

Teacher candidates' reflective thinking skills (RTSs) and pedagogical competence in EFL classrooms

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ABSTRACT

This study aimed to investigate the association between English as a foreign language (EFL) teacher candidates' reflective thinking skills (RTSs) and pedagogical competence. Employing a correlational study, a questionnaire conveying four dimensions of RTSs and the teacher candidates' report of pedagogical performance in the microteaching course was used to collect the data on pedagogical competence. Using Google Forms, the questionnaire was administered to 52 EFL teacher candidates. The descriptive statistics identified that the RTSs of the EFL teacher candidates were categorized in the habitual action type. Pearson Product Moment yielded that the EFL teacher candidates' RTSs and their pedagogical performance had a high positive statistically significant correlation, as the observed sig. value was .766. This finding confirmed that RTSs bridged the theoretical-practical divide, and was found as a predictive variable for pedagogical competence. Therefore, teacher education programs need to consider developing and implementing training activities to enhance student teachers' RTSs, enabling them to make better pedagogical practices.

Keywords: EFL teacher candidates; pedagogical competence; reflective thinking skills (RTSs); teacher education

INTRODUCTION

The idea of reflection, or "reflective thinking," has been widely discussed within the discipline of language education. Reflection has been seen as an essential contributor to organizational learning. The term "reflection" was first introduced by John Dewey (Holdo, 2023), who was interested in knowing how reflection works and what it involves. He defined reflection as a kind of active, deliberate, and cautious thinking that examines a notion or a knowledge claim based on the evidence and the implications (Fernandes, 2014). The working process requires one to actively, persistently, and meticulously assess a claim or a belief, the evidence that supports it, and the implications that follow from it. Reflective thinker utilizes critical thoughts to thoroughly evaluate each learning circumstance and not accept any information at face value. It is highlighted in education since its process conveys critical which involves examining and learning from past experiences. Reflective thinking skills (RTSs) are believed to effectively connect the theory-practice gap and develop professional identity and competence (Stenberg et al., 2016). RTSs can also foster creativity and innovation in teaching. RTSs also help to understand emotions, feelings, reactions, and knowledge, and how they affect our decisions and actions (Körkkö et al., 2016 et al.; Roffey-Barentsen & Malthouse, 2017; Soodmand Afshar & Farahani, 2018).

Teacher education today with a more complex environment should enable future teachers to articulate appropriate teaching practices that can determine an education system's success. Dewey's perspective on learning emphasizes the need for RTSs for teachers. Besides, Leijen et al. (2014), noted that reflection is a way for teachers to enhance their competence and professionalism by connecting new knowledge to problem-solving, thinking conceptually, and applying specific strategies to new tasks. In other words, RTSs is assumed to influence and contribute to the quality

of teachers' pedagogical performance. Reflection for teachers is a process of self-evaluation and learning based on their teaching experience, which involves three broad questions: what do I do, how do I do it, and what does this mean for me, my students, and my institution (Slade et al., 2019). Moreover, reflection can help teachers diminish the gap between knowledge obtained in education programs and challenges in the real-world classroom, and enable them to adapt and apply new ideas to their own classrooms (Halim et al., 2017).

By being able to analyze and enhance their teaching practices, and understanding their students' learning needs and outcomes, teachers can engage in reflective teaching. Farrell & Kennedy (2019) underlined the relevance of teacher reflection in bridging the disparity between classroom instruction and classroom theory in teacher education institutions that aim to generate high-quality teachers. Furthermore, RTSs assist teachers in being mindful and more critical about their own practice, thus gaining more insight into their own abilities and limitations, their values and presuppositions, their aims and methods, and their ethical and moral obligations (Wyatt & Dikilitaş, 2016; Choy et al., 2017; Choy et al., 2019). These deliberate, frequent, and cautious activities based on solid reasoning should be part of the practice of EFL teachers.

In the Indonesian context, being a reflective teacher is one of several descriptors of pedagogical competence required in Chapter IV, Act No. 14/2005 of Teachers and Lecturers, about teachers' academic qualifications, competence, and certification (DEPDIKNAS, 2005). Pedagogical competence refers to the ability to teach effectively, including designing a curriculum, implementing teaching techniques, and assessing learning outcomes. The competence is presented in the form of the teacher's familiarity with EFL learners' characteristics, familiarization with learning concepts and efficacious learning principals, ability to develop curriculum in English, ability to perform a learning-centered approach, ability to use ICT for instructional purposes, ability to assess and evaluate the learning process, and ability to conduct reflective actions to enhance the teaching quality. However, Shelly et al. (2020) identified that pedagogically, most teachers lack the competence in translating frameworks into materials, designing classroom activities, and facilitating students to develop their potential. A survey in South Sulawesi (Azhar & Mardiana, 2016; Tanang & Abu, 2014) showed that in terms of pedagogical competence 96 of the respondent teachers only 19 (9.5%) teachers were in the good and excellent category, and 181 (90.5%) teachers were in the category of fair and poor.

Some current studies have examined RTSs and its variables, for example; the levels and development of RTSs, age and educational background, teachers' knowledge, problem-solving skills, and some variables related to the affective domain of teaching and learning process. Hong & Choi (2015) found that the majority of teachers did not engage in in-depth reflection on how they delivered their lessons. Naghdipour & Emeagwali (2013) yielded that age and education level were key determinants of reflective thinking behavior. Contradicted to Choy (2012), Slade et al. (2019) found that reflective practice directly impacted prospective teachers' understanding, abilities, and attitudes related to pre-K-12 education. In the same notion as Slade et al. (2019), a favorable correlation was discovered between the teachers' reflection and academic accomplishment Fen et al. (2017). Another variable was added to the study of RTSs, i.e., problem-solving. Investigating reflective thinking of the science teachers' ability to solve problems Sendil (2015) revealed that generally, teacher candidates of science exhibited poor RTS when it came to problem-solving. A more recent study (Choy et al., 2017; Han & Wang, 2021; Rahimi & Weisi, 2018) showed that being reflective increased instructors' self-assurance, assessment of oneself, and awareness of one's teaching practice. Meanwhile, Uştuk & De Costa (2021) found that reflection enhanced metacognition and academic performance or motivation among students. Still about the level of reflective thinking, Töman's (2017) action research revealed that teacher candidates' RTSs progressed from technical to critical levels. The empirical studies (Chee Choy et al., 2019; Slade et al., 2019; Naghdipour & Emeagwali, 2013; Cengiz et al., 2014; Malmir & Mohammadi, 2018; Walshe & Driver, 2019; Töman, 2017) are unanimously evident that reflection is indispensable

skills for enhancing teaching and learning outcomes. Thus, the present study believes that teachers' RTSs can be a predictor variable for the quality of their pedagogical competence.

Although there have been many studies on reflective thinking in various contexts and disciplines, the researchers found that the dimensions of reflective thinking advocated by Kember et al. (2000) have been widely adopted since their introduction (Firdaus et al., 2021; Ghanizadeh & Jahedizadeh, 2017; Sabekti et al., 2020). Kember et al., (2000) conceptualized being reflective into four dimensions. These dimensions were identified as types (Ghanizadeh & Jahedizadeh, 2017). The first type is habitual action, establishing that the student attempted to grasp the concept or theory that supports the topic, the student giving it substantial consideration, attempting to interpret it, or forming an opinion, and the student mostly re-creation of other people's work, with or without adaptation. This category indicated that the teacher candidates execute their pedagogical knowledge and skills as prescribed by their mentor without any deliberation of the rationale or implication of their actions. Another type of reflective thinking is understanding. This type includes evidence of comprehension of an idea or issue; content is limited to theory, private experiences, everyday situations, or real-world obstacles that have no influence on theory when employing simply what is written in the course materials or notes from lectures. The teacher candidates in this category exhibit a fundamental concept of understanding, but there is no conscious cognition about their knowledge. Reflection, as the third type, is demonstrated in which theoretical concepts are put into practice, situations that arise in practice will be considered and successfully discussed in light of what has been learned and personal revelations occur. In this case, the teacher candidates acquire a thorough grasp of theoretical concepts and consider their personal dan pedagogical experiences or practical applications. The fourth type is critical reflection which is categorized as proof of a shift of perspective regarding a stipulate belief about one's insight into a crucial subject and phenomenon. The teacher candidates categorized in this type are acknowledging their views, then new knowledge or experiences challenge that belief system, prompting them to reassemble it. It is asserted that through conscious reflective practice, teacher candidates are given the opportunity to improve their pedagogical competence. In the present study, these types were used to conceptualize the reflective thinking skills of EFL teacher candidates.

Different theoretical frameworks, contexts, and even subjects prospectively establish and execute different dimensions of RTSs. A number of empirical shreds of evidence have shown how reflective thinking was not a Cinderella variable. However, in an EFL teaching practicum setting, not much has investigated RTSs to predict pedagogical competence. Therefore, the present study's investigation is focused on revealing the association between RTSs and the pedagogical competence of EFL teacher candidates. Not only that, underpinning Kember et al. (2000) to operationalize the construct of RTSs, the present study yields RTSs in a more specific manner, i.e., types of RTSs. Thus, the present study offers vivid descriptions of the RTSs owned by the EFL teacher candidates and provides insight into the role of RTSs in equipping and preparing the teacher candidates to execute a proper pedagogical practice. Accordingly, the present study formulates its questions as follows:

1. What types of RTSs do EFL teacher candidates have?
2. What level of pedagogical competence do EFL teacher candidates have?
3. Is there any statistically significant relationship between EFL teacher candidates' RTSs and their pedagogical competence?

METHODS

Design

A quantitative correlational study was utilized to reveal a statistically significant correlation between the RTSs of EFL teacher candidates and their pedagogical competence. Correlational research seeks the relationship between variables in positive or negative correlation, with the coefficient of correlation determining the strength of the correlation (Creswell & Creswell, 2018; Ary et al., 2010).

Without manipulating the research variables, i.e., reflective thinking skills and pedagogical competence, the data were obtained from the participants after they took a microteaching course. Following data collection, data analysis was conducted to answer the research's three research questions.

Participants

The present research was conducted in a private education college site in Jombang, East Java, Indonesia, i.e., STKIP PGRI Jombang. The site was chosen as the setting due to the accessibility and the scope rationale of the present research. In addition, it is due to the fact that the college was a private teacher education that legally played a role in training teachers in East Java. Hence, the students enrolling in the mentioned site were the population in the present research. Since the present study limited its context in terms of the subjects and setting, the students who had at least joined a microteaching course were eligible and purposively considered as the samples. Yet, only those who gave responses to the questionnaire completely were considered as the study participants. Using purposive sampling, 52 students were chosen as the participants in the current study and were subsequently referred to as teacher candidates.

Instruments

Utilizing two instruments, the current study adopted Kember et al. (2000) to develop a questionnaire for obtaining data on RTSs. The questionnaire for RTSs includes four dimensions of RTSs, they are; habitual action, understanding, reflection, and critical reflection which were conveyed in 16 items of a five-point Likert-Scale. Confirming the validity of the questionnaire, validity analysis through SPSS was run and resulted in all 16 items being valid. The Cronbach alpha reliability test resulted in a value of .929. Thus, it was empirically assumed that the questionnaire was valid and reliable to be utilized for data collection of the present research. The questionnaire was administered to all the EFL teacher candidates via a WhatsApp group of a Microteaching Course made by the Unit of Education Development of STKIP PGRI Jombang. The second instrument was reports of teacher candidates' teaching practice. These were documents used to collect data on the pedagogical competence of the EFL teacher candidates. The documents were obtained from the Unit of Education Development of STKIP PGRI Jombang.

Data analysis procedures

Aiming at answering the research questions two data analyses were conducted. Descriptive data analysis was first employed to reveal the types of RTSs the EFL teacher candidates have. Enabling the identification of the statistically significant relationship between RTSs and the pedagogical competence of the EFL teacher candidates, a Pearson Product Moment was run. However, prior to running the statistical test, assumption tests had been conducted to ascertain that the test was appropriate to test the correlation of the variables. The normality test revealed that the significant value of Monte Carlo was at sig (p) is 0.200 which is higher than 0.05 (Table 1.). Thus, the data confirmed the first condition, i.e., normal.

Table 1. Normality Test

One-Sample Kolmogorov-Smirnov Test		Unstandardized Residual
N		52
Normal Parameters ^{a,b}	Mean	.0000000
	Std. Deviation	2.18915777
Most Extreme Differences	Absolute	.154
	Positive	.154
	Negative	-.100
Test Statistic		.154

Asymp. Sig. (2-tailed)				.004
Monte Carlo Sig. (2-tailed)	Sig.			.200
	95% Confidence Interval	Lower Bound		.089
		Upper Bound		.311

a. Test distribution is Normal.
 b. Calculated from data.
 c. Lilliefors Significance Correction.
 d. Based on 50 sampled tables with starting seed 2000000.

Another assumption test was the linearity test. The significance of deviation from linearity of RTSs and pedagogical competence was at 0.728 (Table 2.), which was bigger than the p-value of 0.05. Thus, it showed that there is a significant linear correlation between RTSs and pedagogical competence.

Table 2. ANOVA Table for Linearity Test

			Sum of Squares	df	Mean Square	F	Sig.
Pedagogical Performance * Reflective Thinking Skills	Between Groups	(Combined) Linearity	17.062	5	3.412	.577	.717
		Linearity	4.994	1	4.994	.845	.363
		Deviation from Linearity	12.068	4	3.017	.510	.728
	Within Groups		271.938	46	5.912		
	Total		289.000	51			

RESULTS AND DISCUSSION

Investigating the type of RTS and the association between the EFL teacher candidates’ RTS and pedagogical competence, the present research highlighted type based on Kember’s construct of reflection and highlighted RTS as the predictor variable toward pedagogical competence as the criterion variable. The findings were presented in three sub-sections. Firstly, results from descriptive data analysis about RTS are displayed to demonstrate the EFL teacher candidates’ RTS. The next is a numerical illustration of the pedagogical performance of EFL teacher candidates. The last is the result of Pearson Product Moment analysis which revealed the association between the EFL teacher candidates’ RTS and pedagogical competence.

The EFL teacher candidates’ RTSs

Descriptive statistical analysis and frequency distribution were employed to illustrate the type of RTS as well as reveal what type the RTSs were. Table 3. illustrates the means and standard deviations.

Table 3. Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Habitual Action	52	10	16	12.73	1.388
Understanding	52	10	16	12.48	1.448
Reflective	52	9	16	12.42	1.564
Critical Reflective	52	8	16	12.63	1.534
Valid N (listwise)	52				

Referring to Kember et al. (2000) four types of reflective thinking skills, habitual action, understanding, reflective, and critical reflection were identified. Each type describes different skills in making the reflection. The obtained means value of the four types of RTSs in Table 3, showed that the Habitual Action had the highest mean score, followed by Critical Reflective (12.63), Understanding (12.48), and Reflective (12.42). This statistically evidenced that the ability of the EFL teacher candidates in the current study to reflect was categorized in Habitual Action type.



Moreover, Table 3. showed that the standard deviations of all types were smaller than the means indicating that there were no deviations among the scores obtained; since the more similar the values on the items are the more accurate, they were with the mean. This implied that the EFL teacher candidates' reflections demonstrated that there is no reflective thought about their understanding during their teaching practice. The EFL teacher candidates perform out their educational knowledge and abilities as directed by their mentor, with limited consideration given to the justification or implications of their professional conduct.

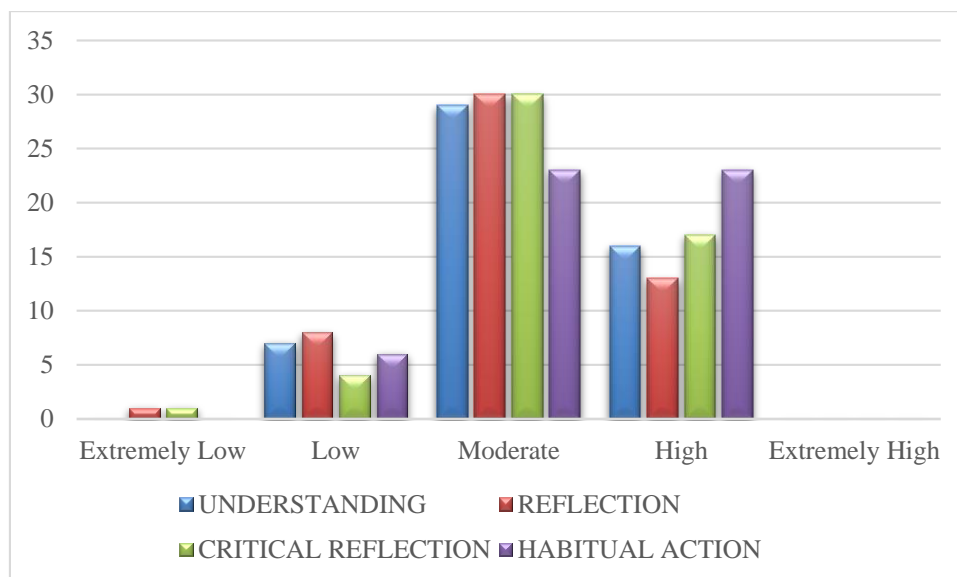


Figure 1. Frequency Distribution of the Reflective Thinking Skills

Furthermore, Figure 1. illustrates the levels of RTSs of the EFL teacher candidates based on the analysis of the frequency distribution across all types of RTSs. The result of the analysis when the four types of RTSs were leveled into four, i.e., extremely low, low, moderate, high, and extremely high, the EFL teacher candidates' RTSs were mostly at a moderate level. Closely looking at the frequency of the moderate level, 30 (58%) of the EFL teacher candidates were identified to have a reflection dimension. The same number of EFL teacher candidates (30) were also identified to have the critical reflection dimension moderately. Meanwhile, 29 (56%) possessed an understanding dimension moderately, and 23 (44%) showed their Habitual Action type moderately. Thus, the moderate level was held mostly by the two types, reflection and critical reflection.

However, looking at the isolated obtained means (see Table 3), habitual action attains the highest means score. The 52 EFL teacher candidates were found to have habitual action types with a moderate level of reflection. The current research discovered that not only the EFL teacher candidates were at the same type as the participants in the study by Slade et al. (2019), but it revealed also that the habitual action type was at moderate level. Slade et al. (2019) identified that a quarter of the participants' reflections are of the habitual action type. Nevertheless, over fifty-six percent of the participants' written reflections were considered in the understanding type. A small percentage (18%) of the participants wrote reflections which were categorized into the reflection type, and 1% of the reflection writing was categorized as critical reflection type. Nevertheless, Naghdipour & Emeagwali (2013) revealed that the more advanced the level of education of the students, the more reflective learners they can be. Besides, Farrell & Kennedy (2020) discovered that when reflective practice participants reach a more critical degree of reflection, comprehensive efforts on meaningful instructional practice emerge. Consequently, reflection is highly recommended to be rehearsed throughout time to offer progress in development required for the participant to attain the most complicated as well as profound levels of practice.

Reflective practice is not a simple or uniform process, but one that evolves and becomes more nuanced and profound over time. Generally, teacher candidates begin with a basic type of reflection to a more advanced and critical type after a short period of practice. The idea of more complex and profound reflection and how it relates to teaching ability takes teachers to a more advanced learning level that changes them and gives them a feeling of professional independence that enables them to act as catalysts for their students' benefit (Deringöl, 2019; Korucu-Kis & Demir, 2019; Karakoç & Demir, 2020). Thus, reflection aids the teacher candidate to confront preconceptions and beliefs, which leads to the selection of acceptable pedagogies in the classroom that accommodate the various needs of children. (Leijen et al., 2014; Cirocki & Farrell, 2017; Kumalasari et al., 2017). Accordingly, teacher education should provide teaching training that enables the EFL teacher candidates to inspect what they think, practice, and feel, then connect them with the pedagogical theories to develop a teaching and learning strategy (Rahimi & Weisi, 2018; Tuncer & Ozeren, 2012).

The EFL teacher candidates' pedagogical competence

The data on pedagogical competence were obtained from the report of the EFL teacher candidates after joining the Microteaching course. The data concerning the EFL teacher candidates' pedagogical competence were presented in terms of the means value and value of the standard deviation to illustrate the pedagogical competence of the EFL teacher candidates. These descriptive data analysis results were presented in Table 4. The descriptive data revealed that the average pedagogical competency of the 52 EFL teacher candidates was 93.50, with the standard deviation far below the means demonstrating that the variance of the scores was small. In other words, the distribution of the scores was all close to the means. This was corroborated by the minimum score of 88 and the greatest score of 98, suggesting a range of 10. Besides, based on the interval score 1-100, the obtained means, 93.50, showed that the EFL teacher candidate had established a sound pedagogical competence.

Table 4. Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Pedagogical Performance	52	88	98	93.50	2.380
Valid N (listwise)	52				

Based on the categorization of scoring in the university, which can be seen in Table 5., the 93.50 obtained means of the EFL teacher candidates were categorized as Greatly Excellent.

Table 5. Level of Pedagogical Competence

No	The Intervals of the Scores	The categorization of the score in letters	
1.	91-100	A	Greatly Excellent
2.	81-90	A-	Excellent
3.	76-80	B+	Good
4.	71-75	B	Good
5.	66-70	B-	Good
6.	60-65	C	Fair
7.	50-59	D	Poor
8.	0-49	E	Very Poor

The result of the assessment reports of the EFL teacher candidates showed that they had excellent pedagogical competence. From the findings, it can be assumed that the EFL teacher candidates had demonstrated great teaching practice during their Microteaching course, likely

trying new ideas and teaching strategies. Teachers' pedagogical knowledge, which is the specialized knowledge of how to create effective learning environments for all students, has a substantial effect on student outcomes. Teachers' knowledge about the subject matter and pedagogical define what they teach and how they orchestrate what to teach. Since language is dynamic, EFL teachers are expected to keep up to date on the use of language for communication. The scope of language teaching is not merely knowing the language but also knowing how to use the language in context. Therefore, teachers need to have the ability to access, judge, and integrate new knowledge relevant to their professional practice and to constantly improve their pedagogical knowledge. Liakopoulou (2011) reveals that most teachers seem to associate their effectiveness at work with the acquisition of knowledge of the subject they taught and pedagogical skills served as tools to present their knowledge.

It is essential to unveil teachers' qualifications that play a major role in the teaching and learning process. To be effective teachers, beginner teachers must define the goal of their actions. They should be capable of justifying to students, parents, and school staff the importance of the subject they teach and the appropriateness of their teaching methods. The EFL teacher candidates should learn how to correspond with the contemporary situation. Further, they need to grasp the connections between what was taught before, what is being taught now, and what will be taught in the future. Thus, they know if their lessons are part of the national curriculum,

The relationship between the EFL teacher candidates' RTSs and pedagogical competence

Employing Pearson's product moment to know whether there was a correlation between the EFL teacher candidates' RTS and pedagogical competency, Table 6 vividly describes the findings.

Table 6. Correlations between Reflective Thinking Skills and Pedagogical Competence

		Reflective Thinking Skills	Pedagogical Competence
Reflective Thinking Skills	Pearson Correlation	1	.766**
	Sig. (2-tailed)		.000
	N	52	52
Pedagogical Competence	Pearson Correlation	.766**	1
	Sig. (2-tailed)	.000	
	N	52	52

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

Table 6. illustrates the outcome of the hypothesis testing revealed a statistically significant correlation between RTSs and the pedagogical competence of the EFL teacher candidates. This was demonstrated by the obtained significance value .000, which was less than the coefficient of determination (0.05). It is possible to conclude that the null hypothesis (Ho) is rejected. In other words, there is a statistically significant relationship between EFL teacher candidates' RTSs and pedagogical competence.

Furthermore, the associative connection of both variables was strong, as shown by the obtained R-value at the point of .766. According to Schober et al. (2018), correlation coefficients have a range from -1 to +1, and a value of 0 means there is no linear or monotonic association. The closer the value is to -1 or +1, the stronger the relationship, with a value of -1 or +1 indicating a perfect straight line (Pearson correlation). Therefore, the coefficient correlation identified in the present study was considered to be highly positive. It implies that there is a significant association between the pedagogical competency of EFL teacher candidates and RTSs. It was discovered that EFL teacher candidates' RTSs contributed to their instructional competency.

The findings of the current research statistically revealed that the EFL teacher candidates' RTSs had a strong positive correlation with their pedagogical competence. RTSs were found as a predictor variable for pedagogical competence. When reflection is included in teacher training it can be a valuable strategy for language teachers to enhance their practice. The finding confirmed

that teachers need to be engaged, and spend time to observe, analyze, and plan actions to enhance their teaching methods. Reflective practice is a deliberate activity that examines actions, evaluates effectiveness, and plans for improvement. It is a way for the teacher candidates to reveal tacit knowledge and bridge the gap between how the knowledge helps to make sound decisions about what to practice and what should be done and, thus, make sense of complex practice. Most importantly, it reminds us that teaching is a lifelong learning process (Puspitasari et al., 2021; Choy et al., 2019). If language teachers are aware of effective language teaching while keeping in mind how learners learn, the effects will be visible in the classroom. Therefore, the current study noted that having the ability to reflect at a particular level can predict the quality of pedagogical competence.

The present research findings were in line with the research conducted by Asakereh & Yousofi (2018) who noted that teacher candidates were more alert of their suppositions, attitudes, and viewpoints when they were provided with a framework for written reflective practice during their professional experience. Similarly, Halim et al. (2017) noted that being reflective needs to be initiated by knowledge of the occurrence of experiences or events, which results in the consciousness of emotion and judgments about the experiences and events. Furthermore, Afshar & Farahani (2018) noted that lessons, activities, practices, and tasks should be designed with care by curriculum and syllabus designers. These required the teacher candidates to carefully and purposively reflect on what and how their teaching practice is. Thus, the EFL teacher candidates were able to conduct reflective teaching. Then pedagogical competence may be executed by developing the extent of pedagogical information and reflective capability either partially or together. The results of the current study were also coherent with Biongan (2015) mentioning that reflective practices will contribute to teachers' professional development and turn them to be active learners rather than passive ones. Choy et al. (2017) mentioned that the association between teaching awareness and reflective thinking was substantial. RTSs and pedagogical competence are essential intertwined variables for preparing future teachers. The RTSs enables the EFL teacher candidates to use their experiential learning and theoretical knowledge to construct learning objectives appropriate to the student needs, establish meaningful teaching strategies, perform learning assessments, and make a judgment for their students as well as for themselves. The EFL teacher candidates in the present study who were reflective and identified to have habitual actions of reflection showed that they had high pedagogical competence. Therefore, it is important to consider that teacher training or teacher education will equip EFL teacher candidates with the ability to reflect.

CONCLUSION

The current study's findings demonstrated that the EFL teacher candidates' RTSs was identified as a habitual action type and was at a moderate level. Besides, it found that the teacher candidates' RTSs and their pedagogical competence had a strong positive correlation. The statistical correlation between RTSs and pedagogical competence showed that the better the EFL teacher candidates make reflections the better their pedagogical competence is. This suggested that it is critical for teacher education to give training that specifically promotes RTSs. Teacher education should foster reflective teaching from the beginning of the study year, by integrating reflective practice in all courses and giving enough time and support for the EFL teacher candidate to enhance and apply their RTSs, which will improve their teaching and become more reflective. However, the current study was not exploring the contributions of all types of RTSs toward pedagogical competence. The current study only included the EFL pre-service in one private college, thus future researchers are recommended to investigate a wider setting. Besides, future researchers are suggested to expand the investigation by including other variables that prospectively underlie the mechanism of reflective thinking and pedagogical practices.

REFERENCES

- Ary, D., Jacobs, L. C., & Sorensen, C. K. (2010). *Introduction to Research in Education* (8th ed.). Cengage Learning.
- Asakereh, A., & Yousofi, N. (2018). Reflective thinking, self-efficacy, self-esteem and academic achievement of iranian efl students. *International Journal of Educational Psychology*, 7(1), 68–89. <https://doi.org/10.17583/ijep.2018.2896>
- Azhar, N., & Mardiana, H. (2016). the English Teachers' Competencies in English Foreign Language Learning At Ma Madani Alauddin Pao-Pao Gowa, South Sulawesi. *ETERNAL (English, Teaching, Learning and Research Journal)*, 2(2), 221–237. <https://doi.org/10.24252/eternal.v22.2016.a4>
- Biongan, A. A. (2015). Reflective Thinking Skills of Teachers and Students' Motivational Preferences: The Mediating Role of Teachers' Creativity on Their Relationship. *International Journal of Novel Research in Education and Learning*, 2(5), 13–25.
- Cengiz, C., Karataş, F. Ö., & Yadigaroglu, M. (2014). The Investigation of Pre-service Science Teachers' Reflective Journals. *Procedia - Social and Behavioral Sciences*. <https://doi.org/10.1016/j.sbspro.2014.01.751>
- Chee Choy, S., Yim, J. S. C., & Sedhu, D. S. (2019). Pre-service teachers' reflection on reflective practices: A Malaysian perspective. *Universal Journal of Educational Research*, 7(12), 18–26. <https://doi.org/10.13189/ujer.2019.071903>
- Choy, S. C., Yim, J. S. C., & Tan, P. L. (2017). Reflective thinking among preservice teachers: A Malaysian perspective. *Issues in Educational Research*, 27(2), 234–251.
- Choy, S. C. P. S. O. (2012). Reflective thinking and teaching practices: A precursor for incorporating critical thinking into the classroom. *International Journal of Instruction*, 5(1), 167–182.
- Cirocki, A., & Farrell, T. S. C. (2017). Reflective practice for professional development of TESOL practitioners. *The European Journal of Applied Linguistics and TEFL*, 6(2), 5–24.
- DEPDIKNAS. (2005). *Undang-Undang no. 14 Tahun 2005 tentang Guru dan Dosen*. Departemen Pendidikan Nasional Indonesia.
- Deringöl, Y. (2019). The relationship between reflective thinking skills and academic achievement in mathematics in fourth-grade primary school students. *International Online Journal of Education and Teaching (IOJET)*, 613–622. <http://iojet.org/index.php/IOJET/article/view/532>
- Farrell, T. S. C., & Kennedy, B. (2019). Reflective practice framework for TESOL teachers: one teacher's reflective journey. *Reflective Practice*, 20(1), 1–12. <https://doi.org/10.1080/14623943.2018.1539657>
- Farrell, T. S. C., & Kennedy, J. (2020). "My personal teaching principle is 'safe, fun, and clear'": Reflections of a TESOL teacher. *Iranian Journal of Language Teaching Research*, 8(2), 83–96.
- Fen, T. S., Sam, L. C., & Meng, C. C. (2017). *Changes in Teachers' Reflection*. 4, 145–172.
- Fernandes, S. R. G. (2014). Preparing Graduates for Professional Practice: Findings from a Case Study of Project-based Learning (PBL). *Procedia - Social and Behavioral Sciences*, 139, 219–226. <https://doi.org/10.1016/j.sbspro.2014.08.064>
- Firdaus, L., Masiah, M., Ibrohim, I., Lestari, S. R., Dewi, I. N., Mahsul, A., & Muliadi, A. (2021). Translation of Reflective Thinking Questionnaire: A Structural Equation Model. *Jurnal Penelitian Pendidikan IPA*, 7(Special Issue), 305–311. <https://doi.org/10.29303/jppipa.v7ispecialissue.1036>
- Ghanizadeh, A., & Jahedizadeh, S. (2017). Validating the persian version of reflective thinking questionnaire and probing Iranian university students' reflective thinking and academic achievement. *International Journal of Instruction*, 10(3), 209–226. <https://doi.org/10.12973/iji.2017.10314a>
- Halim, L., Buang, N. A., Meerah, T. S., Atay, D., Farrell, T. S. C., Al-Mahrooqi, R., Denman, C., Al-Siyabi, J., Al-Maamari, F., Anderson, N., Henderson, M., Unda, Badri, M., Alnuaimi,

- A., Mohaidat, J., Yang, G., Al Rashedi, A., Banegas, D., Pavese, A., ... Zeichner, K. M. (2017). Inconvenient truths about teacher learning: towards professional development 3.0. *Professional Development in Education*, 7(1), 387–405. <https://doi.org/10.1080/13540602.2016.1211523>
- Han, Y., & Wang, Y. (2021). Investigating the Correlation Among Chinese EFL Teachers' Self-efficacy, Work Engagement, and Reflection. *Frontiers in Psychology*, 12(October), 1–11. <https://doi.org/10.3389/fpsyg.2021.763234>
- Holdo, M. (2023). Critical Reflection: John Dewey's Relational View of Transformative Learning. *Journal of Transformative Education*, 21(1), 9–25. <https://doi.org/10.1177/15413446221086727>
- Hong, Y. C., & Choi, I. (2015). Assessing reflective thinking in solving design problems: The development of a questionnaire. *British Journal of Educational Technology*, 46(4), 848–863. <https://doi.org/10.1111/bjet.12181>
- John W. Creswell J. David Creswell. (2018). Reserch Design Quslitative , Quantitative and Mixed methods Approaches. In *Sage* (Issue 9).
- KARAKOÇ, C., & DEMİR, Ö. (2020). The Predictive Power of Turkish Teachers' Reflective Thinking Skills Perceptions in their Problem Solving Skills Perceptions. *International Journal of Education and Literacy Studies*, 8(3), 12. <https://doi.org/10.7575/aiac.ijels.v.8n.3p.12>
- Kember, D., Leung, D. Y. P., Jones, A., Loke, A. Y., McKay, J., Sinclair, K., Tse, H., Webb, C., Wong, F. K. Y., Wong, M., & Yeung, E. (2000). Development of a questionnaire to measure the level of reflective thinking. *Assessment and Evaluation in Higher Education*, 25(4), 381–395. <https://doi.org/10.1080/713611442>
- Körkkö, M., Kyrö-Ämmälä, O., & Turunen, T. (2016). Professional development through reflection in teacher education. *Teaching and Teacher Education*. <https://doi.org/10.1016/j.tate.2016.01.014>
- Korucu-Kis, S., & Demir, Y. (2019). A review of graduate research on reflective practices in english language teacher education: Implications. *Issues in Educational Research*, 29(4), 1241–1261.
- Kumalasari, S. P., Setiawan, B., & Sumarlam, S. (2017). Pedagogical Competence of Indonesia Teacher Viewed From the Anecdote Writing Lesson Planning. *Lingua Didaktika: Jurnal Bahasa Dan Pembelajaran Bahasa*, 11(2), 146. <https://doi.org/10.24036/ld.v11i2.8054>
- Leijen, Ä., Allas, R., Toom, A., Husu, J., Marcos, J.-J. M., Meijer, P., Knezic, D., Pedaste, M., & Krull, E. (2014). Guided Reflection for Supporting the Development of Student Teachers' Practical Knowledge. *Procedia - Social and Behavioral Sciences*, 112(Iceepsy 2013), 314–322. <https://doi.org/10.1016/j.sbspro.2014.01.1170>
- Liakopoulou, M. (2011). Teachers' pedagogical competence as a prerequisite for entering the profession. *European Journal of Education*, 46(4), 474–488. <https://doi.org/10.1111/j.1465-3435.2011.01495.x>
- Malmir, A., & Mohammadi, P. (2018). Teachers' Reflective Teaching and Self-Efficacy as Predicators of their Professional Success: A Case of Iranian EFL Teachers. *Research in English Language Pedagogy*, 6(1), 117–138.
- Naghdi-pour, B., & Emeagwali, O. L. (2013). Assessing the Level of Reflective Thinking in ELT Students. *Procedia - Social and Behavioral Sciences*, 83, 266–271. <https://doi.org/10.1016/j.sbspro.2013.06.052>
- Puspitasari, Y., Widiati, U., Marhaban, S., Sulisty, T., & Rofiqoh. (2021). The sustainable impacts of teacher action research on efl teachers in indonesia. *Studies in English Language and Education*, 8(3), 952–971. <https://doi.org/10.24815/siele.v8i3.21388>
- Rahimi, M., & Weisi, H. (2018). The impact of research practice on professional teaching practice: exploring EFL teachers' perception. *Cogent Education*, 5(1), 1–15. <https://doi.org/10.1080/2331186X.2018.1480340>

- Roffey-Barentsen, J., & Malthouse, R. (2017). What is Reflection? *Reflective Practice in Education and Training*, 3–11. <https://doi.org/10.4135/9781526402134.n2>
- Sabekti, A. W., Khoirunnisa, F., & Liliyasi, L. (2020). *Validating the Indonesian Version of Reflective Thinking Questionnaire and Investigation of the Relationship Between Pre-Service Teachers' Reflective Thinking and Academic Achievement*. 2019(July 2019), 138–144. <https://doi.org/10.24071/seadr.2019.19>
- Sendil, C. (2015). Pre-service science teachers reflective thinking skills toward problem solving. *Educational Research and Reviews*, 10(10), 1449–1457. <https://doi.org/10.5897/err2015.2228>
- Shelly, C. S., Nuraida, I., & Oktaviana, F. (2020). An Analysis of Teacher pedagogical competence in Teaching English at SMK PGRI 3 Kota Serang. *Journal of English Language Teaching and Literature (JELTL)*, 3(1), 54–65. <https://doi.org/10.47080/jeltl.v3i1.787>
- Slade, M. L., Burnham, T., Catalana, S. M., & Waters, T. (2019). The Impact of Reflective Practice on Teacher Candidates' Learning. *International Journal for the Scholarship of Teaching and Learning*, 13(2). <https://doi.org/10.20429/ijsofl.2019.130215>
- Soodmand Afshar, H., & Farahani, M. (2018). Inhibitors to EFL teachers' reflective teaching and EFL learners' reflective thinking and the role of teaching experience and academic degree in reflection perception. *Reflective Practice*, 19(1), 46–67. <https://doi.org/10.1080/14623943.2017.1351353>
- Stenberg, K., Rajala, A., & Hilppo, J. (2016). Fostering theory–practice reflection in teaching practicums. *Asia-Pacific Journal of Teacher Education*, 44(5), 470–485. <https://doi.org/10.1080/1359866X.2015.1136406>
- Tanang, H., & Abu, B. (2014). Teacher Professionalism and Professional Development Practices in South Sulawesi, Indonesia. *Journal of Curriculum and Teaching*, 3(2), 25–42. <https://doi.org/10.5430/jct.v3n2p25>
- Töman, U. (2017). Investigation to Improve the Process of Pre-service Teachers' Reflective Thinking Skills through an Action Research. *Universal Journal of Educational Research*, 5(9), 1535–1548. <https://doi.org/10.13189/ujer.2017.050911>
- Tuncer, M., & Ozeren, E. (2012). Prospective Teacher's Evaluations in Terms of Using Reflective Thinking Skills to Solve Problems. *Procedia - Social and Behavioral Sciences*, 51, 666–671. <https://doi.org/10.1016/j.sbspro.2012.08.221>
- Uştuk, Ö., & De Costa, P. I. (2021). Reflection as meta-action: Lesson study and EFL teacher professional development. *TESOL Journal*, 12(1). <https://doi.org/10.1002/tesj.531>
- Walshe, N., & Driver, P. (2019). Developing reflective trainee teacher practice with 360-degree video. *Teaching and Teacher Education*, 78, 97–105. <https://doi.org/10.1016/j.tate.2018.11.009>
- Wyatt, M., & Dikilitaş, K. (2016). English language teachers becoming more efficacious through research engagement at their Turkish university. *Educational Action Research*, 24(4), 550–570. <https://doi.org/10.1080/09650792.2015.1076731>

CONFLICT OF INTEREST STATEMENT:

All of the authors declare that they have no conflicts of interest to disclose.