



TEACHER SUPPORT STRATEGIES AND STUDENTS' SELF-REGULATION AT SECONDARY SCHOOL LEVEL

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Abstract

Teacher support is an important classroom factor in the development of students' ability to plan, monitor, and regulate their learning. This study examined the relationship between teacher support strategies and students' self-regulation at the secondary school level in Faisalabad, Pakistan. A quantitative descriptive, cross-sectional design was used with 200 students and 50 teachers from public and private secondary schools. Students responded to a 20-item Teacher Support Strategies Scale and a 12-item Self-Regulation Scale using five-point Likert responses. Teacher responses were also examined as a supplementary perspective. Data were analyzed through descriptive statistics and Pearson product-moment correlation. Students reported a mean of 3.62 (SD = 0.79) for teacher support and 3.84 (SD = 0.75) for self-regulation. A statistically significant positive relationship was found between teacher support and self-regulation among students ($r = .606$). The teacher data showed an even stronger positive association between perceived teacher support and perceived student self-regulation ($r = .825$). The findings indicate that instructional guidance, emotional support, autonomy support, feedback, and scaffolding are associated with stronger self-regulated learning practices. Because the study is correlational, the findings describe associations rather than definitive causal effects. The article recommends strengthening structured guidance, gradual scaffolding, constructive feedback, and explicit teaching of goal setting, monitoring, and reflection.

Keywords: Teacher Support Strategies, Self-Regulation, Secondary School Students, Scaffolding, Faisalabad



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Introduction

Secondary education is a stage at which learners increasingly need to move from teacher-directed learning toward greater responsibility for their own academic work. Self-regulation involves planning learning activities, monitoring understanding and progress, controlling attention and effort, and reflecting on completed work. These processes help learners manage academic demands and persist when tasks become difficult (Zimmerman, 2002; Panadero et al., 2023).

Teacher support can provide the external structure through which these internal learning processes develop. Support may include clear explanations, step-by-step guidance, examples, emotional encouragement, constructive feedback, meaningful choices, and scaffolding. From a sociocultural perspective, temporary guidance can help learners perform tasks that are initially beyond their independent ability and gradually move toward independent performance (Vygotsky, 1978; Van de Pol et al., 2010). Similarly, autonomy-supportive teaching can encourage learners to take increasing responsibility for their learning while still receiving appropriate structure (Reeve, 2016; Reeve & Cheon, 2021).

The Pakistani secondary-school context makes this relationship particularly relevant. The thesis underlying this article notes the continued presence of teacher-centred and examination-focused practices and identifies a need for learning environments that develop independent learning skills. The present article therefore isolates one major relationship from the broader thesis: teacher support strategies and students' self-regulation.

Teacher support can be understood from both the students' and teachers' perspectives. Students provide information about the support they experience in the classroom, while teachers provide information about the support they report providing and their perceptions of students' learning behaviours. Considering both perspectives can provide a broader understanding of the relationship between teacher support strategies and students' self-regulation. In secondary education, students increasingly need to plan their learning, monitor their progress, maintain effort, and reflect on their performance. Teachers can facilitate these processes through structured guidance, emotional encouragement, autonomy support, constructive feedback, and scaffolding.

Examining both perspectives is particularly relevant in the Pakistani secondary-school context, where classroom practices are influenced by curriculum requirements, examinations, and traditional teacher-directed approaches. Including both students and teachers in the present study therefore provides evidence from the two main participants involved in the teaching-learning process. The present article focuses specifically on the relationship between teacher support strategies and students' self-regulation at secondary school level in Faisalabad, Pakistan.

Background of the Study

Secondary school education is an important stage in which students gradually develop greater responsibility for their own learning. At this level, students are expected to understand academic tasks, manage their learning activities, monitor their progress, and make efforts to achieve their educational goals. Teacher support strategies can play an important role in developing these learning behaviours by providing students with appropriate guidance, encouragement, feedback, autonomy, and scaffolding.

In the Pakistani secondary school context, teacher support is particularly important because classroom practices are often influenced by examination requirements and



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teacher-directed approaches. Supportive classroom practices can provide students with opportunities to participate actively in learning and gradually develop independent learning skills. Structured guidance can help students understand what they need to do, while emotional support can encourage them to remain engaged when they face academic difficulties.

Teacher support strategies include instructional support, emotional support, autonomy support, and scaffolding. These strategies provide students with both academic and psychological assistance during the learning process.

From the students' perspective, teacher support represents the assistance and classroom practices they experience during learning. Instructional support can help students understand academic tasks and organize their work, while emotional support can encourage persistence when they experience difficulties. Autonomy support can provide opportunities for meaningful participation and responsibility, whereas scaffolding can provide temporary assistance that is gradually reduced as students develop greater competence. These forms of support are therefore relevant to the development of planning, monitoring, and reflection.

From the teachers' perspective, support strategies represent the practices used to facilitate students' learning and development. Teachers may provide explanations, examples, feedback, encouragement, choices, and step-by-step assistance according to students' learning needs. Examining teachers' responses alongside students' responses allows the study to consider whether the two groups show a similar pattern in the relationship between perceived support and self-regulation.

Scaffolding is particularly relevant because it provides temporary assistance that can gradually be reduced as students develop competence and become more capable of performing learning tasks independently.

Self-regulation refers to students' ability to plan, monitor, and control their cognition, motivation, and behaviour in order to achieve learning goals. At the secondary school level, the development of self-regulation is important because students increasingly need to manage their academic responsibilities with less direct supervision. The present study therefore focuses specifically on the relationship between teacher support strategies and students' self-regulation at the secondary school level in Faisalabad, Pakistan.

Problem Statement

Although supportive teaching practices are frequently discussed as important for learning, fewer studies in the Pakistani secondary-school context examine teacher support and self-regulation together. The present study addresses this gap by examining the level of teacher support perceived by students and the level of self-regulation, and by determining whether the two variables are significantly related.

In addition to students' perceptions, teachers' perceptions provide a supplementary perspective on this relationship. However, there is limited evidence from Faisalabad secondary schools that examines teacher support strategies and students' self-regulation using responses from both students and teachers. Therefore, the present study examines the relationship between teacher support strategies and self-regulation from both perspectives.

Objectives

1. To determine the level of teacher support perceived by secondary school students.
2. To determine the level of self-regulation among secondary school students.



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3. To examine the relationship between teacher support strategies and students' self-regulation.
4. **To examine the relationship between teacher support strategies and perceived students' self-regulation from teachers' perspective.**

Research Questions

1. What is the level of teacher support perceived by secondary school students?
2. What is the level of self-regulation among secondary school students?
3. Is there a significant relationship between teacher support strategies and students' self-regulation?
4. Is there a significant relationship between teacher support strategies and perceived students' self-regulation from teachers' perspective?

Significance of the Study

The study is significant because it provides empirical evidence regarding the relationship between teacher support strategies and students' self-regulation in the context of Pakistani secondary schools. The findings may help teachers understand the importance of providing appropriate instructional guidance, emotional support, autonomy support, and scaffolding to promote students' independent learning behaviours.

The study may also be useful for school leaders and teacher educators in designing professional development activities that encourage supportive classroom practices. Educational planners may use the findings to promote learning environments that support students' planning, monitoring, reflection, and independent learning. For researchers, the study provides evidence from the secondary school context of Faisalabad and may serve as a basis for further research on teacher support and self-regulated learning in Pakistan.

The inclusion of both students and teachers strengthens the study by providing two perspectives on teacher support and self-regulation. Students' responses represent their experiences of classroom support, while teachers' responses provide a professional perspective on the support practices and students' self-regulated learning. The findings may help teachers and school leaders identify areas where perceptions of classroom support are similar or different and may support the development of classroom practices that encourage students' independent learning.

Delimitation of the Study

The study was delimited to public and private secondary schools in Faisalabad, Punjab, Pakistan. The study included students enrolled in Grades 9 and 10 and teachers involved in teaching these students. The study examined teacher support strategies and students' self-regulation from both student and teacher perspectives. A quantitative, cross-sectional research design was used. The study did not examine other psychological and educational variables outside the selected constructs.

Literature Review

Self-regulated learning is commonly described as a cyclical process involving goal setting and planning, monitoring during learning, and reflection after performance. Learners who use these processes can manage their time, attention, strategies, and effort more deliberately. Research summarized in the thesis links self-regulated learning with improved learning behaviour and academic outcomes (Masud & Islam, 2022; Panadero



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et al., 2023).

Teacher support may strengthen these processes by making effective learning behaviours visible and manageable. Clear instructions and task breakdown can help students plan; questions and prompts can support monitoring; and feedback can help students identify errors and evaluate performance. Scaffolding is especially relevant because assistance can be gradually reduced as competence develops (Van de Pol et al., 2010).

The relationship is also consistent with the study's use of Vygotsky's Zone of Proximal Development and Zimmerman's self-regulated learning perspective. The former explains how guided participation can support movement toward independent performance, while the latter explains how learners gradually assume responsibility for planning, monitoring, and reflection. Recent work in the thesis also connects autonomy-supportive teaching and self-regulated learning in secondary-school settings (Teng, 2023).

Methodology

A quantitative descriptive, cross-sectional research design was used. The study was conducted in public and private secondary schools in Faisalabad, Pakistan.

Population of the Study

The population of the study comprised students enrolled in Grades 9 and 10 in government and private secondary schools in Faisalabad, Pakistan. The population also included teachers involved in teaching and providing academic support to secondary school students. According to the available records from the School Education Department Punjab, Faisalabad has approximately 461 government secondary schools and 1,496 private secondary schools, making a total of 1,957 secondary schools.

The inclusion of both government and private institutions provided representation of different educational environments. The population included students studying in Grades 9 and 10 and teachers who were actively involved in teaching and providing academic support.

Sample Size and Sampling Technique

A sample of 200 students and 50 teachers was selected from the study population through simple random sampling. The sample was drawn from five secondary schools representing both government and private sectors. Simple random sampling was used to provide the members of the selected population with an equal opportunity of being included in the study.

The selected sample consisted of students from Grades 9 and 10. Among the students, 100 were from public schools and 100 were from private schools. The sample included 50 students from public Grade 9, 50 students from public Grade 10, 52 students from private Grade 9, and 48 students from private Grade 10. In addition, 50 teachers participated in the study, including 20 public-school teachers and 30 private-school teachers.

The selection of five schools represented approximately 0.26% of the total 1,957 secondary schools in Faisalabad. The selection was made while considering representation of both government and private sectors as well as the time, access, and resource limitations of the researcher.

The study consisted of 250 participants, including 200 secondary school students and 50 teachers. The students were enrolled in Grades 9 and 10 in public and private secondary schools in Faisalabad. The student sample included 100 students from public schools and



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100 students from private schools. The teacher sample included 20 teachers from public schools and 30 teachers from private schools. Both groups were included to provide student and teacher perspectives on teacher support strategies and students' self-regulation.

Table 1

Distribution of Student Sample

Sector	Class	N
Public	Grade 9	50
Public	Grade 10	50
Private	Grade 9	52
Private	Grade 10	48
Total Students		200

Table 2

Distribution of Students on the Basis of Background Variables

Variable	Category	f	%
School Type	Public	100	50.0
	Private	100	50.0
Gender	Male	92	46.0
	Female	108	54.0
Class	Grade 9	102	51.0
	Grade 10	98	49.0
Age	14–15 years	101	50.5
	16–17 years	81	40.5
	18 years and above	18	9.0
Total		200	100.0

Table 2 presents the distribution of the student sample according to selected background variables. The sample consisted of 200 students, with an equal representation of public and private schools. Public-school students represented 50.0% of the sample, while private-school students also represented 50.0%. Regarding gender, 92 (46.0%) students were male and 108 (54.0%) were female. In terms of class, 102 (51.0%) students were enrolled in Grade 9 and 98 (49.0%) were enrolled in Grade 10. Regarding age, 101 (50.5%) students were 14–15 years old, 81 (40.5%) were 16–17 years old, and 18 (9.0%) were 18 years or above.

Table 3

Distribution of Teachers on the Basis of Background Variables

Variable	Category	f	%
School Type	Public	20	40.0
	Private	30	60.0
Gender	Male	16	32.0
	Female	34	68.0



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Variable	Category	f	%
Age	21–30 years	19	38.0
	31–40 years	17	34.0
	41–50 years	8	16.0
	Above 50 years	6	12.0
Qualification	Bachelor/BS	11	22.0
	Master's/MA/MSc	21	42.0
	MPhil	16	32.0
	PhD	2	4.0
Teaching Experience	1–5 years	18	36.0
	6–10 years	8	16.0
	11–15 years	11	22.0
	Above 15 years	13	26.0
Total		50	100.0

Table 3 presents the background characteristics of the 50 teachers who participated in the study. Twenty teachers (40.0%) were from public schools and 30 (60.0%) were from private schools. Regarding gender, 16 (32.0%) teachers were male and 34 (68.0%) were female. The largest age group was 21–30 years (38.0%), followed by 31–40 years (34.0%). Regarding qualification, 21 (42.0%) teachers held a Master's degree, 16 (32.0%) held an MPhil degree, 11 (22.0%) held a Bachelor's/BS degree, and 2 (4.0%) held a PhD. In terms of teaching experience, 18 (36.0%) teachers had 1–5 years of experience, 8 (16.0%) had 6–10 years, 11 (22.0%) had 11–15 years, and 13 (26.0%) had more than 15 years of experience.

Justification of Sample Size

The selection of 200 students and 50 teachers was considered appropriate for obtaining information from both students and teachers in the selected secondary schools. Five schools were selected from the population of secondary schools in Faisalabad to include both government and private educational sectors. The selection of schools was also influenced by practical considerations, including time, access, and available resources. The inclusion of students from both Grades 9 and 10 and from both public and private schools provided variation in the study sample.

Validity and Reliability of Instruments

The study used structured scales to measure teacher support strategies and students' self-regulation. The Teacher Support Strategies Scale consisted of 20 items, while the Self-Regulation Scale consisted of 12 items. The internal consistency of the instruments was examined through Cronbach's alpha. The Teacher Support Strategies Scale demonstrated a Cronbach's alpha coefficient of .93, while the Self-Regulation Scale demonstrated a Cronbach's alpha coefficient of .89. These coefficients indicate satisfactory internal consistency of the scales and support their use for statistical analysis.

The teacher questionnaire was also examined for internal consistency. The reliability analysis showed satisfactory internal consistency, with Cronbach's alpha values of 0.94 for Teacher Support Strategies and 0.85 for Self-Regulation. These values indicated that



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the teacher questionnaire was reliable and suitable for examining teacher perceptions of teacher support strategies and students' self-regulation.

Data Analysis Techniques

The collected data were analyzed using the Statistical Package for the Social Sciences (SPSS). Descriptive statistics, including frequency, percentage, mean, and standard deviation, were used to describe the characteristics of the sample and the levels of teacher support strategies and students' self-regulation. Pearson product-moment correlation was used to examine the relationship between teacher support strategies and students' self-regulation. The significance of the correlation was interpreted at the .01 level.

Measures

Teacher Support Strategies Scale: 20 items covering instructional support, emotional support, autonomy support, and scaffolding. Responses ranged from 1 = strongly disagree to 5 = strongly agree; higher scores represented greater perceived support. The student scale reported $\alpha = .93$.

Self-Regulation Scale: 12 items covering planning, monitoring, and reflection. Responses ranged from 1 = strongly disagree to 5 = strongly agree; higher scores represented stronger self-regulation. The reported reliability was $\alpha = .89$.

Teacher Questionnaire

The teacher questionnaire was used to obtain teachers' perceptions of teacher support strategies and students' self-regulation. The questionnaire included items related to instructional support, emotional support, autonomy support, and scaffolding. Teachers responded to the statements using the same five-point response format. The teacher responses were analyzed separately from the student responses to provide a supplementary perspective on the relationship between teacher support strategies and students' self-regulation.

Results

Table 4

Descriptive Statistics of Students Responses

Variable	N	M	SD
Teacher Support Strategies	200	3.62	0.79
Self-Regulation	200	3.84	0.75

The descriptive results show that students reported relatively favourable levels of both teacher support and self-regulation. The mean for self-regulation (3.84) was higher than the mean for perceived teacher support (3.62) on the five-point response scale.

Table 5

Pearson Correlation Between Teacher Support Strategies and Self-Regulation Based on Students Responses

Variables	Teacher Support	Self-Regulation
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Teacher Support	1	.606**
Self-Regulation	.606**	1

Note. N = 200. **Correlation is significant at the .01 level (2-tailed).

Pearson correlation showed a statistically significant positive relationship between teacher support strategies and students' self-regulation ($r = .606$). This indicates that higher reported teacher support was associated with higher self-regulation among the students in the sample. The teacher responses provided a supplementary perspective and showed a stronger positive relationship ($r = .825$) between teacher support and perceived student self-regulation.

Teacher Descriptives

Table 6

Descriptive Statistics of Teacher Responses

Variable	N	M	SD
Teacher Support Strategies	50	3.98	0.71
Self-Regulation	50	4.18	0.57

The descriptive results for the teacher responses show that the mean score for teacher support strategies was 3.98 (SD = 0.71), while the mean score for self-regulation was 4.18 (SD = 0.57). The results indicate relatively favourable levels of both constructs according to the teachers' responses.

Table 7

Pearson Correlation Between Teacher Support Strategies and Self-Regulation Based on Teacher Responses

Variables	Teacher Support	Self-Regulation
Teacher Support Strategies	1	.825**
Self-Regulation	.825**	1

Pearson product-moment correlation showed a statistically significant positive relationship between teacher support strategies and self-regulation based on teacher responses ($r = .825$, $p < .01$). This indicates that higher reported levels of teacher support were associated with higher perceived levels of students' self-regulation among the teachers in the sample.

Discussion

The finding of a positive association between teacher support and self-regulation is consistent with the theoretical position that external instructional support can help learners develop internal learning-management processes. For example, step-by-step instructions and task breakdown can support planning, guiding questions can encourage monitoring, and feedback can facilitate reflection. This pattern is compatible with the scaffolding perspective in which temporary support is gradually reduced as students become more capable of performing independently (Vygotsky, 1978; Van de Pol et al., 2010).

The result also aligns with the self-regulated learning literature cited in the thesis. When



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students are encouraged to set goals, organize study time, monitor understanding, review completed work, and learn from mistakes, they are given opportunities to practise the components of self-regulation. The finding should nevertheless be interpreted as a relationship rather than proof that teacher support causes self-regulation because the design was cross-sectional and correlational.

The teacher responses also showed a positive and statistically significant relationship between teacher support strategies and perceived students' self-regulation ($r = .825$). This finding was consistent with the student results, although the correlation observed in the teacher responses was stronger. The two perspectives therefore showed the same overall pattern: higher levels of teacher support were associated with higher levels of self-regulation. The difference in correlation strength should be interpreted as a difference between respondent perspectives rather than as evidence that one perspective is more accurate than the other.

Conclusion

The study found a significant positive relationship between teacher support strategies and students' self-regulation at the secondary school level. Among the 200 students, teacher support strategies were positively related to self-regulation ($r = .606$, $p < .01$). The teacher responses also showed a significant positive relationship between teacher support strategies and perceived students' self-regulation ($r = .825$, $p < .01$). Thus, both student and teacher perspectives showed a positive relationship between supportive classroom practices and self-regulated learning. The findings highlight the relevance of structured guidance, emotional support, constructive feedback, autonomy support, and scaffolding in supporting students' planning, monitoring, and reflective learning behaviours.

Recommendations

- Teachers should explicitly teach goal setting, planning, monitoring, time management, and self-evaluation.
- Complex academic tasks should be broken into manageable steps and support should be gradually withdrawn as students gain competence.
- Constructive and timely feedback should be used to help students identify strengths, errors, and next steps.
- Teacher professional development should include practical training in scaffolding and self-regulated learning strategies.
- Secondary schools should reduce excessive reliance on rote learning and create more opportunities for reflection and independent learning.

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