MODERATING ROLE OF PARENTAL INVOLVEMENT BETWEEN SELF-REGULATED LEARNING, SELF-EFFICACY, AND ACADEMIC GRADES

Faiza Bashir
M.Phil. Scholar,
Department of Behavioral Science, Fatima Jinnah Women University, Rawalpindi, Punjab, Pakistan.
Email: faizabashir70@yahoo.com

Sahira Zaman
Assistant Professor,
Department of Gender Studies, Fatima Jinnah Women University, Rawalpindi, Punjab, Pakistan.
Email: sahirazaman@fjwu.edu.pk

ABSTRACT
Self-regulated learning (SRL) is a growing trend in education that impacts students' academic performance and self-belief. This study investigated the relationship between self-regulated learning and academic grades and the correlation between student self-efficacy and university academic success. Research has suggested a relationship between self-regulated learning, academic success in terms of good grades, and increased self-efficacy. Students who have supportive parents tend to excel academically and have higher self-efficacy. The study involved 250 first- and second-year students from public universities who completed a survey that included the Self-Regulation Scale (22 items), General Self-Efficacy Scale (10 items), and Parental Involvement Scale (10 items) and CGPA of the students as an indicator of grades. The findings indicated that self-regulated learning significantly predicted academic grades and self-efficacy. Although parental involvement impacts academic performance, it is also strongly influenced by self-belief. Interestingly, parental involvement had contrasting effects on academic performance and self-efficacy in self-regulated learning. The study did not include teacher or peer involvement, which was acknowledged as a notable limitation.

KEYWORDS
Academic Grades, Self-regulation, Confidence, Parental involvement, Graduate students

INTRODUCTION

Education involves obtaining essential global information to acquire the knowledge, beliefs, values, and skills necessary for a prosperous life. In Pakistan, the educational system focuses on rote memorization and exam-based reproduction, which hinders student creativity and innovation. This study explored methods to improve student learning and support factors that enhance knowledge.

The self-regulated learning process persistently activates students' cognitions and motivates their thoughts, feelings, and behaviors to successfully achieve their educational goals (Zimmerman, 2007 & Zumbrunn, Tadlock, & Roberts, 2011). Self-regulated learning is not a simple method or technique we use in routine; it is a different psychological system of acquiring education and changes the whole learning scenario. The process is based on the following main educational goals: students select educational strategies, set goals, and monitor their performance. If the results are undesirable, they must revise their strategy with necessary changes and maintain their motivation (Zimmerman & Shaunk, 2011).

Academic Grades

Are people with high academic grades different from those with low grades? In this study, high achievers were considered to have high academic grades. A meta-analysis of 30 research articles suggests that self-regulated learning-based self-motivation and cognition are adequate to enhance students' academic performance (Dignath et al., 2008). Researchers have shown that academic grades correlate with two self-regulated learning strategies: cognition and metacognition (Dent & Koenka, 2016).

Self-Efficacy

A positive relationship exists between self-regulated learning and student self-efficacy (Schunk & Ertmer, 2000). Students with high self-efficacy can perform better in the required activities, work harder, use different strategies, and persist for extended periods against difficult circumstances, as found by many researchers in various academic studies (Ahmed et al., 2012). Like self-regulated learning, self-efficacy also facilitates individuals to set their goals, invest in efforts, and work persistently until the goal is achieved (Schwarzer & Jerusalem, 1995) and implies internal attribution of success.

Parental involvement

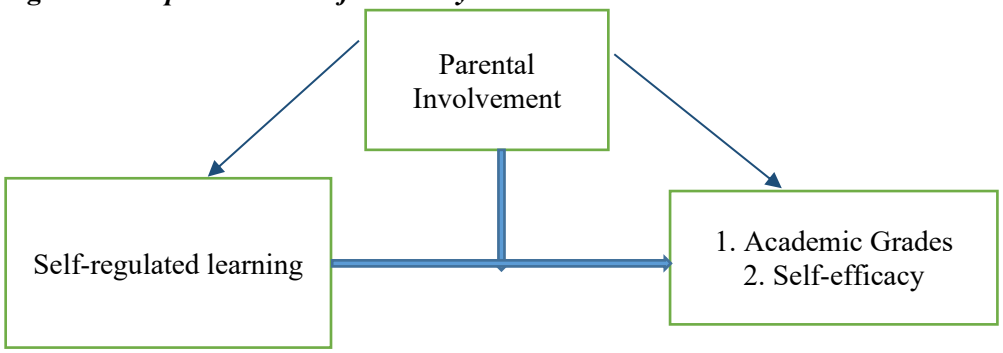
No individuals live in complete isolation, and those around them influence everyone. Parents play a crucial role in collectivist societies, impacting children positively or negatively. Studies show that parental academic engagement can enhance their children's academic performance and boost their self-efficacy. We focus on exploring how parental involvement affects self-regulated learning and its outcomes. Research

underlines the direct connection between parental engagement and students' academic grades, confidence levels, and motivation. However, the impact can be beneficial only if students learn to be more independent and rely on self-regulated strategies rather than constant parental intervention. Research involving 158 students found a significant link between parental involvement and academic success. The perception of individuals on the level of involvement has a vital role in self-efficacy and grades. Excessive parental involvement may hinder students' self-efficacy in completing tasks autonomously. Interactions about homework with low-achieving students negatively correlate with academic performance.

On the other hand, research suggests that children lacking self-regulated learning strategies benefit more from homework-related involvement. These findings stress the significance of parental involvement in college students' lives, especially where strict timelines and constant monitoring are not typical. Overly involved parents and frequent interactions with teachers were reported to potentially lower educational achievements. Another study noted a gradual decline in parental involvement as students progressed through academic levels, indicating that young students may resist high levels of parental engagement because of feeling disturbed and interfered with by their parents.

The proposed model study shows the impact of Self-regulated learning on university students' Academic Grades and self-efficacy. The effect of Parental Involvement was assessed between self-regulatory learning and the dependent variables.

Figure 1: ***Proposed Model of the Study***



RESEARCH OBJECTIVES

1. To find out the impact of self-regulated learning on the academic grades of university students.
2. To analyze the relationship between self-regulated learning and self-efficacy of students.

3. To know the relationship between parental involvement, academic grades, and students' self-efficacy.
4. The findings of this study will provide valuable insights into the role of self-regulated learning and parental involvement in shaping students' academic performance and self-efficacy, thereby contributing to the development of effective educational strategies.

RESEARCH HYPOTHESIS

1. Self-regulated learning, academic grades, and the general self-efficacy of university students are positively correlated.
2. Parental involvement positively moderates the relationship between self-regulatory learning and academic grades among university students.
3. Parental involvement improves the relationship between self-regulated learning and students' general self-efficacy.

RESEARCH METHODOLOGY

Research Design

The present research follows the quantitative research design. Cross-sectional survey methods were utilized for data collection.

Population & Sample

The population for the current research included university students studying in various departments at different academic levels. The sample consisted of 250 students (67 male and 183 female) from five higher education institutions (universities) in Lahore, Pakistan. The sample ages ranged from 18 to 22 years, and the participants were enrolled in 16 years of university education.

Tools for data collection

Three scales and student grades were used for data collection.

1. Self-regulation Questionnaire

We measured using the self-regulation questionnaire developed by Erickson et al. (2015). It is a 22-item, 5-point Likert scale. During the statistical analysis, items 5, 11, 16, 17, and 22 were negatively coded with reverse scoring. A sample item is (*I plan out projects I want to complete*).

2. Academic Grades

Students' Academic Grades were measured through the teachers' records of their last educational evaluations in the form of CGPA. These grades were coded for statistical analysis as 1-4 CGPA numbers.

3. General Self-Efficacy Scale

In this study, we used Schwarzer and Jerusalem's (1995) self-efficacy scale. It is a 10-item scale with scores ranging from 10 to 40, with affirmative statements.

4. Parental Involvement Scale

We use Marsh and James's (2015) scale with ten statements that were positively stated and scored 10-40. A sample item from the scale is (*I believe having my parents involved helps me improve my education*).

Procedure

We obtained ethical approval to conduct this research from the AS&RB of Fatima Jinnah Women's University, Rawalpindi, Pakistan. We collected data from five higher-education institutions in Lahore. Researchers approached each institution personally and collected data after obtaining formal approval from all institutions. Respondents voluntarily participated in the research and completed self-reflective questionnaires in group settings. The researchers debriefed participants after data collection.

DATA ANALYSIS

Table 1: ***Descriptive and reliability analysis of study variables (N=250)***

S.no	Scale	M	SD	Range	α	Skewness
1	Self-regulated learning	81.92	6.53	22-110	.960	.166
2	Self-efficacy	27.18	15.84	10-40	.823	.159
3	Academic grades (CGPA)	3.10	.76	1-4		.154
4	Parental involvement	30.94	4.91	10-40	.853	.175

Table 1 shows descriptive data collected from a sample of 250 students. The alpha coefficients for all the study variables were satisfactory.

Table 2: ***Pearson Correlation between the study variables (N=250)***

S.No	variables	1	2	3	4
1	Academic grades	1			
2	Self-regulated learning	.018	1		
3	Self-efficacy	.008	.199**	1	
4	Parental involvement	.109	.030**	.332**	1

**$p \leq .01$

Table 2 exhibits a significant positive correlation between self-regulated learning, self-efficacy, and parental involvement, except for academic grades.

Table 3: ***Regression analysis of Parental Involvement moderator between Self-regulation and Academic Grades (N=250)***

	Predictors	Dependent variables			
		Academic Grades		Self-efficacy	
		R^2	β	R^2	β
Step 1		.012		.126**	
	Self-regulated learning		-.452*		.773**
	Parental involvement		.081		.341***
Step 2		.019*		.154**	
	self-regulated learning*parental involvement		-.488*		.616**
Total R^2		.031*		.28**	

*** p≤ .001, ** p≤ .01, * p≤ .05

Table 3 displays the negative predictor between self-regulated learning and academic grades and the positive but insignificant regression of parental involvement with academic grades. F (2, 247) = 1.429, $p \geq .05$ values show the statistical differences. The results further indicated self-regulatory learning (b = -.005, SE= .003, β= -.452, t= -2.07, *p).* 039 ≤ .05. However, negative values of b, β, and t values showed negative regression and parental involvement= b= .013, SE= .010, β= .018, t= 1.26, p =.207 ≥ .05, a positive but non-significant regression. In the moderation model results, F (3,246) = 2.635, p. .050. p value is ≤ .05. R^2 change= .020, F (2,247) =1.429, p≥ .026, P≤ .05. Results further indicated by: b= -.586, SE= .262, β= -.488, p= .026 ≤ .05. There was a change; however, it was on the opposite side. The negative values of b, β, and t show a significant negative moderation impact.

This negative sign indicates that parental involvement plays an unusual role. Its effects on grades are less favorable, but it increases the negative regression with students' academic grades as moderators of self-regulated learning. Table 3 in the second dependent variable shows a positive regression of self-regulated learning and parental involvement in self-efficacy as significant, as indicated by F (2, 247) = 18.917, p ≤ .001. The results further confirm the trend of self-regulatory learning (b= .052, SE= .014, β= .773, t= 3.825, p ≤ .001; and parental involvement, b= .312, SE= .054, β= .341, t= 5.750, p ≤ .001).

With moderation of parental involvement, the regression remains significantly positive, as values show F(3, 246) 16.112, p ≤ .001. R^2 Change = .031, p ≤ .01. Results further confirm the trend by b= 4.209, SE= 1.385, β= .616, t= .304, p ≤ .01. The results showed that self-regulated learning was significantly correlated with self-

efficacy, and parental involvement was also highly associated with self-efficacy. As a moderator of self-regulated learning, it remained positively related, but the level of positive relationship slightly decreased.

Figure 2: ***Moderation analysis graphs of study variables.***

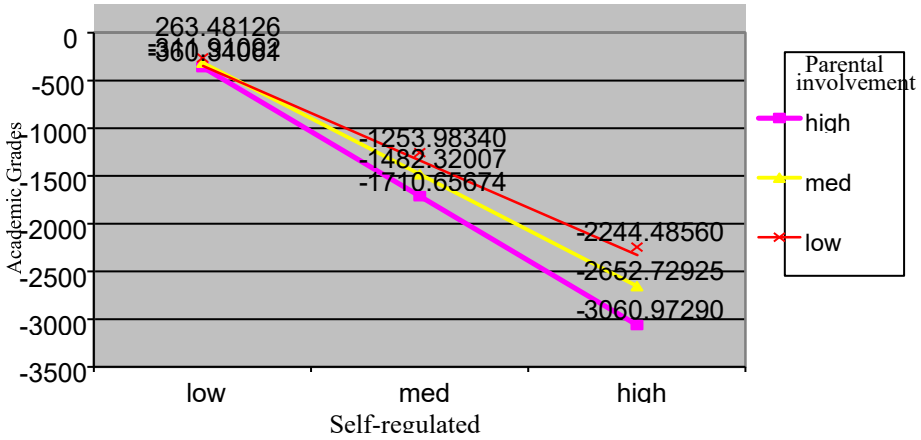


Figure 2: Parental involvement is moderated with self-regulation regarding academic grades. The graph below indicates a robust negative relationship between parental involvement, self-discipline, and academic performance.

Figure 3: ***Moderation analysis graphs of study variables.***

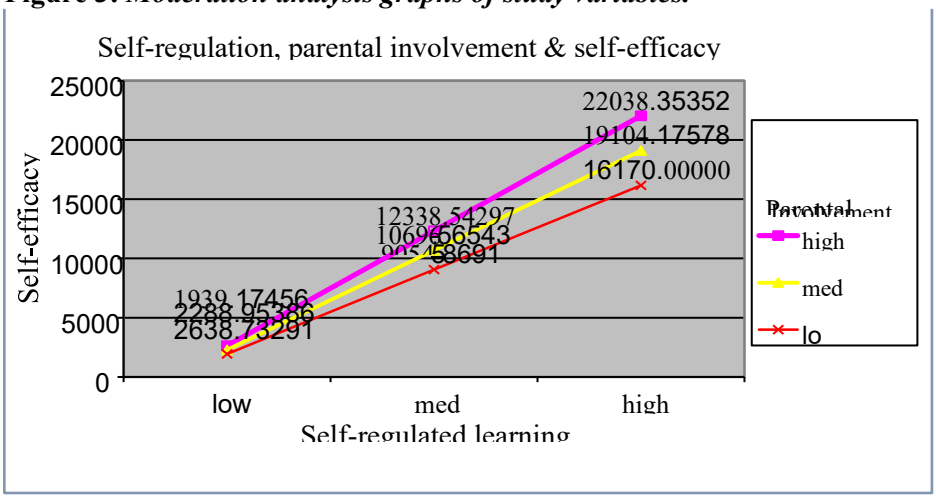


Figure 3: Parental involvement moderated the relationship between self-regulation and

self-efficacy.

DISCUSSION

The current study is based on the previous literature on self-regulated learning and its impact on student's academic performance and self-efficacy. Specifically, this study aims to understand the phenomenon among university-level undergraduate students, resulting in a unique picture of the findings. However, it is essential to note that these findings are not based on the research hypotheses, as no relationship was found between self-regulated learning and students' grades. Although previous literature suggests a significant positive relationship between self-regulated learning and high academic performance, the different results in this study may be attributed to various factors. For instance, students in their early university years may have needed to develop the skills to plan their lessons effectively. Furthermore, the high level of parental and teacher involvement in the rote memorization culture may have hindered students' ability to work independently.

Conversely, the university semester system divides work into smaller evaluation periods and can challenge students' ability to self-regulate their learning, which may affect their grades. Integrating this system into the educational system at all levels can take time. The current educational system primarily focuses on teachers, with students playing a passive role and relying heavily on materials provided by teachers in the form of notes or lectures. In highly structured classrooms, students are often discouraged from utilizing additional resources (Bembenutty, White, & Vélez, 2015), and only exceptional high achievers typically employ self-regulated learning strategies. Other students mainly rely on note-taking and repetition of these notes as their primary approach (Alvi et al., 2016).

The current results show that self-regulated learning strongly correlates with self-efficacy in a positive direction. Self-regulation creates feelings of accomplishment, confidence, and belief in students, contributing to their self-efficacy (Ryff & Keyes, 1995; Schunk & Ertmer, 2000; Samman, 2007). The findings do not confirm parental involvement in academic grades because of the statistically insignificant results and lack of confirmation in previous research (see Grijalva-Quinonez et al., 2020). The respondents' age and higher educational level could be possible reasons for such effects. Students who are less dependent on their parents for academic support may already have acquired self-dependence at a higher level of education. Jaschik (2013) stated that, in higher grades, only financial support is essential for students from the parent's side, and excessive interference can lower academic performance. Wilder (2014) also found that parental involvement in personal problems and social and school issues was more related to academic grades. The current research sample comprises students with higher educational levels whose academic grades remain

unaffected by parental involvement. This study focuses on students with higher education levels (Shumuw et al., 2011).

The hypothesis's second part indicates a strong positive relationship between parental involvement and self-efficacy, and the results support this assumption. Parental involvement is crucial in promoting mental well-being and contentment among individuals by instilling self-assurance and joy (Hysing et al., 2017; Malebese, 2013). The moderation model of parental involvement predicted good grades while interacting with self-regulatory behaviors by increasing the positivity of this relation, which corroborates previous research in the area (see. Figure 2). This study also revealed that a high level of parental involvement and self-regulation significantly improves class grades. However, grades are still considerably affected when parental involvement is high and self-regulation is low. The relationship between self-regulatory learning and self-efficacy is impaired by the moderating effects of parental involvement (see Figure 3). When parental involvement and self-regulation are both high, students' self-efficacy becomes also high, which is supported by previous research (Malebese, 2013; Hysing et al., 2017). It is important to note that when students are highly dependent on their parents and do not use self-regulation strategies, their grades are negatively impacted. Nonetheless, parental involvement and self-regulation positively impact students' academic performance.

This research aimed to enhance our comprehension of self-regulated learning by examining its influence on academic success and self-efficacy, an emerging trend in education. Furthermore, we sought to determine the moderating effect of parental involvement on both dependent variables. The findings revealed that self-regulated learning was significantly associated with self-efficacy and insignificantly correlated with academic grades. Parental involvement is a confident moderator of self-regulated learning, academic grades, and self-efficacy among university students. The local educational system of the teacher-centered approach may have resulted in no independent association between self-regulated learning and academic scores in the data. Moreover, at a higher level, if students use self-regulated learning techniques and parents try to interfere, then students can perform negatively.

The present research findings have merits for educational psychologists, policymakers, administrative staff, and parents in providing a more conducive environment for students to self-regulate their behaviors and achieve good scores and mental health.

Current research helps extend self-regulatory learning in advanced classes and the parental role in guiding or intervening in this situation. This finding has implications for both students and parents. Parents must give their children space to work out their

studies freely at their own pace. Similarly, students must plan, strategize, and execute at a self-managed speed to learn new things. This research warrants interpretation with a few margins based on self-reflected data (except for actual grades). Along with parental involvement, teacher involvement may play a significant role in shaping self-regulated learning, so we suggest incorporating faculty's academic involvement with university students for subsequent research. A focus on sex differences can also provide valuable results.

RECOMMENDATIONS

The current study focused on finding a relationship between self-regulated learning, academic grades, general self-efficacy, and parental involvement in the outcome variables. We recommend including the teacher's participation in students' motivation to study harder and its impact on grades and general self-efficacy. Emotion regulation (Zaman et al., 2021) also impacts the student's learning and outcomes, especially mental health; thereby, we recommend including personality and emotional well-being to investigate self-regulation and good grades. Gender differences in the teacher-student or parent-student relationship should also be the focus of further research for the outcome variables. The triangulation method of data collection can also clarify the association between the study variables. It is also recommended that the relationship between these variables be studied in other populations, i.e., adolescents and school-going children.

Declaration

This research receives no funding, and the authors report no conflict of interest. Data and materials are with the authors and are available upon request.

REFERENCES

Ahmad, S., Hussain, A., & Azeem, M. (2012). Relationship of academic SE to self-regulated learning, SI, test anxiety, and Academic Grades. *International Journal of Education* (1). https://doi.org/10.5296/ije.v4i1.1091

Alvi, E., Iqbal, Z., Masood, F., & Batool, T. (2016). A Qualitative Account of The Nature and Use of Self-Regulated Learning (SRL) Strategies Employed by University Students. *Australian Journal of Teacher Education,* 41(8). http://dx.doi.org/10.14221/ajte.2016v41n8.3

Antoine, D. R. (2015). The correlation between parental involvement and student Academic Grades. *LSU Master's Theses*. 185. https://digitalcommons.lsu.edu/gradschool_theses/185

Bembenutty H., White M.C., Vélez M.R. (2015) Self-regulated Learning and Development in Teacher Preparation Training. In: *Developing Self-regulation of Learning and Teaching Skills Among Teacher Candidates*. Springer Briefs in Education. Springer,

Dordrecht. https://doi.org/10.1007/978-94-017-9950-8_2

Chen, M. (2010). *Education Nation: Six leading edges of innovation at our school*. John Wiley & Sons.

Dent, A. L., Koenka, A.C. (2016). The relation between self-regulated learning and Academic Grades across childhood and adolescence: A meta-analysis. *Educational Psychology Review*, *28*(3), 425-474. https://doi.org/10.1007/s10648-015-9320-8

Dignath, C., Buettner, G., & Langfeldt, H. P. (2008). How can primary school students learn self-regulated learning strategies most effectively?: A meta-analysis on self-regulation training programs. *Educational Research Review*, *3*(2), 101-129. https://doi.org/10.1016/j.edurev.2008.02.003

Gbamanja, S. P. T. (2012). Education and human resource development in Africa. *A Paper Presented at the International Conference of National Association for Research Development (NARD), University of Uyo, Uyo, Nigeria*.

Grijalva-Quiñonez, C. S., Valdés-Cuervo, A. A., Parra-Pérez, L. G., & Vazquez, F. I. G. (2020). Parental involvement in Mexican elementary students' homework is related to academic self-efficacy, self-regulated learning, and Academic Grades. *Psicología Educativa. Revista de los Psicólogos de la Educación*, *26*(2), 129-136

Goetzinger, T. E. A. (2014). Association between parenting processes and child behavior outcomes: The moderating and mediating roles of child characteristics. Honors Program Theses. 134. https://scholarworks.uni.edu/hpt/134

Goswami, U. (2016). Educational neuroscience: Neural structure-mapping and the promise of oscillations. *Current Opinions in Behavioral Science,* pp. 89–96. https://doi.org/10.1016/j.cobeha.2016.05.011

Gonzalez-DeHass, A. R., Willems, P. P., & Holbein, M. F. D. (2005). Examining the relationship between parental involvement and student motivation. *Educational psychology review*, (2), pp. 99–123. https:// doi/org: 10.1007/s10648-005-3949-7

Erickson, A. S. G., Noonan, P. M., Zheng, C., & Brussow, J. A. (2015). The relationship between self-determination and Academic Grades for adolescents with intellectual disabilities. *Research on Developmental Disabilities.* pp. 45–54. DOI: 10.1016/j.ridd.2014.09.008. Epub 2014 Oct 11. PMID: 25314099.

Holloway, S. D., Cambell, E. J., Nagase, A., & Kim, S. (2016). Parenting self-efficacy and parental involvement: Mediators or moderators between socioeconomic status and children's academic competence in Japan and Korea? *Research in Human Development*, (3), pp. 258–272. http://doi.org/10.108 0/15427609.2016.1194710

Hysing, M., Petrie, K. J., Bøe, T., & Sivertsen, B. (2017). Parental work absenteeism is associated with increased symptom complaints and school absences in adolescent children. *BMC Public Health*, *17*(1), 1-7. https://doi.org/10.1186/s12889-017-4368-7

Jaschik, S. (2013). Spoiled children. *Inside Higher Ed*. Retrieved from http://www.insidehighered.com/news/2013/01/14/study-finds-increased-parental-support-college-results-lower-grades.

Kanters, M. A., Bocarro, J., & Casper, J. (2008). Are they supported or pressured? An examination of parents and children's agreement on parents' role in youth sports. *Journal of Sports Behavior*, *31*(1).

Malebese, M. S. L. (2013). *The relationship between parental support and self-regulated*

learning behavior of Grade 12 learners in Lejweleputswa (Doctoral dissertation, [Bloemfontein?]: Central University of Technology, Free State). URI: http://hdl.handle.net/11462/183

Marsh, A. E., & James, B. (2014). Measuring the effects of parental involvement in academic and extracurricular activities on a child's self-efficacy.

Ridnouer, K. (2011). *Everyday Engagement: Making students and parents your partners in learning*. ASCD.

Ryff, C. D., & Keyes, C. L. M. (1995). The structure of self-efficacy revisited. *Journal of Personality and Social Psychology, 69*(4), 719–727. https://doi.org/10.1037/0022-3514.69.4.719

Samman, E. (2007). Psychological and subjective well-being: A proposal for internationally comparable indicators. *Oxford Development Studie*, (4), pp. 459–486. https://doi.org/10.1080/13600810701701939

Schunk, D. H., & Ertmer, P. A. (2000). Self-regulation and academic learning: Self-efficacy enhancing interventions. In *Handbook of self-regulation* (pp. 631–649). Academic Press. https://doi.org/10.1016/B978-012109890-2/50048-2

Schwarzer R., Jerusalem M. (1995). Optimistic self-belief as a resource factor in coping with stress. In: Hobfoll S.E., de Vries M.W. (eds) Extreme Stress and Communities: Impact and Intervention. NATO ASI Series (Series D: Behavioural and Social Sciences), vol 80. Springer, Dordrecht. https://doi.org/10.1007/978-94-015-8486-9_7

Sha, L., Schunn, C., Bathagate, M., & Ben-Eliyahu, A. (2016). Families support their children's success in science learning by influencing interest and self-efficacy—*Journal of Research in Science Teaching,* (3, p. 450–472). https://doi.org/10.1002/tea.21251

Shumow, L., Lyutykh, E., & Schmidt, J. A. (2011). Predictors and Outcomes of Parental Involvement with High School Students in Science. *School Community Journal*, *21*(2), 81-98.

Topor, D. R., Keane, S. P., Shelton, T. L., & Calkins, S. D. (2010). Parent involvement and student academic performance: A multiple mediational analysis. *Journal of Prevention and Intervention in the Community*, (3, p. 183–197). https://doi.org/10.1080/10852352.2010.486297

Wilder, S. (2014). Effects of parental involvement on Academic Grades: a meta-synthesis. *Educational Review, (3), pp. 377–397.* https://doi.org/10.1080/00131911.2013.780009

Wilke, R. (2005). *Improving Teaching and Learning: What Is Your Relationship Quotient?* Lanham, Maryland: Scarecrow Education.

Wooden, S. (2010). Correlation between parent involvement and student success. *Education Masters.* Paper 101. https://fisherpub.sjfc.edu/education_ETD_masters/101

Zaman, S., Abid, F., & Bilal, Y. (2021). Emotion regulation strategies, COVID-19 induced psychological distress, and psychological well-being in Pakistan. *The Journal of Behavioral Science*, *16*(3), 27-41.

Zimmerman, C. (2007). The development of scientific thinking skills in elementary and middle school. *Developmental Review*, *27*(2), 172-223.

Zimmerman, B. J., & Schunk, D. H. (Eds.). (2011). *Educational psychology handbook series. Handbook of self-regulation of learning and performance.* Routledge/Taylor &

Francis Group.
Zumbrunn, S. Tadlock, J. & Roberts, D. E. (2011). Encouraging self-regulated learning in the classroom: A literature review
Retrieved from:http://www.selfregulation.ca/uploads/5/6/2/6/56264915/encouraging_self_regulated_learning_in_the_Class-room