

The Impact of Flipped Instruction on Enhancing EFL In-Service Teachers' Professional Competences

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ABSTRACT

The present study aimed to investigate the effective of a flipped learning program in developing EFL in-service teachers' linguistic competences, professional competences, and critical reflection. A quasi-experimental one-group pre-posttest design was employed. The participants comprised 29 EFL in-service teachers selected purposively from schools in the Eastern Province of Saudi Arabia. The participants received instruction through a researcher-developed flipped learning program designed to integrate independent pre-class learning with interactive, collaborative, and reflective activities during the instructional sessions. A Linguistic Competences Test and Questionnaire, a Professional Competences Test and Questionnaire, and a Critical Reflection Test and Questionnaire. The instruments were constructed in light of the relevant literature, competency frameworks, and the results of researcher-developed questionnaires and were subsequently submitted to a panel of TEFL experts to establish their content validity. The instruments were administered before and after the implementation of the program to determine changes in the participants' linguistic competences, professional competences, and critical reflection. The findings revealed statistically significant differences between the participants' pre- and post-administration scores on the study instruments, with the post-administration results consistently exceeding the pre-administration results. Overall, the findings provide empirical evidence that the flipped learning program was effective in developing EFL in-service teachers' linguistic competences, professional competences, and critical reflection. The results further suggest that integrating independent pre-class preparation with interactive, collaborative, application-oriented, and reflective in-class learning can provide a potentially effective framework for continuing professional development of EFL in-service teachers.....

Keywords: Flipped Learning, EFL In-Service Teachers, Linguistic Competences, Professional Competences, Critical Reflection

INTRODUCTION

The rapid development of educational technologies and the growing demands of the twenty-first century have transformed the knowledge, skills, and competences expected of teachers. In English as a Foreign Language (EFL) education, in-service teachers are no longer expected merely to transmit language knowledge; rather, they are required to facilitate meaningful learning experiences, integrate technology effectively, foster learner-centered instruction, and continuously evaluate and improve their teaching practices. Consequently, EFL in-service teachers are expected to possess not only strong linguistic competence but also advanced professional competence and the ability to critically reflect on their teaching practices. These competences enable teachers to deliver effective instruction, integrate educational technologies, respond to diverse learners' needs, and continuously improve their professional performance.

Lozano et al. (2020) conceptualized linguistic competence as the capacity to comprehend and use a language while observing the linguistic rules and conventions that govern communication. From this perspective, language constitutes a fundamental means through which individuals exchange information and construct meaning. Human beings may communicate through

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various forms and systems of signs; however, linguistic communication is particularly significant because it enables individuals to convey ideas, intentions, and information through an organized system of language. Words constitute the basic linguistic signs through which meaning is constructed and communicated.

Entong (2023) viewed linguistic competence as knowledge of the grammatical system that enables individuals to understand and use a language. From this perspective, linguistic competence is closely connected with communicative competence because effective communication requires sufficient control of the linguistic resources necessary to express ideas clearly and intelligibly. A strong command of the language therefore enables individuals to communicate their intended meanings more accurately and effectively across different communicative contexts.

Channa et al. (2025) conceptualized professional competence as an essential foundation for improving the quality of educational and instructional practices. From this perspective, the quality of teaching constitutes a central concern of professional competence, which enables teachers to initiate, manage, and continuously improve educational processes. Professional competence also involves the capacity to provide instruction grounded in relevant research and disciplinary knowledge, as well as the ability to engage actively with issues concerning the improvement of teaching and learning. Thus, teachers require professional competence in addition to subject knowledge and instructional skills.

Teacher competencies enable EFL in-service teachers to organize and improve instructional practices, classroom management, assessment, and overall teaching performance. According to Daryanto (2013), competence refers to a set of abilities that teachers should possess to meet societal expectations, curriculum requirements, and advances in science and technology. Likewise, teachers are expected to possess appropriate academic qualifications, professional competencies, certification, physical and mental well-being, and the ability to contribute to the achievement of national educational goals.

Critical reflection is widely recognized as an essential component of professional practice and continuous professional development for EFL in-service teachers. Through reflective practice, teachers critically examine their instructional decisions, classroom interactions, and professional behaviors in relation to both their personal beliefs and the expectations of their professional community. As noted by Appleby and Pilkington (2014), professionalism provides individuals with a shared professional identity grounded in common values, responsibilities, and standards of practice. Within the context of English language teaching, this shared identity encourages EFL in-service teachers to engage in reflective inquiry that promotes continuous improvement in teaching effectiveness and learner outcomes.

In an attempt to support teacher reflection and provide systematic ways of examining reflective practice, several scholars have developed models and frameworks for classifying different forms or levels of reflection among teachers and student teachers. Examples include the frameworks proposed by Hatton and Smith (1995), Jay and Johnson (2002), Korthagen and Vasalos (2005), Larrivee (2008), and Zeichner and Liston (1987). Many of these frameworks incorporate critical reflection as a distinct category and generally position it among the more advanced forms of reflective practice. This positioning suggests that critical reflection involves a level of professional inquiry that goes beyond describing classroom events or evaluating the immediate effectiveness of instructional decisions.

The flipped learning approach is recognized as one of the most innovative instructional strategies for promoting active, participant-centered professional learning. By placing EFL in-service teachers at the center of the learning process, flipped learning encourages greater participation, engagement, autonomy, and responsibility for professional development. Yin (2020) argued that this approach enhances learners' performance through the principle of "learning by teaching," which strengthens participants' confidence, promotes deeper understanding, and increases their appreciation of the learning experience.

Moreover, flipped learning promotes higher-order thinking, collaborative learning, and problem-solving through authentic learning experiences. Consequently, participants improve their professional performance, practical knowledge, and ability to apply theoretical concepts within authentic educational contexts (Castedo et al., 2018, Rodríguez-Chueca et al., 2019 ; Sevillano-Monje et al., 2022).

1.1. Delimitations of the Study

A purposive sample of 29 EFL in-service teachers currently employed in the Eastern Province of Saudi Arabia. The participants were recruited from three schools in Dammam: Safwa, El Roud, and Sumou Schools. The dimensions and indicators of linguistic and professional competences approved by the jury members. The dimensions and indicators of critical reflection approved by the jury members. The second term of the 2024-2025 academic year, during which the study was conducted.

1.2. Context of the Problem

Reviewing previous studies related to the study dependent variables, namely linguistic competence, professional competence, and critical reflection, to identify the shortcomings in EFL in-service teachers' performance and to emphasize the need for effective professional development programs. Many EFL teachers require continuous support to enhance their linguistic proficiency, pedagogical practices, and reflective teaching skills.

The review revealed that although flipped learning has demonstrated positive effects on learners' achievement and engagement, relatively few studies have investigated its effectiveness in developing EFL in-service teachers' linguistic competence, professional competence, and critical reflection, particularly within the Egyptian context.

Conducting a pilot study to diagnose and confirm the research problem. The pilot study was administered to a sample of EFL in-service teachers using three instruments: A Linguistic Competence Test, a Professional Competence Questionnaire, and a Critical Reflection Scale. The findings revealed that the participating teachers demonstrated noticeable deficiencies in several aspects of linguistic competence and professional competence, while their level of critical reflection was below the level expected for effective professional practice. These findings confirmed the need for an innovative professional development program based on flipped learning to enhance EFL in-service teachers' linguistic competence, professional competence, and critical reflection.

1.3. Statement of the Problem

EFL in-service teachers demonstrated deficiencies in some aspects of their linguistic and professional competences and showed an insufficient level of critical reflection. These deficiencies may negatively affect their language performance, instructional practices, professional growth, and ability to reflect critically on their teaching experiences. Therefore, the current study sought to develop EFL in-service teachers' linguistic and professional competences and enhance their critical reflection through a flipped learning program.

1.4. Questions of the Study

What is the effectiveness of a flipped learning program in developing EFL in-service teachers' linguistic and professional competences and enhancing their critical reflection?

The following sub-questions were derived from the main question:

What are the linguistic competences required for EFL in-service teachers?

What are the professional competences required for EFL in-service teachers?

What are the dimensions of critical reflection required for EFL in-service teachers?

What are the features of a flipped learning program designed to develop EFL in-service teachers' linguistic and professional competences and enhance their critical reflection?

2. Literature Review

Linguistic competence encompasses more than the ability to communicate effectively; it also involves an understanding of the linguistic rules that govern language use. Such competence does not develop spontaneously but requires systematic learning, training, and sustained practice (Ana et al,2024). In this sense, possessing a language skill implies the capacity to apply acquired knowledge appropriately in actual situations. Hanifah and Putri (2018) similarly associated skill with the ability to translate acquired learning into effective action. From a broader sociocultural perspective, language functions as both a symbolic system and a carrier of cultural values. Consequently, the significance and function of language use are shaped by the communicative purposes and social contexts in which language is employed (Agustin,2011; Devianty; 2017).

The importance of developing learners' ability to engage with texts in languages beyond those formally studied for qualification purposes. Such an orientation contributes to greater awareness of learners' multilingual repertoires and supports the development of independent learning. In this respect, the Common European Framework of Reference for Languages (CEFR) provides a basis for promoting learners' awareness and autonomy, while the European Language Portfolio offers a means of documenting the diverse linguistic abilities and intercultural experiences acquired across languages (Strasser and Reissner, 2022).

English language teachers need a sufficiently developed linguistic repertoire to facilitate learners' acquisition of the language skills required for effective comprehension and production across the four major language skills: listening, speaking, reading, and writing (Matalines, 2023). The notion of linguistic competence has traditionally been associated with grammatical competence. Canale and Swain (1980), as cited in Bagaric and Djigunovic (2007), conceptualized linguistic competence in terms of mastery of the linguistic code, particularly knowledge of morphology, syntax, and semantics. Accordingly, teachers' linguistic competence encompasses not merely general proficiency in English but also a systematic understanding of the linguistic components underlying effective language use.

Safitri (2019) characterized professional competence in terms of the qualities, behavioral patterns, and distinctive attributes demonstrated by an individual in the performance of professional responsibilities. In relation to teachers, Hamalik (2016) identified several characteristics of professional competence. A professionally competent teacher should be capable of assuming and fulfilling professional responsibilities effectively, performing the various roles associated with teaching successfully, working purposefully toward the achievement of educational objectives, and carrying out instructional responsibilities effectively within the classroom.

The professional competence constitutes an essential foundation of effective teaching and that teachers are expected to develop a broad range of professional knowledge and skills to perform their roles effectively (Rudkevych et al., 2020). Drawing on Merriam's framework as presented by Suyanto and Djihad (2012), the professional competence of teachers encompasses several interrelated areas. These include understanding learners' motivation and learning needs; possessing adequate theoretical and practical knowledge; recognizing the expectations of educational stakeholders; employing a range of teaching methods and techniques; communicating effectively through listening and oral and written communication; relating instructional content to learners' real-life contexts; maintaining openness to learners' individual interests; pursuing continuous expansion of professional knowledge; and evaluating educational programmes and learning outcomes.

Contemporary conceptualizations of reflection in teacher professional development are strongly influenced by Dewey's work. Dewey's conception of reflective thought emphasizes the systematic, deliberate, and sustained examination of beliefs or assumed knowledge in light of the evidence supporting them and the conclusions to which they may lead (Dewey, 2015; Šarić and Šteh, 2020). Reflection therefore involves more than simply thinking about an experience; it requires teachers to examine experiences, ideas, and problems systematically while maintaining openness, intellectual engagement, curiosity, and professional responsibility (Dewey, 1933, as cited in Rodgers, 2002). Consistent with this perspective, Tripp and Rich (2012) conceptualized reflection as a self-critical and investigative process through which teachers examine the consequences of their pedagogical decisions within particular teaching contexts with the aim of improving professional practice.

Several empirical studies have demonstrated the effectiveness of flipped learning in enhancing the quality of learning experiences. Bossaer et al. (2016), Chiang (2017), and Connell et al. (2016) reported that the flipped learning approach increases participants' engagement and improves the overall learning experience. Likewise, Abeysekera and Dawson (2015) found that it strengthens learners' motivation while promoting greater responsibility for their own learning. Flipped learning enhances participants' performance and satisfaction with the learning process (Betihavas et al. 2016; Peterson 2016). Moreover, the approach promotes interaction between trainers and participants as well as collaboration among participants, while strengthening their problem-solving abilities (Davies et al., 2013; Della Ratta, 2015). Marlowe (2012) reported that flipped learning reduces learners' anxiety and encourages independent, self-directed learning.

3. Methodology

3.1. The Study Design

The current study adopted both descriptive-analytical and quasi-experimental research designs. The descriptive-analytical design was employed to identify the linguistic and professional competences required for EFL in-service teachers, as well as the dimensions of critical reflection, through reviewing the related literature and previous studies. It was also used to develop and validate the study instruments, including the Linguistic Competence Test and Questionnaire, the Professional Competence Test and Questionnaire, and the Critical Reflection Test and Questionnaire, to ensure their suitability.

The quasi-experimental design was employed to investigate the effectiveness of the flipped learning program in developing EFL in-service teachers' linguistic and professional competences and enhancing their critical reflection. The study adopted a one-group pretest–posttest design, in which a purposive sample of EFL in-service teachers participated in the study. The study instruments were administered to the participants before and after the implementation of the flipped learning program. The participants' pre- and post-test scores were then statistically analyzed to determine the effectiveness of the proposed program in achieving the objectives of the study.

3.2. Participants

The participants of the current study consisted of 29 EFL in-service teachers currently employed in the Eastern Province of the Kingdom of Saudi Arabia. They were purposively selected from three schools in Dammam: Safwa School, El Roud School, and Sumou School. The participants represented the experimental group and received instruction through the flipped learning program, which was designed to develop their linguistic and professional competences and enhance their critical reflection.

3.3. The Study Instruments

After reviewing the related literature and previous studies on linguistic competence, professional competence, critical reflection, and flipped learning, the researcher developed the following instruments in light of the objectives of the current study and its dependent variables:

- A. For Linguistic Competences Questionnaire & Linguistic Competence Test.
- B. For Professional Competences Questionnaire & Professional Competence Test
- C. For Critical Reflection Questionnaire & Critical Reflection Test.

Statistical analysis

Data was analyzed using SPSS 21 (Statistical Package for the Social Services) (SPSS). The findings were displayed using

tabular formats. Results were displayed using standard statistical measures such as means, medians, standard deviations, and confidence intervals. The student's *t* test (*T*) is utilized. *P* value of 0.05 or less was judged statistically significant.

4. Results

Based on the data statistical analysis, the hypotheses were validated as follows:

The First Hypothesis

It was hypothesized that “There would be a statistically significant difference between the mean scores of the participants in the pre- and post-administrations of the Linguistic Competences Test in favor of the post-administration.” Independent samples *t*-test was used to test whether there was any significant difference.

There was a statistically significant difference between the participants' mean scores on the pre- and post-administrations of the Linguistic Competence Test, with the post-test scores being significantly higher than the pre-test scores. The participants' mean score increased from 23.52 in the pre-test to 37.28 in the post-test. The paired-samples *t*-test yielded a *t*-value of -23.293 with 28 degrees of freedom, which was statistically significant at $P < 0.001$ (Table 1). This significant improvement suggests that the flipped learning program had a positive effect on developing the participants' linguistic competences. Therefore, the first hypothesis was supported.

The Second Hypothesis

The second hypothesis of the study stated “There would be a statistically significant difference between the mean scores of the participants in the pre- and post-administrations of the Linguistic Competences questionnaire in favor of the post-administration.” Paired samples *t*-test was used to examine this hypothesis.

There was a statistically significant difference between the participants' mean scores on the pre- and post-administrations of the Linguistic Competence questionnaire, with the post-test scores being significantly higher than the pre-test scores. The participants' mean score increased from 6.17 in the pre- questionnaire to 9.24 in the post questionnaire. The paired-samples *t*-test yielded a *t*-value of 16.003 with 28 degrees of freedom, which was a significant at $p < 0.001$. This significant improvement suggests that the flipped learning program had a positive effect on developing the participants' linguistic competences. Therefore, the second hypothesis was supported.

The Third Hypothesis

It was hypothesized that “the flipped learning program would have a positive effect on developing the linguistic competences of EFL in-service teachers.” To test this hypothesis, the effect size of the program on the participants' overall linguistic competences was calculated using Cohen's formula.

Table (3) identifies the referential framework for the effect size. It was hypothesized that the flipped learning program would have a positive effect on developing the linguistic competences of EFL in-service teachers. To test this hypothesis, the effect size of the program on the participants' overall linguistic competences was calculated using Cohen's *d*. The participants' mean score increased from 23.52 ($SD = 2.923$) in the pre-administration to 37.28 ($SD = 1.461$) in the post-administration. The paired-samples *t*-test revealed a statistically significant difference between the pre- and post-administration scores, $t(28) = 23.293$, $p < .001$, in favor of the post-administration. Moreover, Cohen's *d* was 4.33, indicating an extremely large effect of the flipped learning program on the participants' overall linguistic competences. The eta squared value ($\eta^2 = .951$) likewise indicated a very large effect. These findings provide strong evidence of the effectiveness of the flipped learning program in developing EFL in-service teachers' linguistic competences (Table 3,4).

The Fourth Hypothesis

It was hypothesized that “There would be a statistically significant difference between the mean scores of the participants in the pre- and post-administrations of the Professional Competences Test in favor of the post-administration.” Independent samples *t*-test was used to test whether there was any significant difference.

There was a statistically significant difference between the participants' mean scores on the pre- and post-administrations of the Professional Competence Test, in favor of the post-administration. As shown in the table, the participants' mean score increased from 26.24 on the pre-test to 37.59 on the post-test. The paired-samples *t*-test yielded a *t*-value of -31.318 , with $df = 28$ and $p < .001$, indicating that the difference between the pre- and post-test scores was statistically significant (Table 5). This significant improvement may be attributed to the implementation of the flipped learning program. Therefore, the fourth hypothesis was supported.

The Fifth Hypothesis

The fifth hypothesis of the study stated “There would be a statistically significant difference between the mean scores of the participants in the pre- and post-administrations of the Professional Competences questionnaire in favor of the post-administration.” Paired samples t-test was used to examine this hypothesis.

There was a statistically significant difference between the participants’ mean scores on the pre- and post-administrations of the professional Competences questionnaire, with the post questionnaire scores being significantly higher than the pre questionnaire scores. As shown in the table, the participants’ mean score increased from 12.62 in the pre- questionnaire to 18.48 in the post questionnaire. The paired-samples t-test yielded a t-value of 15.683 with 28 degrees of freedom, which was statistically significant at $p < .001$ (Table 6). This significant improvement suggests that the flipped learning program had a positive effect on developing the participants’ professional competences. Therefore, the fifth hypothesis was supported.

Table (1): Paired Samples t-test comparing the Mean Scores of the Study Group on the Pre and Posttest of Linguistic Competences

Administration	N	Mean	Std. Deviation	Mean Difference	t	df	p	Cohen's d
Pre-test	29	23.52	2.923	-13.759	-23.293	28	< .001	-4.325
Post-test	29	37.28	1.461					

Table (2): Paired Samples t-test Comparing the Mean Scores of the Study Group on the Pre and Post questionnaire of Linguistic Competences.

Administration	N	Mean	Std. Deviation	Mean Difference	t	df	p	Cohen's d
Pre-questionnaire	29	6.17	1.416	-3.069	-16.003	28	< .001	-2.972
Post- questionnaire	29	9.24	.830					

Table (3): The referential framework for the effect size

Effect Size	Interrelation
From 0.2 till less than 0.5	Small
From 0.5 till less than 0.8	Medium
From 0.8 Or more	Large

Table (4): Paired-Samples t-Test and Effect Size for the Participants’ Overall Linguistic Competence

Variable	Pre-test M	Pre-test SD	Post-test M	Post-test SD	t	df	p	Cohen's d	η^2
Overall Linguistic Competence	23.52	2.923	37.28	1.461	23.293	28	< .001	4.33	.951

Table (5): Paired Samples t-test Comparing the Mean Scores of the Study Group on the Pre and Posttest of Professional Competences

Variable	N	Mean	Std. Deviation	Mean Difference	t	df	p
Administration							
Professional Competence Pre-test	29	26.24	1.958	-11.345	-31.318	28	< .001
Professional Competence Post-test	29	37.59	1.476				

Table (6): Paired Samples t-test Comparing the Mean Scores of the Study Group on the Pre and Post questionnaire of Professional Competences

Administration	N	Mean	Std. Deviation	Mean Difference	t	df	p	Cohen's d
Pre-questionnaire	29	12.62	2.259	-5.862	15.683	28	< .001	2.013
Post- questionnaire	29	18.48	1.090					

The Sixth Hypothesis

It was hypothesized that “The flipped learning program would have a positive effect on developing the professional competences of EFL in-service teachers.” To test this hypothesis, the effect size of the program on the participants’ overall professional competences was calculated using Cohen’s formula.

Table (7) identifies the referential framework for the effect size. It was hypothesized that the flipped learning program would have a positive effect on developing the professional competences of EFL in-service teachers. To test this hypothesis, the effect size of the program on the participants’ overall professional competences was calculated using Cohen’s *d*. the participants’ mean score increased from 26.24 (*SD* =1.958) in the pre-administration to 37.59 (*SD*=1.476) in the post-administration. The paired-samples *t*-test revealed a significant difference between the pre- and post-administration scores, $t(28) = -31.318$, $P < 0.001$, in favor of the post-administration. Cohen’s *d* was 5.82, indicating an extremely large effect of the flipped learning program on the participants’ overall professional competences. The eta squared value ($\eta^2 = 0.972$) likewise indicated a very large effect (**Table 8**). These findings provide strong evidence of the effectiveness of the flipped learning program in developing EFL in-service teachers’ professional competences.

The Seventh Hypothesis

It was hypothesized that “There would be a statistically significant difference between the mean scores of the participants in the pre- and post-administrations of the Critical Reflection Test in favor of the post-administration.” Independent samples *t*-test was used to test whether there was any significant difference.

There was a statistically significant difference between the participants’ mean scores on the pre- and post-administrations of the critical reflection Test, in favor of the post-administration. As shown in the table, the participants’ mean score increased from 16.31 on the pre-test to 23.93 on the post-test. The paired-samples *t*-test yielded a *t*-value of -18.842, with *df* = 28 and $p < .001$, indicating that the difference between the pre- and post-test scores was statistically significant (**Table 9**). This significant improvement may be attributed to the implementation of the flipped learning program. Therefore, the seventh hypothesis was supported.

The Eighth Hypothesis

The eighth hypothesis of the study stated “There would be a statistically significant difference between the mean scores of the participants in the pre- and post-administrations of the critical reflection questionnaire in favor of the post-administration.” Paired samples *t*-test was used to examine this hypothesis.

There was a significant difference between the participants’ mean scores on the pre- and post-administrations of the critical reflection questionnaire, with the post questionnaire scores being significantly higher than the pre questionnaire scores. the

participants' mean score increased from 16.17 in the pre- questionnaire to 24.83 in the post questionnaire. The paired-samples *t*-test yielded a *t*-value of 17.245 with 28 degrees of freedom, which was statistically significant at $P < 0.001$ (**Table 10**). This significant improvement suggests that the flipped learning program had a positive effect on developing the participants' critical reflection. Therefore, the eighth hypothesis was supported.

The Ninth Hypothesis

It was hypothesized that "The flipped learning program would have a positive effect on developing the critical reflection of EFL in-service teachers." To test this hypothesis, the effect size of the program on the participants' overall critical reflection was calculated using Cohen's formula

It was hypothesized that the flipped learning program would have a positive effect on developing the critical reflection of EFL in-service teachers. To test this hypothesis, the effect size of the program on the participants' overall critical reflection was calculated using Cohen's *d*. The participants' mean score increased from 16.17 ($SD = 2.687$) in the pre-administration to 24.83 ($SD = .3841$) in the post-administration. The paired-samples *t*-test revealed a significant difference between the pre- and post-administration scores, $t(28) = -17.245$, $p < .001$, in favor of the post-administration. Moreover, Cohen's *d* was 2.703, indicating a very large effect of the flipped learning program on the participants' overall critical reflection (**Table 11,12**). The eta squared value ($\eta^2 = .914$) likewise indicated a very large effect. These findings provide strong evidence of the effectiveness of the flipped learning program in developing EFL in-service teachers' critical reflection.

Table (7): The referential framework for the effect size

Effect Size	Interrelation
From 0.2 till less than 0.5	Small
From 0.5 till less than 0.8	Medium
From 0.8 Or more	Large

Table (8): Paired-Samples t-Test and Effect Size for the Participants' Overall professional Competence

Variable	Pre-test M	Pre-test SD	Post-test M	Post-test SD	t	df	p	Cohen's d	η^2
Overall professional Competence	26.24	1.958	37.59	1.476	-31.318	28	< .001	1.951	0.972

Table (9): Paired Samples t-test comparing the Mean Scores of the Study Group on the Pre and Posttest of Critical Reflection

Variable Administration	N	Mean	Std. Deviation	Mean Difference	t	df	p
Critical reflection Pre-test	29	16.31	2.123	-7.621	-18.842	28	< .001
Critical reflection Post-test	29	23.93	.842				

Table (10); Paired Samples t-test Comparing the Mean Scores of the Study Group on the Pre and Post questionnaire of critical reflection

Administration	N	Mean	Std. Deviation	Mean Difference	t	df	p	Cohen's d
Pre-questionnaire	29	16.17	2.687	-8.655	17.245	28	< .001	2.703
Post- questionnaire	29	24.83	.384					

Table (11): The referential framework for the effect size

Effect Size	Interrelation
From 0.2 till less than 0.5	Small
From 0.5 till less than 0.8	Medium
From 0.8 Or more	Large

Table (12): Paired-Samples t-Test and Effect Size for the Participants' Overall critical reflection

Variable	Pre-test M	Pre-test SD	Post-test M	Post-test SD	t	df	p	Cohen's d	η^2
Overall Linguistic Competence	16.17	2.687	24.83	.384	-17.245	28	< .001		.914

The findings obtained from the pre- and post-administrations of the study instruments demonstrated the effectiveness of the flipped learning program in developing the targeted competencies of EFL in-service teachers. The results can be summarized as follows:

Linguistic Competence Test: The participants' mean scores on the post-administration of the Linguistic Competence Test were significantly higher than their scores on the pre-administration, indicating a significant improvement in their overall linguistic competences following participation in the flipped learning program.

Effect on Linguistic Competences: The flipped learning program demonstrated a very large positive effect on the development of the participants' overall linguistic competences, as evidenced by the substantial effect-size estimate obtained from the pre-post comparison.

Linguistic Competence Questionnaire: The participants showed a statistically significant improvement in their post-administration scores on the Linguistic Competence Questionnaire compared with their pre-administration scores, indicating increased perceptions of their linguistic competences after the implementation of the program.

Professional Competence Test: The results revealed a statistically significant increase in the participants' mean scores on the Professional Competence Test from the pre-administration to the post-administration. The higher post-test performance indicates considerable development in the participants' professional competences following the flipped learning intervention.

Effect on Professional Competences: The flipped learning program produced a very large positive effect on the participants' overall professional competences. The substantial effect-size value provides strong evidence of the program's effectiveness in enhancing the professional competencies of EFL in-service teachers.

Professional Competence Questionnaire: The post-administration scores of the Professional Competence Questionnaire were significantly higher than the corresponding pre-administration scores, suggesting improvement in the participants' perceived professional competences following the implementation of the flipped learning program.

Critical Reflection Competence Test: The participants achieved significantly higher mean scores in the post-administration

of the Critical Reflection Competence Test than in the pre-administration, demonstrating improvement in their ability to engage in critical reflection on their teaching practices and professional experiences.

Effect on Critical Reflection: The flipped learning program had a positive effect on developing the participants' critical reflection competence, as demonstrated by the improvement in their pre- and post-administration performance and the corresponding effect-size results.

Critical Reflection Competence Questionnaire: The participants' post-administration scores on the Critical Reflection Competence Questionnaire were higher than their pre-administration scores, indicating an improvement in their perceived critical reflection competence after participating in the flipped learning program.

Overall Effectiveness of the Program: Taken together, the findings of the three sets of instruments indicate that the flipped learning program was effective in developing EFL in-service teachers' linguistic competences, professional competences, and critical reflection competence. The statistically significant gains between the pre- and post-administrations, together with the obtained effect sizes, provide empirical support for the effectiveness of the program in achieving the objectives of the study.

CONCLUSION

The flipped learning program significantly improved EFL in-service teachers' linguistic, professional, and critical reflection competencies. Post-test and questionnaire scores were significantly higher than pre-test scores across all three areas. The program showed very large positive effects, particularly in linguistic and professional competencies. Overall, the findings provide strong empirical evidence of the program's effectiveness in achieving the study objectives

Recommendations

In light of the findings of the present study and the conclusions drawn from the statistical analysis, the following recommendations are proposed to support the development of EFL in-service teachers' linguistic competences, professional competences, and critical reflection through the integration of flipped learning.

A. Recommendations Concerning Linguistic Competences

EFL teacher education and professional development programs should place greater emphasis on the systematic development of teachers' linguistic competences, particularly the ability to apply linguistic knowledge accurately and appropriately in authentic instructional contexts.

Flipped learning should be incorporated into professional development programs for EFL in-service teachers to provide teachers with opportunities for independent pre-class preparation and active, practice-oriented learning during face-to-face sessions.

EFL teachers should be encouraged to engage regularly with advanced linguistic resources, academic publications, authentic English materials, and digital learning platforms to maintain and extend their linguistic knowledge.

Professional development activities should provide teachers with opportunities to apply linguistic knowledge rather than merely recall linguistic rules, particularly through communicative, problem-solving, and teaching-related tasks.

Teacher development programs should integrate activities that enable EFL teachers to analyze language forms, interpret meaning, and apply linguistic knowledge appropriately across different communicative contexts.

Teachers should be encouraged to use authentic English-language materials and technology-mediated resources as part of their continuous linguistic development.

Adequate opportunities should be provided for EFL in-service teachers to practice speaking, listening, reading, and writing in professionally relevant contexts, with particular attention to accuracy, fluency, appropriateness, and effective communication.

EFL teacher development programs should provide continuous formative feedback on teachers' linguistic performance so that strengths and areas requiring further development can be identified and addressed.

B. Recommendations Concerning Professional Competences

EFL professional development programs should give systematic attention to the development of teachers' lesson planning, curriculum implementation, teaching methodology, classroom management, assessment, and feedback competences.

Teachers should be encouraged to design lesson plans that establish clear connections among curriculum standards, learning outcomes, instructional activities, assessment procedures, and learners' needs.

Flipped learning should be employed as a professional development model through which teachers can experience and subsequently implement pre-class, in-class, and post-class learning activities in their own teaching contexts.

EFL teachers should be trained to employ learner-centered, communicative, inclusive, and differentiated instructional strategies that accommodate variation in learners' abilities, proficiency levels, interests, and learning needs.

Professional development programs should strengthen teachers' competence in designing valid and reliable assessment tasks and using assessment evidence to inform subsequent instructional decisions.

Teachers should be encouraged to provide learners with timely, constructive, individualized, and development-oriented feedback rather than relying exclusively on summative evaluation.

Teacher development activities should incorporate critical thinking, creativity, collaboration, communication, and other 21st-century skills into EFL classroom practices.

Schools and educational institutions should provide teachers with sustained opportunities to participate in workshops, seminars, conferences, professional learning communities, and collaborative professional activities.

EFL teachers should be encouraged to collaborate with colleagues by sharing teaching experiences, instructional materials, classroom practices, and solutions to professional challenges.

Professional development should be viewed as a continuous and sustained process rather than a series of isolated training events. Teachers should therefore be supported in identifying their professional learning needs and applying newly acquired knowledge and strategies in their classrooms.

C. Recommendations Concerning Critical Reflection

EFL teacher development programs should explicitly incorporate critical reflection as a fundamental component of teachers' professional learning, enabling teachers to examine, evaluate, and improve their instructional practices.

Teachers should maintain reflective journals, teaching portfolios, or other systematic records through which they can document classroom experiences, identify challenges, evaluate successful practices, and formulate plans for improvement.

EFL teachers should be encouraged to engage in structured professional dialogue with colleagues, including sharing classroom experiences, seeking feedback, and discussing theoretical and practical issues related to language teaching and learning.

Schools should promote peer observation and collaborative reflection, allowing teachers to observe effective classroom practices and receive constructive feedback on their own instructional performance.

Teachers should be encouraged to conduct small-scale classroom inquiry or action research in order to investigate classroom problems, examine the effectiveness of instructional practices, and develop evidence-informed solutions.

EFL teachers should systematically consider learners' backgrounds, interests, abilities, experiences, needs, and preferences when reflecting on instructional decisions and evaluating classroom outcomes.

Teachers should actively seek learners' perspectives and feedback regarding classroom activities and use such information as evidence for modifying and improving their teaching practices.

Professional development programs should provide opportunities for teachers to examine their teaching philosophies, professional identities, personal experiences, and the assumptions underlying their instructional decisions.

Teachers should critically examine inconsistencies, contradictions, and limitations in their classroom practices rather than relying exclusively on established routines or traditional teaching procedures.

Critical reflection should extend beyond classroom techniques to include consideration of social, cultural, gender-related, and socioeconomic factors that may influence learners' participation, experiences, and educational outcomes.

EFL teachers should be encouraged to use English language teaching as a context for promoting tolerance, respect, inclusivity, intercultural understanding, and democratic participation.

Teacher education institutions and schools should provide a supportive professional environment in which reflection, experimentation, constructive criticism, collaboration, and continuous improvement are encouraged.

D. Recommendations Concerning the Flipped Learning Program

The flipped learning model should be considered as a potentially effective approach for professional development of EFL in-service teachers, particularly when the program combines independent pre-class preparation with interactive and collaborative face-to-face activities.

Flipped professional development programs should provide teachers with carefully selected digital materials before face-to-face sessions, followed by opportunities for discussion, practice, problem-solving, collaboration, reflection, and application during instructional sessions.

The design of flipped learning activities should ensure that pre-class tasks are directly connected to the objectives and

activities of the subsequent face-to-face sessions, thereby creating continuity between independent and collaborative learning.

Educational institutions should provide EFL teachers with the technological resources, guidance, and institutional support required for effective participation in flipped professional development.

Further research should investigate the effectiveness of flipped learning in developing teachers' competences across different educational stages, teaching contexts, school types, and teacher-experience levels.

Future studies should examine whether the development of linguistic competences, professional competences, and critical reflection achieved through flipped learning is sustained over an extended period following completion of the program.

Further research may also compare flipped learning with other professional development approaches to determine its relative effectiveness in enhancing EFL in-service teachers' professional learning and classroom practice.

Overall, the recommendations emphasize that the development of EFL in-service teachers should be approached as a continuous, integrated, and reflective professional-learning process. The findings of the present study support the use of flipped learning as a promising framework through which teachers can develop linguistic knowledge, strengthen professional practice, and engage more systematically in critical reflection on their teaching....

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