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9. Assessing self-regulated learning strategies of prospective teachers

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Abstract

Self-regulated learning (SRL) refers to the process through which learners actively manage and control their own learning by setting goals, selecting strategies, and evaluating progress. The present study aims to assess the self-regulated learning strategies employed by prospective teachers, identifying five key strategies from the related literature: goal-setting, time management, help-seeking and collaboration, task strategies, and self-evaluation. Utilizing a quantitative survey method, the study was conducted among 256 prospective teachers, selected through a convenient sampling technique. Data was collected using an investigator-made tool specifically designed to measure the utility of SRL strategies. The statistical techniques employed for data analysis included percentage analysis, t-tests, and correlational analysis. The percentage analysis revealed a low level of usage of self-regulated learning strategies among prospective teachers. This finding suggests that many prospective teachers may not be fully equipped to regulate their academic learning processes effectively. Further analysis using t-tests indicated no significant difference between male and female prospective teachers in their application of self-regulated learning strategies. In addition, correlational analysis demonstrated a high significant positive correlation among the five identified self-regulated learning strategies. This implies that the use of one SRL strategy is strongly associated with the use of others, indicating that these strategies are interrelated and tend to reinforce each other in fostering academic self-regulation among learners.

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Educational implications of the study include the recommendation to integrate explicit instruction on self-regulated learning strategies into teacher education programs. By equipping prospective teachers with effective SRL practices, not only enhance their own academic success but also gain the capacity to teach these strategies to future students, thereby promoting more engaged learning in classrooms.

Keywords: Self-regulated learning (SRL), SRL strategies, Prospective teachers

INTRODUCTION

Self-Regulated Learning (SRL) has emerged as a crucial aspect of effective education, particularly for aspiring teachers. It is now recognized as a process that occurs when learners are motivated to actively engage in reflective and strategic leaning activities, particularly in environments designed to promote self-regulation (Butler, 2023). SRL emphasizes learners' ability to take control of their own learning by being reflective, goal-oriented and adaptive. Research shows that SRL training programs significantly improve both academic performance and motivation among university students, equipping them with the skills needed to succeed in higher education and beyond (Theobald, 2021). Zimmerman (1990) identified three key characteristics of self-regulated learning: the active use SRL strategies, responsiveness to self-generated feedback regarding the effectiveness of one's learning, and the motivational processes that drive continued engagement and persistence. These components are interlinked, as effective self-regulation requires learner sot adapt their strategies based on performance feedback and maintain motivation throughout the learning process. With these foundational aspects in mind, this study aims to explore how prospective teachers use self-regulated learning strategies in their academic pursuit. The objectives of this study are outlined as follows:

- To assess the level of SRL strategies employed by prospective teachers with respect to the gender (Male/Female) and Year of study (I Year/II Year).
- To examine whether there exists any notable variation in the use of SRL strategies among prospective teachers in terms of gender and year of study.
- To analyze the correlation among various SRL strategies employed by prospective teachers.

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RELATED STUDIES

The professional development of prospective teachers has increasingly moved beyond the traditional approach of simply imparting subject-matter and pedagogical knowledge using prescribed methodologies. Current reforms advocate for a broader and more dynamic approach to teacher education, emphasizing the need for preservice teachers to engage in self-regulated learning processes and these reforms encourage teachers to construct their own knowledge through active engagement, thereby fostering higher-order thinking skills (Michalsky & Schechter, 2018). Rather than being a passive receiver of information, the preservice teacher is envisioned as an active learner who takes control of their learning journey. Self-regulation, as explained by Zimmerman (2002), is not a mere cognitive ability or a performance-based skill, instead, it is a deliberate process where learners actively direct their own development by converting their cognitive capacities into measurable academic skills. This process involves setting clear learning goals, monitoring progress, and making necessary adjustments, including the adoption of new learning strategies (Zimmerman, 2000; Pintrich, 2000; Valtonen et al., 2021). Active learners who practice self-regulation monitor their own behavior in alignment with their goals and continually refine their task-related strategies. They engage in self-reflection, which boosts their sense of accomplishment and motivation (Zimmerman, 2002). Various self-regulatory strategies act as tools for these learners, helping them maintain control over their learning and continually improve their performance (Garcia & Pintrich, 2023). Bai & Wang (2023) emphasize that the extent to which students employ self-regulated learning strategies—such as monitoring, effort regulation, goal setting, and planning—depends on their motivational beliefs, including a growth mindset, self-efficacy, and intrinsic value. Based on this body of literature, the researcher intends to explore SRL strategies in the context of prospective teachers. Specifically, the study will focus on assessing strategies like goal-setting, time management, help-seeking and collaboration, task strategies, and self-evaluation. This study identifies these strategies are critical for fostering the development of independent, reflective, and effective future educators capable of navigating the complexities of modern classrooms. The hypotheses of this study are outlined as follows:

Ho1: The level of SRL strategies utilized by prospective teachers is Moderate with respect to gender and year of study.

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Ho2: There exist no substantial variation between male and female prospective teachers in the usage of SRL strategies.

Ho3: There exist no substantial variation between I year and II year prospective teachers in the use of SRL strategies.

Ho4: There exist a positive correlation among SRL strategies employed by prospective teachers.

METHODOLOGY

Research Method

The researcher employed a quantitative survey method to investigate the self-regulated learning strategies utilized by prospective teachers, gathering data to provide a detailed understanding of their SRL behaviors and practices.

Sample and Sampling Technique

The sample consists of 256 prospective teachers who are pursuing B.Ed. programme in colleges of education at Karaikudi vicinity, selected through convenient sampling technique, ensuring accessibility and ease in gathering data for the research study.

Research Instrument

The researcher developed a survey questionnaire, which underwent a pilot study to refine its content. Both content validity and face validity were ensured by two experts in the field of education research. Reliability testing was conducted using a sample of 45 participants, with Cronbach's alpha (α) demonstrating strong reliability, exceeding .80 (Hair et al., 2013) for all SRL dimensions, including goal-setting, time management, help-seeking and collaboration, task strategies and self-evaluation (Table 1). The final instrument consisted of 22 statements across these dimensions, utilizing a 5-point Likert scale ranging from 5 – strongly agree to 1 – strongly disagree. Data collection was carried out thorough Google Forms in a classroom setting, with the researcher present to oversee the process. Asterisk marks indicated mandatory responses, resulting in 256 complete responses being gathered and analyzed.

Table 1: Reliability Analysis

Dimensions	No. of Items	α

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Goal-setting	4	.847
Time management	4	.837
Help-seeking and collaboration	5	.893
Task strategies	4	.878
Self-evaluation	5	.861

FINDINGS

Ho1: The level of SRL strategies utilized by prospective teachers is Moderate with respect to gender and year of study.

Table 2: Percentage analysis with respect to gender

Dimensions	Categories	Low		Moderate		High	
		No.	%	No.	%	No.	%
Goal-setting	Male	9	52.9	1	5.9	7	41.2
	Female	151	63.2	30	12.6	58	24.3
Time management	Male	9	52.9	4	23.5	4	23.5
	Female	81	33.9	80	33.5	78	32.6
Help-seeking and collaboration	Male	9	52.9	3	17.6	5	29.4
	Female	82	34.3	77	32.2	80	33.5
Task strategies	Male	9	52.9	2	11.8	6	35.3
	Female	151	63.2	23	9.6	65	27.2
Self-evaluation	Male	8	47.1	2	11.8	7	41.2
	Female	141	59.0	33	13.8	65	27.2

Table 2 shows that both male and female prospective teachers have notable percentages in the low category for all dimensions of self-regulated learning strategies. This indicates that, neither group is extensively employing these strategies.

Table 3: Percentage analysis with respect to year of study

Dimensions	Categories	Low	Moderate	High

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		No.	%	No.	%	No.	%
Goal-setting	I Year	92	62.2	20	13.5	36	24.3
	II Year	68	63.0	11	10.2	29	26.9
Time management	I Year	44	29.7	58	39.2	46	31.1
	II Year	46	42.6	26	24.1	36	33.3
Help-seeking and collaboration	I Year	42	28.4	50	33.8	56	37.8
	II Year	49	45.4	30	27.8	29	26.9
Task strategies	I Year	87	58.8	16	10.8	45	30.4
	II Year	73	67.6	9	8.3	26	24.1
Self-evaluation	I Year	88	59.1	14	9.5	46	31.1
	II Year	61	56.5	21	19.4	26	24.1

Table 3 shows that both I year and II year prospective teachers have significant percentages in low category for all dimensions of SRL strategies. This suggest that neither group extensively use these strategies. However, there are differences in the high category, with I year prospective teachers generally having higher percentages in most dimensions when comparing to II year prospective teachers. This indicates that while both groups face challenges in applying SRL strategies, I year students tend to employ them more effectively when they do.

Ho2: There exist no substantial variation between male and female prospective teachers in the usage of SRL strategies.

Table 4: t-test for usage of SRL strategies with respect to gender (Male -17, Female – 239)

Variable	Categories	Mean	SD	t-value	Level of significance (5%)
Goal-setting	Male	15.47	4.54	.283	NS
	Female	15.79	2.68		
Time management	Male	14.76	4.16	.896	NS
	Female	15.68	2.62		
Help-seeking and collaboration	Male	19.12	4.64	.417	NS
	Female	19.59	3.18		

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Task strategies	Male	15.53	4.39	.382	NS
	Female	15.94	2.63		
Self-evaluation	Male	19.88	4.91	.072	NS
	Female	19.79	3.08		

*NS – Not Significant

The results from the Table 4 shows that there are no statistically significant differences between male and female prospective teachers in any of the dimensions of SRL strategies. The t-value (df-254) indicate that the mean scores are not significantly differ from each other. This suggest that both genders use these strategies at comparable levels.

Ho3: There exist no substantial variation between I year and II year prospective teachers in the use of SRL strategies.

Table 5: t-test for usage of SRL strategies with respect to year of study (I year -148, II year- 108)

Variable	Categories	Mean	SD	t-value	Level of significance (5%)
Goal-setting	I year	16.07	2.55	1.949	NS
	II year	15.35	3.13		
Time management	I year	15.86	2.51	1.623	NS
	II year	15.29	3.02		
Help-seeking and collaboration	I year	20.01	3.05	2.544	S
	II year	18.94	3.51		
Task strategies	I year	16.26	2.59	2.291	S
	II year	15.44	2.95		
Self-evaluation	I year	20.05	2.99	1.402	NS
	II year	19.46	3.49		

*S – Significant, NS – Not Significant

Table 5 reveals that significant differences exist between I year and II year prospective teachers in some dimensions of SRL strategies which are help-seeking and collaboration (t=2.544) and task strategies (t=2.291), where I year prospective teachers scored higher than II year prospective

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teachers. For goal-setting, time management and self-evaluation, the difference between these two group were not significant. Overall, the findings suggest that I year prospective teachers use help-seeking and collaboration and task strategies more effectively compared to II year prospective teachers, while others show no significant difference.

Ho4: There exist a positive correlation among SRL strategies employed by prospective teachers.

Table 6: Correlation Analysis

Dimensions	Goal-setting	Time management	Help-seeking and collaboration	Task strategies	Self-evaluation
Goal-setting	1				
Time management	.804**	1			
Help-seeking and collaboration	.750**	.788*	1		
Task strategies	.794*	.823**	.833**	1	
Self-evaluation	.750**	.750**	.784**	.823**	1

**Correlation is significant at 0.01 level (2-tailed)

The Pearson correlation analysis (Table 6) shows that all dimensions of SRL strategies are significantly positively correlated with each other at 0.01 level. Specifically, goal-setting is correlated with time management, help-seeking and collaboration, task strategies and self-evaluation, indicating that improvements in one area are likely associated with improvements in others.

DISCUSSION AND EDUCATIONAL IMPLICATIONS

The aim of this article is to investigate the self-regulated learning (SRL) strategies used by prospective teachers. Self-regulated learning is an essential process in which students actively manage and regulate their thoughts, behaviors, and learning environments to achieve their personal and academic goals (Cleary et al., 2022). The study specifically examines the usage of SRL strategies such as goal-setting, time management, help-seeking, collaboration, task strategies, and self-evaluation among prospective teachers which foster success in both academic and professional contexts. Lawson et al. (2019) highlighted in their research that the actual use of SRL strategies among students is less frequent than might be anticipated, suggesting that many students are not

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fully capitalizing on these methods to enhance their learning. This study similarly found that while some prospective teachers do use SRL strategies effectively, a substantial portion of them engage with these strategies only minimally. Male and female participants, as well as I and II students, demonstrated lower levels of SRL strategy use. The major findings of this study indicate a lower usage of SRL strategies among prospective teachers, with clear areas for improvement. Pearson correlation analysis revealed that all SRL dimensions—goal-setting, time management, help-seeking and collaboration, task strategies, and self-evaluation—are significantly positively correlated with each other. Holzer et al. (2021) recommended that fostering SRL strategies in students is essential for increasing their intrinsic motivation to learn also emphasized that universities should prioritize teaching students how to structure and plan their learning more effectively, as doing so has been shown to positively influence motivation and, consequently, academic outcomes

Educational implications of the research point to the necessity of incorporating SRL-focused training within teacher education programs. Firstly, universities should provide explicit instruction in SRL strategies to help future educators better manage their learning. Secondly, teacher training programs should focus on equipping prospective teachers with the skills needed to foster SRL practices. By mastering SRL strategies, themselves, prospective teachers will be better prepared to guide their students in developing the same essential skills. Finally, continuous monitoring and assessment of SRL strategy use among prospective teachers could be incorporated into the educational process, ensuring that students are progressively developing stronger self-regulation habits throughout their studies.

CONCLUSION

This article emphasizes the importance of self-regulated learning as a predictor of academic and professional success. While some prospective teachers are effectively utilizing SRL strategies, there remains considerable room for improvement across all dimensions. Universities and teacher education programs should prioritize fostering these skills, not only to enhance prospective

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teachers' own learning but also to prepare them to cultivate self-regulated learners in their future classrooms.

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Jan-June 2025, Volume-II, Number-I www.apimrj.com , apimrjournal@gmail.com

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