

Teaching Efficacy Structures and Influencing Factors in Promoting Success and Retention Among Pre-Service Teachers

¹John Vincent C. Aliazas, ²Anna Liza P. Del Rosario & ³Rose R. Andrade

Abstract

This study explored the collective teaching efficacy (CTE) and its influencing factors on the in-service teaching performance of pre-service teachers. The study, through purposive sampling, involved 301 graduating pre-service teachers from a state university in Laguna, Philippines. Multiple regression analysis was used to determine significant predictors of pre-service teachers' performance. Results showed that pre-service teachers had high levels of CTE and that influencing factors of teaching efficacy were well-manifested. The respondents' in-service teaching performance was outstanding, and there was a weak to moderate correlation between CTE, influencing factors, and pre-service teachers' performance. Furthermore, the construct of CTE (vicarious experience) and influencing factors (knowledge, perceived personality factors, and resource provision) were significant predictors of pre-service teachers' performance. The findings of this study have implications for the design and implementation of pre-service teacher development training programs. By enhancing pre-service teachers' collective efficacy and addressing the influencing factors of teaching efficacy, such programs can help promote effective teaching practices and better student outcomes. The study suggests that pre-service teacher education programs should provide opportunities for pre-service teachers to observe experienced teachers, acquire knowledge and skills related to teaching, develop their perceived personality factors, and access adequate resources to enhance their teaching efficacy. The study also provides insights into the importance of building a supportive learning environment that fosters a sense of collective efficacy among pre-service teachers.

Keywords: *Collective teaching efficacy, influencing factors, pre-service teachers, internship, regression*

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About the authors:

¹Corresponding author. Assistant Professor 3, Laguna State Polytechnic University, Philippines. Corresponding email: johnvincent.aliazas@lspu.edu.ph

²Assistant Professor 4, Laguna State Polytechnic University, Philippines

³Assistant Professor 2, Laguna State Polytechnic University, Philippines.



1. Introduction

Collective teacher efficacy (CTE) is claimed as the most significant factor influencing student achievement (Hattie, 2016; Moosa, 2021). CTE is characterized as the teachers' holistic perception of their abilities to provide affirmative effects and differences in students' learning field (Donohoo, 2017). It can be noted that CTE plays a crucial role in delineating students' outcomes. Several researchers have confirmed that CTE predicts academic success and school attainment (DeWitt, 2017; Donohoo, 2018; Hattie, 2016). However, CTE is believed to be an understudied construct in several investigations into school improvement and student achievement (Donoho, 2017; Guidetti et al., 2018).

In education, fostering CTE could be a major key in escalating the performance of Filipino students in international assessments. It was revealed in the World Bank report that 80% of Filipino students still needed to meet the minimum proficiency levels, as manifested in the three assessments. Program for International Student Assessment (PISA) of the Organization for Economic Cooperation and Development (OECD) in 2018 unveiled that the Philippines ranked 78 out of 79 countries, exceeding only the Dominican Republic in mathematics and science. Moreover, Trends in International Mathematics and Science Study (TIMSS) (2019) revealed that out of 58 countries, Grade 4 students' mathematics and science performance is at 58th. Further, Southeast Asia Primary Learning Metrics (SEA-PLM) (2019) showed an alarming report that Grade 5 students' reading, writing, and mathematics performance exceeds the minimum proficiency levels. Thus, school innovations should be implemented to mitigate the effect of education to economic growth through increasing CTE (Schwabsky et al., 2020) as it precedes teacher self-efficacy beliefs (Guidetti et al., 2018).

Teacher self-efficacy is the individual belief of teachers in their capacity to effect positive change in students' learning (Atasoy & Cakiroglu, 2019; Yada et al., 2021). Teacher self-efficacy is believed to be a significant predictor of CTE (Cansoy & Parlar, 2018; Ninkovic & Knezevic, 2018). On the contrary, Guidetti et al. (2018) noted that CTE influences teachers' self-efficacy. Although these two concepts influence each other mutually, definitions still vary. Teacher efficacy belief is anchored on a single teacher's belief (Seneviratne et al., 2019; Hartell, 2017; Alibakhshi et al., 2020; Guidetti et al., 2018; Barni et al., 2019; Mok & Moore, 2019; Cruz et al., 2020; Da'as et al., 2022).

In contrast, CTE is based on a group's shared belief of teachers in making an efficacious impact on students' level of attainment (Mosoge et al., 2018). There are several factors at the school level interact and influence the expansion of efficacy beliefs among teachers (Donohoo, 2017; Guidetti et al., 2018; Hogsteen, 2020). This only demonstrates that research has advanced significantly to include the school-level element as an essential factor that contributes to establishing collective efficacy and teacher efficacy beliefs. Given paramount attention, these two constructs will prompt students' positive outcomes and improvement. Hence, it is imperative to investigate how these efficacy beliefs evolve at all stages of professional learning, specifically pre-service teachers' schooling. Based on this tenet, an extensive understanding of how pre-service teachers perceive collective efficacy and efficacy beliefs should be considered, for they play a crucial role in shaping students' future performances.

Although there has been a notable increase in published research on the impact of collective teacher efficacy and teacher efficacy beliefs on student achievement and school improvement (Ramos et al., 2014; Moosa, 2021), there is limited literature examining preservice teachers' collective efficacy and teacher efficacy beliefs. The researchers have not yet investigated the relationship between these constructs and preservice teachers' performance. As a result, the current study seeks to ascertain the relationship between preservice teachers' collective efficacy and teacher efficacy as influencing factors in the performance of teacher education students.

The study aimed to answer the following research questions:

1. To what extent can collective teaching efficacy be observed among pre-service teachers, taking into consideration factors such as mastery experience, vicarious experience, social persuasion/socialization, and affective state?
2. To what extent are the factors that influence teaching efficacy manifested among pre-service teachers in terms of content knowledge, perceived personality traits, and resource provision?
3. What is the level of pre-service teachers' performance in terms of teaching competence, administrative compliance, personal, professional, and social competence, and service to school and community?

4. Is there a significant relationship between collective teaching efficacy, influencing factors, and pre-service teachers' performance?
5. Which parameters of collective teaching efficacy and influencing factors, singly or in combination, positively predict pre-service teachers' performance?

By addressing these research questions, the study aimed to provide insights into the collective teaching efficacy of pre-service teachers and the factors that influence their teaching efficacy and performance. The study may help develop effective strategies for enhancing pre-service teachers' collective teaching efficacy, improving their performance, and ultimately enhancing the quality of education in schools.

2. Literature Review

2.1. Collective Teaching Efficacy

CTE refers to the collective beliefs of a group of teachers in their ability to positively impact student learning outcomes (Cardullo et al., 2021). It is a construct related to self-efficacy, an individual's belief in their ability to perform specific tasks successfully. In the context of teaching, CTE reflects teachers' shared beliefs about their ability to promote student learning and achieve desired educational outcomes.

Numerous studies have explored the relationship between CTE and student outcomes. For example, a study by Erdogan et al. (2022) found that CTE was positively associated with student achievement, even after controlling for individual teacher efficacy and other factors that might affect student outcomes. Similarly, a study by Blatti et al. (2019) found that schools with high levels of CTE had better student outcomes than schools with lower levels of CTE. Similarly, several factors have been identified as influencing CTE. For example, vicarious experience, an inquiry or reflection on observing other teachers' success, significantly predicts CTE (Donohoo et al., 2020; Santiago, 2023). Teacher collaboration and communication have also been found to be related to CTE (Pressley, 2021). Additionally, teacher education and professional development programs can influence CTE by providing pre-service and in-service teachers with opportunities to observe effective teaching practices, acquire knowledge and skills related to teaching, and access resources that support effective teaching practices (Tschannen-Moran, 2020).

The literature suggests that CTE is an important construct that can significantly impact student outcomes. By enhancing CTE through teacher education and professional development programs, schools and educators can improve student outcomes and promote effective teaching practices.

2.2. Teacher Efficacy Influencing Factors

Teacher efficacy refers to teachers' beliefs in their ability to impact student learning outcomes positively (Bourne et al., 2021). Research has shown that teacher efficacy significantly predicts teacher performance and student outcomes (Tschannen-Moran, 2020; Donohoo, 2018). Various factors have been identified as influencing teacher efficacy, including personal factors, contextual factors, and professional development opportunities.

Personal factors that can impact teacher efficacy include prior teaching experiences, level of education, and self-reflection. For example, research has shown that experienced teachers generally have higher levels of efficacy than novice teachers (Tschannen-Moran, 2020; Fong-Yee & Normore, 2013). Additionally, teachers who engage in self-reflection and seek feedback from others can improve their teaching efficacy (Rezaeian & Abdollahzadeh, 2020).

Contextual factors influencing teacher efficacy include the school culture and support from colleagues, parents, and administrators. Teachers who perceive their school culture as supportive and collaborative tend to have higher efficacy levels (DeWitt, 2017). Similarly, teachers who feel supported by their colleagues, parents, and administrators tend to have higher levels of teaching efficacy (Rezaeian & Abdollahzadeh, 2020).

Professional development opportunities like workshops, conferences, and in-service training can also impact teacher efficacy. Research has shown that professional development that provides teachers with practical knowledge and skills related to teaching can improve their efficacy in field (Rezaeian & Abdollahzadeh, 2020). Additionally, professional development that incorporates opportunities for teachers to observe effective teaching practices, collaborate with colleagues, and receive feedback can also enhance teaching efficacy (Tschannen-Moran, 2020).

Overall, teacher efficacy significantly predicts teacher performance and student outcomes. Personal, contextual, and professional development opportunities can influence teacher efficacy. Schools and educators can enhance teacher efficacy and promote effective teaching practices by addressing these factors.

2.3. Pre-service Teachers' Performance

Pre-service teachers' performance refers to their ability to successfully apply their knowledge and skills in a classroom setting during their teaching practicum. Several factors have been identified in the literature as influencing pre-service teachers' performance. First, pre-service teachers' knowledge and skills in teaching are significant predictors of their performance field (van Driel, 2021). Studies have shown that pre-service teachers with higher content and pedagogical knowledge levels tend to perform better during their teaching practicum (Darling-Hammond et al., 2020). Second, pre-service teachers' self-efficacy is a significant predictor of their performance. Studies have shown that pre-service teachers with higher self-efficacy levels tend to perform better during their teaching practicum (Ashton & Webb, 1986; Klassen & Chiu, 2010). Pre-service teachers with high self-efficacy tend to take risks, persist in facing challenges, and use effective teaching strategies (Bourne et al., 2021). Third, pre-service teachers' prior teaching experiences have been found to influence their performance. Studies have shown that pre-service teachers with prior teaching experiences, such as tutoring or coaching, perform better during their practicum (Darling-Hammond et al., 2020; van Driel, 2021). Prior teaching experiences can provide pre-service teachers opportunities to practice their teaching skills and build their confidence in the classroom. Fourth, the support and feedback provided by cooperating teachers and university supervisors can also impact pre-service teachers' performance. Studies have shown that pre-service teachers who receive more frequent and meaningful feedback from their cooperating teachers and university supervisors tend to perform better during their teaching practicum (Darling-Hammond et al., 2020).

Overall, pre-service teachers' performance is influenced by their knowledge and skills in teaching, self-efficacy, prior teaching experiences, and the support and feedback they receive from their cooperating teachers and university supervisors (Donohoo, 2017). By addressing these factors in pre-service teacher education programs, educators can promote effective teaching practices and improve student outcomes.

3. Methodology

This study aimed to gain a deeper understanding of pre-service teachers' perceptions of CTE and the factors that influence their performance. Through purposive sampling, the study involved 301 pre-service teachers about to graduate from a state university in the Philippines during the 2021-2022 academic year.

The study used a survey questionnaire as the main instrument to gather data. The survey questionnaire was divided into three parts. Part 1 focused on the constructs of CTE, including mastery experience, vicarious experience, social persuasion/socialization, and affective state. Part 2 of the survey instrument covered the factors influencing teacher efficacy, including content knowledge, perceived personality traits, and resource provision. Part 3 of the survey instrument assessed the pre-service teachers' performance in terms of teaching competence, administrative compliance, personal professional and social competence, and service to the school and community.

The study used statistical techniques to analyze their data and draw conclusions. In particular, two common measures of statistical variability: mean and standard deviation. The mean measures central tendency, representing the average score of a set of data fields (Mishra, et al., 2019). The standard deviation is a measure of the spread of the data around the mean. Using these measures, the study determined the extent to which each variable was practiced and manifested by the pre-service teachers. This helped them better understand the relationship between the variables and the teachers' performance. In addition to these descriptive statistics, the study used multiple regression analysis to identify significant predictors of the pre-service teachers' performance. Multiple regression analysis is a statistical technique used to examine the relationship between a dependent variable and two or more independent variables field (Maulud & Abdulazeez, 2020). By using this method, the researchers could identify which variables had the strongest impact on the performance of the pre-service teachers. Overall, these statistical techniques allowed the researchers to gain a deeper understanding of the factors that influence pre-service teachers' performance, and to identify areas where interventions or training could be focused to improve teacher preparation and effectiveness. By conducting this study, the researchers aimed to contribute to the existing body of knowledge on pre-service teacher education and the factors that impact their performance. The study's findings could be

used to inform teacher education programs and help improve pre-service teachers' preparation for their future classroom roles.

4. Findings and Discussion

Table 1

The extent of collective teaching efficacy observed among pre-service teachers

Collective Teaching Efficacy	Mean	SD	VI
Mastery Experience	4.48	.411	HO
Vicarious Experience	4.46	.491	HO
Social Persuasion/Socialization	4.38	.480	HO
Affective State	4.31	.581	HO

Note: 4.50-5.00 VHO Very Highly Observed
 3.50-4.49 HO Highly Observed
 2.50-3.49 MO Moderately Observed
 1.50-2.49 LO Least Observed
 1.00-1.49 NO Not Observed

The findings presented in Table 1 indicate the level of collective teaching efficacy observed among pre-service teachers. Collective teaching efficacy refers to the belief shared by a group of teachers that they can positively impact student learning outcomes. The results suggest that pre-service teachers who participate in field experience during their internships have higher levels of collective teaching efficacy. Furthermore, the data indicate that spending more time monitoring students, in general, is associated with increased teaching efficacy. This suggests that pre-service teachers who take a proactive approach to monitoring and assessing their student's progress and needs are more likely to feel confident in their ability to teach effectively.

Importantly, these findings suggest that pre-service teachers who embrace the professional teaching field and actively seek to engage their students in creative and innovative ways are more likely to sustain student engagement (Nykvist et al., 2022). This is an important aspect of effective teaching, as engaged students are more likely to be motivated and achieve positive learning outcomes (Filgona et al., 2020). Thus, the results suggest that field experience during internships can enhance pre-service teachers' skills, including their ability to sustain student engagement through artistic and creative teaching strategies (Dalinger et al., 2020).

The discussion of Table 2 revolves around the factors that influence the teaching efficacy of pre-service teachers. Teaching efficacy refers to a teacher's belief in their ability to facilitate student learning effectively. The factors influencing teaching efficacy can be broadly

categorized into four constructs: content knowledge, pedagogical knowledge, perceived personality traits, and resource provision.

Table 2

The extent of teaching efficacy influencing factors manifested among pre-service teachers

Teaching Efficacy Influencing Factors	Mean	SD	VI
Content	4.51	.581	VHM
Knowledge	4.45	.521	HM
Perceived Personality Traits	4.48	.528	HM
Resource Provision	4.53	.380	VHM

<i>Note:</i>	<i>4.50-5.00</i>	<i>VHM</i>	<i>Very Highly Manifested</i>
	<i>3.50-4.49</i>	<i>HM</i>	<i>Highly Manifested</i>
	<i>2.50-3.49</i>	<i>MM</i>	<i>Moderately Manifested</i>
	<i>1.50-2.49</i>	<i>LM</i>	<i>Least Manifested</i>
	<i>1.00-1.49</i>	<i>NM</i>	<i>Not Manifested</i>

Content knowledge refers to a teacher's knowledge of the subject matter, while pedagogical knowledge refers to their knowledge of how to teach that subject matter effectively field (Lachner, et al., 2021). Perceived personality traits refer to the teacher's perception of themselves, their ability to build rapport with students, and their ability to manage a classroom. Resource provision refers to the resources teachers have at their disposal to facilitate student learning, such as textbooks, technology, and classroom supplies field (Ternenge & Agipu, 2019). The manifestation of these factors among pre-service teachers has significant implications for the quality of education they provide. When teachers believe in their ability to teach effectively, they are more likely to engage their students and create a positive learning environment. This is particularly important for students who may be challenging or uninspired, as these students may require additional effort and creativity on the part of the teacher to engage them (Mohd et al., 2023). Overall, the factors influencing teaching efficacy are critical to consider in teacher training and development programs. By addressing these factors and helping teachers build their confidence in their ability to teach, we can improve the quality of education and student outcomes.

Table 3 presents the perceived level of pre-service teachers' performance based on several performance indicators. These indicators include teaching competence, administrative compliance, personal, professional, and social competence, and service to school and community. Each factor has significant implications for the quality of education student teachers can provide.

Table 3*Perceived level of pre-service teachers' performance*

Pre-service teachers performance	Mean	SD	VI
Teaching Competence	4.44	.394	VS
Administrative Compliance	4.47	.381	VS
Personal, Professional and Social Competence	4.59	.385	O
Service to School and Community	4.43	.410	VS

Note: 4.50-5.00 O Outstanding
3.50-4.49 VS Very Satisfactory
2.50-3.49 S Satisfactory
1.50-2.49 FS Fairly Satisfactory
1.00-1.49 P Poor

Teaching competence refers to the ability of pre-service teachers to effectively plan, deliver, and assess instruction (Jeschke et al., 2019). Administrative compliance refers to their ability to comply with school policies and regulations. Personal, professional, and social competence refer to their ability to manage their personal and professional lives while also building strong relationships with students and colleagues (DeWitt, 2017). Service to school and community refers to their involvement in extracurricular activities and community service initiatives (Atasoy & Cakiroglu, 2019).

Teaching internships are a crucial component of teacher education, as they allow student teachers to put theories into practice (Hoogsteen, 2020). Student teachers who are well-prepared in practical areas may be better able to teach the skills required to meet the demands of their future profession (Pressley, 2021). The findings in Table 3 suggest that pre-service teachers' performance was rated as being at a very satisfactory level, indicating that they have been adequately prepared to meet the demands of their future profession. It provides valuable insight into the perceived performance level of pre-service teachers. By addressing the factors that influence their performance, teacher education programs can better prepare student teachers to meet the demands of their future profession. This can ultimately lead to improved student outcomes and a more effective and efficient education system.

Table 4 presents the results of a test of correlation between collective teaching efficacy, influencing factors, and pre-service teachers' performance. Collective teaching efficacy refers to the shared belief among teachers in their ability to promote student learning. The influencing factors include content knowledge, pedagogical knowledge, perceived personality traits, and resource provision. Pre-service teachers' performance refers to their ability to plan, deliver, and assess instruction effectively.

Table 4

Test of correlation between collective teaching efficacy, influencing factors and pre-service teachers' performance

	Pre-Service Teachers' Performance			
	Teaching Competence	Administrative Compliance	Personal, Professional and Social Competence	Service to School and Community
Collective Teaching Efficacy				
Mastery Experience	.128*	.224**	.220**	-
Vicarious Experience	-	.168**	.278**	.307**
Social Persuasion/Socialization	-	.136*	.146*	.273**
Affective State	-	-	-	.277**
Teaching Efficacy Influencing Factors				
Content	.209**	.190**	.186**	.249**
Knowledge	.156**	.154**	.116*	.336**
Perceived Personality Traits	.320**	.293**	.277**	-
Resource Provision	.418**	.431**	.366**	.246**

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

*Correlation is significant at the 0.05 level (2-tailed).

The test results revealed a weak to moderate correlation between the variables. This suggests that a relationship exists between collective teaching efficacy, influencing factors, and pre-service teacher performance, but the relationship could be stronger. This may be due to several factors, such as individual differences in teaching style and personality or variations in the quality of teacher education programs. The test results also highlight the importance of collective teaching efficacy and its influencing factors in teacher education programs. By fostering a shared belief among teachers in their ability to promote student learning and by providing pre-service teachers with the knowledge, skills, and resources needed to be effective teachers, teacher education programs can help develop competent teacher education students (Santiago, 2023). This can ultimately lead to improved student outcomes and a more effective and efficient education system (Moosa, 2021).

Table 4 provides valuable insight into the relationship between collective teaching efficacy, influencing factors, and pre-service teachers' performance. While the correlation between the variables may be weak to moderate, it underscores the importance of addressing these factors in teacher education programs to help develop effective and competent teachers.

Table 5*Prediction of collective teaching efficacy and influencing factors to pre-service teachers' performance*

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	3.714	.147		25.313	.000
Vicarious Experience	.173	.033	.292	5.279	.000
<i>F = (1,299) = 27.866; Adjusted R² = .082; p < .01; N = 301</i>					
(Constant)	2.150	.205		10.508	.000
Resource Provision	.314	.039	.410	8.052	.000
Knowledge	.102	.027	.183	3.761	.000
Perceived Personality Traits	2.150	.205		10.508	.000
<i>F = (3,297) = 44.484; Adjusted R² = .303; p < .01; N = 301</i>					

Dependent Variable: Pre-Service Teachers' Performance

In the study, a stepwise multiple linear regression analysis was conducted to examine the relationship between pre-service teachers' performance as the dependent variable, the four constructs of collective teaching efficacy, and the four constructs of teaching efficacy influencing factors as independent variables. The analysis aimed to determine which variables were most strongly associated with pre-service teachers' performance.

The multiple regression analysis revealed that the construct of collective teaching efficacy (vicarious experience) contributed significantly to the regression model. Specifically, the F-value for the model was $(1, 299) = 27.866$, $p < .05$, indicating that the model was statistically significant. Additionally, the construct of vicarious experience accounted for 8.2% of the variation in pre-service teachers' performance scores. The findings of the multiple regression analysis have significant implications for teacher education programs and the professional development of pre-service teachers. The results suggest that providing opportunities for pre-service teachers to observe and learn from the successful teaching strategies of their peers can positively impact their teaching efficacy and, ultimately, their students' learning outcomes.

One way to provide opportunities for pre-service teachers to observe successful teaching strategies is through classroom observations and feedback (Atasoy & Cakiroglu, 2019). For example, teacher education programs could facilitate classroom observations by pairing pre-service teachers with experienced teachers, who can model effective teaching strategies and provide feedback on their performance (Lachner, et al., 2021). Additionally, peer observations among pre-service teachers can be beneficial, as they can learn from each other's

successes and provide constructive feedback (Donohoo, 2018). Another way to provide opportunities for pre-service teachers to observe successful teaching strategies is through video-based observations. For example, teacher education programs could provide pre-service teachers with video recordings of successful teaching lessons, allowing them to observe and analyze effective teaching strategies at their own pace (Yada et al., 2021). This approach can be particularly helpful for pre-service teachers who may not have access to experienced teachers or who may be learning in remote or online environments.

Moreover, teacher education programs can facilitate collaborative learning among pre-service teachers through group projects, case studies, and other interactive activities. By working together, pre-service teachers can share their knowledge and experiences, learn from each other's successes and challenges, and develop a deeper understanding of effective teaching strategies (Blatti et al., 2019). Furthermore, the findings of the study emphasize the importance of providing opportunities for pre-service teachers to observe and learn from successful teaching strategies (van Driel, 2021). By fostering collective teaching efficacy and providing pre-service teachers with the knowledge, skills, and resources needed to be effective teachers, teacher education programs can help develop competent and confident teachers who can promote student learning and improve educational outcomes (Cardullo et al., 2021).

The findings also entail that the constructs of teaching efficacy (i.e., beliefs and confidence in one's ability to teach effectively) significantly impact pre-service teachers' performance scores. The study found that three specific factors - knowledge, perceived personality factors, and resource provision - influenced the constructs of teaching efficacy and contributed significantly to the variation in pre-service teachers' performance scores.

The regression model used in the study showed that the relationship between these factors and teaching efficacy was statistically significant, with an F-value of 44.484 and a p-value of less than 0.05. This means that the model is likely to fit the data well and that the relationship between the variables is not due to chance. Furthermore, the model accounted for 30.3% of the variation in pre-service teachers' performance scores, indicating that these factors significantly determine how well pre-service teachers perform in the classroom. Overall, the findings suggest that developing teaching efficacy through these three factors could improve pre-service teachers' performance.

The discussion of the research findings highlights the importance of teaching efficacy influencing factors in predicting pre-service teachers' performance (Dalinger et al., 2020). The study found that knowledge, perceived personality factors, and resource provision are significant predictors of teaching efficacy, which influences pre-service teachers' performance in the classroom (Tschannen-Moran, 2020).

Firstly, knowledge was identified as a key factor in predicting teaching efficacy. Pre-service teachers who possessed a high level of subject matter and pedagogical content knowledge were likelier to have a strong sense of teaching efficacy (Donohoo et al., 2020). This is because having a deep understanding of the content and how to teach it effectively will likely increase one's confidence in their ability to teach (Atasoy & Cakiroglu, 2019).

Secondly, perceived personality factors were found to influence teaching efficacy. Specifically, pre-service teachers with a positive self-concept were emotionally stable and had high levels of optimism were more likely to have a strong sense of teaching efficacy (Bourne et al., 2021). This suggests that teachers' beliefs about themselves and their abilities can have a significant impact on their performance in the classroom.

Finally, resource provision was also identified as a significant predictor of teaching efficacy. Pre-service teachers who had access to adequate resources, such as teaching materials, classroom technology, and support from colleagues and mentors, were likelier to have a strong sense of teaching efficacy (Ternenge & Agipu, 2019). This highlights the importance of providing pre-service teachers with the necessary resources and support to help them develop their teaching skills.

These findings suggest that teaching efficacy influence factors play a crucial role in predicting pre-service teachers' performance. By addressing these factors, teacher education programs and schools can help pre-service teachers develop a stronger sense of teaching efficacy, which will likely improve their classroom performance. This has important implications for improving the quality of education and preparing future teachers to meet the needs of diverse learners in today's complex world.

5. Conclusion

Teaching quality is a complex and multidimensional concept that encompasses various aspects of the teaching-learning process. Effective teaching practices are essential for improving student outcomes and enhancing the reputation of educational institutions. The study findings highlight the significance of teaching efficacy constructs and influencing factors in predicting pre-service teachers' performance.

The construct of CTE (vicarious experience) was a significant predictor of pre-service teachers' performance. Providing pre-service teachers with opportunities to observe experienced teachers in action and learn from their teaching practices can help enhance their teaching efficacy and improve their performance in the classroom. This finding has implications for the design and implementation of pre-service teacher development training programs, which should incorporate opportunities for pre-service teachers to observe and learn from experienced teachers.

The study also identified three key influencing factors of teaching efficacy that significantly predicted pre-service teachers' performance: knowledge, perceived personality factors, and resource provision. To enhance teaching efficacy, pre-service teacher education programs should provide opportunities for pre-service teachers to acquire knowledge and skills related to teaching, develop their perceived personality factors, and access adequate resources to support their teaching practice.

The findings have important implications for designing and implementing pre-service teacher development training programs. Pre-service teacher education programs should aim to create a supportive learning environment that fosters a sense of collective efficacy among pre-service teachers. This can be achieved by providing opportunities for pre-service teachers to collaborate with their peers, share their experiences and ideas, and receive feedback on their teaching practice.

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