Enhancing Pre-Service EFL Teachers' Teaching Performance Through Action Research

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Abstract—Action research supports and empowers pre-service teachers as they plan lessons, act in the practicum, observe, and reflect on their teaching experiences. This study presents a professional development program based on action research to provide pre-service teachers with effective teaching skills in the EFL classroom and improve their students' language performance. The researcher implemented the training program for twelve male EFL majors enrolled in their practicum using a mixed-methods approach. By incorporating both individual and group experiences, action research improved pre-service teachers' understanding of methodology, encouraged reflection on their beliefs, tacit knowledge, and teaching practice, and assisted in the development of their teaching and learning theories. The findings show that pre-service teachers' performance improved significantly during and after receiving training. Additionally, there was substantial improvement in the students' overall language performance as well as their performance in each language category (vocabulary, grammar, listening, reading, and writing). It is concluded that action research fostered the cognitive evolution of these pre-service teachers and encouraged their synthesis of teaching theory and practice. These benefits of action research mark the beginning of a journey toward becoming a professional educator who can enhance both teaching practice and student outcomes.

Index Terms—Action research, pre-service teacher education, practicum, reflection, participatory observation

I. INTRODUCTION

The term teacher development describes the process by which an educator grows professionally through practice and self-reflection (Ganser, 2000). It involves studying, learning how to learn, and using teachers' knowledge for the benefit of their students' development (Avalos, 2011). Professional development for pre-service teachers is a process rather than an event; it entails changing roles and involves learning new knowledge, behaviors, theories, and attitudes (Roberts, 1998). In the realm of education, imparting knowledge and facilitating learning is a multifaceted endeavor wherein the efficacy of instruction is contingent upon two pivotal forms of understanding: a comprehensive understanding of students and a self-awareness amongst educators regarding their own pedagogical capacities. This perspective is essential to reflective teacher education (Pennington, 1990; Richards & Lockhart, 1994). A pre-service teacher's practices and beliefs evolve throughout time as a result of complex interactions with classroom experiences.

The teaching practicum offers this kind of interaction for pre-service teachers. It gives them the opportunity to experience teaching in a genuine classroom situation. During initial teacher education, the practicum serves as the bedrock upon which professional development and learning are built (Gebhard, 2009). It also offers an investigation of more complex techniques and methods to think about teaching, with the aim of better preparing future teachers for classroom realities (Fang, 1996; Grudnoff, 2011). In a teaching practicum, pre-service teachers can develop their knowledge repertoire and skills of teaching, as well as question and reflect on their firmly held beliefs and views. This can facilitate their learning and cognitive development (Cheng et al., 2010).

Meanwhile, teacher educators have long embraced action research as a means of cultivating the professional disposition of teachers and the teaching profession (Mills, 2011). It is a kind of practitioner-directed inquiry into classroom practice, and it is generally regarded as a powerful tool for helping teachers enhance their own teaching and bolster the educational experiences of their students (Cochran-Smith & Lytle, 1993). Thus, it is employed in bridging the gap between research on teacher professional development and classroom practice. Action research is a simple, yet effective framework consisting of a see, think, and act process, according to Stringer (2007). Each step involves observing, reflecting, and acting. This action drives us to the next step. As such, action research can inspire prospective educators to investigate the workings of their educational environments, engage in critical reflection regarding student behaviors and interactions, and take risks throughout the teaching process (Mills, 2011).

There is a paucity of pre-service professional development programs targeted to improve the teaching effectiveness of Saudi pre-service English as a foreign language (EFL) teachers. Johnson (2008) adds that the reality of what takes place in the classrooms of public schools is often inconsistent with the outcomes of research on instructional practices and students' learning. To address this problem, this study aims to train a sample of pre-service EFL teachers in the light of the action research pedagogy to language teacher education to teach English to intermediate-school students in meaningful and communicative contexts.

II. LITERATURE REVIEW

Teacher professional development is the basis for quality teaching. Effective professional development opportunities provide teachers with a multitude of educational benefits. Therefore, teacher professional development should be seen as a crucial aspect of enhancing student learning and performance (Villegas-Reimers, 2003). Meanwhile, there is a need to provide pre-service teachers with high-quality training to prepare them for their teaching responsibilities. Teachers' educators, according to Aydin et al. (2005), should ensure that these pre-service teachers are qualified and professional. As a part of this procedure, pre-service teachers are given the opportunity to participate in a practicum that gives them the chance to gain teaching experience in an actual classroom environment. They are encouraged to undertake an action research project while they are enrolled in the teaching practicum because it gives them the opportunity to apply the theoretical information that they have gained to a real-life classroom situation (Ho, 2013).

The practice of action research is centered around the exploration of pedagogical challenges that manifest within the immediate context of a teacher's classroom milieu (Crookes, 1993). Significantly, this form of research is frequently conceptualized and directed by the teachers themselves (Auerbach, 1994). It involves digging into the beliefs and practices that underpin the process of teaching (Quigley & Kuhne, 1997). Burns (1998) adds that action research involves reflection on and evaluation of classroom experiences since it tries to effect change and development in practice. It is also participatory because it allows teams of colleagues and practitioners to investigate an issue collaboratively. Overall, action research is conducted by teachers in their own classrooms, and it is based on a methodical examination of their pedagogical practices (Johnson, 2008).

Over the course of the past two decades, teachers, educators, administrators, and policymakers have all begun to show a growing interest in action research (Mills, 2011). It has been welcomed by educators working at a range of levels because it makes the process of conducting research a task that is more manageable, and it produces results that are more informative and have quick and direct application. While there are different models of action research, they share the key components (Goodnough, 2011). The process typically begins with identifying an issue and figuring out what caused it. The practitioner then formulates and implements a solution to the issue. The implementation phase is monitored constantly, and data are collected and analyzed to assess the impact of the change. According to most perspectives, action research is cyclical, with recurrent cycles of planning, implementing, observing, analyzing, and reflecting (e.g., Mertler, 2020; Riel, 2007; Stringer, 2007). The change is modified with each cycle based on the data acquired from the prior implementation.

A. Action Research and Practicum

In initial teacher professional development, action research enables and supports pre-service teachers as they plan lessons, take action in the practicum, observe, and reflect on their teaching experiences (Ryan et al., 2017). Thus, the teaching practicum is a rich context for exploiting the potential of action research in pre-service teacher professional development. According to McMillan (2004), action research focuses on resolving a particular classroom or school problem, enhancing practice, or assisting with a decision at a single, specific place. Scholars have elucidated various rationales for the integration of action research into the training of pre-service teachers. Primarily, the adoption of action research serves as a vehicle for harmonizing theoretical constructs with practical experiences, thereby diminishing the chasm that separates the classroom environment from the broader external sphere. Action research is essential in connecting what pre-service teachers know about teaching in a school with what they study at university (Phillips & Carr, 2010). According to the reflective practitioner paradigm, action research seeks to integrate academic and procedural knowledge as two essential components of professionalism: Academic knowledge is defined as knowledge about practice, while procedural knowledge is defined as knowledge in practice. Action research incorporates these two knowledge types to create knowledge for practice, thus helping to overcome one of the core issues in teacher professional development.

Throughout the practicum experiences, action research also encourages pre-service teachers to voice their professional development needs and their ideas on the teaching process by enabling them to critically reflect on their experience of becoming a teacher. Action research affords them the opportunity to showcase their instructional practices and construct their own meaning in their own words (Phillips & Carr, 2010). Consequently, it makes the process of becoming a professional educator more mindful (Kosnik & Beck, 2000). In addition, action research facilitates collaboration between pre-service instructors and university faculty. It adds to both the quality of instructors' ability to manage the teaching process and the quality of students' language learning (Marlina et al., 2016). Action research provides teachers with the valuable opportunity to engage in an introspective analysis of their own schools. This encompasses a comprehensive examination, not only of their instructional methodologies, but also of their unique student population and assessment measures. Through this self-reflection, they acquire a deeper understanding of these variables, enabling them to bolster the overall quality and effectiveness of their pedagogical practices (Parsons & Brown, 2002). Mertler (2020) asserts that preservice teachers, supervising teachers, and university faculty can collaborate on action research to improve student learning.

B. Related Studies

This literature review provides an overview of several studies that investigate the role of action research in pre-service EFL teacher professional development. Crookes and Chandler (2001) implemented action research in a teaching methodology course, where participants conducted group-research teaching projects. The findings revealed that the

implementation of action research yielded enhanced communication between pre-service teachers and their students, as well as better scores for those pre-service teachers who engaged in keeping journals and conducted field research. Furthermore, Armutcu and Yaman (2010) investigated the reflective teaching experiences of L2 pre-service teachers during their practicum, considering gender and type of teaching as variables. The study found significant improvement in teacher reflection throughout the practicum, but no differences were observed based on gender or type of teaching. This highlights the importance of nurturing reflective practices throughout pre-service teaching programs.

Ulvik and Riese (2016) conducted a case study exploring the implementation of action research in a professional development program for pre-service teachers. While the process initially presented obstacles, most pre-service teachers had a satisfactory experience. In-depth reflection was identified as a crucial requirement for successful action research, facilitating the bridging of theory and practice. The study highlighted the importance of continuous efforts to familiarize pre-service teachers with research and its application in the classroom. Similarly, Ryan et al. (2017) utilized action research to examine the impact of involving of a supervising teacher and a faculty advisor in a teaching practicum. Through journaling and reflective processes, the participants gained deeper insights into their practicum experiences. It was concluded that embedding an action research process within teacher education practicums proves beneficial for the personal and professional development of pre-service teachers, supervising teachers, and faculty advisors.

Takrouni and Alkubaidi (2019) utilized action research to collect reflective data from a post-graduate MA TESOL student during a teaching practicum. It was found that action research facilitated the development of awareness of teaching as a profession and highlighted areas that needed improvement. Eğinli and Solhi (2021) further explored the effects of a practicum on pre-service EFL teachers' self-efficacy beliefs. The practicum experience positively influenced student teachers' engagement and improved their classroom management skills. It was also found that self-efficacy beliefs were enhanced in the areas of classroom management, instructional strategies, and student engagement.

The reviewed studies emphasized the benefits of action research in enhancing pre-service teachers' performance and knowledge, particularly in areas such as reflective practice, belief modification, practical and theoretical knowledge development, self-efficacy beliefs, and lesson planning. The current study makes a contribution by focusing on enhancing pre-service EFL teachers' teaching performance through action research. It seeks to bridge the gap by investigating how action research can effectively support these pre-service EFL teachers in improving their classroom management, instructional strategies, student engagement, and overall teaching efficacy.

III. METHODOLOGY

The methodology section provides an examination of various elements, namely the research questions, participants, study design, instruments used, and data collection procedure. The research questions center around the effectiveness of a professional development program based on action research on pre-service teachers' teaching performance, as well as its impact on improving their students' language performance. The participants of the study consist of twelve EFL majors and students from first-year intermediate-school classes. The study follows a mixed-methods approach, incorporating quantitative and qualitative data collection. Two main instruments are employed: an observation checklist and a language performance pre-posttest. The data collection procedure involves cyclical action research phases of planning, acting, developing, and reflecting, utilizing training sessions and various activities to support pre-service teachers' professional development.

A. Research Questions

1. How far would a professional development program based on action research be effective in developing pre-service teachers' teaching performance?
2. How far would training pre-service teachers in the light of action research be effective in improving their students' language performance?

B. Participants of the Study

(a). The Pre-Service Teachers' Group

Twelve male EFL majors in the second semester in the year 1440-1441 participated in the study. They were enrolled in College of Languages and Translation, Imam Mohammad Ibn Saud Islamic University (IMSIU). During the implementation of the practicum in the Intermediate School of Prince Sultan Complex in Riyadh, KSA, supervising teachers acted as the pre-service teachers' classroom mentors and school-based supervisors. The supervising teachers gradually shift responsibility for instruction and assessment of student learning from a more sheltered teaching environment to the full responsibility of pre-service teachers. Throughout the practicum, the tutor (faculty advisor) observed, documented, and evaluated the pre-service teachers' classroom performance, providing suggestions for improvement.

(b). The Students' Group

The study's sample included four male first-year classes from the Intermediate School of Prince Sultan Complex in Riyadh. The participants' average age was 12-14 years, with a standard deviation of 0.73 years. Because the study

participants were chosen at random, it was presumed that they formed a homogeneous group. As a result, they were anticipated to have a lot in common and have similar levels of experience for their age.

C. Design of the Study

This study followed a mixed-methods approach. Action research studies are most comparable to mixed-methods designs, according to Creswell (2005), since they often use both quantitative and qualitative data. One aim of action research is to address local-level problems with the expectation of reaching immediate answers. In this study, the mix of quantitative and qualitative data enhanced the comprehension of the research problem.

A one-group pretest-posttest design was employed for the pre-service teachers' group. Qualitative data were collected through the pre-post training observation checklist that was employed to measure the participants' teaching performance. Before receiving the professional development program, the researcher used the pre-training observation checklist and documented the participants' teaching performance. After attending the training sessions and completing the practicum field teaching, the researcher employed the post-training observation checklist to the same group of participants and compared their post-training scores with their pre-training scores. This design allows for determining whether a change has occurred (Leedy & Ormrod, 2005). The researcher also gathered qualitative data via participant observation, during which the researcher observed and engaged as an equal in the group. In this stance, the practitioner-researcher was mostly an observer, although there was some engagement with the participants (Glesne, 2006). The participants were aware that they were being watched, therefore there might be nonverbal communication between the participants and the observer. Typically, in this role, the researcher would observe and take notes while sitting in the back of the classroom. The researcher did not instruct, advise, help, talk, respond to inquiries, or interact in any other manner while seated in the classroom observing the participants' teaching performance.

As for the students' group, the pre-posttest design with a non-equivalent control group was employed. Two classes taught by two trained pre-service teachers represented the experimental group students. The control group students were drawn from two other classes taught by pre-service teachers who were not enrolled in the training program. Before and after the treatment, the two groups were given a pre-post language test.

D. Instruments of the Study

Two instruments were used in the study: the observation checklist measuring a number of teaching skills and the language pre-posttest.

(a). The Observation Checklist

The researcher used the observation checklist to assess pre-service teachers' teaching skills before and after the implementation of the professional development program. It included twelve skills of EFL teaching (see Table 3).

1. Validity of the Observation Checklist

To determine the checklist validity, four EFL associate and full professors were given the initial version to evaluate each teaching skill based on its importance and relevance. After analyzing the responses, all reviewers approved each of the teaching skills; at least 75% of them reached a consensus on the importance of each teaching skill and the overall validity of the observation checklist. Furthermore, they indicated that the checklist was valid and the teaching skills included were clear and adequate.

2. Administration of the Observation Checklist Before and After the Treatment

The administration of the observation checklist took place during the commencement of the second semester of the academic year 1440-1441 H. The tutor and two other raters (faculty advisors) observed pre-service teachers' teaching skills according to the observation checklist. Therefore, the tutor and the two raters attended the lessons and observed each pre-service teacher's teaching skills. In the same way, pre-service teachers' performance was observed at the end of the treatment, adhering to the same criteria.

3. Observation Checklist Scoring

In order to ensure the consistency and reliability of the scoring process, the observation checklist was assessed by a panel of three independent raters who were blind to each other's ratings. This means that they were not able to view one another's raring until all assessments were completed (Rowntree & Lockwood, 1994). The observation checklist contained a rating scale with three options: always, sometimes, and never. The three raters were given an estimated value for each level of frequency. The first level (always) took three, the second level (sometimes) took two, and the third level (never) took one. The checklist was graded out of 36 since it included twelve teaching skills.

TABLE 1
RATER CORRELATION COEFFICIENTS FOR PRE-SERVICE TEACHERS' PRE- AND POST-TRAINING TEACHING PERFORMANCE

	I and II	I and III	II and III
Pre-training teaching performance	.79	.83	.84
Post-training teaching performance	.80	.81	.83
	Ties	0	

Observation scores of both the pre-training and post-training teaching performance were pooled to get the average score. Table 1 indicates statistically significant correlations among the three raters. Calculating the two average scores for each teaching performance revealed a significant correlation at the 0.01 level, with estimated correlation coefficients of (.082) and (.081) for the pre-training and post-training teaching performances, respectively.

(b). The Language Pre-Posttest

The language test was used as a pre-test to ensure that the students in both groups (experimental and control) were at a similar level of language performance prior to the beginning of the experiment. As a post-test, it was utilized to assess the effectiveness of the professional development program in enhancing the language performance of the experimental group versus the performance of the control group. The pre-posttest was adopted from the teacher's manual of the textbook *Full Blast 2* which is prescribed for Saudi students in their first year of intermediate school.

E. Data Collection Procedure

Action research is a recursive, cyclical activity that does not follow a linear progression (Johnson, 2008). Consequently, it is inferred that some of the action research processes are repeated several times or maybe in a different sequence. In adopting a methodology for the pre-service training program in this study, the researcher followed the four phases of cyclical and iterative action research: planning, acting, developing, and reflecting (Figure 1).

1. The planning phase includes the three steps listed below:
   - Defining and limiting the topic
   - Collecting information
   - Reviewing the relevant literature
2. The action phase includes the two steps listed below:
   - Executing the devised plan and gathering data
   - Examining the collected data
3. The phase of development includes the subsequent step:
   - Creating an action plan.
4. The stage of reflection encompasses the ensuing two steps:
   - Disseminating and communicating the results.
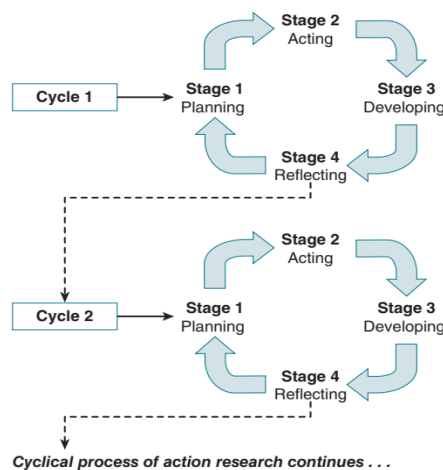   - Reflecting upon the process of the implemented action plan.

Figure 1. The Process of Action Research (Adapted From Mertler and Charles, 2011)

Four training sessions were designed with two objectives: to help pre-service teachers develop their own ideas about teaching and learning, as well as to help them comprehend and apply the underlying assumptions in teaching materials and curricular guidelines. In each training session, pre-service teachers examined their pedagogical practices. Training activities and tasks (i.e., demonstration, lecturing, journal writing, diary-keeping, and directed reading) were used to impart concepts, showcase language teaching/learning methodologies, and elicit responses from pre-service teachers. For example, the participants maintained a journal in which they recorded their responses to course activities, and diaries were also kept throughout individual action research data gathering to facilitate discussion.

The program training sessions emphasized the pedagogical skills of planning, identifying student needs, and skill development activities. It was arranged according to the following key areas (each covered in one training session):
   - Planning for effective teaching to intermediate-school EFL students.
   - Classroom management and teaching skills for intermediate-school EFL students.
   - Resources and materials for teaching intermediate-school EFL students.
   - Professional development for pre-service teachers of intermediate-school EFL students.

The training time plan went as follows:

Phase I. Weeks 1-2: First university-based phase
    1- First training session.
        - Orientation to course and preparation for initial school placement.
    2- Guided observation and inquiry in school.
Phase II. Week 3: Second university-based phase
    1- Second training session.
        - Method and complementary studies work.
    2- The implementation of the training program was jointly planned by the tutor and supervising teachers.
        - Exploring theoretical aspects of an issue in a training session at the university by observation of pre-service teachers in sheltered individual teaching.
    3- Sharing lecture notes and other details of university input with pre-service teachers and supervising teachers.
Weeks 4-5: Initial full-time placement in school
    1- Training activities and tasks focused on increasing responsibilities to teaching whole lessons and lesson sequences; shifting complementary studies in focus from fact-finding to investigation and development of cross-curricular issues.
    2- Discussing assessment (method and complementary studies) and preparing for the second phase of full, no-shelter practice in school.
Weeks 6-9: Main placement in school
    1- Teaching a 50 percent normal timetable day of 3 lessons (in pairs and alone), carrying out observation and reflection duties, and preparing for assignments related directly to pre-service teachers' own teaching.
    2- Observing one lesson by pre-service teachers and the tutor; tutor visiting a minimum of three times for each pre-service teacher.
Weeks 10: Third university-based phase
    1- Third training session.
    2- Tutorials and private study time (feedback on block practice, prepare complementary studies assignment, orientate to final school-based phase).
Weeks 11-14: Final school-based teaching phase
    1- Four weeks' block experience.
    2- Pre-service teachers developing a specific aspect of teaching, the subject negotiated with supervising teachers and the tutor.
Weeks 15: Final university-based phase
    1- Fourth training session.
    2- Completing assessment requirements and producing plans for future professional development.

IV. RESULTS OF THE STUDY

The results are presented in relation to the study questions in two distinct parts. The first part is devoted to the effectiveness of the professional development program in enhancing the instructional skills of pre-service teachers. On the other hand, the second part explores the influence of this training on their students' language proficiency.

A. Results of the Teachers' Group

TABLE 2
WILCOXON SIGNED RANKS FOR OVERALL PRE- AND POST-TRAINING SCORE OF PRE-SERVICE TEACHERS

Ranks						
		N	Mean Rank	Sum of Ranks	Z*	P
overall post-training teaching performance – overall pre-training teaching performance	Positive Ranks	12 a	8.32	171.00	2.06	0,00
	Negative Ranks	0 b	.00	.00		
	Ties	0 c				
	Total	12				

Table 2 demonstrates that pre-service teachers' overall post-training score is statistically higher than their overall pre-training score as the Z value is 2.06, which is statistically significant at 0.01. A number of Wilcoxon Matched-Pairs Signed-Ranks tests were used to examine the relative extent of progress fostered by the training program's implementation from pre-observation to post-observation for pre-service teachers in each teaching skill.

TABLE 3
WILCOXON SIGNED RANKS FOR PRE- AND POST-TRAINING SCORES OF PRE-SERVICE TEACHERS IN EACH TEACHING SKILL

Teaching skill	Positive ranks	Ties	No.	Z	Significance at 0.01 level
1- Pre-service teacher makes appropriate use of a range of materials and resources in relation to achieving the aims of each language lesson.	12	.00	12	2.17	.000
2- Pre-service teacher uses a range of resources and strategies to teach and support the learning of all students.	12	.00	12	2.17	.000
3- Pre-service teacher works successfully with learners at different levels, using appropriate types of language activities.	11	1	11	2.04	.000
4- Pre-service teacher helps students develop their language and communication skills	10	2	10	1.89	.000
5- Pre-service teacher adjusts his own use of language to the level of the class.	12	.00	12	2.17	.000
6- Pre-service teacher communicates clearly with students in ways that encourage learning and generate interest.	11	1	11	2.04	.000
7- Pre-service teacher chooses appropriate moments and strategies for correcting students' language.	11	1	11	2.04	.000
8- Pre-service teacher identifies areas, after lessons, where the class as a whole and each individual student have made progress and where additional support and/or supplementary work is necessary.	11	1	11	2.04	.000
9- Pre-service teacher sets up and manages whole class work, pair work, and group work as appropriate.	10	2	10	1.89	.000
10- Pre-service teacher has good rapport with learners at all times and fosters a constructive learning atmosphere.	12	.00	12	2.17	.000
11- Pre-service teacher evaluates his teaching performance by monitoring and reflection during and after lessons, and by taking notes of comments from tutor and colleagues.	10	2	10	1.89	.000
12- Pre-service teacher takes account of evaluation in planning future lessons.	11	1	11	2.04	.000
Total	253.0	.00	12	2.06	.000

Table 3 shows that all ranks are positive, indicating that pre-service teachers performed significantly better on the post-observation in each teaching skill than on the pre-observation. Furthermore, Z values indicate that there are statistically significant differences at the 0.01 level between the pre-observation and post-observation performance of pre-service teachers in each teaching skill in favor of the post-observation.

B. Results of the Students' Group

In order to evaluate any significant differences between the experimental and control groups, a t-test for independent samples was employed to compare their performance on the pre-test.

TABLE 4
PRE-TEST RESULTS OF THE EXPERIMENTAL AND CONTROL GROUPS' OVERALL LANGUAGE PERFORMANCE

Group	N	M	SD	DF	t-value	Significance at 0.01 level
Experimental	46	21.80	8.88	85	1.458	Not significant
Control	41	19.39	6.12			

The estimated t-value 1.458 of the two groups' language performance on the pre-test was not statistically significant. Consequently, further independent samples t-tests were conducted to examine the differences between the experimental and control groups specifically in terms of their proficiency in the language categories of vocabulary, grammar, listening, reading, and writing.

TABLE 5
T-TEST RESULTS OF THE EXPERIMENTAL AND CONTROL GROUPS ON THE PRE-TEST IN EACH LANGUAGE CATEGORY

	Experimental group pre-test		Control group pre-test		DF	t-value	Significance at 0.01 level
	M	SD	M	SD			
Vocabulary	5.760	4.206	4.561	2.820	85	1.543	Not significant
Grammar	5.391	2.245	4.975	1.903	85	.925	Not significant
Listening	2.355	.9331	2.243	.9428	85	.551	Not significant
Reading	3.021	1.341	2.634	1.462	85	1.289	Not significant
Writing	5.369	2.416	4.926	1.915	85	.939	Not significant

According to Table 5, the mean scores obtained on the pre-test for both the experimental and control groups did not show any statistically significant differences across the language categories of vocabulary, grammar, listening, reading, and writing. This suggests that both groups were initially at a similar level of language performance before the start of the study.

TABLE 6
POST-TEST RESULTS OF THE EXPERIMENTAL AND CONTROL GROUPS IN OVERALL LANGUAGE PERFORMANCE

Group	N	M	SD	DF	t-value	Significance at 0.01 level
Experimental	46	38.21	6.003	85	11.45	Significant
Control	41	22.87	6.489			

Statistical evidence emerged from the estimated t-value of 11.45, indicating a significant difference between the experimental and control groups in terms of overall language proficiency on the post-test. These results establish a statistically significant result in favor of the experimental group students.

TABLE 7
T-TEST RESULTS OF THE EXPERIMENTAL AND CONTROL GROUPS' POST-TEST IN EACH LANGUAGE CATEGORY

Language category	Experimental group post-test		Control group post-test		t-value	Significance at 0.01 level
	M	SD	M	SD		
Vocabulary	12.978	3.179	6.536	3.443	9.071	Significant
Grammar	7.173	1.595	5.048	1.515	6.348	Significant
Listening	4.891	1.337	3.097	1.319	6.285	Significant
Reading	5.021	1.406	3.243	1.670	5.389	Significant
Writing	8.217	1.724	5.073	2.102	7.658	Significant

Statistical differences were observed at a significance at the 0.01 in the mean scores between the experimental and control groups. This indicates that the experimental group consistently outperformed the control group across all language categories. This conclusion is supported by the statistically significant estimated t-values of 9.071 for vocabulary, 6.348 for grammar, 6.285 for listening, 5.389 for reading, and 7.658 for writing.

TABLE 8
T-TEST RESULTS OF EXPERIMENTAL GROUP'S PRE-TEST VS. POST-TEST MEANS IN OVERALL LANGUAGE PERFORMANCE

Test	N	M	SD	DF	t-value	Significance at 0.01 level
Pre-test	46	21.80	8.883	45	12.73	Significant
Post-test		38.21	6.003			

According to the findings shown in Table 8, there was a statistical difference at a significance level of 0.01 in overall language performance between the mean scores of the experimental group students on the language pre-posttest. This distinction favored the post-test score, as evidenced by the estimated t-value of 12.73.

TABLE 9
T-TEST RESULTS OF THE EXPERIMENTAL GROUP'S PRE-TEST VS. POST-TEST MEANS IN EACH LANGUAGE CATEGORY

Language category	Experimental group pre-test		Experimental group post-test		DF	t-value	Significance at 0.01 level
	M	SD	M	SD			
Vocabulary	5.760	4.206	12.978	3.179	45	9.839	Significant
Grammar	5.391	2.245	7.173	1.595	45	5.573	Significant
Listening	2.355	.9331	4.891	1.337	45	11.032	Significant
Reading	3.021	1.341	5.021	1.406	45	7.636	Significant
Writing	5.369	2.416	8.217	1.724	45	7.689	Significant

Table 9 showed statistical differences at a significance level of 0.01 between the mean scores of the experimental group students' performance on the language pre-posttest. These differences were in favor of the post-test in each language category. The estimated t-values for vocabulary, grammar, listening, reading, and writing were 9.839, 5.573, 11.032, 7.636, and 7.689, respectively.

In light of the research findings, it can be stated that the action research-based professional development program has proven its efficacy in enhancing the teaching effectiveness of pre-service teachers, addressing the two research questions that were formulated. Furthermore, the implementation of action research-based training for pre-service teachers has been found to yield significant benefits in terms of improving their students' language performance. These results highlight the positive impact that such training can have on both the professional growth of pre-service teachers and the academic performance of their students.

V. DISCUSSION OF THE RESULTS

The study procedure followed Metler's (2020) action research stages. These processes included identifying a problem, gathering evidence, reflecting on the findings, drawing conclusions based on the information, and applying this knowledge to teaching. There are also key, effective features related to the structure of the training program. First of all, more than three-quarters of the practicum time was spent in school by pre-service teachers to have access to supervising teachers' craft knowledge. Meanwhile, the participants' awareness of local school conditions was developed by the contrast between the two placements (i.e., university and school). In addition, intervals between university and school-based experiences for pre-service teachers were kept short, for example, with split weeks in university and school. These split weeks enabled short time intervals between personal experience in school and the wider frame of reference of university-based discussion and reflection. The experiences of pre-service teachers at the two locations were closely interwoven. University and school staff roles were complementary, with collaboration on course planning and implementation processes.

However, pre-service teachers were unable to spend a significant amount of time in the classroom during the first two weeks of the study. As a result, they had to anticipate a possible classroom issue. They entered the classrooms and began gathering evidence. After the incident, they had some time to analyze the data and develop conclusions. They then returned to the classroom to put the solutions they had uncovered in their teaching into action. As a result, the participants concluded that the problem identification stage needed to be improved. Because they could not be in the classroom at the start of the semester, the problem identification stage required them to anticipate a probable classroom problem that needed to be fixed without first entering the classroom. In several cases, the anticipated problem did not exist. Nevertheless, the reflections and comments of pre-service teachers enabled them to identify significant areas that needed improvement.

The training program guaranteed that pre-service teachers received genuine classroom experience and that they were able to identify and incorporate solutions to their own teaching issues. In accordance with Creswell's (2005) insights, they had the opportunity to study the dynamics of the classroom, reflect on the actions and interactions of students, and validate as well as criticize current practices. Thus, they were given the opportunity to build an action plan while engaging in the process of reflection (Mills, 2011).

Most importantly, the use of a wide variety of action research-based activities helped pre-service teachers develop their skills as educators. Short readings helped them gain access to new material in the curriculum, while reflective writing and diaries encouraged personal growth, interpretation, and application to specific teaching contexts. The integration of activities and practices during both phases of the program (i.e., session training activities and real classroom teaching practices) provided support and real classroom practice for pre-service teachers. During the first phase of the program, support was offered in the form of lecturing and readings. Phase two support included ongoing opportunities for structured observation, dialogue, and classroom visits. This assistance made it possible for pre-service teachers to discuss their challenges and triumphs in tangible and personalized terms.

Specifically, training activities such as role-playing and observation helped pre-service teachers modify their behavior. Meanwhile, they displayed an increase in their confidence when speaking out. Ultimately, they developed a more systematic and reflective attitude toward the profession. The findings are corroborated by Hobson et al. (2015) who explain that through action research, pre-service teachers can connect meaningful connections between pedagogical underpinnings and their own teaching methodologies. By engaging in this iterative process, these teachers are able to effectively utilize acquired knowledge to critically analyze and improve their instructional practices. Furthermore, through the application of personal insights gained through action research, pre-service teachers are empowered to make informed decisions that align with professional standards and guidelines.

The dialogue component was offered via class discussions of assigned texts and by pre- and post-lesson reflections on classroom activities. The participants valued peer dialogue for a variety of reasons. First, they spoke the same practical language, informed by classroom reality. The exposure to the perspectives and interpretations of colleagues, which were offered in a collaborative and supportive environment, aided in the formation and crystallization of the participants' thoughts. These findings coincide with Morales et al. (2019) that it is crucial for pre-service teachers to gather data from their practices and reflect on them individually and as a teaching community.

A significant finding was that action research was employed as a means of reflection for enhancing individual classroom practice. The participants had varied opportunities for reflection and taking stock of their training activities and classroom teaching practices. In the program's training sessions, taking stock of present practice was emphasized by helping pre-service teachers discuss experiences and views and voice their feedback via reflective writing and discussion. They were able to focus on modifying their thoughts and enhancing their teaching practices. The same idea is confirmed Mann and Walsh (2017) that pre-service teachers should build reflection skills using evidence from their classrooms.

After that, classroom observation was used to evaluate pre-service teachers' teaching practices. The researcher followed participant observation in which he not only observed but actively participated in group activities. This allowed the researcher to learn first-hand experience how the pre-service teachers' practices corresponded with the training they received. The researcher as an observer assumed a much more active role within the framework of the specific context. In addition to continuing to observe and record observations, the researcher had the opportunity to communicate with the participants. Glesne (2006) discusses a paradoxical situation that may occur in this role. The more the researcher's participation in the setting he/she is actively exploring, the greater the danger of losing the objective eye. However, the greater the participation, the bigger the researchers' ability to get first-hand information of the setting.

As for pre-service teachers, they had access to the craft knowledge of their supervising teachers by observing and interacting with them. Their time at school enabled them to learn about the school's specific conditions and their impact on practice. Based on classroom observation of teaching practices, they gradually transferred their understanding of the reasoning of supervising teachers to their own less-sheltered teaching practices. They reflected on and described their own decisions in situations that involved planning and adjusting instruction in class, and evaluated their teaching behavior after class. Morales et al. (2019) add that observation enables pre-service teachers to identify and resolve teaching difficulties via reflection.

Positive results also included increased instructional knowledge, an increasingly more active role for students in the learning process, as well as a greater variety in pre-service teachers' classroom practice (such as using a broader range of teaching strategies and less reliance on prescribed textbooks). These results receive support from Ewart and Straw (2005) that pre-service teachers have the chance to undertake the duties of practicing teachers when they are placed in an extended field experience of practicum.

Another significant component of this action research project was its advancement of the concept of teacher empowerment. Pre-service teachers became empowered when they gathered their own data to help them make decisions about their own learners and classrooms. In the training sessions, pre-service teachers were prompted and encouraged to take risks and modify their teaching practices whenever they deemed it necessary. These findings are in line with Johnson's (2008) idea that teachers' increased sense of agency makes them empowered through tailoring instructional practices to the specific requirements of their learners.

Finally, the integration of this concerted array of action-research activities and practices assisted in identifying practical classroom challenges and valuing pre-service teachers' contributions. These findings are reinforced by Morales (2016), who argues that teachers as agents of change should engage in action research since it is proof of professional growth. The advantages of action research included both process (in the form of fostering social connections and relationships) and outcome (in the form of identifiable changes). As one participant noted, "Everyone here is completely at ease with one another. It was enriching to work so closely together, and the experience taught us to be more deliberate in our instruction".

VI. CONCLUSIONS AND IMPLICATIONS

Pre-service teacher action research is a distinctive genre within the broader action research pedagogy. According to Phillips and Carr (2010), action research entails engaging with a community to develop critical thinking skills and the ability to address instructional challenges, while also fostering a deep commitment to personal growth. This process is driven by the aspiration to become a compassionate, knowledgeable, and transformative teacher, requiring the mastery of proficiency in the planning and reflection processes. Consequently, the result of undertaking action research as a pre-service teacher is the initiation of a lifelong journey towards embodying the dual roles of a teacher and researcher, with the aim of enhancing both teaching expertise and student learning (Kizilaslan & Leutwyler, 2012).

It is also concluded that practicum provides several crucial merits in pre-service teachers' professional development. Meanwhile, action research is an active, reflective, and participatory process that optimally provides rich and diversified training opportunities to pre-service teachers in the teaching practicum. By employing both individual and group experience, action research can strengthen pre-service teachers understanding of methodology, encourage their reflection on their beliefs, tacit knowledge, and teaching practice, and assist them in developing their theories of teaching and learning (Roberts, 1998).

A significant conclusion is that action research has been shown to serve as a means of improving teachers' problem-solving and reflection skills, in addition to boosting confidence and growth as a teacher (Parsons & Brown, 2002). Additionally, action research upholds the expertise of teaching by empowering teachers to take ownership of their own development, instead of being subjected to rigid guidelines imposed by external authorities (Schmuck, 1997). Action research enables teachers to personalize and tailor their professional development, leading to more versatile and impactful growth.

Finally, learning how to teach should be an ongoing process of testing hypotheses, which should be framed by an in-depth examination of the issues that are crucial to teaching. Future research should examine the incorporation of action research in different settings of language learning classrooms in order to better prepare pre-service teachers on how to manage classroom problems and improve their classroom teaching and professional performance. Following

prospective teachers into service, research should be conducted to see whether action research is employed to inform their decision-making and problem-solving processes.

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