



Long Paper

# Self-Regulated Learning Strategies and Self-Efficacy of Teachers in Selected Elementary Schools of a Rural School District in the Philippines

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## Abstract

This study examined the self-regulated learning (SRL) strategies and teaching self-efficacy of elementary teachers in selected rural districts of a Philippine province. Grounded in Social Cognitive Theory and Self-Regulated Learning Theory, it employed a quantitative descriptive-correlational design involving 156 in-service teachers from both small and large schools. Data were gathered through validated Likert-scale questionnaires measuring SRL dimensions such as goal setting, self-monitoring, and motivation and effort regulation, and self-efficacy dimensions including confidence in teaching, perceived impact on learning, and problem-solving skills. Results revealed that teachers demonstrated high SRL ( $M = 22.05$ ,  $SD = 2.54$ ) and self-efficacy ( $M = 21.54$ ,  $SD = 2.74$ ) levels. Among SRL indicators, self-monitoring had the highest mean ( $M = 22.15$ ), followed by motivation and effort regulation ( $M = 22.03$ ) and goal setting ( $M = 21.97$ ).



Similarly, self-efficacy scores were highest in perceived impact on student learning ( $M = 22.13$ ), followed by confidence in teaching ( $M = 21.48$ ) and problem-solving ( $M = 21.02$ ). Differences across school types were not statistically significant ( $p > .05$ ), indicating comparable SRL and self-efficacy levels among teachers from small and large schools. Correlation analysis revealed strong positive relationships among SRL components such as goal setting and self-monitoring ( $r = .814, p < .001$ ), and between SRL and self-efficacy dimensions, including confidence in teaching ( $r = .601, p < .001$ ) and problem-solving ( $r = .612, p < .001$ ). Age and length of service were weakly and negatively correlated with both constructs ( $r = -.05$  to  $-.10, p > .05$ ). These findings suggest that teachers consistently employ self-regulated strategies and sustain high instructional confidence regardless of context. However, lower results in problem-solving and perceived instructional impact highlight the need for targeted professional development. A professional growth framework is proposed to strengthen teachers' self-regulation, reflective practice, and pedagogical confidence, especially in geographically isolated and disadvantaged areas (GIDAs).

*Keywords* – self-regulated learning, teacher self-efficacy, elementary education, professional development, instructional confidence

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## INTRODUCTION

The increasing complexity of 21st-century education has amplified the need for teachers to cultivate adaptive skills that foster both professional growth and instructional effectiveness. Among these, self-regulated learning (SRL) and teaching self-efficacy have emerged as critical constructs in educational research, particularly within elementary education. Self-regulated learning involves the capacity of individuals to actively manage their learning processes by planning, monitoring, and evaluating their strategies to achieve specific educational goals (Zhang et al., 2022). In parallel, self-efficacy, defined as the belief in one's ability to perform tasks and influence outcomes (Cuenca & Gilbert, 2019), determines how teachers navigate instructional challenges, adopt innovative pedagogies, and address the diverse needs of learners.

In the context of rural and underserved communities in the Philippines, teachers often confront unique professional constraints, including limited access to technological infrastructure, insufficient professional development opportunities, and systemic resource limitations. These challenges intensify the demand for teachers to employ SRL strategies and develop strong teaching self-efficacy to sustain instructional quality despite contextual adversities. Research has demonstrated that educators with strong self-regulatory capabilities tend to exhibit greater motivation, reflective practice, and instructional adaptability, ultimately improving student engagement and achievement (Su et al., 2023; Blackmore et al., 2021). Similarly, teachers with high self-efficacy are more

likely to experiment with new instructional methods, persist in the face of difficulties, and foster dynamic classroom environments (Burić et al., 2024).

Despite the extensive global literature affirming the roles of SRL and self-efficacy in enhancing educational practice, empirical investigations in elementary education within developing regions remain limited. Most studies have focused on secondary or tertiary education and are largely based in Western contexts, raising questions about the applicability of these findings to localized educational settings in the Philippines (Nguyen & Huynh, 2024). Furthermore, there is a lack of research examining how demographic factors such as age, gender, teaching experience, and academic qualifications affect the interplay between SRL and self-efficacy among elementary teachers. Without context-specific data, policy interventions and capacity-building efforts risk being misaligned with the actual needs of educators.

This study aims to address this gap by examining the self-regulated learning strategies and self-efficacy of elementary school teachers in selected districts within a rural Philippine province. By exploring the interrelationship between these constructs and identifying relevant demographic predictors, the study seeks to inform the design of targeted professional development programs that enhance instructional effectiveness and promote sustainable teacher growth. The findings are expected to offer empirical evidence to guide educational leaders and policymakers in developing support systems responsive to the contextual realities of elementary education in geographically isolated and disadvantaged areas.

## ***Theoretical Framework***

This study is grounded in Social Cognitive Theory (SCT) by Bandura (1997) and the updated insights on self-regulated learning (SRL) frameworks as synthesized by Pegden, Molenaar, and Jarodzka (2024). These theoretical perspectives provide a robust foundation for understanding the interplay between self-efficacy and self-regulated learning strategies among elementary school teachers in rural educational settings.

SCT posits that human behavior is shaped by the reciprocal interaction of personal, behavioral, and environmental factors. Within educational contexts, self-efficacy refers to an individual's belief in their capacity to achieve desired outcomes and influences motivation, instructional choices, and perseverance in the face of challenges (Bandura, 2001). Teachers who possess strong self-efficacy are more likely to adopt innovative practices, engage in reflective learning, and respond constructively to feedback (Tschannen-Moran & Hoy, 2021). Thus, self-efficacy functions as both a catalyst for and a product of self-regulated learning.

Complementing SCT, the recent work of Pegden et al. (2024) outlines classic and contemporary models of SRL, emphasizing the importance of cyclical processes such as goal-setting, performance monitoring, and reflective evaluation. These metacognitive

skills enable teachers to continuously adapt their instructional approaches, improve practice, and respond effectively to evolving classroom demands. The synthesis highlights how SRL promotes autonomy and professional growth among educators, particularly in resource-constrained settings.

Together, SCT and the updated SRL perspective provide a theoretical lens through which the interaction between teachers' instructional confidence and their use of adaptive learning strategies can be examined. This framework informs the study's objective of exploring how these constructs reinforce one another and supports the design of targeted professional development initiatives that address the contextual realities of underserved educational environments.

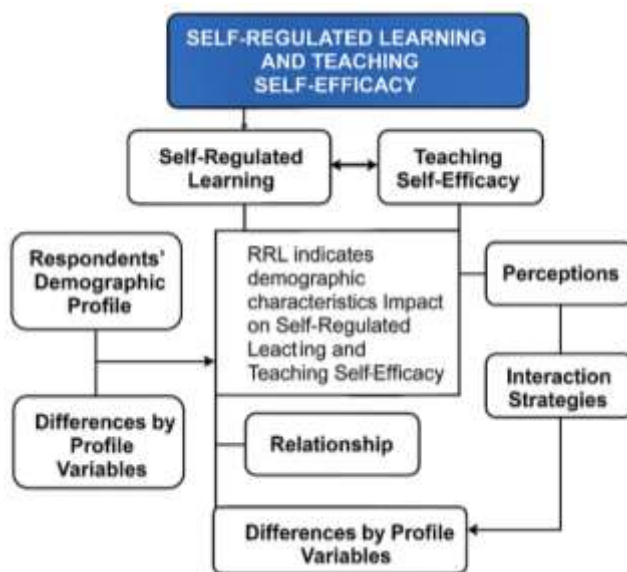


Figure 1. Conceptual Framework of the Study

This study is anchored on a conceptual framework that examines the relationship between self-regulated learning (SRL) and teaching self-efficacy among elementary teachers in the San Agustin District. SRL involves how teachers plan, monitor, and reflect on their teaching and learning processes, while teaching self-efficacy refers to their confidence in managing instructional tasks, addressing student needs, and achieving desired learning outcomes. Grounded in Bandura's Social Cognitive Theory, the framework underscores the reciprocal influence of personal beliefs, behaviors, and environmental factors. It posits that teachers who actively engage in self-regulated learning are more likely to develop higher self-efficacy, enabling them to adopt adaptive teaching strategies and maintain instructional resilience. The inclusion of this theoretical lens emphasizes the significance of internal motivation and belief systems in shaping effective teaching practices.

Moreover, the framework integrates demographic variables such as age, sex, civil status, educational attainment, and teaching experience to explore their potential influence on SRL and self-efficacy. It also incorporates teachers' perceptions of their own learning and their interaction strategies with students and colleagues, recognizing that both subjective beliefs and observable behaviors impact classroom effectiveness. These components allow for a more nuanced understanding of how personal and contextual factors contribute to variations in instructional confidence and professional growth. By identifying these relationships, the framework supports the development of targeted professional development initiatives that address specific teacher needs, enhance instructional practices, and promote sustained teaching effectiveness in elementary education settings.

### ***Statement of the Problem***

Despite the recognized importance of self-regulated learning (SRL) and teaching self-efficacy in promoting instructional effectiveness and professional development, limited empirical studies have examined these constructs within the context of elementary education in geographically isolated and disadvantaged areas (GIDAs) in the Philippines. Teachers in such settings often encounter systemic challenges, including limited access to professional development, constrained resources, and varying levels of institutional support. These factors may affect their ability to plan, monitor, and evaluate instructional practices effectively.

While existing literature acknowledges the connection between SRL and self-efficacy, there remains a significant gap in understanding how demographic variables such as age, gender, educational attainment, and years of teaching experience influence this relationship. Most previous research has concentrated on secondary or higher education, often within urban or Western contexts, which limits the applicability of these findings to rural elementary school environments in the Philippines. Without context-specific data, educational leaders and planners may find it difficult to design and implement targeted interventions that effectively support teachers' professional growth and instructional competence.

This study seeks to address these gaps by examining the relationship between self-regulated learning strategies and teaching self-efficacy among elementary teachers in selected rural districts. It also aims to determine whether demographic characteristics and school type (small versus large schools) influence these constructs. By generating localized empirical evidence, this study intends to support the development of professional development programs and policy interventions that are responsive to the specific needs of teachers working in underserved and challenging educational settings.

## **Objectives of the Study**

### **General Objective:**

This study aimed to assess the self-regulated learning strategies and teaching self-efficacy of elementary teachers in selected rural districts within a Philippine province.

### **Specific Objectives:**

1. To describe the demographic profile of the respondents in terms of:
  2. 1.1 Gender
  3. 1.2 Age
  4. 1.3 Educational attainment
  5. 1.4 Length of teaching practice
6. To determine the perceptions of elementary teachers regarding their self-regulated learning strategies, particularly in the areas of:
  7. 2.1 Goal setting
  8. 2.2 Self-monitoring
  9. 2.3 Motivation and effort regulation
10. To determine the perceptions of elementary teachers concerning their teaching self-efficacy in terms of:
  11. 3.1 Confidence in teaching abilities
  12. 3.2 Perceived impact on student learning
  13. 3.3 Problem-solving skills
14. To examine whether there are significant differences in self-regulated learning strategies and teaching self-efficacy when analyzed according to school type (small and large schools).
15. To determine the relationship between elementary teachers' self-regulated learning strategies and their teaching self-efficacy.
16. To propose intervention strategies aimed at enhancing elementary teachers' self-regulated learning strategies and teaching self-efficacy.

## **LITERATURE REVIEW**

The reviewed literature collectively underscores the critical role of self-regulated learning (SRL) and teaching self-efficacy in promoting effective instructional practices and sustained professional growth among teachers. These two constructs are closely interrelated, with multiple studies highlighting their reciprocal influence in educational contexts. Bandura's Social Cognitive Theory (1997) serves as the underlying framework across many of these studies, emphasizing the triadic interaction between personal factors, behavior, and environmental influences in shaping teaching competence and motivation.

## ***Self-Regulated Learning (SRL) Strategies***

Self-regulated learning (SRL) plays a pivotal role in effective teaching and professional growth. Rooted in Bandura's (1997) Social Cognitive Theory, SRL is characterized by a triadic interaction among personal factors, behaviors, and the environment. Scholars such as Fokkens-Bruinsma et al. (2021) and Gan et al. (2022) define SRL as a cyclical process involving goal setting, self-monitoring, and motivation regulation. These strategies equip teachers to reflect on their practices and adjust their approaches, leading to greater instructional adaptability. Goal setting supports clarity of instructional purpose and professional focus (Vosniadou et al., 2024), while motivation and effort regulation help educators remain engaged despite challenges, which is essential for classroom resilience (Goddard et al., 2021; Wang et al., 2024). Collectively, self-regulated learning (SRL) strategies are positively associated with enhanced teacher confidence, adaptability, and instructional quality. Recent studies emphasize that teachers who actively engage in goal setting, self-monitoring, and reflective practices demonstrate higher instructional efficacy and are more responsive to dynamic classroom needs (Greenquist-Marlett et al., 2025; Jud et al., 2024).

In conclusion, SRL strategies not only empower teachers to manage their own professional growth but also create a ripple effect that fosters more motivated and self-directed learners. Promoting SRL among educators is therefore a crucial step toward cultivating adaptive, reflective, and effective teaching in today's evolving educational landscape.

## ***Teaching Self-Efficacy***

Teaching self-efficacy, defined as teachers' belief in their ability to positively affect student learning, plays a critical role in education. Research by Su et al. (2023) shows that teachers with high self-efficacy implement more effective instructional strategies and foster greater student engagement. Confidence in teaching ability, perceived instructional impact, and classroom problem-solving form the core of self-efficacy constructs.

Self-efficacy is bolstered by professional learning, supportive feedback, and leadership encouragement (Lim & Yeo, 2021; Zeng et al., 2024). Teachers with strong efficacy beliefs report higher job satisfaction, lower burnout, and a greater likelihood to implement inclusive, responsive pedagogies (Dignath, 2021; Duan et al., 2024; Oberg et al., 2024). Chan and Wong (2023) highlight its influence on differentiated instruction. Furthermore, teachers who believe in their instructional impact are more motivated and actively engage in ongoing professional development (Blackmore et al., 2021; Goddard et al., 2021). Problem-solving efficacy, as noted by Skrblinek et al. (2024) and Tschannen-Moran and Hoy (2021), supports flexible decision-making in complex classrooms, promoting quality instruction even in high-pressure settings (Su et al., 2023).

## ***Demographic Influences on SRL and Self-Efficacy***

Recent research highlights the role of contextual and demographic factors in shaping teachers' self-regulated learning (SRL) strategies and self-efficacy beliefs. Zahidi and Ong (2023) found that SRL behaviors and self-efficacy vary depending on personal characteristics such as age, teaching experience, and language proficiency. Similarly, Wang et al. (2024) emphasized that SRL-informed teacher training programs must be tailored to match the specific needs and capacities of individual educators to be effective and sustainable in practice.

Institutional and school-level factors also contribute significantly to teaching self-efficacy. Lim and Yeo (2021) observed that supportive school environments play a vital role in enhancing teacher confidence, particularly in settings where teachers face increasing instructional challenges. Jud et al. (2024) further noted that teachers' motivation to support student SRL is influenced by the broader teaching context, suggesting that institutional frameworks and leadership styles can either reinforce or hinder teachers' belief in their instructional impact.

In rural and geographically isolated contexts, limited access to professional learning and contextual support can negatively affect teachers' confidence and capacity for SRL. Wang et al. (2024) pointed out that teacher motivation styles interact with environmental factors, influencing the effectiveness of SRL strategies among both pre-service and in-service educators. These findings support the need for professional development programs that are not only evidence-based but also responsive to the specific demographic and contextual realities faced by teachers working in under-resourced educational settings.

## **METHODOLOGY**

### ***Research Design***

This study utilized a quantitative descriptive-correlational research design to examine the relationship between elementary teachers' self-regulated learning (SRL) strategies and their teaching self-efficacy. The design was selected to explore natural associations between variables without manipulation, making it suitable for real-world educational contexts. Specifically, the research investigated how goal setting, self-monitoring, and motivation relate to various dimensions of teaching self-efficacy, including instructional confidence, perceived impact on student learning, and problem-solving ability.

## ***Locale and Participants***

The study was conducted in selected rural districts within a Philippine province. These locations were purposively chosen due to their accessibility and their representation of common conditions in public elementary schools situated in underserved areas. A total of 156 in-service elementary teachers participated in the study. Participants were selected through convenience sampling to ensure efficient access and cooperation. Only teachers with at least one year of teaching experience were included in the study to ensure that the responses were grounded in actual classroom practice.

## ***Research Instruments***

Data collection was facilitated through a structured questionnaire composed of three main sections. The first section gathered the demographic profile of the respondents, including information such as age, length of service, and school size. The second section assessed self-regulated learning strategies, particularly focusing on goal setting, self-monitoring, and motivation and effort regulation. This portion of the instrument was adapted from a scale developed by Vosniadou in 2024. The third section measured teaching self-efficacy using a modified version of the Teachers' Sense of Efficacy Scale created by Tschannen-Moran and Hoy in 2021. This part examined three subdomains: instructional confidence, perceived impact on student learning, and problem-solving ability. All sections used a five-point Likert scale, and results were interpreted using predefined mean intervals.

## ***Validity and Reliability Procedures***

To ensure the validity and reliability of the instrument, five education management experts reviewed the questionnaire for content relevance and clarity. The instrument was subsequently pilot-tested among 30 teachers from comparable districts to assess its reliability and practical applicability. Cronbach's alpha coefficients for each scale exceeded the threshold of 0.80, indicating a high level of internal consistency. Factor analysis further supported the construct validity of the instrument by confirming that the items were aligned with their intended theoretical constructs.

## ***Ethical Considerations***

Ethical protocols were observed throughout the study. Permission to conduct the research was secured from local education authorities. Informed consent was obtained from all participants, and their anonymity and confidentiality were strictly upheld. Ethical procedures were guided by the general research standards outlined by Creswell and Creswell in 2023, especially important in the absence of a formal institutional ethics review board. The voluntary nature of participation and the non-intrusive character of the survey ensured minimal risk to respondents.

## Data Collection and Statistical Treatment

The validated questionnaires were personally distributed to the participants and retrieved upon completion within a reasonable timeframe. Data collected from the instruments were subjected to statistical analysis using SPSS. Descriptive statistics, including frequency, percentage, mean, and standard deviation, were employed to describe the demographic characteristics of the respondents and to assess the levels of SRL and teaching self-efficacy. Independent t-tests were applied to determine whether significant differences existed in SRL or self-efficacy scores across demographic categories. Pearson's r correlation coefficient was used to identify the strength and direction of the relationship between self-regulated learning strategies and teaching self-efficacy domains.

## RESULTS

**Objective 1: To describe the demographic profile of the respondents in terms of gender, age, educational attainment, and length of teaching practice**

Table 1. Summary of Respondents' Demographic Profile

School/Type	Male	Female	Total	Undergrad	With MA Units	MA Graduate	Mean Age / LOS
Central Elem. School	6	14	20	4	15	1	-
Doña Juana Elem. School	2	14	16	0	16	0	-
Esteban M. Madrona Elem. School	4	11	15	0	11	4	-
Long Beach Elem. School	3	12	15	1	13	1	-
Big Schools (Total)	23	84	107	23	78	6	46.12 / 18.12
Small Schools (Total)	8	41	49	6	42	1	43.00 / 15.61
Overall Total	31	125	156	29	120	7	45.3 / 17.33

Table 1 presents the demographic profile of the respondents. The demographic profile shows that the majority of respondents are female (125 out of 156), with only 31 male teachers across both big and small schools. Most of the respondents have taken Master's level coursework, with 120 having units towards a Master's degree and only 7 having completed it. The average age and length of service (LOS) are higher among teachers in big schools (46.12 years old with 18.12 years of service) compared to those in small schools (43.00 years old with 15.61 years of service). This indicates that the teaching workforce is predominantly composed of experienced female educators with graduate-level education in progress, implying a strong foundation for implementing professional development initiatives that target advanced pedagogical skills.

**Objective 2: To determine the perceptions of elementary teachers regarding their self-regulated learning strategies, particularly in the areas of goal setting, self-monitoring, motivation, and effort regulation**

Table 2. Summary of Self-Regulated Learning (SRL) Dimensions by School Type with Statistical Measures

SRL Dimension	Mean (All Schools)	Mean (Big Schools)	Mean (Small Schools)	Median (All Schools)	Standard Deviation	Skewness	ANOVA p-value	Significance
Goal Setting	21.97	21.85	22.24	22	2.69	-0.804	0.3971	Not Significant
Self-Monitoring	22.15	21.98	22.53	23	2.54	-0.4726	0.2115	Not Significant
Motivation and Effort Regulation	22.03	21.93	22.24	22	2.4	-0.2789	0.4426	Not Significant

Table 2 reveals the mean scores of elementary teachers across three dimensions of self-regulated learning: goal setting, self-monitoring, and motivation and effort regulation. Overall, all dimensions received high mean scores, with self-monitoring rated the highest (M = 22.15), followed by motivation and effort regulation (M = 22.03) and goal setting (M = 21.97). When disaggregated by school type, small schools posted slightly higher averages in all SRL dimensions compared to big schools. However, ANOVA results show that none of the differences are statistically significant, indicating consistent perceptions across school types. This suggests that teachers generally view themselves as capable of managing their own learning behaviors, regardless of school setting. The findings imply a

shared level of self-regulated learning competence among elementary teachers, which may serve as a strong foundation for personalized professional development initiatives.

**Objective No.3: To determine the perceptions of elementary teachers concerning their teaching self-efficacy in terms of confidence in teaching abilities, perceived impact on student learning, and problem-solving skills**

Table 3. Summary of Teaching Self-Efficacy Dimensions by School Type with Statistical Measures

Teaching Self-Efficacy Dimension	Mean (All Schools)	Mean (Big Schools)	Mean (Small Schools)	Median (All Schools)	Standard Deviation	Skewness	ANOVA p-value	Significance
Confidence in Teaching Abilities	21.48	21.2	22.1	21	2.73	-0.4296	0.0545	Not Significant
Perceived Impact on Student Learning	22.13	21.98	22.44	23	2.48	-0.3222	0.2747	Not Significant
Problem-Solving Skills	21.02	20.75	21.61	20	3.02	-0.5294	0.0975	Not Significant

The data presented in Table 3 summarizes the differences in teaching self-efficacy across three dimensions: confidence in teaching abilities, perceived impact on student learning, and problem-solving skills based on school type (big vs. small schools). Data show that elementary teachers generally have positive perceptions of their teaching self-efficacy across all three dimensions: confidence in teaching abilities ( $M = 21.48$ ), perceived impact on student learning ( $M = 22.13$ ), and problem-solving skills ( $M = 21.02$ ). Among these, the highest mean is observed in perceived impact on student learning, indicating that teachers feel strongly about their ability to influence student outcomes. While small school teachers recorded slightly higher mean scores across all dimensions compared to those in big schools, ANOVA results confirm that these differences are not statistically significant. This suggests that regardless of school size, teachers consistently demonstrate a strong sense of instructional self-efficacy, highlighting the need to sustain and enhance teacher confidence through targeted support and ongoing professional development.

**Objective No.4: To examine whether there are significant differences in self-regulated learning strategies and teaching self-efficacy when analyzed according to school type (Big and Small schools).**

Table 4. Correlation between the variables of self-regulated learning strategies, where age and length of service are included as correlates.

Coefficient	Correlation Matrix					
Cases						
p <	GS	SM	MER	AGE	SERV	
GS	1.000					Correlation: Spearman rho Coefficient  2-tailed significance tests  '!' p- value not computed  T able 4 shows the
	156					
	0.000					
SM	0.814	1.000				
	156	156				
	0.000	0.000				
MER	0.743	0.823	1.000			
	156	156	156			
	0.000	0.000	0.000			
AGE	-0.050	-0.062	-0.092	1.000		
	156	156	156	156		
	0.533	0.443	0.253	0.000		
SERV	-0.075	-0.043	-0.101	0.861	1.000	
	156	156	156	156	156	
	0.350	0.595	0.211	0.000	0.000	

correlation between self-regulated learning (SRL) strategies—goal setting (GS), self-monitoring (SM), and motivation and effort regulation (MER)—and the demographic variables of age and length of service (SERV). The results show strong and statistically significant positive correlations among the three SRL strategies: GS and SM ( $r = 0.814$ ,  $p < 0.001$ ), GS and MER ( $r = 0.743$ ,  $p < 0.001$ ), and SM and MER ( $r = 0.823$ ,  $p < 0.001$ ). This indicates that teachers who perform well in one SRL dimension are also likely to score high in the others, suggesting a cohesive and mutually reinforcing SRL profile.

In contrast, age and length of service show weak and non-significant negative correlations with the SRL strategies. For instance, GS is slightly negatively correlated with age ( $r = -0.050$ ,  $p = 0.533$ ) and with length of service ( $r = -0.075$ ,  $p = 0.350$ ), indicating no meaningful relationship. Similar weak and non-significant trends are observed for SM and MER. However, age and length of service are strongly and positively correlated with each

other ( $r = 0.861$ ,  $p < 0.001$ ), which is expected, as older teachers tend to have longer teaching experience. These results suggest that self-regulated learning behaviors among teachers are closely related to one another but are largely independent of age and teaching experience.

**Objective No. 5: To determine the relationship between elementary teachers' self-regulated learning strategies and their teaching self-efficacy.**

Table 5. Multiple correlation between variables of self-regulated learning strategies and self-efficacy.

Coefficient		Correlation Matrix				
Cases						
p <	GS	SM	MER	CTA	PISL	PSS
<b>GS</b>	1.000					
	156					
	0.000					
<b>SM</b>	0.814	1.000				
	156	156				
	0.000	0.000				
<b>MER</b>	0.743	0.823	1.000			
	156	156	156			
	0.000	0.000	0.000			
<b>CTA</b>	0.601	0.666	0.574	1.000		
	156	156	156	156		
	0.000	0.000	0.000	0.000		
<b>PISL</b>	0.662	0.706	0.714	0.764	1.000	
	156	156	156	156	156	
	0.000	0.000	0.000	0.000	0.000	
<b>PSS</b>	0.612	0.691	0.641	0.867	0.758	1.000
	156	156	156	156	156	156
	0.000	0.000	0.000	0.000	0.000	0.000

Correlation: Spearman rho Coefficient  
 2-tailed significance tests  
 '!' p-value not computed  
 2-tailed significance tests  
 '!' p-value not computed

Table 5 reflects the multiple correlations between the three self-regulated learning (SRL) strategies, namely goal setting (GS), self-monitoring (SM), and motivation and effort regulation (MER), and the three dimensions of teaching self-efficacy, which include

confidence in teaching abilities (CTA), perceived impact on student learning (PISL), and problem-solving skills (PSS). All correlation values are positive and statistically significant, indicating strong relationships between SRL and self-efficacy dimensions. Notably, the highest correlation is observed between CTA and PSS, followed closely by the relationship between CTA and PISL, suggesting that teachers with higher confidence are more likely to feel effective in solving instructional problems and influencing student outcomes. Similarly, strong correlations between SRL components and self-efficacy dimensions indicate that teachers who actively set goals, monitor their performance, and regulate their motivation tend to exhibit higher teaching confidence and instructional impact. These findings underscore the importance of fostering self-regulated learning strategies among teachers as a means to strengthen their overall teaching self-efficacy and professional effectiveness.

***Objective No.6: To propose intervention strategies aimed at enhancing elementary teachers' self-regulated learning strategies and teaching self-efficacy.***

#### ***Proposed Comprehensive Professional Development and Support Program***

##### **Rationale:**

To justify the need for proposing intervention strategies, it is essential to recognize the pivotal role that self-regulated learning (SRL) and teaching self-efficacy play in fostering effective instructional practices and continuous professional growth among elementary teachers. Despite evidence of high SRL and self-efficacy levels, variations across contexts and the evolving demands of education necessitate targeted support to sustain and enhance these competencies. As teaching environments become increasingly complex due to diverse learner needs and shifting curricular standards, interventions must be designed to reinforce teachers' goal-setting, self-monitoring, motivation, and confidence in their instructional abilities. These strategies not only address existing gaps identified in the study but also contribute to building a more adaptive, reflective, and resilient teaching workforce capable of navigating pedagogical challenges with greater autonomy and effectiveness.

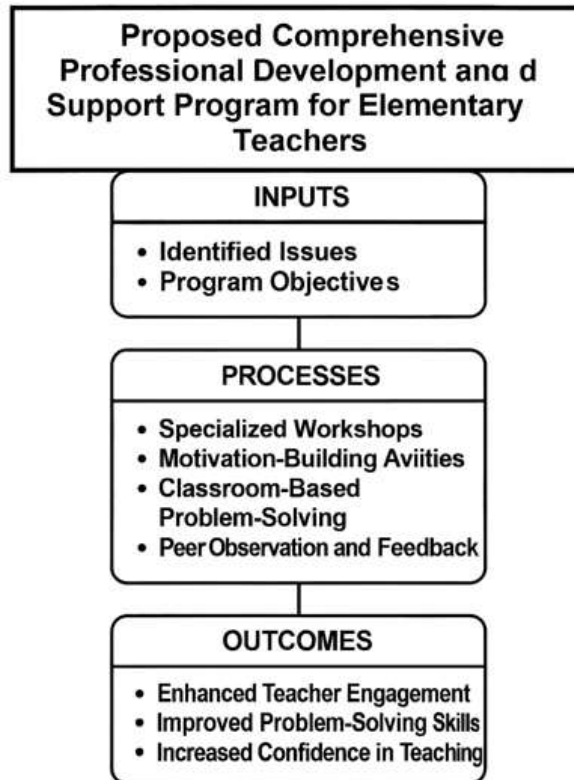


Figure 2. Proposed Program Intervention



Figure 3. Proposed Actual Plan of Activities

The Proposed Comprehensive Professional Development and Support Program for Teachers serves as the primary output of the study titled "Elementary Teachers' Self-Regulated Learning Strategies and Self-Efficacy in Selected Districts in Romblon." Grounded in the study's findings, the framework addresses critical gaps in teachers' academic advancement, instructional confidence, and self-regulated learning (SRL) habits, particularly among older and longer-serving educators. Quantitative data revealed low mean scores in self-efficacy components such as problem-solving and confidence in teaching. Correlational analyses showed a downward trend in SRL and self-efficacy scores as teachers' age and years of service increased. These findings justified the need for a structured and sustainable intervention that supports teachers' professional growth.

Figure 2, titled *Proposed Program Intervention*, illustrates the conceptual framework guiding the intervention. It is composed of three key elements: Inputs, Processes, and Outcomes. The inputs include the identified issues and the overall program objectives. The processes highlight a sequence of activities such as specialized workshops, motivation-building exercises, classroom-based problem-solving training, and peer observation with feedback. These are designed to respond to the challenges surfaced during the study. The outcomes emphasize the intended improvements in teacher engagement, enhanced problem-solving ability, and greater confidence in teaching—all contributing to improved self-efficacy and SRL capabilities.

Expanding this conceptual foundation into a practical implementation guide, Figure 3 presents the Proposed Actual Plan of Activities. This plan operationalizes the intervention through three main components: Graduate Study Support, SRL and Self-Efficacy Training, and Other Support Data of the Proposed Program Intervention. Activities include scholarship orientations, mentoring and coaching for thesis and dissertation writing, workshops on goal setting and effort regulation, and peer collaboration through reflective practice. These initiatives address the low completion of graduate degrees, weak SRL among veteran teachers, and modest instructional confidence as identified in the findings, aligning with evidence that teacher self-efficacy significantly influences teaching quality (Burić et al., 2024).

## **DISCUSSION**

The analysis of respondent characteristics provides foundational insights into the professional landscape of elementary education. Patterns in gender, educational attainment, and teaching experience reflect broader trends in the sector. The predominance of female teachers mirrors the continuing feminization of the teaching profession, which, as Zahidi and Ong (2023) noted, may shape pedagogical identity and self-efficacy. Although many respondents have pursued graduate-level studies, the low completion rate of master's degrees highlights barriers to advanced academic progression. Brenner (2022) and Fokkens-Bruinsma et al. (2021) identified institutional and motivational factors that often impede completion, underscoring the role of support structures in sustaining teacher learning. The age and length of service of respondents

suggest a workforce concentrated in mid- to late-career stages, consistent with the developmental needs described by Rezaei Rad et al. (2023) and Mou (2023). Additionally, observed differences between teachers in large and small schools, particularly in experience and qualifications, affirm the role of institutional context in shaping access to professional learning (Gan et al., 2022; Lim & Yeo, 2021).

Further examination of teacher learning behaviors reveals consistently high levels of engagement in self-regulated learning strategies. Across goal setting, self-monitoring, and motivation and effort regulation, teachers demonstrated a strong capacity to manage and direct their professional growth. This pattern aligns with the work of Shin (2024) and Cuenca and Gilbert (2019), who emphasized the importance of clear goal setting for instructional focus and reflective decision-making. Higher self-monitoring scores among small school teachers may reflect more frequent reliance on individual reflection in settings with fewer formal supports, consistent with findings by Su et al. (2023). Similarly, the consistently strong perceptions of motivational regulation highlight the persistence and resilience needed in instructional practice, as noted by Goddard et al. (2021). These results suggest the value of embedding SRL principles into professional development programs to nurture teachers' capacity for reflection, planning, and perseverance in diverse school contexts.

In relation to instructional competence, teachers reported a high sense of self-efficacy across three core domains: confidence in teaching, perceived impact on student learning, and problem-solving ability. These findings affirm earlier conclusions by Oberg et al. (2024), who posited that teaching efficacy is shaped more by internal motivation and experience than school structure. The elevated scores in perceived impact on student learning support prior research by Blackmore et al. (2021) and Zahidi and Ong (2023), who found that belief in one's influence over student achievement contributes to instructional drive and persistence. Teachers' ratings on problem-solving, though slightly varied, suggest adaptability and strategic thinking, in line with Tschannen-Moran and Hoy (2021) and Goddard et al. (2021), who emphasized the importance of autonomy and context-responsive decision-making. As Martin et al. (2022) asserted, high self-efficacy contributes meaningfully to student success. These patterns highlight the need for continuous, differentiated support that addresses the conditions affecting teacher confidence and resilience across school types.

Correlation analysis of the SRL components revealed strong interconnections among goal setting, self-monitoring, and motivational regulation, reinforcing the notion that these strategies are applied holistically. Pegden, Molenaar, and Jarodzka (2024) describe SRL as a cyclical and interconnected process, wherein reflection and planning inform sustained instructional performance. The absence of significant relationships between SRL behaviors and demographic variables such as age and teaching experience suggests that self-regulation is not inherently tied to years in the profession. This supports the findings of Rezaei Rad, Zhang, and Kim (2023), who argued that engagement in SRL is primarily driven by contextual supports and personal initiative. These results point to the

importance of accessible and adaptable development opportunities for teachers regardless of their career stage.

Additionally, the strong positive correlations between SRL strategies and self-efficacy dimensions underscore the reciprocal nature of belief and behavior in teacher learning. Teachers who engage in goal setting, self-monitoring, and motivational regulation also tend to report greater confidence in their instructional capabilities and influence over student learning. This bidirectional relationship is supported by Özer and İspınar Akçayoğlu (2021) and Brenner (2022), who emphasized the role of SRL in shaping and reinforcing teacher efficacy. The especially strong relationship between self-monitoring and perceived instructional impact illustrates the power of reflective teaching in shaping belief systems. Bandura's (1997, 2001) Social Cognitive Theory further explains these patterns by highlighting the interplay of personal, behavioral, and environmental factors in the development of self-efficacy. These findings advocate for professional development models that integrate SRL and self-efficacy principles to support teachers' growth and instructional confidence.

Taken collectively, the results of this study inform the development of a research-based, policy-aligned professional development framework. Anchored in self-regulated learning and teaching self-efficacy, the proposed approach is aligned with the Philippine Professional Standards for Teachers and the mandates of the Continuing Professional Development Act (RA 10533). By integrating reflective practice, goal setting, and motivation-building strategies, the model offers a responsive intervention that supports teacher effectiveness and educational quality. As emphasized by Sodergren, Kettler, Sulak, and Payne (2023), sustained professional learning is integral to developing empowered, adaptable, and high-impact educators.

## **CONCLUSIONS**

The study concludes that elementary teachers in the San Agustin District of Romblon exhibit generally strong self-regulated learning strategies and moderate levels of teaching self-efficacy. However, patterns of decline in SRL and self-efficacy among older and more experienced teachers suggest a need for sustained motivation and targeted professional development. While no significant differences were found between big and small schools in terms of SRL and self-efficacy levels, disparities in access to academic qualifications and institutional support call for localized interventions. The correlation between SRL dimensions and teaching self-efficacy affirms that enhancing goal setting, self-monitoring, and motivational regulation can positively influence teachers' confidence in managing classrooms and solving instructional problems. These findings reinforce the need to build structured, career-stage-responsive support systems to sustain teachers' instructional effectiveness, especially in resource-constrained settings.

## RECOMMENDATIONS

1. **Implement Professional Development Programs:** Institutions should prioritize workshops and coaching sessions focused on improving SRL strategies, particularly goal setting, reflective teaching, and effort regulation. Such interventions are essential for helping teachers remain adaptive in the face of instructional challenges.
2. **Enhance Teacher Efficacy through Targeted Training:** Capacity-building efforts must focus on strengthening teachers' confidence in problem-solving and in their perceived ability to impact student learning. This includes simulation-based training, mentorship programs, and feedback-driven instructional reviews.
3. **Support Graduate-Level Advancement:** Educational leaders should create mechanisms such as scholarship grants, study leaves, and thesis/dissertation mentoring to support teachers in completing advanced degrees, addressing the observed low completion rate of graduate education.
4. **Design Context-Specific Interventions:** Given the demographic patterns identified, particularly the needs of older and longer-serving teachers, differentiated professional development models tailored to varying career stages and school contexts should be developed.
5. **Institutionalize the Proposed Framework:** The study's output, a comprehensive professional development framework, should be adopted by DepEd divisions in similar contexts to systematically promote SRL and teacher efficacy across elementary schools in GIDAs.

## LIMITATIONS OF THE STUDY

The findings of this study hold significant relevance for teacher development policy and practice, especially in geographically isolated and disadvantaged areas (GIDAs). The positive relationship between self-regulated learning (SRL) and teaching self-efficacy underscores the importance of strengthening teachers' ability to set goals, monitor their progress, and sustain motivation. Building these self-regulatory capacities supports continuous professional growth and enhances instructional effectiveness. The observed decline in SRL and self-efficacy among older and more experienced teachers also indicates the need for responsive professional development programs that promote both pedagogical renewal and adaptive learning throughout the teaching career.

At the institutional level, the results highlight the value of establishing structured and sustained support systems for in-service teachers, particularly those with limited access to graduate education and mentoring. The proposed professional development framework serves as a practical guide for enhancing instructional confidence, problem-solving skills, and collaborative teaching culture. By investing in these areas, educational leaders can cultivate reflective and resilient teachers capable of improving learning outcomes in underserved communities. Furthermore, the study contributes to the

discourse on teacher quality by advocating for localized, data-informed approaches to capacity building, reinforcing the role of continuous learning as the cornerstone of effective and equitable education.

## **IMPLICATIONS**

The findings of this study carry significant implications for teacher development policy, educational leadership, and instructional practice, particularly in geographically isolated and disadvantaged areas (GIDAs) such as those in Romblon. The observed correlation between self-regulated learning (SRL) strategies and teaching self-efficacy suggests that fostering teachers' capacity to set goals, monitor progress, and regulate motivation is essential for sustaining professional effectiveness. Moreover, the decline in SRL and self-efficacy among older and more tenured teachers points to the need for age- and career-responsive professional development programs that address not only pedagogical skill-building but also mindset renewal and adaptive learning.

Institutionally, the study underscores the urgency of establishing structured, continuous support mechanisms for in-service teachers, particularly those who have limited access to graduate education and formal mentoring systems. The proposed professional development framework, as an output of the research, offers a practical and evidence-based model for enhancing instructional confidence, problem-solving ability, and collaborative teaching culture. By investing in these dimensions, educational leaders can promote reflective teaching and instructional resilience, thereby improving student learning outcomes in underserved communities. The study also contributes to the broader discourse on teacher quality by advocating for localized, data-driven approaches to professional growth in basic education settings.

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## DECLARATIONS

### **Conflict of Interest**

The author declares no conflict of interest. The study was conducted independently, and no financial or personal relationships influenced the research process, data interpretation, or conclusions.

### **Informed Consent**

Informed consent was obtained from all participants before data collection. Participation was voluntary, and respondents were assured of confidentiality and anonymity. No personal identifiers were collected.

### **Ethics Approval**

Ethical clearance for the study was obtained from the institutional ethics review committee. The study adhered to ethical standards in educational research, ensuring respect for participants' rights, privacy, and welfare throughout the process.

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## Author's Biography

Reynold Magay Madali is a dedicated public-school teacher from Bachawan, San Agustin, Romblon, and the lead author of the study titled “*Self-Regulated Learning Strategies and Self-Efficacy of Teachers in Selected Elementary Schools of a Rural School District in the Philippines.*” He holds a Bachelor of Elementary Education and a Master's in Educational Management, both from Romblon State University. With over a decade of teaching experience, he has served in various capacities, including volunteer teacher, classroom teacher, and Teacher-in-Charge at Esteban M. Madrona Elementary School – Extension. Currently designated as Teacher III, Mr. Madali is committed to fostering inclusive and quality education in rural communities. His strong service orientation and leadership in grassroots education reflect his passion for teaching and community development.

Dr. Emelyn Rico-Villanueva is an accomplished educator, researcher, and academic leader currently serving as Associate Professor V at Romblon State University. She holds a Ph.D. in Educational Management from the Philippine Normal University and has previously served as Vice President for Academic Affairs, College Dean, and Director of RSU Science High School. Her expertise includes instructional leadership, governance, and educational policy implementation, supported by extensive research in educational management and higher education development. She has three Scopus-indexed publications—one as lead author and two as co-author—focusing on employability, digital leadership, and participatory governance in higher education. Recognized for her outstanding academic and leadership achievements, Dr. Rico-Villanueva remains dedicated to advancing educational excellence through research, innovation, and public service.

Clare Ann S. Lazaro is a graduate of Romblon State University, where she earned her degree in Bachelor of Secondary Education major in Mathematics. A native of Odiongan, Romblon, she is equipped with strong skills in Microsoft Office applications and has working knowledge of graphic design tools such as Canva and Adobe Photoshop. Her academic background and digital proficiency reflect her dedication to both education and creativity.