RELATIONSHIP BETWEEN EFL PRE-SERVICE TEACHERS' SELF-EFFICACY AND THEIR EPISTEMIC BELIEFS

Rida Rohmata Injiya

Department of Language Education, Faculty of Cultural Studies, Universitas Brawijaya, Indonesia Email: ridarohmata@student.ub.ac.id

Ive Emaliana

Department of Language Education, Faculty of Cultural Studies, Universitas Brawijaya, Indonesia Email: ive@ub.ac.id

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Abstract: Nowadays, English is an essential language that must be mastered and has been studied for many years as a foreign language in many countries in the world. Specifically, English pre-service teachers' ability to teach students English as a foreign language requires self-efficacy and epistemic beliefs that can support students' 21st century skills. Self-efficacy and epistemic beliefs are related to individual differences in psychological domains that can affect learning achievement. An investigation of the relationship between self-efficacy and epistemic beliefs of pre-service teachers in a reputable university in Malang, East Java was conducted in this study. This study examined the relationship between pre-service teachers' self-efficacy and epistemic beliefs. The method of this research is correlational study. A total of 85 pre-service teachers completed the self-efficacy and epistemic beliefs questionnaires. SPSS was used to analyze the questionnaire filled out by the participants and determine the results. As a result of SPSS's analysis, self-efficacy is positively correlated with epistemic beliefs, which implies a correlation in both areas. The findings of the correlation coefficient is -0.528, the correlation between self-efficacy and epistemic beliefs is negative and it means that the higher EFL self-efficacy the simpler their epistemic beliefs. A correlation from SPSS's analysis indicates that self-efficacy and epistemic beliefs have a medium relationship.

Keywords: *EFL pre-service teachers; epistemic beliefs; self-efficacy.*

INTRODUCTION

Since 2015, the United Nations (UN) has set global goals for sustainable development - the "Sustainable Development Goals" (SDGs), which a continuation of the "Millennium Development Goals". There are 17 goals in the Sustainable Development Goals outlined by the United Nations, including "quality education" as one of the goals. As for SDG no. 4 (SDG-Education), according to Zinchenko et al. (2021), it aims to provide comprehensive, equitable, and lifelong quality education in order to ensure the peaceful coexistence of freedom and prosperity in the future. One of quality education can be achieved by having high quality teachers, including Teaching English as a Foreign Language (EFL) that are equipped with the 21st century skills to support SDG 4 implementation. EFL pre-service teachers should gain abilities and attributes that have the ability to be taught or acquired to enable them to enhance ways of learning, working, and living in the 21st century.

teachers preservice are students undergoing teacher training and have not yet begun teaching who are trained specifically in preparation to teach English lesson in schools. The importance of preparation among pre-service English teachers has been discussed in several studies, variety of alternatives, and student success in understanding the material. According to Haraldstad & Kristiansen (2020) previous experiences can be bridged with learning of educational content, bringing new perspectives and respecting prior knowledge. Damnet (2021) stated that Students' motivation and attitude are positively affected when EFL pre-service teachers are prepared for their future roles through special training programs, but it may not be effective due to time limitations. Hien (2020) stated that pre-service teachers' ideal figure of good EFL teachers is that their teaching skills are exceptional, as are their pedagogical skills, as well as their ability to motivate students to succeed and become independent learners. According to Walida &

Murtafi'ah (2022) during EFL pre-service teacher efficacy preparation, five dimensions are explored: consider philosophy, principles, theory, practice, and beyond practice.

Li et al. (2023) study found that it is important to understand that pre-service EFL teacher learning involves interaction between and among numerous socio-contextual factors and, as a result, As part of the learning process, influences are exerted in a non-linear and complex manner. Reflection is generally valued by pre-service teachers, but many engage in general, brief, and descriptive reflection practices, which suggests that undergraduate courses in TEFL need to reconfigure reflective teaching practices (Alsuhaibani, 2019) and it is in line Kaymakamoğlu (2019) found that with Microteaching sessions, feedback sessions, and selfreflection and self-monitoring sessions are all part of the proposed model that helped EFL pre-service teachers develop practical knowledge. Pre-service EFL teachers' teaching practice contributes to their academic success and personal development (Can, 2019).

However, it is crucial that each EFL pre-service teacher has different characteristics that are related to individual differences. Individual differences can be impacted by the previous learning process, which is actually subconsciously possessed. Understanding pre-service teachers' individual differences in the educational field is important, because it has an impact on their future teaching performance and indirectly to their students' achievement. Thus, education quality is impacted by individual differences in self-concept, anxiety level, and learning motivation owned by preservice teachers (Septiara et al., 2021).

Among others, EFL pre-service teachers' individual differences that need to be considered in education are self-efficacy and epistemic beliefs. Each pre-service teacher has a different level of self-efficacy and epistemic beliefs which can impact their future teaching approaches and strategies.

Self-efficacy is a crucial aspect in determining how individuals behave and make decisions that impact both their own and other people's well-being (Bandura 1997). It is believed that self-efficacy in EFL pre-service teachers depends on the belief that they are capable of performing specific tasks or achieving specific goals. As a result, pre-service EFL teachers' self-efficacy is a reflection of their belief that they are capable of teaching English. Self-efficacy is an essential component of their self-determination, as well as influencing life-meaningful orientations and self-

2019). Self-efficacy (Dryhus, considerably influences their activity selection, effort, and perseverance, playing a pivotal role in shaping their behavioral choices. According to Safitri (2021) understanding these concepts is essential for understanding pre-service teachers' competence and confidence as they embark on their English language teaching careers. There are various applications of self-efficacy theory to human endeavors, including health psychology, education, and clinical practice. Teachers' selfefficacy can be improved by participating in professional development programs, receiving support from colleagues, and having practical teaching experiences (Liu et al., 2021; Eginli & Solhi, 2021).

The self-efficacy theory for EFL pre-service teachers can provide insights into their capabilities and beliefs about teaching English to language learners. Developing self-efficacy is essential for pre-service teachers, since it is directly related to their ability to teach and learn. The self-efficacy of EFL teachers is linked to effective classroom management, and pre-service teacher education and professional development, coupled with teachers' autonomy in learning, are important factors to cultivate teachers who exude selfefficacy (Quoc et al., 2021). As described by Dewi et al. (2022), understanding and improving future EFL educators' self-efficacy is crucial to their preparation and success. Practicum experiences can positively alter pre-service teachers' beliefs about their capabilities, ultimately leading to improved classroom management, more effective instructional strategies, and heightened student engagement (Eginli & Solhi, 2021). According to Kwangsawad (2022), micro-teaching boosts EFL pre-service teachers' confidence in classroom management, student engagement, instructional strategies. An instruction-learning framework that incorporates constructivist theory is associated with an increase in self-efficacy in **EFL** teachers in classroom management. instructional tactics, and student involvement (Yildirim & Biçer, 2023

Furthermore, Performance of employees is significantly affected by self-efficacy, burnout reduction, and dealing with workplace challenges (Khalique & Singh, 2019). Lal et al. (2019) stated that student achievement and positive teaching techniques are strongly correlated with teachers' self-efficacy, which is essential for "classroom management, instructional success, and student engagement". Increasing self-efficacy positively impacts teachers' job satisfaction, commitment to

which promote positive attitudes and behaviors (Demir, 2020).

Additionally, Stoel et al. (2022) argue that epistemic beliefs have a significant impact on history education teaching and learning. As a preservice teacher, perception accuracy is strongly influenced by the epistemic beliefs he or she holds about knowledge and how they acquire it. The engagement of EFL teachers can be predicted by their epistemic beliefs and learning strategies (Emaliana & Rahmiati, 2019), in addition, students' achievement was directly impacted by intrinsic motivation and teachers' epistemic beliefs (Chai et al., 2021), and thus, academic achievement and epistemic profiles were strongly correlated (Lonka et al., 2020).

Epistemic beliefs are personal values that filter individuals' behavior and guide teachers' actions and behavior in the classrooms (Soleimani, 2020). It means that Teaching styles and conceptions of teaching can be influenced by these beliefs. The theory of epistemic beliefs, which is often referred to as epistemological beliefs, includes people's opinions regarding what knowledge and knowing are like, It differentiated five dimensions of epistemic beliefs, focusing on the development, structure, and sources of knowledge (Hofer & Pintrich, 1997 in Schiefer et al., 2022). According to Gulfoyle et al. (2020) the acceptance or rejection educational research in Initial Teacher Education is mostly influenced by the pre-service science teachers' epistemic ideas. Pre-service teachers' ability to think epistemically and comprehend abstract learning outcomes can both be enhanced by including education in the epistemic core for pre-service teachers (Erduran & Kaya, 2019).

According to Moser et al. (2021) prior to service During their training, teachers gain knowledge and perspectives regarding educational psychology, but the field's significance for teacher preparation and practice is still underestimated. The teaching-learning concepts of pre-service teachers are significantly predicted by their educational epistemological beliefs and philosophy tendencies (Aytaç & Uyangör, 2020). Soleimani (2020) stated that since EFL teachers' methods of teaching are influenced by their epistemological beliefs, learners should utilize a variety of resources to acquire the language. The facilitator teaching style is the most common among these teachers. An online learning study by Puspitasari et al. (2020), found that epistemic beliefs of EFL learners affect their speaking,

organizations, motivation, and involvement, all of reading, and writing strategies, which can affect their proficiency in a language.

> Accordingly, both EFL teachers' self-efficacy and epistemic beliefs are differences owned by each individual that affect teaching and eventually their students' achievement that determine high quality education which indirectly promotes 21st century skills and help United Nations achieve the 4th SDG. Both self-efficacy and epistemic beliefs are key factors which are possessed by pre-service teachers and are worth researching.

> Therefore, in this study, the researchers aim to examine whether self-efficacy and epistemic beliefs are related to pre-service EFL teachers' selfefficacy, as well as their strength. The study predicts future EFL pre-service teachers' selfefficacy and epistemic beliefs and provides guidelines for designing an educational curriculum that caters to varying teacher levels of these attributes. Teachers should select an approach suited to students with diverse self-efficacy and epistemic beliefs. Hence, EFL pre-service teachers should pay particular attention to their self-efficacy and epistemic beliefs.

METHOD

The research design in this study is correlational research. According to Rukminingsih et al. (2020) an analysis of correlation is intended to determine the relationship between two variables determined by determining their degree relationship at the same time by comparing their measurement results. Correlation research aims to measure how much the relationship between one variable and another variable is to determine the direction of the relationship between variables or ascertain the extent of the relationship between variables to be transformed into a predictive relationship. The purpose of selecting a correlation approach in this study is to examine and quantify the degree of association between self-efficacy and epistemic beliefs among pre-service teachers.

Participants in the study 85 include pre-service teachers from English education department at Brawijaya University who take part in the "P4" program as one of the mandatory programs for students majoring in language education, one of which is English education to improve students' abilities as prospective teachers.

This study collected data using two structured questionnaires. For the purpose of measuring selfefficacy among preservice teachers, researchers used the Teacher Self-Efficacy Scale (TSES) developed by Tschannen-Moran and Hoy (2001). The test consisted of 24 statements that measured the effectiveness of three subscales: Table 1. Pearson correlation result student engagement, instructional strategies, and classroom management. Α questionnaire developed by Emaliana (2017) was used to examine epistemic beliefs, to know about preservice teachers' perception of knowledge. It contained 25 statements to measure certain knowledge, fix ability, omniscient authority, and simple knowledge. In each questionnaire, respondents are asked to provide answers or responses regarding the statements given and are asked to answer these statements on the measuring scale provided. Scores were based according to a 4-point Likert scale, 1 refers to a "strong disagreement" and 4 refers to "strong a agreement".

This study used SPSS (Statistical package for the Social Sciences) software for statistical analysis. SPSS is used for various research purposes in the form of correlation, relationship, influence and impact of one variable on another. The SPSS program is used for inference statistics, which is the process of drawing conclusions based on a hypothesis (Rosalina, 2023). The correlation technique used in this study is Pearson product moment to state whether or not there is a relationship between two variables.

RESULTS AND DISCUSSION

Based on our findings, we calculated Pearson's product moment correlation, which assesses how interval-scale variables relate to each other. The correlation value is between 0 and 1 with positive and negative properties. A positive correlation value indicates a unidirectional meaning. A high first variable corresponds to a high second variable. The negative correlation value shows the opposite meaning. In this case, as the value of the first variable increases, the value of the second variable decreases (Sofiyana et al., 2020). There are two hypothesis in this research:

Ho (null hypothesis): "Self-efficacy is not significantly correlated with epistemic beliefs". Significant value of this hypothesis is < 0.05

H1 (alternative hypothesis): "The higher EFL students' self-efficacy the more sophisticated their epistemic beliefs level".

To test the hypothesis, the researcher tested by conducting a two-sided test. The basis for decision making is from

If the significant value > 0.05 it means that H1 is accepted

If the significant value < 0.05 it means that Ho is rejected

Correlations

		SE	EB
SE	Pearson Correlation	1	528**
	Sig. (2-tailed)		.000
	N	85	85
EB	Pearson Correlation	528**	1
	Sig. (2-tailed)	.000	
	N	85	85

^{**.} Correlation is significant at the 0.01 level

Table 2. Pearson correlation interpretation

Correlation Coefficient	Interpretation	
< 0.20	No correlation	
0.20 - 0.40	Weak correlation	
> 0.40 - 0.70	Medium correlation	
> 0.70 - 0.90	Strong/high correlation	
> 0.90	Correlation very strong	

The findings of this study as depicted in Table 1 showed that because the probability of the correlation due to sampling error is .000, which is lower than .05 significance level set by the researchers, it means that EFL pre-service teachers' self efficacy and epistemic beliefs are positively correlated, so the null hypothesis can be rejected. Besides, the correlation result shows that the p value is -0.528 and there is a negative correlation between self-efficacy and epistemic beliefs, which means that the higher EFL self-efficacy, the simpler the epistemic beliefs. According to Sarwono (2006), it is a medium correlation as shown in table 2. This correlation bring several implications.

Meng & Zhang (2023) found that in terms of academic performance, self-efficacy can be a significant factor, as well as an indirect predictor through academic engagement. Hence, a high level of self-efficacy among pre-service teachers are capable of engaging students in learning activities, such as providing motivation to students, creating a comfortable learning atmosphere and encouraging students to think critically, and etc. As such, this is in accordance with Khalid & Akhter (2021) study found that higher self-efficacy affects teachers' ability to engage students in the classroom, which impacts students' learning.

Students' engagement as well as instructional strategies are influenced by teacher self-efficacy. According to Ramli & Yusoff (2020) differentiated instruction in the classroom is strongly influenced by teachers' self-efficacy. Based on the research, EFL Pre service teachers can use various strategies in teaching, but almost all of them still have difficulty in applying the strategies and are also confused about responding to difficult questions from students.

In addition, teachers' self-efficacy plays a significant role in classroom management. Lazarides et al., (2020) found that teachers' efficacy in managing classrooms is positively impacted by their self-efficacy, and it is similar with Holzberger & Prestele (2021) finding that stated management of the classroom is influenced by teacher self-efficacy, and the school environment has a significant impact on the motivation of teachers and self-reported cognitive activation.

Teachers' instructional practices and students' learning strategies are strongly affected by beliefs, which are individual representations of knowledge and knowing. The pedagogical implications show that improving teachers' epistemic beliefs can support the UN's goal of improving the quality of education that can support increased 21st century skills. The 21st century skills by UNESCO are related with epistemic beliefs. Some of the 21st century skills by UNESCO are critical thinking, learning to learn, collaboration. creativity and innovation. information literacy, ICT literacy and citizenship. Therefore, it is crucial for EFL pre-service teachers to have higher epistemic beliefs because they can support 21st century skills for preparing students to succeed rapidly in a changing world.

Therefore, there are several ways for improving teachers' epistemic beliefs levels. Lammassaari et al. (2021) stated that attending a workshop, seminar, or conference can help educators learn new ideas and perspectives, which will add to their epistemological beliefs. Letina (2022) found that it is crucial for educators to regularly assess their teaching practices and they should reflect on their beliefs about teaching and learning in order to identify areas for improvement and teachers can refine their epistemic beliefs by engaging in discussions and conversations with colleagues, mentors, and other educators. Epistemic beliefs can also be developed by staying informed about the latest developments in education (Mataka et al., 2019). Implementing student-centered learning strategies in the classroom can help educators better understand including their beliefs about teaching and learning, as well as the learning strategies used by their students (Lammassaari et al., 2022). Based on Bereczki & Kárpáti (2021) epistemological beliefs about creativity influence expert teachers' decisions on how to foster creativity with technology, but assessment barriers are a significant obstacle.

Based on the result of the study, the high significant level of self-efficacy can predict low epistemic beliefs. Therefore, curriculum attention is crucial, so it can create quality education. Creating high quality in education, a high level of self-efficacy among EFL pre-service teachers must using simple epistemic beliefs method that include certain knowledge, fix ability, omniscient authority, simple knowledge.

Urhahne & Kremer (2023) stated in their studies that learners' epistemic beliefs affect their conceptions of learning, knowledge, and how knowledge is perceived as less static and more dynamic. Knowledge that can be achieved by Independent learning is regarded as important for improving English proficiency among students, but it has different meanings for each student (Agustina & Fajar, 2019).

There is no specific best way to learn English, each skill has its own way to learn. It means that EFL pre-service teachers should understand every problem in learning English has a different solution to solve. Fidyati et al, (2021) stated the best way to practice speaking skills using song, learning English vocabulary through Virtual Reality is more engaging, effective, and fun, as demonstrated by students' enthusiasm and active participation (Saepuloh & Salsabila, 2022), Cooperative learning is an effective strategy for teaching English that promotes efficiency and offers good development prospects (Yu, 2019). Certain knowledge is also achieved by understanding grammar and vocabulary. Vocabulary mastery plays a key role in learners' ability and level of language acquisition and improves speaking ability (Sheng, 2022) (Kolmurodovna & Valievna, 2021). Concept of learning English for EFL pre-service teachers these days is still relevant to be used in the future based on the purpose. Rao (2019) explained that languages like English play an important role in society for international communication and the need for a common language to make it mandatory for all citizens to learn the language.

EFL pre-service teachers' epistemic beliefs can be achieved by EFL pre-service teachers' fix ability. There are several ways to improve EFL pre-service teachers' ability, such as always learning to know the best way to study and increasing each skill, especially in this era. EFL pre-service teachers can improve their ability during the training program. Can (2019) stated that practicing teaching contributes greatly to the self-improvement and academic success of preservice EFL teachers. Another way to improve EFL pre-service teachers' ability is by increasing literacy, it

knowledge. By using critical literacy, college students are able to improve their English proficiency as well as various ability to collaborate, to self-contribute, to lead, to present, to respect, to think critically, and to recognize multiple perspectives are just some of the skills required (Wardani, 2021). An omniscient authority also necessary in learning English, omniscient authority is associated with critical thinking in occupational therapy students, and ontological cognition in general and occupational therapy-specific becomes more sophisticated with time (Mitchell et al., 2020). According to Santos et al, (2019) Student participation, critical thinking, and peer learning are all enhanced through the use of innovative teaching methods in higher education. English language teachers receive in-service teacher training (INSET) that enhances their ability to use ICT, enhance their language components, and improve their teaching and learning processes (Qizi et al., 2020). Simple knowledge can be reached by understanding English words, and grammar. In English, most words are not used for a single meaning, but have multiple meanings or senses related to one another (Resmiyati, 2020). In addition to enhancing the students' grammar competence, Tenses Master application improves their understanding of basic English grammar principles (Badroeni et al., 2021). The important thing that needs to be considered by EFL preservice teachers' is to always improve their teaching quality. The quality of classroom teaching can be enhanced by mastering teaching content, perfecting teaching design, utilizing a variety of teaching methods, improving classroom mastery, and reflecting on teaching in a timely manner (Cong & Yu, 2020).

CONCLUSION

The objective of this study is to determine whether self-efficacy and epistemic beliefs of pre-service EFL teachers are related. Epistemic beliefs and self-efficacy were significantly correlated using Pearson product moment correlation. The correlation results can be analyzed that the correlation value shows that the relationship is negative with a medium level of relationship.

Therefore, it can be concluded that the higher a person's self-efficacy, the simpler the person's epistemic beliefs. The pedagogical implications show that a high level of epistemic beliefs can significantly influence 21st century skills. In order to improve education, teachers, researchers, and

means that books are necessary to give additional institutions of higher education must all be knowledge. By using critical literacy, college considered.

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