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*Research Article*

# Empowering Pre-Service English Language Teachers: The Impact of Scenario-Based SRL Training on Self-Regulated Learning and Teaching Self-Efficacy

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**Abstract:** This study examines the impact of scenario-based self-regulated learning (SRL) training on the SRL and teaching self-efficacy of pre-service English language teachers. Utilizing a quasi-experimental design, 48 participants were divided into experimental and control groups, with the experimental group receiving SRL-focused interventions through scenario-based exercises, peer collaboration, and reflective practices. Findings revealed significant post-intervention improvements in SRL and self-efficacy, particularly in instructional strategies, classroom management, and student engagement. Large effect sizes and robust post-hoc power analyses affirm the effectiveness of the intervention. While the study demonstrates the transformative potential of scenario-based SRL training, further longitudinal research with larger and more diverse samples is recommended to ensure the generalizability and sustainability of results. This research offers a replicable framework for integrating SRL into teacher education, equipping pre-service teachers with essential skills to foster autonomous learning and improve educational outcomes.

**Keywords:** *Teacher professional development, reflective teaching practices, student-centered learning, EFL teacher education, educational psychology, K-12 school contexts*

## INTRODUCTION

Self-regulated learning (SRL) has long been recognized as a cornerstone of effective teaching and learning, with research emphasizing its importance in fostering academic achievement, motivation, and life-long learning (Schunk & Greene, 2018; Zimmerman, 2001). SRL involves the cognitive, metacognitive, and motivational processes learners employ to set goals, monitor progress, and reflect on their performance, thereby enhancing their ability to manage learning independently (Schunk, 2012). While its relevance to student success has been extensively documented, the role of SRL in teacher professional development remains underexplored, despite its potential to address critical gaps in instructional effectiveness (Cleary & Zimmerman, 2004; Panadero et al., 2016; Theobald, 2021).

Existing research highlights that while teachers recognize the value of SRL, their instructional practices often fail to integrate SRL strategies effectively (Eker Uka, 2022; Isbej et al., 2024; Mejeh et al., 2024; Spruce & Bol, 2015; Dignath-van Ewijk & van der Werf, 2012). This discrepancy stems from a lack of training in SRL-focused pedagogy, leaving teachers ill-equipped to model and foster these strategies in their classrooms (Cleary et al., 2022; Spruce & Bol, 2015). Additionally, studies have demonstrated that professional development programs emphasizing SRL significantly enhance teachers' instructional practices and self-efficacy (Kramarski & Michalsky, 2015; Quackenbush, 2020; Tran et al., 2024; Zhi & Derakhshan, 2024). However, these initiatives are scarce, particularly in pre-

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service teacher education, where developing foundational competencies is paramount (Callan et al., 2022; Karlen et al.,2023; Tillema & Kremer-Hayon, 2002).

Further compounding this gap is the limited integration of SRL-focused interventions with practical and collaborative teaching models. While SRL training has been shown to improve teachers' ability to support students' self-regulation (Cleary & Platten, 2013; Dignath & Büttner, 2008; Latva-aho et al., 2024), the literature underscores the need for structured, contextually relevant training that bridges theory and practice (Ao et al., 2024; Alvi & Gillies, 2024; Butler et al., 2004; Perry et al., 2006). Yet, few studies have systematically evaluated such approaches, leaving an evident research gap.

This study addresses this gap by introducing a teacher training model designed to promote SRL through three interrelated components: personalized guidance, practical application, and collaborative learning. By equipping teachers with both theoretical knowledge and practical tools, the model aims to enhance their SRL strategies and capacity to integrate these skills into their instructional practice. This study contributes to the growing body of literature by addressing the pressing need for comprehensive, SRL-centered teacher training programs that bridge the gap between research and practice. This is particularly crucial in contexts like English Language Teaching (ELT) and English as a Foreign Language (EFL), where the cultivation of learner autonomy is paramount for language acquisition and long-term academic success. The findings have the potential to contribute to teacher education programs by offering a robust framework for integrating SRL-focused training into teacher preparation and professional development.

## LITERATURE REVIEW

### Self-Regulated Learning (SRL) and the Teacher

SRL is a multifaceted process that encompasses cognitive, metacognitive, and motivational strategies, enabling learners to set goals, monitor their progress, and reflect on their performance to achieve academic success (Zimmerman, 2000; Schunk & Greene, 2018). Research has consistently highlighted SRL as a teachable and critical component of effective learning, linking it to enhanced academic achievement, motivation, and lifelong learning (Greene et al., 2015; Panadero et al., 2016). However, the effective implementation of SRL strategies in educational contexts relies heavily on teachers' ability to model, teach, and support these processes in their classrooms (Yaşar, 2025).

Teachers play a dual role in the realm of SRL—as learners themselves and as facilitators of SRL in their students. However, despite acknowledging the importance of self-regulation in their classrooms, many teachers struggle to effectively implement SRL principles in their classrooms (Spruce & Bol, 2015; Perry et al., 2008). A significant factor contributing to this disconnect is the limited pedagogical knowledge teachers possess to explicitly model and teach SRL strategies (Dignath-van Ewijk et al., 2012; Mejeh et al., 2024). Despite being high-performing individuals during their own educational journeys, many pre-service teachers lack awareness of metacognitive control and effective SRL strategies, hindering their ability to effectively teach these skills to their future students (Greene, 2021; Kornell & Bjork, 2007; McCabe, 2011).

Research also underscores the superficial nature of SRL practices among teachers, particularly in the absence of structured prompts and scaffolding (Moos & Miller, 2015; Özdemir & Önal, 2021; Yaşar, 2025). Studies reveal that pre-service teachers often engage in limited SRL unless prompted across all three phases—forethought, performance, and reflection (Ortube et al., 2024; Vosniadou et al., 2021). Without these deliberate interventions, the potential for deep SRL development and its application in instructional planning may not be fully realized (Alvi & Gillies, 2024; Michalsky & Schechter, 2013). Teachers cannot instill SRL in their students if they do not possess these skills themselves (Agbenyegah, 2022; Bembenutty, 2024). This highlights the necessity of addressing this gap in teacher training.



## Teachers' Self-Efficacy for Teaching

Teacher' SRL involves multiple aspects, such as motivation, emotions, cognitive strategies, and behaviors (Efklides et al., 2017). Motivation, particularly self-efficacy, plays a crucial role in teachers' SRL (Dignath-van Ewijk & van der Werf, 2012). Teachers' self-efficacy, a key aspect of their SRL, significantly influences their teaching practices and student outcomes (Dignath, 2016). It refers to their belief in their ability to effectively engage and teach students, even those who are unmotivated and unwilling to participate in content-related classroom discussions (Tschannen-Moran & Woolfolk Hoy, 2001).

Self-efficacy, like SRL, significantly influences both students' and teachers' learning and performance (Wu et al., 2019). Teachers with high self-efficacy often demonstrate stronger SRL skills, such as planning and organization, and show a greater willingness to experiment with innovative teaching methods to meet their students' needs (Tschannen-Moran & Woolfolk-Hoy, 2001). Research by Chatzistamatiou et al. (2014) highlights that teachers' self-efficacy beliefs predict their use of strategies to enhance students' SRL. Furthermore, studies confirm that teachers' self-efficacy can be developed through targeted training, reinforcing the notion that SRL is a skill that can be taught and learned (Bachtiar, 2024; Howardson & Behrend, 2015; Schunk & Greene, 2018; Schwoerer et al., 2005; Sitzmann & Ely, 2011; Perry et al., 2008). Collectively, these findings emphasize that fostering teachers' SRL and self-efficacy through professional development enhances instructional effectiveness and positively impacts both teachers' and students' learning outcomes in K-12 educational settings.

## Pre-service Teacher Training Programs

Previous research highlights that SRL plays a limited role in both pre-service and in-service teacher training programs (Dunlosky et al., 2013). It's a common misconception that successful learners automatically become effective teachers of SRL (Allshouse, 2016; Buzza & Allinotte, 2013). However, studies show that teachers need explicit training in SRL principles, practice using SRL strategies for their own learning, and opportunities to engage in active learning processes to effectively support students' SRL development (Ganda & Boruchovitch, 2018; Kramarski & Michalsky, 2009). Buzza and Allinotte (2013) emphasize that teachers' academic strengths alone are insufficient to foster SRL in students without explicit instructional connections. Additionally, guidance is essential to help teachers reconcile discrepancies in their understanding of their own learning processes and those of their students (Krečič & Grmek, 2010).

Yaşar (2025) posits that both pre-service and in-service teacher training must explicitly address SRL development to improve instructional effectiveness and student outcomes. Moos and Miller (2015) also advocate for pre-service programs to focus on SRL needs, while research on in-service training shows positive impacts, particularly when engaging disengaged or unreflective learners. These findings suggest that explicit SRL instruction and support in teacher training programs are critical (Tschannen-Moran & Woolfolk Hoy, 2001; White, 1998). By embedding SRL into teacher education, these programs not only equip educators with the skills to model and teach SRL but also foster long-lasting relationships essential for student achievement and instructional success (Klei Borrero, 2019).

## Objective of the Current Study

This study aims to address the gap in research on teacher training in SRL, particularly focusing on pre-service English language teachers. Despite the limited number of studies in this area, prior research highlights the need for sufficiently powered interventions to explore the impact of SRL training (Cerezo & McWhirter, 2012; Smith, 2001; Stronge et al., 2011; Taranto, 2024). By targeting pre-service teachers, who represent prospective teachers, this study emphasizes the importance of authentic skill application in real classroom contexts. It builds on existing SRL intervention research, which has demonstrated significant results even with short-term interventions, and focuses on the role

of expert support and ongoing collaboration in enhancing teachers' SRL skills (Alvi & Gillies, 2024; Butler et al., 2004; Önal & Özdemir, 2024; Panadero et al., 2016; Perry et al., 2008). By investigating the relationship between teachers' SRL, self-efficacy, and instructional effectiveness, this study seeks to demonstrate how an intervention can significantly enhance teachers' ability to self-regulate, boost their self-efficacy, and ultimately improve their instructional practices.

Given the above findings, this study aimed to investigate the effect of an SRL-based teacher training model on the pre-service English language teachers' SRL and self- efficacy for teaching. In accordance with the objective of the study, the following research questions were raised:

1. Does the intervention of scenario-based SRL teacher training model affect pre-service English language teachers' self-regulated learning?

2. Does the intervention of scenario-based SRL teacher training model affect pre-service English language teachers' self-efficacy for teaching?

## METHODOLOGY

### Research Design and Participants

The study pursued a pretest-post-test quasi-experimental design. It seeks to determine the effect of the SRL teacher training model by comparing the SRL and teaching self-efficacy levels of two groups: one (experimental group) participating in the SRL teacher training program and the other (control group) doesn't. A three-week orientation phase and an eight-week implementation took place between the pre- and post-tests in the spring semester of 2024-2025 academic year. The accessible population consisted of pre-service English language teachers enrolled in the *Teaching Practice* course at the Department of Foreign Languages Education (FLE) at the Faculty of Education in a Turkish state university. The *Teaching Practice* course was divided into seven sections, and all participants were enrolled in one of these sections. Each section was supervised by a faculty member from the university and had approximately 12 students. The course required the participants to observe real classroom environments, gain teaching experience, and develop school-based skills at primary and secondary schools (shortly K-12) under staff supervision. As part of the course, they attended six lessons per week and visited cooperating K-12 schools for twelve weeks during the semester. The course involved completing observation and reflection activities, along with teaching tasks. During this period, participants became familiar with their mentor teachers and the school setting. The course required two main types of tasks: **Observation tasks and Teaching tasks. Observation tasks** involved participants observing various classroom elements, guided by pre-prepared questions from their university instructor. **Teaching tasks** required participants to conduct lessons and submit written reflections on their teaching experiences. These tasks aimed to provide hands-on experience and promote deeper understanding of instructional practices. Through these semester-long teaching tasks, the study investigates the impact of the SRL teacher training model on pre-service English language teachers' self-regulated learning and teaching self-efficacy.

The participants in the experimental group were selected through purposive sampling from a total of 84 pre-service ELT teachers (aged 23-26), who volunteered to participate in the intervention process. The control group consisted of participants who agreed to complete the pre- and post-test scales administered as part of the study. Informed consent was obtained from the 28 participants in the experimental group who initially volunteered, after five withdrew. On the other hand, 35 students were included in the control group. However, 10 were excluded because they failed to take part in either of the pre- or post-test. As a result, the experimental group consisted of 23 participants (18 female and 5 male), while the control group comprised 25 participants (17 female and 8 male). Prior to the implementation, all participants were informed about the voluntary nature of the study, its objectives, procedures, and their right to withdraw at any time. Table 1 below includes information on the design of the study.



**Table 1. Overview of the research design and participants of the study**

| | Experimental Group | Control Group |
|---|---|---|
| Pre-tests | X | X |
| Intervention | X | |
| Post-tests | X | X |
| Teaching Practice course | X | X |
| Teaching tasks at K-12 schools | X | X |
| Observation tasks at K-12 schools | X | X |
| Number of participants | 23 | 25 |

## Instrumentation

### *The self-regulated online learning questionnaire (SOL-Q)*

The revised version of the Self-Regulated Online Learning Questionnaire (SOL-Q-R), originally developed by Jansen et al. (2018), was used to assess the SRL levels of both groups. The SOL-Q-R has been validated in multiple studies assessing SRL in online and blended learning environments, indicating strong psychometric properties with a reported Cronbach's alpha of .82 to .91 across its subscales (Broadbent et al., 2018; Jansen et al., 2018; Xu et al., 2022).

While the initial version of the SOL-Q was designed for online learning contexts, modifications were made to adapt the questionnaire for classroom settings to align with the study's instructional environment. For example, the item *"I think about what I really need to learn before I begin a task in this online course"* was adjusted to *"I think about what I really need to learn before I begin a task in the classroom."* These adaptations ensured that the content remained relevant to the participants' experiences in face-to-face instruction, preserving the integrity of the instrument's constructs. Previous research supports the use of adapted versions of the SOL-Q in classroom-based SRL studies (Jansen et al., 2018; Kizilcec et al., 2017; Kumar & Pande, 2019). The revised instrument underwent a pilot test with a small sample of pre-service teachers (n=12) to confirm item clarity and internal consistency before full-scale implementation. The pilot results yielded a Cronbach's alpha of .88, reinforcing the reliability of the adapted tool in measuring SRL in classroom contexts.

The SOL-Q was chosen for its ability to comprehensively assess SRL through 42 items rated on a 7-point Likert scale (1 = "not at all true for me" to 7 = "very true for me") and distributed across seven subscales: (a) Meta-cognitive Activities Before Learning (MABL), (b) Meta-cognitive Activities During Learning (MADL), (c) Meta-cognitive Activities After Learning (MAAL), (d) Time Management (TM), (e) Environmental Structuring (ES), (f) Persistence (PER), and (g) Help-Seeking (HS). This multi-faceted approach allows for a thorough examination of SRL behaviours.

### *The teacher sense of efficacy scale (TSES)*

The Teacher Sense of Efficacy Scale (TSES), developed by Tschannen-Moran and Woolfolk Hoy (2001), was used to measure the impact of the Scenario-based SRL Teacher Training intervention on the participants' sense of efficacy. The TSES is a widely validated instrument designed to measure teachers' self-efficacy across three key dimensions: Instructional Strategies (IS), Classroom Management (CM), and Student Engagement (SE) (Duffin et al., 2012; Klassen et al., 2009). It consists of 24 items, with 8 items dedicated to each subscale. Efficacy in Instructional Strategies (Items 7, 10, 11, 17, 18, 20, 23, 24), Efficacy in Classroom Management (Items 3, 5, 8, 13, 15, 16, 19,

21), and Efficacy in Student Engagement (Items 1, 2, 4, 6, 9, 12, 14, 22). Participants respond to items using a 9-point Likert scale, ranging from 1 (Nothing) to 9 (A great deal), indicating the extent to which they feel capable of handling various teaching tasks. The TSES exhibits strong internal consistency, with Cronbach's alpha exceeding 0.90 for both the overall scale and nearly all its individual subscales (see Table 2).

**Table 2. Overview of the reliability scores of the TSES and each dimension**

| (Sub)scales | Mean | SD | alpha |
|---|---|---|---|
| TSES | 7.1 | .94 | .94 |
| Instructional Strategies | 7.3 | 1.1 | .91 |
| Student Engagement | 7.3 | 1.1 | .87 |
| Classroom Management | 6.7 | 1.1 | .90 |

Tschannen-Moran and Woolfolk Hoy (2001)

By administering the SOL-Q and TSES, the study aims to assess changes in participants' SRL levels and teaching self-efficacy following the intervention process. The study employed a three-phase design: pre-testing, intervention, and post-testing. The data collection process is illustrated in Figure 1.

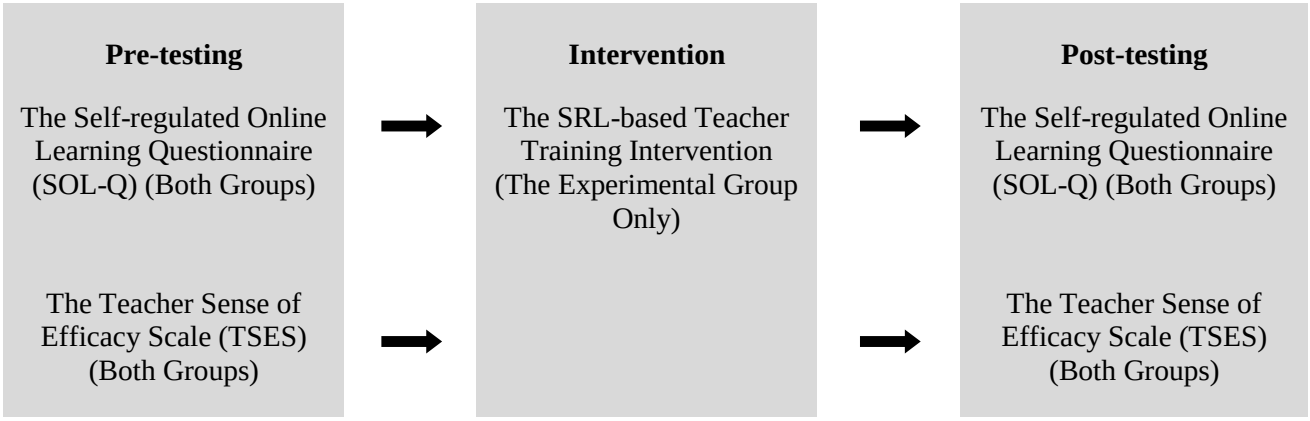


**Figure 1. The flow of the data collection procedures**

***Procedure***

After obtaining necessary approvals, the study commenced with an introductory meeting with the trainees. During this meeting, they were informed about the research and provided with a consent form to sign. During the pre-data collection and orientation stage, the participants were introduced to the concept of SRL and its importance in teaching practice. They received explicit SRL skill training during instructional coaching. Two-hour instructional coaching sessions were delivered by the author, i.e. the trainer over the course of three weeks during the pre-intervention phase. These sessions took place twice a week for two days each week.

The intervention process, which lasted 8 weeks, began on January 20, 2025. The SOL-Q and the TSES were administered to the participants in both groups as pre-tests to assess their initial SRL levels and self-efficacy beliefs about implementing SRL in everyday practice. The tests were administered online through the university's official Learning Management System (LMS), ensuring a secure and standardized data collection process. The same LMS platform was used to conduct post-

tests for both groups after eight weeks of implementation, ensuring uniformity in data collection procedures and enhancing the validity and reliability of the results. The intervention process was over on March 14, 2025. Procedural phases are described in Table 3 below.

**Table 3. Timetable of the intervention and data collection procedures (2024-2025, Spring)**

| Weeks | Data Collection |
|---|---|
| Three Weeks/Two days each week (Two-hour instructional coaching sessions each day) | Introduction, Orientation and Pre-data Collection Stage - Pre-Tests (SOL-Q & TSES) |
| Week 1 (Jan, 20-24) | Intervention |
| Week 2 (Jan, 27-31) | Intervention |
| Week 3 (Feb, 3-7) | Intervention |
| Week 4 (Feb, 10-13) | Intervention |
| Week 5 (Feb, 17-21) | Intervention |
| Week 6 (Feb, 24-28) | Intervention |
| Week 7 (Mar, 3-7) | Intervention |
| Week 8 (Mar, 10-14) | Intervention |
| One Week | Post-Tests (SOL-Q & TSES) |

***Intervention***

The Scenario-based SRL Teacher Training intervention began after the three-week orientation phase was over. **Weeks 1-2** focused on building foundational knowledge by the trainer and skills related to SRL. Interactive workshops were conducted to explore core SRL strategies like goal setting, task monitoring, and reflective practices. These workshops were designed to be relevant to real-world teaching challenges, helping trainees understand how SRL can be applied in their classrooms. Additionally, the trainees received instructional coaching in SRL pedagogy. This coaching involved explicit instruction on SRL concepts and opportunities to apply these concepts in practical teaching scenarios. The trainees were required to discuss their understanding of SRL and set personalized learning goals. The Scenario-based SRL training differs from traditional situation-based teaching in both structure and purpose. Situation-based approaches immerse trainees in realistic language-use situations to practice communicative functions, whereas scenario-based SRL training presents a scripted, multi-phase scenario that mirrors the forethought-performance-reflection cycle of self-regulated learning; trainees must forecast goals, monitor actions, and reflect on outcomes within the scenario. Thus the scenario is not only a context for language use, but a pedagogical device designed to elicit and rehearse SRL processes explicitly.

During **weeks 3-5,** participants engaged with scenario-based problem-solving activities to apply their knowledge of SRL to practical teaching situations. They were tasked with designing teaching scenarios (Appendix A) to practice SRL strategies such as goal setting, planning, self-monitoring, self-evaluation, and help-seeking. These tasks aimed to stimulate their creativity, problem-solving skills, and ability to apply SRL strategies in practical contexts. To ensure the integration of SRL strategies, participants were encouraged to break down complex tasks, set clear learning goals, and establish regular self-monitoring checkpoints. The author provided guidance and feedback during weekly group sessions, helping trainees refine their solutions and incorporate SRL strategies. Peer and self-assessment were also integral components of this phase. Participants were assigned to evaluate each other's work, focusing on the application of SRL strategies. They also engaged in self-reflection to assess their own learning progress and identify areas for improvement.

In the final phase of the intervention **(weeks 6-8),** participants engaged in collaborative implementation and reflection. To maximize the quality of the learning experience, each trainee presented their refined scenario in a seminar-style session. These presentations included scenarios with unique contexts that required trainees to apply SRL strategies and meet the diverse needs of learners lacking SRL skills. Moreover, they were required to share and assess each other's teaching scenarios, fostering a collaborative learning environment. This peer review process encouraged them to refine their solutions, demonstrating the power of co-regulation. The trainer encouraged the trainees to reflect on their performances and discuss how their understanding of SRL had evolved, as well as how they planned to apply these principles in their future teaching practices.

In the final phase, the SOL-Q and the TSES were administered to both groups as post-tests again to compare the differences in the total mean scores of each group regarding their SRL levels and self-efficacy beliefs. Figure 2 presents the procedures followed along the intervention process.

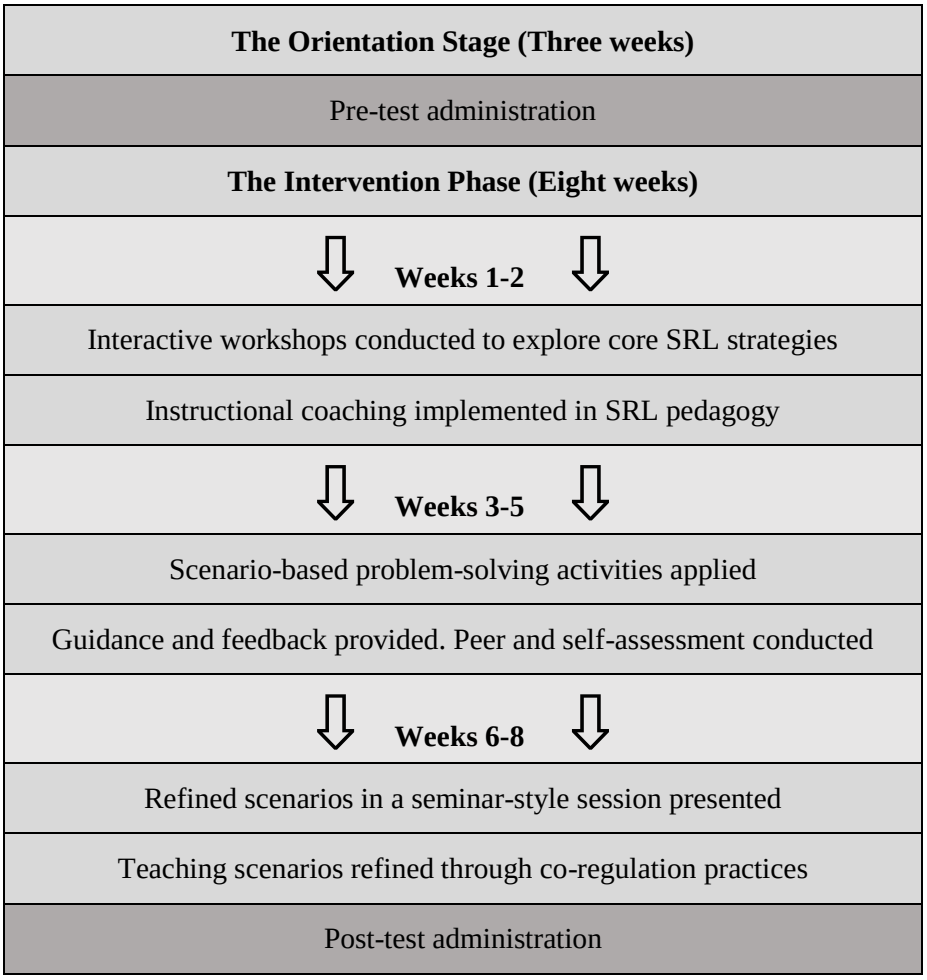


**Figure 2. Procedures followed along the intervention**

***The process in the experimental and control groups***

The experimental group participated in the eight-week training program. The trainees focused on SRL strategies and tried to apply them in practical teaching scenarios during their *Teaching Practice* course, completing tasks like lesson planning, classroom observations, and teaching practice under faculty supervision at cooperating K-12 schools.

The control group followed the standard curriculum, participating in classroom observations and teaching practice without the SRL-focused intervention. They completed the same *Teaching Practice* tasks but did not receive targeted SRL training or engage in problem-solving scenarios.

To ensure the validity of the experimental study, two experienced faculty members specializing in teacher education and SRL methodologies were consulted. These experts examined the study design, instructional content, and intervention framework to verify alignment with established educational practices and research protocols. Their insights helped refine both the intervention and assessment instruments. The procedures followed by both groups are depicted in Figure 3.

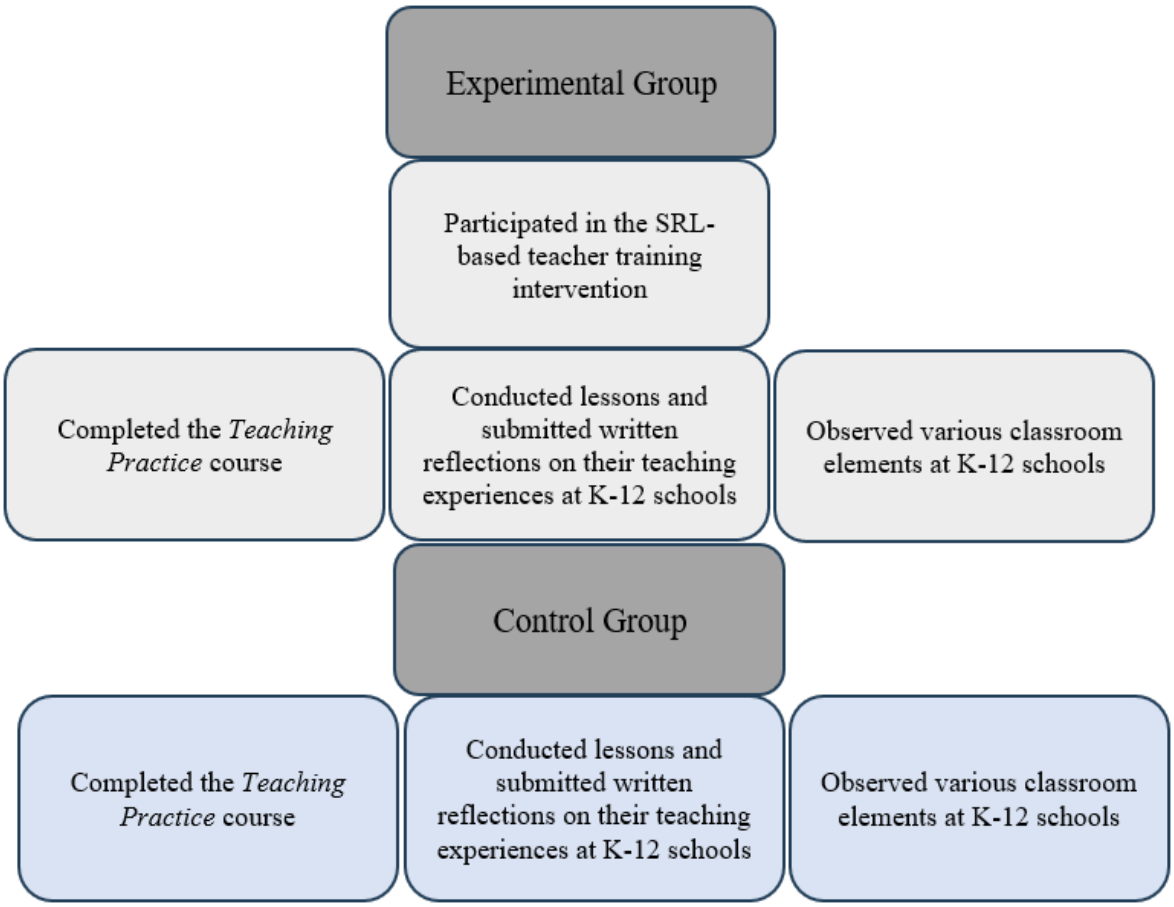


**Figure 3. Procedures in the experimental and control groups**

***The scenario-based SRL teacher training model***

This model emphasizes Instructional Coaching and Mentoring for personalized guidance, Scenario-Based Problem Solving for practical application, and Co-Regulation Practices for collaborative learning. Through a structured yet flexible approach, participants actively develop, implement, and refine SRL strategies, enhancing both their SRL skills and their capacity to promote these skills in their future students. The instructional coaching intervention in this model was adapted from a professional development workshop framework (Allshouse, 2016), a self-regulated learning guide (Cleary, 2018), and a self-regulated learning module (Willems et al., 2015). All instructional resources were designed to align with Zimmerman's (2008) SRL model and methodological development, providing trainees with practical tools and strategies to implement SRL in their classrooms.

Additionally, the participants were given information about diverse teacher training formats; **instructional coaching and mentoring, scenario-based problem solving,** and **co-regulation practices**. How these practices will support their professional growth was explained to them. To provide a theoretical foundation, Zimmerman's (2000) three-phase model of SRL (forethought, performance, and reflection) was explained. In the **forethought phase,** trainees were guided to set specific learning goals, develop a plan of action, and motivate themselves to engage in the learning process. During the **performance phase,** they were encouraged to employ various SRL strategies, such as time management, self-monitoring, and self-evaluation, to execute their learning plans effectively. As for the **reflection phase,** the trainees were prompted to reflect on their learning experiences, assess their performance, and identify areas for improvement. This phase emphasized the importance of self-evaluation and metacognition in the learning process. An outline of **instructional coaching and mentoring** adapted from Allshouse (2016) and Schunk and Mullen (2013) (see Appendix B), **scenario-based problem solving** adapted from Seker (2016) (see Appendix C), and **co-regulation practices** adapted from Saariaho et al. (2016) (see Appendix D) was provided to participants.

Through the integration of coaching and mentoring practices, trainees received tailored guidance and ongoing support. These personalized interactions not only strengthened their confidence but also enhanced their competence as pre-service teachers. Applying these strategies during their K-12 teaching experiences enabled trainees to model SRL techniques and bolster their self-efficacy in teaching. Meanwhile, scenario-based problem-solving activities offered trainees the opportunity to address realistic challenges, thus equipping them for the complexities of classroom teaching. Lastly, the co-regulation practices enabled collaboration, mutual accountability, and shared reflection among the trainees to improve their readiness for real-world teaching challenges. The scenario-based teacher training model used to promote SRL is described in Figure 4 below. Figure 4 is an author-created composite that adapts elements from Allshouse (2016), Cleary (2018), Willems et al. (2015), and Zimmerman's (2000, 2008) three-phase SRL model.

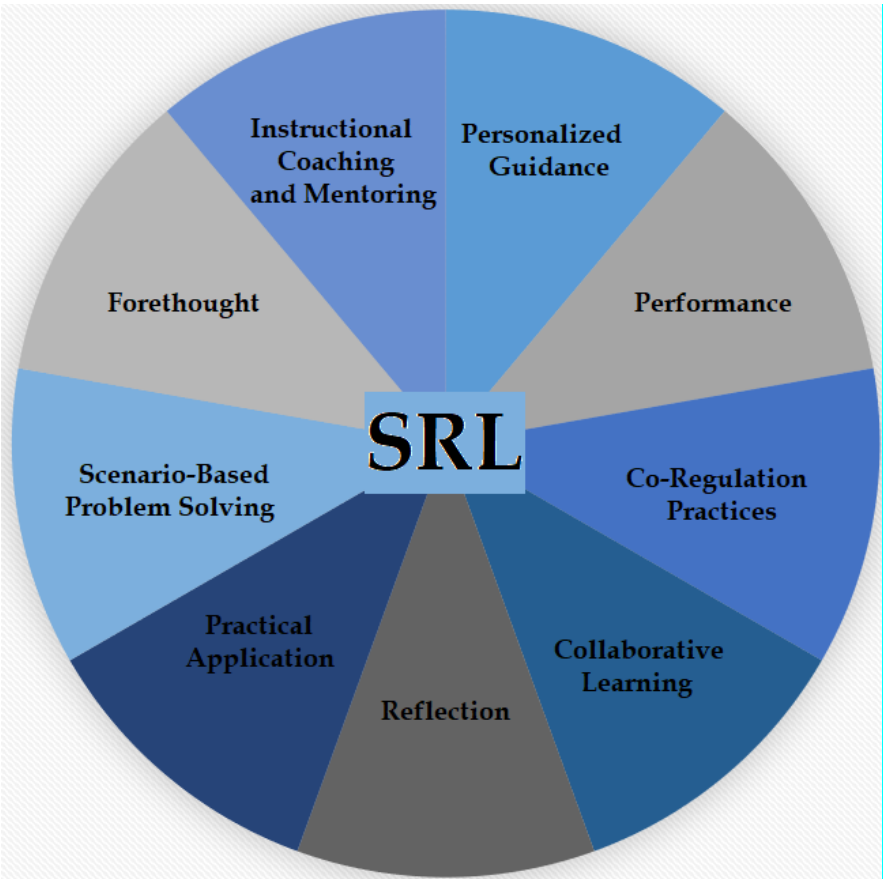


**Figure 4. The pedagogical model used for the scenario-based SRL training**

***Data analysis***

The quantitative data analyses were conducted using SPSS version 22. Pre- and post-test results from the experimental ($n$ = 23) and control ($n$ = 25) groups, based on the SOL-Q and TSES, were examined to assess normality and determine the suitability of the data for parametric testing. As shown in Table 4, the skewness and kurtosis values ranged between -1.12 and 2.26. Since all values fell within the acceptable range of ±2 (Garson, 2012) and were within the broader threshold of ±2.58 (Field, 2009), the data were considered to follow a normal distribution. Although the kurtosis value (2.26) for the post-test control group is near the upper limit of the acceptable range, parametric tests were deemed appropriate given the overall normality of the data and the robustness of t-tests for moderately non-normal distributions.

**Table 4. Skewness and kurtosis values for pre- and post-test scores of both groups**

| Scales | Tests | Groups | Skewness | Kurtosis |
|---|---|---|---|---|
| SOL-Q | Pre-Tests | Experimental | -1.05 | 1.88 |
| | Post-Tests | Control | -1.02 | 1.65 |
| TSES | Pre-Tests | Experimental | .27 | 1.22 |
| | Post-Tests | Control | -1.12 | 2.26 |

As the data from both groups followed a normal distribution, the parametric Independent Samples T-test was conducted to compare differences in the SRL and teaching self-efficacy levels between the experimental and control groups. Table 5 provides a summary of the research approach and procedures.

**Table 5. Overview of research approach and procedures**

| Research Questions | Data Collection Tools & Study Group | Data Analysis |
|---|---|---|
| 1-Does the intervention of scenario-based SRL teacher training model affect pre-service English language teachers' self-regulated learning? | Pre- & Post-Tests of SOL-Q & TSES<br>Experimental + Control Group | Inferential Statistics (means and standard deviations) |
| 2-Does the intervention of scenario-based SRL teacher training model affect pre-service English language teachers' self-efficacy for teaching? | Pre- & Post-Tests of SOL-Q & TSES<br>Experimental + Control Group | Inferential Statistics (means and standard deviations) |

## FINDINGS

**1st Research question:** Does the intervention of scenario-based SRL teacher training model affect pre-service English language teachers' self-regulated learning?

To determine if the groups differed significantly prior to and after the intervention, pre- and post-test scores were compared. Test results in Table 6 show that although the experimental group initially demonstrated slightly higher scores, no statistically significant difference was observed between the groups ($t$ = 1.37; $p$ = .174). This lack of significant difference indicates baseline equivalence and suggests that any changes observed in the post-test can be attributed to the intervention rather than pre-existing differences between the groups.

**Table 6. Comparison between pre- and post-test results of both groups in terms of SOL-Q**

| Test | Group | N | M | SD | t | p |
|---|---|---|---|---|---|---|
| **Pre-Test** | Experimental | 23 | **4.83** | .63 | 1.37 | .174 |
| | Control | 25 | **4.65** | .54 | | |
| **Post-Test** | Experimental | 23 | **5.42** | .60 | 2.91 | **.007** |
| | Control | 25 | **4.79** | .55 | | |

Independent Samples T-test

The post-test results in Table 6 indicate a statistically significant difference in favor of the experimental group ($t$ = 2.91; $p$ = .007), suggesting the positive effect of the intervention. Post-test analyses also indicated a significant effect of the intervention on SRL levels, with a large between-

group effect size (Cohen's d = 1.09). The experimental group demonstrated significant improvements in SRL from pre- to post-test, reflecting a large within-group effect size ($d$ = 1.15), while the control group showed limited improvement ($d$ = 0.22). These findings highlight the substantial impact of the intervention on enhancing the SRL levels of the experimental group compared to the control group.

Additionally, a post-hoc power analysis was conducted to assess the likelihood that the study detected a meaningful effect of the training. Using the calculated effect size (Cohen's d = 1.09), an alpha level of .007, and group sizes of 23 (experimental) and 25 (control), the analysis yielded a power of approximately 0.90 (90%), even though larger-scale replication may further substantiate these findings.

Overall, regarding the first research question: "Does the intervention of scenario-based SRL teacher training model affect pre-service English language teachers' self-regulated learning?" the results suggest that the training has a significantly positive and practically meaningful effect on students' SRL.

To deepen the understanding of the training's impact on participants' SRL, descriptive statistics were also applied to each subscale of the SOL-Q. Table 7 presents the results of the Independent Samples T-test comparing pre- and post-test performance across all SOL-Q subscales for both groups.

**Table 7. Pre- and post-test score comparisons on each sol-q subscale across groups**

| Pre/Post Tests | Group | N | M | SD | p |
|---|---|---|---|---|---|
| **Pre**-MABL | Experimental | 23 | 4.67 | .91 | .721 |
| | Control | 25 | 4.60 | .94 | |
| **Pre**-MADL | Experimental | 23 | 4.96 | .85 | .543 |
| | Control | 25 | 4.87 | .72 | |
| **Pre**-MAAL | Experimental | 23 | 5.10 | .99 | .796 |
| | Control | 25 | 5.04 | .77 | |
| **Pre**-TM | Experimental | 23 | 3.09 | .75 | .891 |
| | Control | 25 | 3.01 | .68 | |
| **Pre**-ES | Experimental | 23 | 5.12 | 1.48 | .294 |
| | Control | 25 | 4.33 | 1.32 | |
| **Pre**-PER | Experimental | 23 | 5.01 | 1.10 | .641 |
| | Control | 25 | 4.93 | 1.29 | |
| **Pre**-HS | Experimental | 23 | 4.68 | 1.22 | .318 |
| | Control | 25 | 4.94 | 1.28 | |
| **Post**-MABL | Experimental | 23 | 5.21 | .70 | **.041** |
| | Control | 25 | 4.71 | .92 | |
| **Post**-MADL | Experimental | 23 | 5.30 | .65 | **.034** |
| | Control | 25 | 4.85 | 1.01 | |
| **Post**-MAAL | Experimental | 23 | 5.78 | .59 | **.007** |
| | Control | 25 | 5.09 | .89 | |
| **Post**-TM | Experimental | 23 | 6.11 | .51 | **.001** |
| | Control | 25 | 4.80 | .74 | |
| **Post**-ES | Experimental | 23 | 5.68 | 1.45 | .065 |
| | Control | 25 | 5.23 | 1.16 | |
| **Post**-PER | Experimental | 23 | 5.52 | 1.20 | **.048** |
| | Control | 25 | 5.02 | 1.38 | |
| **Post**-HS | Experimental | 23 | 4.98 | 1.52 | .089 |
| | Control | 25 | 4.55 | 1.34 | |

Independent Samples T-Test

As seen in Table 7, the pre-test results revealed no statistically significant differences between the experimental and control groups across all subscales ($p > .05$). However, the results of the post-test analysis indicate a statistically significant improvement in self-regulated learning across key subscales for the experimental group compared to the control group. This suggests that the SRL-based teacher training intervention had a meaningful and measurable impact on enhancing the self-regulation skills of pre-service English language teachers. Because no pre-intervention differences were detected ($p > .05$), the significant post-test improvements in the experimental group can be attributed to the SRL-based training. However, future work should compare this model with other professional-development formats to determine relative efficacy in varied contexts.

Post-test results, as outlined in Table 7, demonstrate a statistically significant difference in favor of the experimental group across the following subscales: 'Time Management' ($p = .001$) – This subscale showed the most pronounced improvement, reflecting the trainees' enhanced ability to set achievable learning goals, manage tasks effectively, and track their progress. 'Meta-cognitive Activities Before and During Learning' ($p = .041$; $p = .034$) – Gains in these areas suggest the intervention successfully fostered anticipatory strategies (goal-setting and planning) and self-monitoring during tasks, essential for autonomous learning. 'Meta-cognitive Activities After Learning' ($p = .007$) – The significant improvement in this area highlights the experimental group's strengthened ability to reflect on their learning experiences and assess their performance, which aligns with Zimmerman's (2008) three-phase SRL model. 'Persistence' ($p = .048$) – The observed improvements in persistence reflect the development of resilience and sustained effort, both critical to overcoming learning challenges.

Although improvements were noted in 'Help-Seeking' ($p = .089$) and 'Environmental Structuring' ($p = .065$), these subscales did not reach statistical significance. Although the intervention effectively enhanced overall SRL, these findings suggest that future iterations could benefit from a greater focus on strategies that enhance peer collaboration and optimize the learning environment.

**2nd Research question:** Does the intervention of scenario-based SRL teacher training model affect pre-service English language teachers' self-efficacy for teaching?

Independent samples t-tests were employed to compare pre- and post-test scores between the groups. As indicated in Table 8, despite a slightly higher initial self-efficacy score in the experimental group, no statistically significant difference was found between the groups ($t = 1.21$; $p = .231$).

**Table 8.** ***Comparison between pre- and post-test results of both groups in terms of TSES***

| Test | Group | N | M | SD | t | p |
|---|---|---|---|---|---|---|
| **Pre-Test** | Experimental | 23 | **6.35** | .81 | 1.21 | .231 |
| | Control | 25 | **6.18** | .75 | | |
| **Post-Test** | Experimental | 23 | **7.41** | .67 | 3.02 | **.005** |
| | Control | 25 | **6.85** | .74 | | |

Independent Samples T-test

Post-test results revealed a statistically significant difference in favor of the experimental group ($t = 3.02$; $p = .005$), suggesting that the intervention positively impacted the self-efficacy of the trainees. Further analysis of post-test scores revealed a significant effect of the intervention on self-efficacy levels, with a large between-group effect size (Cohen's d = 0.88). The experimental group demonstrated meaningful improvements in self-efficacy from pre- to post-test, reflecting a within-group effect size ($d = 1.21$), whereas the control group showed modest improvements ($d = 0.34$).

While the direction was anticipated, the *magnitude* of the gain (within-group d = 1.21; between-group d = 0.88) provides practical evidence of the training's effectiveness and is necessary for comparison with future studies. Post-hoc power analysis, conducted using the observed effect size (Cohen's d = 0.88), yielded a power of 0.87 (87%), indicating a high probability of detecting the intervention's impact with an alpha level of .005 and group sizes of 23 and 25.

Regarding the second research question, the findings suggest that the teacher training model significantly enhances the self-efficacy of pre-service English language teachers. However, as with the first research question, the modest sample size warrants cautious interpretation.

Pre- and post-test results from the TSES were also analyzed across its three key dimensions: Instructional Strategies, Classroom Management, and Student Engagement. Descriptive statistics were calculated to compare pre-test scores across all dimensions.

**Table 9. Pre- and post-test score comparisons on each TSES dimension across groups**

| Pre/Post Tests | Group | N | M | SD | p |
|---|---|---|---|---|---|
| **Pre**-IS | Experimental | 23 | 6.42 | .78 | .394 |
| | Control | 25 | 6.28 | .83 | |
| **Pre**-CM | Experimental | 23 | 6.12 | .81 | .574 |
| | Control | 25 | 6.04 | .85 | |
| **Pre**-SE | Experimental | 23 | 6.08 | .86 | .612 |
| | Control | 25 | 5.96 | .88 | |
| **Post**-IS | Experimental | 23 | 7.55 | .66 | **.009** |
| | Control | 25 | 6.79 | .74 | |
| **Post**-CM | Experimental | 23 | 7.02 | .71 | **.021** |
| | Control | 25 | 6.43 | .79 | |
| **Post**-SE | Experimental | 23 | 7.14 | .69 | **.013** |
| | Control | 25 | 6.50 | .82 | |

Independent Samples T-Test

As seen in Table 9, the pre-test results reveal no statistically significant differences between the experimental and control groups across all TSES subscales ($p > .05$). This confirms baseline equivalence, ensuring that any post-test differences can be attributed to the teacher training intervention rather than pre-existing disparities.

However, the post-test results indicate a statistically significant improvement in all three dimensions of the TSES for the experimental group compared to the control group: The most significant improvements were observed in 'Instructional Strategies' ($p = .009$), suggesting the intervention effectively empowered participants to design and implement engaging and effective teaching techniques. Notably, improvements were also observed in 'Classroom Management' ($p = .021$), indicating that participants gained valuable skills in maintaining a conducive learning environment and fostering a positive classroom climate. Finally, a significant improvement was observed in 'Student Engagement' ($p = .013$), highlighting the intervention's success in equipping participants with strategies to motivate and engage their students.

Overall, these findings suggest that integrating SRL strategies into teacher training significantly enhances pre-service teachers' confidence in instructional delivery, classroom management, and engaging students. By reinforcing reflective practices and goal-setting, the

intervention not only fosters SRL in teachers but also enhances their ability to model and cultivate SRL among students.

## DISCUSSION

The findings of this study underscore the transformative potential of scenario-based SRL teacher training interventions in enhancing pre-service English language teachers' SRL and self-efficacy for teaching. The statistically significant improvements observed across multiple dimensions of SRL, particularly in time management, meta-cognitive activities, and persistence, reflect the efficacy of the structured, multi-faceted approach employed in the intervention. These findings align with prior research by Kramarski and Michalsky (2015) and Butler et al. (2004), who also reported that structured, reflective SRL interventions improved pre-service teachers' regulatory strategies and instructional practices. Similarly, Yaşar (2025) emphasized that explicitly supporting SRL phases led to stronger gains in planning and reflection, consistent with the present study. In contrast, Moos and Miller (2015) observed that SRL growth was limited in the absence of structured prompts, highlighting the value of the scenario-based tasks and scaffolding used here.

Notably, the substantial gains in instructional strategies, classroom management, and student engagement also align with previous findings. Studies such as Chatzistamatiou et al. (2014) and Bachtiar (2024) reported that teacher training that integrates SRL components boosts efficacy beliefs in instructional competence. In particular, Perry et al. (2008) demonstrated that self-efficacy improvements are often mediated by explicit SRL instruction and peer-supported reflection, which were integral elements of the present intervention. By contrast, studies lacking such structured peer interaction (e.g., Alvi & Gillies, 2024) reported more modest changes in teacher confidence, suggesting that the collaborative elements of in the design of the present study may have enhanced the impact.

A key strength of this study lies in its application of Zimmerman's (2008) SRL model, integrating forethought, performance, and reflection phases into teacher training. This structured yet adaptable framework not only facilitated significant within-group growth but also demonstrated large between-group effect sizes, reinforcing the intervention's practical significance. By extending the application of Zimmerman's model to the unique context of pre-service English language teachers, this study introduces a nuanced adaptation that highlights the importance of SRL in language education. While Zimmerman's model has been widely validated, few studies have applied it directly in ELT-focused pre-service training; thus, the findings of this study offer a subject-specific contribution that complements more general SRL research.

The alignment of improved SRL skills with enhanced self-efficacy for teaching underscores the reciprocal relationship between these constructs. This relationship has also been identified in previous research (e.g., Ganda & Boruchovitch, 2018; Kramarski & Kohen, 2017), which noted that as teachers become more self-regulated in their own learning, their confidence in supporting student learning increases. The results support this bidirectional link and show that integrated SRL training can yield benefits in both cognitive and affective teaching competencies.

Additionally, this study invites critical reflection on the potential for SRL models to evolve. While the findings are consistent with much of the existing literature, some prior studies (e.g., Vosniadou et al., 2021; Mejeh et al., 2024) have reported uneven gains across SRL subskills. For example, improvements in help-seeking and environmental structuring were less pronounced in the present study as well, suggesting these areas may require more targeted support in future training designs. These differences reinforce the importance of tailoring SRL interventions to the specific challenges pre-service teachers face.

Importantly, the findings offer valuable insights into global teacher training practices by demonstrating how SRL-based interventions can be adapted to diverse cultural and linguistic contexts. As educational systems strive to enhance teacher quality and student outcomes, the scalability and



adaptability of this intervention make it a viable model for integration into international teacher training standards and policy frameworks.

Despite these promising outcomes, the modest sample size necessitates cautious interpretation of the results. It should be acknowledged that the intervention was not compared with other professional development formats, and thus it cannot be claimed it is the most effective approach. Therefore, future research that directly compares SRL-based models with other established techniques is highly encouraged. Replicating this study across multiple institutions and within varied cultural and linguistic settings will provide greater generalizability and enhance the credibility of the findings.

Ultimately, this study contributes to the growing recognition of SRL as a foundational element of teacher training and professional development. By demonstrating the tangible benefits of SRL-based interventions, the findings advocate for the widespread adoption of such models in pre-service education, equipping future teachers with the skills and confidence necessary to drive student success and lifelong learning. Furthermore, this research highlights the potential for SRL-based interventions to inform policy decisions and reshape teacher training curricula, ensuring that SRL is embedded as a core component of teacher development globally.

## CONCLUSION

This study investigated the effects of a scenario-based SRL teacher training model on the SRL strategies and self-efficacy beliefs of pre-service English language teachers. Findings clearly demonstrate that the intervention significantly enhanced participants' use of SRL strategies and their confidence in core teaching competencies, including instructional planning, classroom management, and student engagement. While improvements in these areas may be anticipated, the study contributes novel insights by quantifying the impact through large effect sizes and applying an SRL intervention tailored to the specific challenges of English language teacher education. The structured use of scenario-based problem solving—aligned with Zimmerman's SRL model—offered a practical, replicable framework that promoted deep reflection, co-regulation, and sustained engagement. Beyond affirming known benefits of SRL, this research offers an applied model with high potential for integration into national and international teacher education curricula. It addresses a critical gap in how SRL training is operationalized during the early stages of teacher development. Future research should explore long-term impacts and compare this scenario-based approach with other forms of professional development to further evaluate its relative effectiveness.

## PEDAGOGICAL IMPLICATIONS

This study's findings reveal practical pathways for enhancing teacher education by embedding self-SRL strategies directly into pre-service training programs. Teacher educators can leverage scenario-based exercises, peer collaboration, and reflective practices to cultivate SRL skills, fostering more adaptive educators. The integration of SRL not only enhances instructional quality but also empowers teachers to model and transfer these strategies to their students, promoting lifelong learning habits. Policymakers and curriculum designers are encouraged to adopt SRL-focused frameworks, recognizing their capacity to drive sustainable improvements in teaching effectiveness and student achievement. By aligning teacher development with evidence-based SRL methodologies, educational institutions can address persistent gaps in classroom engagement, instructional adaptability, and teacher confidence. This pedagogical shift ensures future educators are better equipped to meet diverse learning needs and thrive in complex, evolving educational environments.

## LIMITATIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH

While this study offers preliminary evidence of the potential effectiveness of SRL-based teacher training interventions, several limitations should be taken into account when interpreting the findings. First, the relatively modest sample size and single-institution context limit the

generalizability of the results. Future studies should include larger and more diverse participant groups from multiple institutions and cultural settings to enhance external validity. Second, the short duration of the intervention restricts conclusions about the sustainability of observed improvements. Longitudinal research would provide more robust insights into whether gains in SRL and self-efficacy persist over time and translate into improved instructional practices. Additionally, some components of SRL—particularly environmental structuring and help-seeking—showed less pronounced development, suggesting a need for more targeted support or extended practice in these areas. Moreover, while the scenario-based model appeared beneficial, it was not directly compared to alternative teacher training formats. Therefore, future studies should explore comparative designs to determine the relative effectiveness of scenario-based SRL training versus other professional development approaches. Investigating the integration of technology-enhanced SRL tools may also help scale and diversify future implementations. These recommendations are offered with an understanding of the study's scope and constraints. Addressing these areas in future research can help refine SRL-based teacher training and inform the development of more adaptive, context-responsive models that support pre-service teachers' professional growth.

**Ethical Statement:** The author confirms that ethical approval was obtained from the Ethical Committee of Social and Human Sciences, as outlined in the ethical permission document dated 12/02/2025 (decision ID: 02/0019).

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## Appendix A

## Scenario-based Problem-solving Activities to Apply SRL Strategies (Random selection)

| Trainees | Context (eg. population, setting, age groups etc) | Problem | Goals | Activities | *Mostly used SRL Strategies |
|---|---|---|---|---|---|
| **Trainee 1** | A high school student, Ceren, struggles with test anxiety and her teacher tries to find a solution to solve this problem by using SRL strategies. | She has some worries that affect her performance on tests. It is because she uses wrong strategies while studying which leads her to fail in exams. | Her teacher's goal is to help her to gain self-awareness and create her own techniques using SRL strategies to be successful. | Her teacher talked with Ceren and her parents to get some ideas about her study habits and her behaviors at home. After that, her teacher gave her some advice to solve these problems. | -Self evaluation<br>-Goal setting and planning<br>-Keeping track of records<br>-Seeking for help and Time management |
| **Trainee 7** | The story is about five students at Sky haven academy. They were tasked with an exciting but challenging project. They needed to find suitable renewable sources to power their academy. At first, they did not exactly act like a team but then by using their holographic mentor EVA'S tools they achieved the find the most suitable one for their academy. | 1)They don't have a strict plan. So they act freely.<br>2)They were studying in a crowded and noisy place.<br>3)After researching their own topics, each member defended his/her own ideas.<br>4)They couldn't manage their time effectively and Zara hesitated to ask for help. | Their goal is to find the most sustainable energy source to power their academy. | As a team, they all helped each other's task like finding the most suitable source and testing progress. | -Goal Setting<br>-Environmental structuring<br>-Help seeking<br>-Time management<br>-Task Strategies |
| **Trainee 10** | Rumi (Mevlana)'s life | The Loss of Loved Ones | Goal is to become a self-regulated person, without needing an external support. | His whole life | Simply all of the theories we mentioned in our classes |
| **Trainee 12** | In the year 2500, humans live in a world where an infinite library exists. This library holds all possible knowledge, ideas, and records of human history. | People are unable to decide which information is relevant to their needs, leading to procrastination, distractions, and an inability to take meaningful action. | The goal is learning the real learning process with infinite resources. | They are all stuck. They escape by self regulate themselves. | -Self Reflection<br>-Time Management<br>-Goal Setting & -Task Strategies |
| **Trainee 17** | A group of young adults (ages 20-40) traveling through a desert setting, seeking survival and hope | Scarcity of resources, betrayal within the group, and a dangerous ambush by a gang | To survive the desert journey, find the Last Oasis, and resolve internal and external conflicts | Traveling through harsh conditions, dealing with betrayal, negotiating with enemies, seeking allies | Goal setting, self-awareness, self-talk, seeking help, emotional regulation |
| **Trainee 22** | **A dystopian arena with intellectual challenges** testing creativity, knowledge, and emotional resilience. Contestants are **17-18 years** old. Population: Four contestants: **Aster** (District 1, elite, privileged) **Ryn** (District 12, self-taught problem-solver) **Kael** (District 7, resourceful and collaborative) **Mira** (District 5, analytical but emotionally volatile) | **The Learning Games** challenge contestants to overcome high-pressure, complex tasks requiring creativity, resilience, and learning strategies.<br>Each contestant brings unique strengths but faces their own weaknesses: privilege, lack of resources, emotional control, and over-analysis. | **Primary Goal** is to win the Games and become the **Knowledge Keeper**. | The Library of Illusions (Processing Chaos)<br>The Bridge of Knowledge (Problem-Solving Under Pressure)<br>The Arena of Distractions (Focus Under Stress)<br>The Maze of Choices (Decision-Making and Adaptation) | Metacognitive Strategies,<br>Mnemonics and Visualization,<br>Trial and Error,<br>Emotional Regulation,<br>Collaborative Learning,<br>Goal Setting and Planning |

## Appendix B

## The Outline for Instructional Coaching and Mentoring

| Activity | Description | Objective |
|---|---|---|
| 1. Initial Goal-Setting Conferences | At the start of the intervention, the trainer conducts one-on-one meetings with participants. | Help participants articulate their professional goals and identify areas where they want to improve their understanding or application of SRL strategies. |
| 2. Ongoing Observation and Feedback | The trainer observes participants' presentations or teaching practice (real or simulated) and provides narrative feedback aligned with SRL strategies. | Offer specific, actionable advice to improve participants' implementation of SRL in teaching contexts. |
| 3. Self-Monitoring and Reflection Discussions | The trainer mentors participants in analysing their learning process during bi-weekly check-ins. | Encourage participants to recognize their strengths, challenges, and how they adapt their strategies. |
| 4. Role-Modelling SRL Strategies | The trainer models effective SRL strategies during workshops or meetings to demonstrate practical applications. | Show participants how SRL can be implemented in real-world teaching scenarios. |
| 5. Tailored Problem-Solving Guidance | The trainer works with participants individually to tackle specific challenges in designing or implementing SRL strategies. | Provide personalized support for unique instructional contexts or difficulties. |
| 6. Reflection after Collaborative Activities | After group activities or presentations, the trainer meets individually with participants to discuss their contributions, challenges, and takeaways. | Help participants internalize feedback and refine their SRL strategies. |

Adapted from Allshouse (2016) and Schunk and Mullen (2013)

## Appendix C

## The Outline for Scenario-based Problem Solving

| Activity | Scenario/Objective | Example |
|---|---|---|
| 1. Designing Lessons for Unmotivated Learners | S: Participants are tasked with creating a lesson plan for a group of students who exhibit low motivation to complete tasks. O: Apply SRL strategies such as goal-setting, self-monitoring, and reflective practices to enhance student engagement. | Participants develop a plan incorporating:<br>Goal Setting: Asking students to set daily learning goals and break them into smaller tasks.<br>Self-Monitoring: Including progress tracking charts for students to check off completed steps.<br>Reflection: Using guided reflection questions like, "What helped me stay on task today?" |
| 2. Managing Disruptive Classroom Behaviour | S: Participants are presented with a classroom scenario where a few students frequently interrupt during lessons, causing a lack of focus for others. O: Identify and implement SRL-based strategies to manage behaviour and create a conducive learning environment. | Participants create strategies such as:<br>Setting clear classroom behaviour goals collaboratively with students.<br>Using self-monitoring tools, like behaviour charts, to track adherence to rules.<br>Facilitating group reflections on how behaviour impacts learning and ways to improve. |
| 3. Addressing Language Barriers in ELT | S: A group of students in an EFL class struggles with comprehension due to language barriers. Participants are asked to create an intervention to support their learning. O: Develop SRL-aligned strategies that help students manage their learning process. | Participants design:<br>Bilingual vocabulary journals for self-monitoring progress in word acquisition.<br>Structured peer support sessions where students discuss their learning challenges and strategies. |
| 4. Differentiating Instruction for Mixed-Ability Groups | S: Participants must develop a lesson plan for a mixed-ability classroom where students have varying levels of English proficiency.<br>O: Encourage participants to use SRL to create flexible and adaptive teaching strategies. | The solution includes:<br>Grouping students by ability and setting group-specific goals.<br>Providing scaffolding tools like step-by-step guides for lower-proficiency students and open-ended tasks for advanced learners. |
| 5. Overcoming Assessment Anxiety | S: Participants are tasked with helping students who feel overwhelmed by formal assessments like exams or quizzes.<br>O: Design SRL-based strategies to reduce anxiety and improve performance. | Participants propose:<br>Pre-assessment goal-setting activities (e.g., setting a goal to review one topic per day leading up to the test).<br>Stress management strategies like mindfulness exercises or positive self-talk incorporated into the preparation process. |

Adapted from Seker (2016)

## Appendix D

## The Outline for Co-regulation Practices

| Description | Activity/Objective | Example |
|---|---|---|
| 1. Group Goal-Setting and Planning | A: Participants work in small groups to design a lesson plan or solve a teaching-related problem, such as creating differentiated activities for students with varied English proficiency. O: Encourage co-regulated goal-setting, planning, and task delegation. | The group sets shared goals (e.g., "Complete the lesson plan draft by Wednesday"). They use collaborative tools like checklists to allocate specific tasks (e.g., one person focuses on materials, another on assessments). Each group member identifies personal sub-goals and monitors their contributions to the shared objective. |
| 2. Real-Time Collaborative Problem Solving | A: Groups are given a classroom scenario (e.g., addressing low participation in a hybrid learning environment) and must develop a collaborative solution during a workshop. O: Use co-regulation to foster collective monitoring, strategizing, and reflecting. | Group members brainstorm solutions together, discussing their thought processes aloud to co-regulate their planning. As the discussion progresses, participants periodically evaluate their ideas' feasibility using prompts like: "Does this solution align with the students' needs?" |
| 3. Peer Feedback Sessions | A: Groups present their projects or teaching plans to their peers and receive structured feedback. O: Foster co-regulation by using peer evaluation to refine work collaboratively. | During feedback sessions, participants identify strengths and areas for improvement in others' work using a rubric focused on SRL elements like goal-setting, adaptability, and self-monitoring. |
| 4. Structured Peer Teaching Activities | A: Groups take turns teaching their peers about specific SRL concepts (e.g., goal-setting, self-monitoring) while others act as learners. O: Foster co-regulation through collaborative teaching and learning. | A group teaches "goal-setting" by creating a mini-lesson, including activities where peers set their own goals. The teaching group reflects on how effectively they worked together to design and deliver the session. |

Adapted from Saariaho et al. (2016)