.05, SD = 0.06). Furthermore, we have observed a decrease in mean scores for emotional and overall school engagement across the three grade levels. Thus, the results show that the student's school engagement has been decreasing across grade 9, grade 10, and grade 11.

Regarding the total level of engagement, the mean score of behavioural school engagement (M = 3.52, SD = 0.64) was the highest compared to emotional (M = 2.70, SD = 0.83) school engagement and cognitive school engagement (M = 3.12, SD = 0.57). Thus, the results suggest that the level of behavioural school engagement was the highest while the

level of emotional school engagement was the lowest among students in the three grade levels. The overall school engagement mean score in grade 9 (M = 3.60, SD = 0.03), grade 10 (M = 3.20, SD = 0.04), and grade 11(M =2.58, SD = 0.04) indicate that grade 9 students had the highest level of school engagement while grade 11 had the lowest school engagement practices. Lastly, as indicated by Sözen and Güven (2019), concerning a scoring range of the five-point response scale (1.00-2.40 = negative/weak, 2.41-3.40 = neutral/moderate, and 3.41-5.00 = positive/strong), the evaluation of the level of behavioural school engagement across grade levels of 9, 10, and 11 becomes strong (M = 3.52, SD = 0.64).

The analyses of the descriptive statistics shown in Table 2 reveal that the level of behavioural school engagement among grades 9, 10, and 11 was high while the levels of emotional, cognitive, and overall school engagement across the three grades were moderate, showing declines in rising grade levels.

Table 3

Differences in school engagement across grade levels (N= 310)

School Engagement		Sum of Squares	df	Mean Square	F	Sig.
Behavioural engagement	Between Groups	32.003	2	16.001	52.913	0.00
	Within Groups	92.839	307	0.302		
	Total	124.841	309			
Emotional engagement	Between Groups	86.333	2	43.166	106.854	0.00
	Within Groups	124.02	307	0.404		
	Total	210.353	309			
Cognitive Engagement	Between Groups	45.769	2	22.885	54.915	0.00
	Within Groups	127.935	307	0.417		
	Total	173.704	309			
Overall Engagement	Between Groups	55.275	2	27.638	191.886	0.00
	Within Groups	44.218	307	0.144		
	Total	99.493	309			

Table 3 presents the ANOVA comparison of school engagement levels across three grade levels: 9th, 10th, and 11th. Before presenting the results, the assumptions for independent groups based on grade level were checked. Levene's test for homogeneity of variances indicated no significant difference ($p > 0.068$), confirming that the assumption of homogeneity of variance was not violated. The data were normally distributed, thereby satisfying the assumptions for the ANOVA test.

As indicated in Table 3, comparisons of behavioural, emotional, cognitive, and overall school engagement for grades 9, 10, and 11 were conducted. The results revealed a statistically significant difference in behavioural engagement mean scores among the three groups ($F(2, 307) = 52.91$, $p = .00$).

Post-hoc comparisons using the Tukey test showed that the mean score for grade 9 (M = 3.82, SD = 0.04) was significantly higher than the mean score of grade 11 (M = 3.08, SD = 0.07). Similarly, the mean score for grade 10 (M = 3.66, SD = 0.05) was significantly higher than that for grade 11 (M = 3.08, SD = 0.07). However, the mean score for grade 9 (M = 3.82, SD = 0.04) did not significantly differ from that of grade 10 (M = 3.66, SD = 0.05).

Hence, the result suggests that students' behavioural engagement was significantly higher in grade nine than in grade eleven. Grade 10 students were superior in school engagement compared to grade 11, while the differences between grades 9 and 10 were not appreciable.

The mean score comparison in emotional school engagement among grades 9, 10, and 11 revealed that there was a statistically significant difference in the group mean scores ($F(2,307) = 106.85$, $p = 0.00$) set at $P = 0.05$. The Tukey post hoc comparison portrayed that grade 9 (M = 3.33, SD = 0.05) was significantly higher in emotional level of school engagement than that of grade 10 (M = 2.74, SD = 0.08) and grade 11 (M = 2.05, SD = 0.06). Similarly, the mean score of grade 10 (M = 2.74, SD = 0.08) was significantly higher than the mean score of grade 11 (M = 2.05, SD = 0.06).

The results indicate that there were significant differences in the level of emotional school engagement as a function of grade levels. The comparisons of the differences between a pair of grade levels were also significant, showing the trend of significantly decreasing with the increasing grade level.

Regarding the level of cognitive school engagement among grades 9, 10, and 11, as shown in Table 3, there was a significant difference in the mean score ($F(2,307) = 54.92$, $p = .00$) tested at $\alpha = 0.05$. The pairwise comparison of the means indicates that the grade 9 mean score (M = 3.75, SD = 0.05) was significantly higher than the mean scores of grade 10 (M = 3.39, SD = 0.07) and grade 11 (M = 2.82, SD = 0.07). The mean score of grade 10 was also significantly higher than that of grade 11. The results show that cognitive school engagement is significantly and consistently decreasing with the increasing grade level.

Finally, the comparison of the overall level of school engagement among grade levels (grades 9, 10, and 11) illustrated that there was an appreciable difference in mean scores ($F(2, 307) = 191.89$, $p = 0.00$) assessed at alpha equal to 0.05. The pairwise comparisons of means of the overall school engagement across the three grade levels (grades 9, 10, and 11) demonstrate that the mean score of grade 9 (M = 3.60, SD = 0.03) was significantly higher than the mean scores of grade 10 (M = 3.20, SD = 0.04) and grade 11 (M = 2.58, SD = 0.04). Besides, the mean score of the level of overall school engagement of grade 10 was significantly higher than that of grade 11. Thus, the results show that students' level of school engagement is significantly and consistently decreasing with the increasing grade levels of students.

MAJOR FINDINGS

1. The level of behavioural school engagement among grades 9, 10, and 11 was high, while the levels of emotional, cognitive, and overall school engagement across the three grades were moderate, showing declines in rising grade levels.
2. The student's behavioural engagement was significantly higher in grade nine than in grade eleven. Grade 10 students

were superior in school engagement compared to grade 11, while the differences between grades 9 and 10 were not appreciable.

3. There were significant differences in the level of emotional school engagement as a function of grade levels; the comparisons of the differences between a pair of grade levels were also significant, showing trends of significantly decreasing with the increasing grade level and
4. Cognitive school engagement is significantly and consistently decreasing as grade levels rise.

Discussions

The study offers a thorough look at behavioural, emotional, and cognitive school engagement in grades 9, 10, and 11. They imply important implications for the understanding of the patterns and predictors of student engagement at various grade levels.

Behavioral School Engagement

Results from the analyses showed that students in grades 9, 10, and 11 tended to have high behavioural school engagement (participation in school-related activities, attending classes, completing assignments, and obeying rules in school). Significantly for this thesis, grade 9 students were more engaged, on average, than grade 11 students, while grade 10 students showed higher levels of engagement than grade 11 students. Given that grades 9 and 10 do not differ substantially, it appears that the initial change in behavioural engagement during the middle-to-high school transition is not large. However, the behavioural engagement of students increases in lower grades and declines as they advance to higher grades. This reiterates previous research that students' school engagement decreases in later grades as they carry more academic and extracurricular work (Fredricks et al., 2004).

Emotional School Engagement

The results indicated moderate emotional school engagement for all three grades and a positive trend based on grade level. Students' emotional involvement in school can encompass feelings of connection and belonging, interest, and enjoyment (Finn, 1989). Importantly, we see considerable differences between each pair of grade levels, which indicate a consistent decrease in emotional engagement from grade 9 to grade 11. This pattern could reflect difficulties that students faced during their high school years, that is, heightened academic and social demands and greater student preparation for transitions to postsecondary education. As in prior studies, these developmental and environmental factors have also been found to reduce emotional engagement in higher grades (Wang & Eccles, 2012).

Cognitive School Engagement

The investment in learning, self-regulation, and willingness to master complex ideas (Fredricks et al., 2004) was seen to decrease significantly and consistently with the grade levels. These results reinforce the difficulty students have sustaining the cognitive engagement required to advance through high school. A combination of factors, including curriculum complexity, reduced motivation, and belief that school content is irrelevant to future goals (Eccles et al., 1999), could account for the decrease. This finding highlights the need for interventions fostering cognitive engagement, especially those directed at upper-grade students, to

ensure their sustained intellectual engagement in the educational process.

Overall engagement

Moderate school engagement across all grades, measured at the behavioural, emotional, and cognitive dimensions, showed declines alongside increases in school grades. The developmental theories that we are inscribing here present adolescence as a critical period with interest engagement waning or decreasing (Eccles et al., 1993; Wang & Fredricks, 2014). These differences in grade are a demonstration of why targeted strategies to help students engage in high school are critical.

To combat the decline in engagement, schools must pay significant regard to creating conducive classrooms, bolstering teacher-student relationships, and, at the same time, teaching a curriculum that is appropriate to the growth needs of the students. Besides, the existing programs educate on emotional wellness and cognitive uses as well as mentorship and extracurricular activities. However, these efforts will allow students not only to get more engaged but also to be more successful academically and overall.

CONCLUSIONS

The focus of this study was grade level differences in school engagement of public secondary school students based on behavioural, emotional, and cognitive dimensions. We found significant declines across all dimensions of school engagement over grades 9 to 11, severe declines in grade 11, and began to decline in grades 9 and 10. Across all grade levels, emotional and cognitive engagements were moderate, while behavioural engagement was consistently higher than emotional or cognitive ones. These results underscore two challenges faced by students during critical academic transitions: (1) maintaining and (2) enhancing engagement.

RECOMMENDATIONS

1. Schools, where police are used as an alternative to education, should take priority in creating a positive school climate and authentic relationships between students and teachers. Strategic setting up of a comprehensive mentorship program to augment, fortify, and expand the emotional connection that exists between the student and educational institution, combined with the judicious undertaking of a plethora of extracurricular activities that are devised meticulously, to resonate and match well, with the various interests and inspirations to the student body, will help in achieving this process.
2. Creating expectations in behaviour and rewarding students for their efforts will allow for continued behaviour. Even collaborative learning strategies and hands-on activities may improve engagement.
3. Teachers should create engaging and challenging tasks that link the content to students' real-life experiences. The inability to sustain cognitive engagement can be helped by encouraging self-regulated learning and critical thinking skills.
4. A sharp decline in student engagement is an issue that can be alleviated by transition programs for students moving from grade 9 to 10. For example, grade 11 students should be supported by tailored support in

navigating academic and career pressure.

CRediT authorship contribution statement

The author confirms the sole responsibility for the conception of the study, presented results and manuscript preparation.

Declaration of competing interest

The author declares that there is no conflict of interest.

Data availability

Data will be made available on request

Acknowledgment

The author expresses gratitude to Wollega University's College of Education and Behavioral Sciences for printing the data collection instrument of the study.

REFERENCES

Appleton, J. J., Christenson, S. L., & Furlong, M. J. (2008). Student engagement with school: Critical conceptual and methodological issues of the construct. Psychology in the Schools, 45(5), 369-386. https://doi.org/10.1002/pits.20303

Archambault, I., Janosz, M., Morizot, J., & Pagani, L. (2009). Adolescent behavioural, affective, and cognitive engagement in school: The role of school belonging. Journal of Youth and Adolescence, 38(1), 1-12. https://doi.org/10.1007/s10964-007-9257-5

Arlinkasari, F., Akmal, S. Z., & Rauf, N. W. (2017). Should Students Engage in Their Study? (Academic Burnout and School-Engagement among Students). *GUIDENA Jurnal Ilmu Pendidikan Psikologi Bimbingan Dan Konseling*, *7*(1), 29. https://doi.org/10.24127/gdn.v7i1.727

Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Harvard University Press.

Chala, L. (2024). Enhancing student school engagement through teacher and classmate support in secondary schools. *Sci. Technol. Arts Res. J., 13*(4), 27-43. DOI: https://doi.org/10.20372/star.V13.i4.03

Deci, E. L., & Ryan, R. M. (1985). Intrinsic Motivation and Self-Determination in human behaviour. In *Springer eBooks*. https://doi.org/10.1007/978-1-4899-2271-7

Eccles, J. S., Barber, B., & Jozefowicz, D. (1999). Linking gender to educational, occupational, and recreational choices: Applying the Eccles et al. model of achievement-related choices. In W. B. Swann, Jr., J. H. Langlois, & L. A. Gilbert (Eds.), *Sexism and stereotypes in modern society: The gender science of Janet Taylor Spence* (pp. 153–192). American Psychological https://d oi.org/10.1037/10277-007

Eccles, J. S., Midgley, C., Wigfield, A., Buchanan, C. M., Reuman, D., Flanagan, C., & Mac Iver, D. (1993). Development during adolescence: The impact of stage-environment fit on young adolescents' experiences in schools and families. American Psychologist, 48(2), 90-101. https://doi.org/10.1037/0003-066X.48.2.90

Estvez, I., Rodrguez-Llorente, C., Pieiro, I., Gonzlez-Surez, R., & Valle, A. (2021). School engagement, academic achievement, and self-regulated learning. Sustainability. https://doi.org/10.3390/SU13063011

Finn, J. D. (1989). Withdrawing from school. *Review of Educational Research, 59*(2), 117–142. https://doi.org/10.2307/1170412

Finn, J. D., & Zimmer, K. S. (2012). Student engagement: What is it? Why does it matter? In *Springer eBooks* (pp. 97–131). https://doi.org/10.1007/978-1-4614-2018-7_5

Fredricks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School engagement: Potential of the concept, state of the evidence. Review of Educational Research, 74(1), 59-109. https://doi.org/10.3102/00346543074001059

Fredricks, J. A., Filsecker, M., & Lawson, M. A. (2016). Student engagement, context, and adjustment: Addressing definitional, measurement, and methodological issues. *Learning and Instruction*, *43*, 1 4. https://doi.org/10.1016/j.learninstruc.2016.02.002

Hilviu, D., Gabbatore, I., Parola, A., & Bosco, F. M. (2022). A cross-sectional study to assess pragmatic strengths and weaknesses in healthy ageing. *BMC Geriatrics*, *22*(1). https://doi.org/10.1186/s12877-022-03304-z

Korpershoek, H., Canrinus, E. T., Fokkens-Bruinsma, M., & de Boer, H. (2019). The relationships between school belonging and students' motivational, social-emotional, behavioural, and academic outcomes in secondary education: a meta-analytic review. *Research Papers in Education, 35*(6), 641–680. https://doi.org/10.1080/02671522.2019.1615116

Lara, L., Saracostti, M., & de-Toro, X. (2022). Adaptation and psychometric properties of the school engagement and contextual factors questionnaires for COVID-19 and post-COVID-19 context. PLoS ONE. https://doi.org/10.1371/journal.pone.0272871

Li, Y., & Lerner, R. M. (2011). Trajectories of school engagement during adolescence: Implications for grades, depression, delinquency, and substance use. Developmental Psychology, 47(1), 233–247. https://doi.org/10.1037/a0021307

Marks, H. M. (2000). Student engagement in instructional activity: Patterns in the elementary, middle, and high school years. *American Educational Research Journal*, *37*(1), 153–184. https://doi.org/10.3102/00028312037001153

Paik, J. H., Himelfarb, I., Yoo, S. H., Yoo, K., & Ha, H. (2024). The relationships among school engagement, students" emotions, and academic performance in elementary online learning. International Conference on Learning Analytics and Knowledge. https://doi.org/10.1145/3636555.3636871

Ramadhani, M. N., & Purwono, U. (2023). School engagement measures Economics and instrument adaptation. Journal Research of Social Science Management, 2(08). https://doi.org/10.59141/jrssem.v2i08.403

Roeser, R. W., Strobel, K. R., & Quihuis, G. (2002). Studying early Adolescents' academic Motivation, Social-Emotional Functioning, and Engagement in Learning: Variable- and Person-Centered Approaches. *Anxiety Stress & Coping*, *15*(4), 345–368. https://doi.org/10.1080/10615800210000056519

Setia, M. (2016). Methodology series module 3: Cross-sectional studies. *Indian Journal of Dermatology*, *61*(3), 261. https://doi.org/10.4103/0019-5154.182410

Sözen, E., & Güven, U. (2019). The effect of online assessments on students' attitudes towards Undergraduate-Level Geography courses. *International Education Studies*, *12*(10), 1. https://doi.org/10.5539/ies.v12n10p1

Thomas, L. (2023, June 22). *Cross-Sectional Study | Definition, Uses & Examples.* Scribbr. Retrieved January 19,

2025, from https://www.scribbr.com/methodology/cross-sectional-study/

Wang, M. & Eccles, J. (2012). Social support matters: longitudinal effects of social support on three dimensions of school engagement from middle to high school. Child Development. https://doi.org/10.1111/j.1467-8624.2012.01745.x

Wang, M. T., & Fredricks, J. A. (2014). The reciprocal links between school engagement, youth problem behaviours, and school dropout during adolescence. *Child Development, 85*(2), 722-737. https://doi.org/10.1111/cdev.12138

Wigfield, A., & Eccles, J. S. (2002). Development of achievement motivation. (2002). In *Elsevier eBooks*. https://doi.org/10.1016/b978-0-12-750053-9.x5000-1

Wigfield, A., Eccles, J. S., Schiefele, U., Roeser, R. W., & Davis-Kean, P. (2007). Development of Achievement Motivation. Handbook of Child Psychology. Portico. https://doi.org/10.1002/9780470147658.chpsy0315

Yang, C., Sharkey, J. D., Reed, L. A., Chen, C., & Dowdy, E. (2018). Bullying victimization and student engagement in elementary, middle, and high schools: The moderating role of school climate. *School Psychology Quarterly*, *33*(1), 54–64. https://doi.org/10.1037/spq0000250