

Exploring Pre-service Teachers' Attitudes toward Inclusive Education: An Explanatory Sequential Mixed-Methods Study

Sabillano, Krystelle R.

Bachelor of Culture and Arts Education College of Teacher Education Western Mindanao State University Email: krystellesabillano@gmail.com

https://orcid.org/0009-0001-5506-0348

Date Submitted:

August 6, 2025

Date Accepted:

September 28, 205

Date Published:

October 30, 2025

Suggested Citation:

Sabillano, K. (2025).Exploring Pre-service Teachers' Attitudes toward Inclusive Education: An Explanatory Sequential Mixed-Methods Study. International Journal of Education, Literacies and Curriculum Studies. 1 (1), 49-.

Abstract

This study explored the attitudes of pre-service teachers toward inclusive education using mixed-methods explanatory sequential design. A total of 150 respondents were selected through stratified random sampling and were surveyed using a structured questionnaire for the quantitative phase. To gain a deeper understanding of the respondents' responses this was followed by qualitative phase, where 15 participants were purposely chosen by the researcher to have oneon-one semi-structured interview. This study investigates pre-service teachers' attitudes toward inclusive education across various programs, results from the quantitative data revealed that pre-service teachers across various programs generally exhibit a "positive" attitude toward inclusive education and found no significant differences between pre-service teachers' attitudes and program. Suggesting that regardless of their programs, these pre-service teachers expressed a favorable attitude towards inclusivity in the realm of education. Furthermore, themes have emerged from the qualitative findings supporting to the result obtained from the quantitative phase, with the insights and opinions focusing on preservice teachers' positive attitudes toward inclusive education and factors that have influenced their positive attitudes. The integration of both methods provide a more deeper understanding of pre-service teachers' attitudes, highlighting that several factors can contribute to the positive attitude of pre-service teachers toward inclusive education.



Publisher's Note

The *International Journal of Education, Literacies and Curriculum Studies (IJELCS)* publishes all articles under the terms of the **Creative Commons Attribution-Non Commercial 4.0 International License (CC BY-NC 4.0)**. This license permits any non-commercial use, sharing, adaptation, distribution, and reproduction in any medium or format, provided appropriate credit is given to the original author(s) and the source, a link to the Creative Commons license is provided, and any changes made are indicated. The authors retain copyright, and the publisher is granted the right of first publication.





INTRODUCTION

Inclusive education has attained international attention and has gathered global momentum (Alrudyani, 2025). Globally, the movement to teach all students in the inclusive education system is one of the most significant school reforms (Malinen et al., 2013). Currently, the inclusive concept in education continues to be a contested subject. As noted by Boyle et al. (2022), it is progressively accepted as the most effective means to provide equitable and high-quality education while reducing biased attitudes toward all students; it is also acknowledged as the best principle and practice in addressing issues of diversity and equity (Migliarini et al., 2023). However, implementing full inclusion of students regardless of their degree of disability in a regular classroom is an extraordinary task for teachers if they are to be well served (Kauffman et al., 2023), requiring teachers to adjust their practices and make greater differentiation in their teaching just to cater to the needs of all students (Steen & Wilson, 2020), and it can be difficult at times to accommodate all students' needs and meet their demands in a single classroom (Almalky & Alrabiah, 2024; Pozas et al., 2023; Tiwari et al., 2015). Teachers, as key players inside the classroom, face these challenges (Mentel et al., 2024). Consequently, it has become a paramount to investigate the attitudes toward inclusive education, especially among teachers and those in the field of education, as teachers' attitudes determine the success of inclusive education (Steen & Wilson, 2020).

Teachers' attitudes toward inclusive education are often described as teachers' beliefs and feelings with the concept of the inclusion of students with special educational needs (SENs) in mainstream classrooms (Malinen et al., 2013), which is generally

recognized as a consistent and enduring value judgment and evaluation of a stimulus object or circumstance that can be either positive or negative (Kersh, 2011; Vargas & Yoon, 2004). One of the crucial factors that can lead Inclusive Education to success is teachers' attitudes: if thev are not inclusive. consequently it may be a barrier to inclusive teaching and practices (Al-Korbi et al., 2024). Teachers' attitudes toward inclusive education are a significant element of its effectiveness, as they have a substantial impact on its implementation, as highlighted by Steen and Wilson (2020). The success of inclusive education is dependent upon teachers executing adaptations for children with special educational needs. Moreover, their attitudes have the power to shape relationships, actions, as well as teaching strategies and methods, which can directly affect all students with or without special educational needs (SENs) (Soeharto et al., 2024). Even with sufficient materials and support from the school, inclusive education can never be effective, as it is the most important variable for the success of inclusivity (Schell et al., 2024), and positive attitudes are key in practicing inclusive education (Wang et al., 2025).

Having inclusivity is not just about the placement of previously marginalized learners in a regular classroom or the integration of these learners into the normal structures of the educational system as closely as possible (Michailakis & Reich, 2009; Unianu 2012); it also requires teachers to use innovative and inclusive teaching practices (Woodcock et al., 2022). As Malinen et al. (2013) noted, inclusive practices can include, for example, a teacher modifying instruction and assessment according to students' needs, with the aim of preventing and controlling disruptive student behavior.



Cardenas (2022)defined inclusive education as the education of every student in age-appropriate regular classrooms. irrespective of the degree or severity of their disability. With the necessary support of the teacher and within a welcoming social atmosphere, students will be involved in accessing the regular curriculum. Its definition has been extended to school systems wherein all children now, including children from ethnic minorities. children from socioeconomic status, and even children with disabilities, can obtain access to their local schools (Yada, 2018); they are welcomed, cared for equally, and valued, with fair and learning. participation equitable educational opportunities (Vieira et al., 2024). educational systems must implement educational programs allowing students with SEN to completely participate in and benefit from a needs-centered pedagogy (Khamzina et al., 2021).

Good-quality education should be inclusive, ensuring that all types of learners participate in and achieve responses to their differences and needs during learning (Chtaika, 2023). According to Saloviita (2015), inclusive education has become a vehicle for resisting all kinds of rejection, irrespective of their disability, race, gender, class, culture, ethnicity or other forms of difference. It is envisioned as a systematic improvement process in which diverse strategies are employed as a way to remove walls that could hinder and limit the learning process of students with special needs (Fernández, 2017). Inclusive education practices must also encompass various approaches and principles designed to guarantee that every student will have the opportunity to receive high-quality education while also respecting their human rights, which involves nurturing students with a learning environment that is inclusive, making students with special educational needs (SENs) feel a sense of belonging and socially integrated (Almalky & Alwahbi, 2024).

Teachers' attitudes play a pivotal role in of inclusive education the success (Prisiazhniuk et al., 2024). Thus, the concept of teachers' role being significant in the realm of inclusive education has prompted many researchers to investigate different variables that may impact teachers' practices related to inclusive education (Almalky & Alwahbi, 2024). One of which is their attitudes. Researchers have investigated the attitudes of teachers toward pre-service education, such as Boyle et al. (2023), whose study focused primarily on Australian students, 548 university with total participants, reflecting a large sample size. This indicates that the findings of their study aim to provide an extensive perspective on the phenomenon. Hence, the current study addresses the gap in literature by providing a profound examination of the topic from a smaller-scale perspective. In particular, for the targeted respondents, pre-service teachers in the teacher education department who are enrolled in a university, allowing the researcher to gain a deeper understanding of the attitudes of pre-service teachers, which may differ from those of pre-service teachers at other universities. Moreover, studies have focused on the influence of gender and attitudes toward inclusive education (De Boer et al. 2011; Malinen et al. 2012). However, few studies have investigated the influence of programs on attitudes toward inclusive education. This gap remains significant, as programs may play a significant role in how pre-service teachers perceive their attitudes in inclusive education. Therefore, the aim of this study is to determine pre-service teachers' attitudes toward inclusive education across different programs at a university.

Research Questions



This study aimed primarily to determine the attitudes of pre-service teachers toward inclusive education. Specifically, the study sought to answer the following questions.

- 1. What is the attitude of the respondents toward inclusive education?
- 2. Is there a significant difference in the respondents' attitudes toward inclusive education when the data are grouped across programs?
- 3. Is there a significant difference in attitudes toward inclusiveness between male and female respondents?
- 4. What are the factors that contribute to the positive attitude of pre-service teachers toward inclusive education?

METHODOLOGY

Research Design

The aim of this study was to determine the attitudes of Pre-service teachers toward inclusive education. An explanatory sequential method design was employed in the study; with this method, the qualitative stage was employed to further explain and gain a deeper understanding of the quantitative stage. The quantitative phase provides a framework for the systematic collection of numerical data as well as the empirical investigation of observable situations by using deductive and inferential techniques that are descriptive and/or casual (Azar et al., 2024). In the qualitative phase, the researcher conducted multiple shots to identify the factors that may contribute to pre-service teachers' positive attitudes toward inclusive education. The incorporation of both qualitative and quantitative methods facilitates a more detailed analysis, which leads to a more comprehensive understanding of the study.

Respondents

During the first phase or the quantitative data, the respondents of this study sampled a total of 150 pre-service teachers from the Teacher Education Department at a university, equally divided into 30 across five programs: Bachelor of Secondary Education (BSED), Bachelor of Elementary Education (BEED), Bachelor of Special Needs Education (BSNED), Bachelor of Early Childhood Education (BECED), and Bachelor of Culture and Arts Education (BCAED). In terms of gender, 62% of the respondents were females, which composed the largest sample of this study, and only 38% of the respondents were males.

The second phase of the study involves qualitative data. A total of 15 participants were equally divided into three groups (3) across the five programs. These 15 participants were purposively chosen by the researcher to ensure that all necessary requirements for this study were met.

Instrument

To achieve the research objective of exploring the attitudes of pre-service teachers toward inclusive education. In the quantitative study employs phase. this a survey questionnaire that incorporates one adopted research instrument. The research instrument used was the Teacher Scale (TAISA) developed by Boyle (2023). The questionnaire was measured on a 6-point Likert scale, where 1 was "Strongly Disagree", 2 was "Disagree", 3 was "Slightly Disagree", 4 was "Slightly Agree", 5 was "Agree", and 6 was "Strongly Agree". A total of twenty-one (21) items were answered by the respondents of the study, which assessed their attitudes toward inclusive education. A six-point Likert scale was purposely used in this study so that respondents were unable to select a neutral score. The negative statements from this study were reverse coded (Statements 2, 7, 9, 11, 14, 20, and 21). This adopted research instrument



has demonstrated high reliability, with a Cronbach's alpha value of 0.726. The research instrument involved a pilot test of a total of 30 respondents; importantly, these respondents involved in the pilot test were not the same as those included in the final sample presented. All the data obtained from this test were analyzed via Cronbach's alpha, and the instrument used exhibited high reliability, with a value of 0.878.

Moreover, in the second phase, qualitative data are necessary. The researcher conducted a one-on-one semi-structured interview employing an open-ended question to allow participants to freely express themselves in answering the questions. To ensure the validity of the content and reliability of the primary question developed by the researcher, it was validated by an expert.

Ethical Considerations

In this study, the researcher secured a letter of consent for the respondents, ensuring that they understood the research purpose, including its benefits and risks. respondents' participation in this study was entirely voluntary. Furthermore. respondents' anonymity and confidentiality were strictly preserved. All the information and data obtained from both the surveys and the interviews, including the recordings, interpretations transcriptions. or documents, were stored securely, with access limited to the researcher solely to prevent any leakage of information and unauthorized access.

Data Gathering Procedure

During the first phase, the data collection process was performed by distributing survey questionnaires physically to the respondents in their respective classrooms. This approach allowed for a controlled environment in which

the respondents experienced minimal distraction while they were answering the questionnaires. During the delivery of the questionnaires, the researcher explained and provided clear instructions to the respondents and was assured that their responses would be kept confidential and anonymous. The survey questionnaire requires 5–10 minutes to complete. The approach of physically distributing the survey questionnaire allowed for a high response rate because respondents were able to ask clarifications from the researcher if needed.

In the second phase of this study, the researcher conducted a one-on-one semistructured interview that lasted approximately 15–30 minutes. Prior to the interviews, the researcher ensured that the participants' consent was obtained beforehand and that they were informed about the study's purpose and benefits. The participants were also assured that there was no risk associated with their participation and that their participation was entirely voluntary. If they find uncomfortable in answering the question, they have the right to withdraw from the interview at any time.

Quantitative Data Analysis Procedure

In this study, the researcher utilized the statistical application IBM SPSS version 20 to analyze, interpret, and compute the data. Descriptive analysis was employed for the demographic profile of the respondents, including their gender, program, and age. The instrument used underwent a normality test via the Kolmogorov–Smirnov test, and a significant value of 0.03 was gained. Demonstrating that the items were not normally distributed. Thus, the researcher employs a nonparametric statistical tool to analyze, interpret, and compute the data. A Kruskal–Wallis test, which is the counterpart of one-way analysis of variance (ANOVA), was



used to determine the significant difference between respondents' attitudes and programs, and the Mann–Whitney U test, which is the counterpart of the independent samples T-test, was employed to determine the difference between respondents' attitudes and gender.

Coding Procedure

A coding procedure was employed for the researcher to facilitate the analysis of the quantitative data. This involves assigning corresponding numerical values to the categorical variables in this study. For gender, a value of 1 was assigned to male respondents, and a value of 2 was assigned to female respondents. For the program, BSED is coded as 1, BEED is coded as 2, BSNED is coded as 3, BECED is coded as 4, and BCAED is coded as 5. Moreover, a scoring interval ranging from 5.15 to 6.0 reflects a strongly positive attitude, 4.32 to 5.14 indicates a positive attitude, 3.49 to 4.31 reflects a somehow positive attitude, 2.66 to 3.48 denotes somehow negative attitude, 1.83 to 2.65 indicates a negative attitude, and 1.82 to 1.0 denotes a strongly negative attitude.

Qualitative Data Analysis Procedure

For the researcher to facilitate the analysis of qualitative data, the responses immediately transcribed after the interviews were conducted. As some participants speak in their native language because it is more comfortable to share their insights and opinions, their responses were translated into standard English translation. To ensure that every transcription and translation was researcher accurate, the asked respondents to have it checked and validated it by an expert. After being checked and validated, the researcher analyzed the data gathered for coding and generating themes, according to the responses given by the participants. All participants in this study were coded on the basis of the sequence in which they were interviewed. Participants 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, and 15.

RESULTS AND DISCUSSION

4.1 Quantitative Findings

Table 1.Pre-service teachers' attitudes toward inclusive education

Attitude toward Inclusive Education				
Program	Median	SD	Interpretation	
BSED	4.32	0.49	Positive	
BEED	4.37	0.48	Positive	
BSNED	4.42	0.47	Positive	
BECED	4.44	0.45	Positive	
BCAED	4.46	0.45	Positive	

To determine the attitudes of preservice teachers toward inclusive education, the researcher performed descriptive analysis using SPSS. Table 1 reveals that, in this study, pre-service teachers across various programs generally exhibit a "positive" attitude toward inclusive education. Specifically, the findings suggested that the respondents tended to express a favorable attitude toward inclusive education. The findings of the study corroborate other research findings, which highlighted that pre-service teachers generally held a positive attitude toward the inclusion of students with special educational needs. (Braksiek, 2022; Deitcher et al., 2025).

Table 2.

Significant differences between pre-service teachers' attitudes and programs

To determine the significant differences between these variables, a statistical tool known as the Kruskal–Wallis test was used. The results of the analysis are



presented in Table 2. Table 2 shows that, between the program-only and pre-service teachers, there is no significant difference between the variables because its p value is 0.985, which is greater than 0.05. These findings indicate that regardless of the program of pre-service teachers, their attitudes do not significantly differ from one another; they all share the same attitudes toward inclusive education. There are few studies on pre-service teachers' attitudes across programs. However, Guillemot et al. (2022) investigated in-service teachers' attitudes and reported that teachers who specialize in special education are more favorable to inclusive education than ordinary teachers are, as they are more trained in children with diverse special educational needs.

Table 3.

Significant difference between pre-service teachers' attitudes and gender

Variables	Mean Rank	
Dependent	Independent	
Attitude toward inclusive education	Male Female	67.15 80.62

The raw data that were gathered for this study were successfully transferred to SPSS, which enables the researcher to process and analyze the data. To determine whether significant differences occurred in the attitudes of the respondents across genders, a nonparametric tool known as the Mann–Whitney U test was used.

As shown in Table 3, the Mann–Whitney U test results revealed a probability value of 0.065, which is greater than the alpha value of 0.05. This finding indicates that there

is no significant difference between attitudes and gender. This implies that, regardless of the gender of the pre-service teachers, the attitudes they hold toward inclusive education do not significantly differ, suggesting that gender is not a variable influencing the attitudes of pre-service teachers toward inclusive education and that regardless of the gender of the respondents, they both exhibit similar attitudes toward inclusive education. This finding is in line with some studies confirming that gender does not significantly influence the attitudes of pre-service teachers toward inclusive education (Malinen et al., 2012; Soeharto et al., 2024; Todorovic et al., 2011). However, the findings of this study contradict those of other studies, indicating that female pre-service teachers have more positive attitudes toward inclusive education than male pre-service teachers do (Alhumaid, 2022; Avramidis et al., 2000; Boyle et al., 2024).

The quantitative results indicate that pre-service teachers demonstrate a positive attitude toward inclusive education. This result prompted further research interest in identifying and examining various factors that contribute to the positive attitudes of preservice teachers toward inclusive perspective on the factors contributing to pre-service teachers' positive attitudes toward inclusive education, it is important to understand these elements.

4.2 Qualitative Findings

In this phase, semi-structured interviews were conducted to further analyze and identify the factors that contributed to the positive attitudes of pre-service teachers toward inclusive education. Four themes emerged from the analysis, and the researcher briefly discussed each theme. This implies that the positive attitudes of pre-service teachers



toward inclusive education are attributed to four factors.

Theme 1: Subjects Taken

Six (6) out of 15 or 40% of the participants believed that the subjects or courses offered by the college related to inclusive education influenced their positive attitudes toward inclusive education. On the basis of the responses and reasons acquired during the interviews, taking subjects or courses related to inclusive education is a good foundation for having a positive attitude toward inclusive education because these courses or subjects have strengthened their knowledge, shaped, and equipped them as future teachers in catering to students with different needs.

The following excerpts are extracted from the interviews:

"The lectures given, made me realize about things and made me understand more about it, and because of that, it actually helped me in acknowledging and recognizing differences between students and accepting them, without leaving anyone behind." (Participant 1)

"The courses offered open the minds of teachers in the most unique and deeply way. Like what I experienced, I got to know students with learning disabilities and got to know deeper what makes them different and how are they different. This is one of the most evident assets which a teacher has a positive attitude toward it, as these courses equip and shape teacher's perspective" (Participant 4)

"Because of subjects that are related to Inclusive Education, it helps me as a pre-service teacher to strengthen my knowledge and equip me with how to handle learners, including those with disabilities" (Participant 6).

"...Courses or subjects is a must because without it, it would be hard for preservice teachers to cater to the needs of each student regardless of differences." (Participant 7)

"The subject taught me that all children, regardless of their abilities, deserve education and inclusion among regular students. Now this value has stuck in me, reason why I have a positive attitude toward inclusive education" (Participant 8)

".... These courses opened my mind about the learners who are abled differently. It taught me how to handle and communicate with these kinds of students, allowing me to see the beauty within them and appreciate how the course broke stereotypes." (Participant 14)

All the participants highlighted that subjects related to inclusive education play a vital role in contributing to a positive attitude toward inclusivity in the realm of education. As stated by Participant 1, these subjects give pre-service teachers the bridge to have awareness about inclusivity that fosters and acceptance understanding toward of differences. students irrespective Participants 4, 6, and 7 shared a similar response, where courses related to inclusive education shaped and equipped pre-service teachers to be more ready in handling learners, including those who are differently abled. This highlights its importance in building the knowledge and skills needed to cater to the needs of each student. These responses correspond with the findings of



Kraska and Boyle (2014), who revealed that students perceive more positive attitudes toward inclusive education if courses related to inclusive education are already studied. making this an essential factor in developing pre-service teachers' attitudes toward inclusivity in the realm of education. Moreover, courses can provide pre-service teachers with knowledge about characteristics of special needs students, allowing them to have the knowledge and skills required by teaching with this type of learner. Thus, it should be offered to enable the potential of pre-service teachers to students, including those who are abled differently in the future (Rabi et al., 2018). Furthermore, Participants 8 and 9 shared their commonalities with responses. emphasizing that related courses or subjects significantly helped in valuing all types of learners to have equal access to high-quality education.

Theme 2: Training and Field Experiences

Two (2) out of 15 or 13.33% of the participants believed that training played a vital role in sharpening their professional development as pre-service teachers, and according to 4 out of 15 or 26.67% of the participants, practical experiences also play a significant role, as this allows pre-service teachers to integrate the learned knowledge from the subjects or courses taken.

The following excerpts are extracted from the interviews:

"The training helps me understand what inclusive education really means and gives me the tools to support all learners. The way we are trained to value all learners and how to handle diverse needs, it really helps build a positive attitude. Without it, I might feel unsure and uncomfortable about

handling students with different needs." (Participant 5)

"For me, training plays a vital role in shaping pre-service teachers' attitudes toward inclusive education, as this builds a foundation for understanding and implementing inclusivity effectively. With training, I learned that students who are differently abled can cope in the general education setting if given appropriate support and accommodations." (Participant 11)

"My experience helped me understand my role as a future teacher in creating and welcoming environment where all students, regardless of their abilities, are valued and given equal opportunities to learn." (Participant 9)

"I had the opportunity to learn what equal learning truly means in a classroom owing to my experience, that regardless of abilities, social background, or difficulties they have. Every student has a fair chance to learn in school." (Participant 10)

"My experience was the realization that every student I encountered had a different story, needs, and a way of learning. Seeing that made me want to understand them better and figure out how I can support them, even in small ways." (Participant 13)

"My experience made me realize that inclusive education is not just a dream or a possibility. Rather, it is an important approach to help every student feel included. Changing the way I view myself as future teacher" (Participant 15).

Participants 5 and 11 claim that training is a great preparation for inclusive



education because it allows them to apply the learned knowledge taken from the subjects or courses, enhancing their skills and making them more prepared in handling all types of learners. Moreover, Participants 9, 10, 13, and 15 highlighted the importance of their experiences as pre-service teachers, stating that the exposures they have allowed them to better understand each learner's needs and ensure that these learners will have equal opportunities to learn inside the classroom. Pre-service teachers adjust their teaching approach and develop the necessary skills to effectively cater to the needs of each student. These responses can be supported by the study of Massaouti (2021), which suggests that completing the field-based experience that exemplifies students' diversity was crucial, as this developed their understanding of inclusion and made sense of their future teaching practices. Moreover, meaningful field experience can positively influence preservice teachers' attitudes and help them develop their skills in facilitating all types of learners (Hassanein et al., 2021). Another study conducted by Sharma et al. (2006) revealed that, in most instances, pre-service teachers have more positive attitudes toward individuals with disabilities, and the idea of inclusion is because of the training and experiences they have.

Theme 3: Values

Another factor shared by 4 out of 15 or 26.67% of the participants established that the values they hold as pre-service teachers and human beings are essential. In particular, being open to inclusivity, accepting and respecting differences, and empathizing learners.

The following excerpts are extracted from the interviews:

"I believe, it would be the openness of the pre-service teachers toward inclusive education. Where they are aware and know that everyone has unique characteristics." (Participant 2)

"I believe that the factors that contribute to the positive attitudes of pre-service teachers are acceptance and respect. Despite differences as preservice teachers, I accept and respect diversity and ensure that everyone is heard and valued." (Participant 3)

"Empathy as well is an important factor. Because as future teachers, we start to realize that every student deserves a chance to learn, regardless of their background or ability. When we see how inclusive education can make a difference, it motivates us to support it." (Participant 5)

"...I have empathy for these individuals because they are human just like me... As pre-service teacher it is our role to treat them equally together with the other learner, hone what they have and let them experience life and education as how it should be" (Participant 12)

In response to Participant 2, openness contributes to positive attitudes toward inclusive education because it allows preservice teachers to have knowledge and welcome any type of learner inside the classroom, regardless of any differences. Participant 3, on the other hand, established the importance of acceptance and respect. A pre-service teacher should possess these values because they serve as role models for their students. Participants 5 and 12 highlighted how empathy toward learners who are differently abled builds positive



attitudes toward inclusive education. Understanding their struggles and background provides them with more motivation to support inclusive education. As explained by participants 5 and 12, it is through empathy that pre-service teachers begin to see every learner's capability and worth, inspiring them to support inclusivity where everyone, regardless of differences, will feel a sense of belonging, value, and support. These findings support the findings of Makoelle (2019), suggesting that the development of teacher empathy should be part of the regular initial teacher education curriculum and of in-service training programs, as through empathy, the teacher can recognize that the students are different and have different needs, which can positively impact student-teacher relationships.

Theme 4: Having Family Members Who Belongs to Differently Abled Communities

One (1) out of 15 participants (6.67%) shared a unique response. This finding suggests that having a family member who is abled differently can be a factor in having a positive attitude toward inclusive education. This response is supported by the explanation that being around people who are in need of special needs allows pre-service teachers to have first-hand experience in witnessing their struggles, which can lead to strong personal connections.

The excerpt is extracted from the interview:

"Through having a family member who belongs to a different abled community, pushes you as a teacher to ensure that all learners feel valued and supported because you can understand how they feel, struggle, and live based on your personal experience. In addition, as a

pre-service teacher, having a differently abled family member, you will not see inclusive education as a burden but a moral responsibility and an opportunity to create a more compassionate educational environment" (Participant 14).

In response to Participant 14, having a family member who is also part of a differently abled community can be a factor in how preservice teachers perceive the attitude toward inclusive education. This is because close personal relationships or connections create an opportunity for more positive interactions and observations. Few studies have investigated how having family members who belong to differently abled communities is related to pre-service teachers' attitudes toward inclusive education. However, Krischler and Pit-ten Cale (2019) reported that more interactions with students with special educational needs play a pivotal role in the development of more positive attitudes.

5. Conclusion

This study investigated pre-service teachers' attitudes toward inclusive education utilizing a mixed methods explanatory sequential approach. On the basis of the quantitative findings of the study, a positive attitude toward inclusive education among pre-service teachers across programs was observed, suggesting that the respondents integrated the concept of inclusivity in their teaching and learning process into their classrooms and students. This highlights the importance of fostering inclusivity in educational settings, ensuring that there is an equal opportunity for all students irrespective of their differences, as it plays a pivotal role in enhancing their academic success and wellbeing. Thus, to further understand the factors



underlying this positive attitude, a qualitative investigation was performed to gain an indepth understanding of the key elements that contributed to this attitude.

On the basis of the qualitative findings. four (4) themes emerged for the factors that contribute to the positive attitudes of preservice teachers toward inclusive education. This theme highlights how the subjects provided the necessary knowledge and awareness of learners, including those in need of special education, in contributing to positive attitudes toward inclusive education. The theme Trainings and field experiences emphasized how these factors contributed to developing understanding and skills in handling students with different needs. Giving the opportunity to be equipped and honed the ability to teach diverse students effectively. Moreover, the values that a pre-service teacher possesses become a significant factor, as they foster connections between teachers and learners, ensuring that no one will feel left behind. Finally, the theme of having a family member who belongs to a differently abled community. Highlights how having family members who need additional support allows pre-service teachers to experience and witness the way they live as individuals, leading to a deeper understanding that shapes them as future teachers to become more compassionate and inclusive.

Together, these themes highlighted the different factors contributing to preservice teachers' positive attitudes toward inclusive education. That is not just about having knowledge but also training, field experiences, values that the pre-service teacher possesses, and having a family member who is differently abled.

Aldosari, M. (2022). Perceptions of Saudi Arabian school teachers in private general education schools toward the inclusion of students with disabilities. *Research in Developmental Disabilities*, 130, 104342. https://doi.org/10.1016/j.ridd.2022. 104342.

Alhumaid, M. (2022). Predictors of physical educators' attitudes toward including students with disabilities in inclusive class. *The Open Sports Sciences Journal*, 15, https://doi.org/10.2174/1875399X-v15-e221031-2022-34.

Alhumaid, M., Khoo S., & Bastos, T. (2022). Experiencing of an adapted physical activity intervention progrm in Saudi pre-service physical educatio teachers' self-efficacy towards inclusion. *The Open Sports Sciences Journal*, *15*. https://doi.org/10.2174/1875399X-v15-e2206270.

Al-Korbi, H., Al-Hamdani, A., Ghareeb, A., Al-Asmakh, M., & Abdallah, A. (2024). Facilitating inclusive education: Assessing faculty awareness and attitudes towards students with special educational needs at Qatar university. *Heliyon*, 10(10), e3107.https://doi.org/10.1016/j.heliyon.2024.e31076.

AlMahdi O., & Bukamal H. (2019). Pre-service teachers' attitudes toward inclusive education during their studies in Bahrain teachers college. *SAGE Journal*, 9(3). https://doi.org/10.1177/215824401 9865772.

Almalky, A., & Alrabiah, A. (2024). Predictors of teachers' intention to implement

REFERENCES



- inclusive education. *Children and Youth Services*, 158, 107457.https://doi.org/10.1016/j.childyouth.2024.107457.
- Almalky, H., & Alwahbi, A. (2023). Teachers' perceptions of their experience with inclusive education practices in Saudi Arabia. *Research in Developmental Disabilities*, 140, 104584.https://doi.org/10.1016/j.rid d.2023.104584.
- Alrudayni, M. (2025). Moving towards inclusive education: Policy evolution in Saudi Arabia. *International Journal of Educational Research*, 130, 102533. https://doi.org/10.1016/j.ijer.2024.102533.
- Altes, T., Willemse, M., Goei S., & Ehren, M. (2024). Higher education teachers' understandings of and challenges for inclusion and inclusive learning environments: A systematic literature review. *Educational Research Review*, 43, 100605. https://doi.org/10.1016/j.edurev.202 4.100605.
- Avramidis, E., Bayliss, P., & Burden, R. (2000). Student teachers' attitudes towards the inclusion of children with special educational needs in the ordinary school. *Teaching and Teacher Education*, 16(3), 277-293. https://doi.org/10.1016/S0742-051X(99)00062-1.
- Azar, N.G., Eisen, A., Abdul Rahman, H., Alrimawi, I., Vaughn, K., Patton, L., Ellis, K., & Taha. (2024). A brief and general overview of quantitative designs for pediatric nurses. *Journal of Pediatric Nursing*, 78, e460-e463. https://doi.org/10.1016/j.pedn.2024.08.010.

- Boyle, C., Barrel, C., Allen K., & She, L. (2023). Primary and secondary pre-service teachers' attitudes towards inclusive education. *Heliyon*, 9(11), e22328.https://doi.org/10.1016/j.heliyon.2023.e22328.
- Braksiek, M. (2022). Pre-service physical education teachers' attitude toward, and self-efficacy in, inclusive physical education: Measurement invariance and influence factors. *Teaching and Teacher Education*, 109, 103547. https://doi.org/10.1016/j.tate.2021.103547.
- Cardenas, C., Rivard, M., Mestari Z., & Mello, C. (2022). Validation of the multidimensional attitudes toward preschool inclusive education scale in the bilingual context of Québec. Research in Developmental Disabilities, 127, 104258. https://doi.org/10.1016/j.ridd.2022. 104258.
- Çelik, S., & Tomris, G. (2024). A chain of interlocking rings": Preschool teachers' experiences regarding homeschool collaboration with a focus on children with special needs and their parents in inclusive education. Children and youth services Review, 163. 107700. https://doi.org/10.1016/j.childyouth. 2024.107700.
- Chataika, T. (2023). Inclusive education policies and practices in Malawi and Zimbabwe. *International Encyclopedia of Education (Fourth Edition)*, 404-417. https://doi.org/10.1016/B978-0-12-818630-5.12033-0.
- De Boer, A., Pijl, S., & Minnaert, A. (2011). Regular primary schoolteachers'



- attitudes towards inclusive education: A review of the literature. *International Journal of Inclusive Education*, 15(3), 331-353. 10.1080/13603110903030089.
- Deitcher, D., Barkai, Y., & Aram, D. (2025). Preservice special education teachers' shared book-reading discourse: Evaluating explicit and implicit attitudes towards children with disabilities. *Teaching and Teacher Education*, 155, 104899. https://doi.org/10.1016/j.tate.2024.104899.
- Engsig, T. (2023). Nordic representations and paradoxes of inclusive education. *International Encyclopedia of Education*, 98-100. https://doi.org/10.1016/B978-0-12-818630-5.12037-8.
- Fernández, M. (2017). Attitudes toward inclusive education and practical consequences in final year students of education degrees. *Procedia-Social Behavioral Sciences*, 237, 1184-1188.https://doi.org/10.1016/j.sbspr o.2017.02.187.
- Guðjónsdóttir, H., & Óskarsdóttir, E. (2023). Enacting inclusive pedagogy in teacher education: creating a learning space for teachers to develop their professional identity. *International encyclopedia of Education*, 243-253.https://doi.org/10.1016/B978-0-12-818630-5.04035-5.
- Guillemot, F., Lacroix, F., & Nocus, I. (2022).

 Teachers' attitude towards inclusive education from 2000 to 2020: An extended meta-analysis. *International Jouranl of Educational Research Open*, 3,

- 100175.https://doi.org/10.1016/j.ije dro.2022.100175.
- Gülsün, İ., Malinen, O., Yada, A., & Savolainen, H. (2023). Exploring the role of teachers' attitudes towards inclusive education, their self-efficacy, and collective efficacy in behaviour management in teacher behaviour. *Teaching and Teacher Education*, 132, 104228.
- Hassanein, E., Alshaboul, Y., & Ibrahim, S. (2021). The impact of teacher preparation on preservice teachers' attitudes toward inclusive education in Qatar. *Heliyon*, 7(9), e07925. https://doi.org/10.1016/j.heliyon.20 21.e07925.
- Heyder, A., Südkamp, A., & Steinmayr, R. (2020). How are teachers' attitudes toward inclusion related to the social-emotional school experiences of students with and without special educational needs? *Learning and Individual Differences*, 77, 101776. https://doi.org/10.1016/j.lindif.2019. 101776.
- Jordan, A., Glenn, C., & Richmond, D. (2010). The Supporting Effective Teaching (SET) project: The relationship of inclusive teaching practices teachers' beliefs about disability and ability, and about their roles as teachers. Teaching and **Teacher** 259-Education, 26(2), 266.https://doi.org/10.1016/j.tate.20 09.03.005.
- Kantavong, P., Nethanomsak, T., & Luangungkool, N. (2012). Inclusive education in Thailand after 1999 national education act: A review of a



- pre-service teacher system. *Procedia-Social and Behavioral Sciences*, 69, 1043-1051.
- https://doi.org/10.1016/j.sbspro.201 2.12.031.
- Kauffman, J., Anastasiou, D., Felder, M., Hornby, G., & Lopes, J. (2023). Recent debates in special & inclusive education. *International Encyclopedia of Education (Fourth Edition)*, 269-283. https://doi.org/10.1016/B978-0-12-818630-5.12004-4.
- Kay, S., & Pisani, M. (2021). An overview of sex and gender in pulmonary and critical care medicine. *Clinics in Chest Medicine*, 42(3), 385-390. https://doi.org/10.1016/j.ccm.2021.0 4.001.
- Kersh, J. (2011). Chapter six- Attitudes about people with intellectual disabilities: Current status and new directions. *International Review of Research in Developmental Disabilities*, 41, 199-231. https://doi.org/10.1016/B978-0-12-386495-6.00006-0.
- Khamzina, K., Juy, M., Ducreux, E., & Desombre, C. (2021). The conflict between inclusive education and the selection function of schools in the minds of French teachers. *Teaching and Teacher Education*, 106, 103454.https://doi.org/10.1016/j.tat e.2021.103454.
- Khanolainen, D., Nesterova, Y., Semenova, E. Fatkhulova, E., & Trach, J. (2024). Teachers' beliefs and characteristics predictive of their willingness to cultivate a safe, ethnically inclusive school environment. *International Journal of Educational Research*, 127, 102420.

- https://doi.org/10.1016/j.ijer.2024.102420.
- Korabik, K., McElwain, A., & Chappell, D. (2001). Chapter 12- Integrating gender-related issues into research on work and family. *Handbook of Work-Family Integration*, 215-232. https://doi.org/10.1016/B978-012372574-5.50015-6.
- Kozlova, M., & Ryabichenko, T. (2024). Inclusive education in schools in Russia and Kazakhstan: Attitudes and well-being of teachers as related factors in the formation of an inclusive environment. *Children and Youth Services*, 163.107785. https://doi.org/10.1016/j.childyouth. 2024.107785.
- Kraska J., & Boyle C. (2014). Attitudes of preschool and primary school pre-service teachers towards inclusive education. Asia-Pacific Journal of Teacher Education, 42(3), 228-246. 10.1080/1359866X.2014.926307.
- Krischler, M., & Pit-ten Cate, I. M. (2019). Preand in-service teachers' attitudes toward students with learning difficulties and challenging behavior. *Frontiers in Psychology*, 10, 327. https://doi.org/10.3389/fpsyg.2019.00327.
- Lohzano, C., Wüthrich, S., Büchi, J., & Sharma, U. (2022). The concerns about inclusive education scale: Dimensionality, factor structure, and development of a short-form version (CIES-SF). International Journal of Educational Research, 111, 101913. https://doi.org/10.1016/j.ijer.2021.101913.



- Lyra, O., Koullapi, K., & Kalogeropoulou, E. (2023). Fears towards disability and their impact on teaching practices in inclusive classrooms: An empirical study with teachers in Greece. *Heliyon*, 9(5), e16332. https://doi.org/10.1016/j.heliyon.20 23.e16332.
- Makaolle, T.M. (2019). Teacher empathy, a prerequisite for an inclusive classroom . Encyclopedia of Teacher Education, 11(2), 27-39. DOI:10.1007/978-981-13-1179-6_43-1.
- Malinen, O., Savolainen, H., & Xu, J. (2012).

 Beijing in-service teachers' selfefficacy and attitudes towards
 inclusive education. *Teaching and Teacher Education*, *28*(4), 526534.https://doi.org/10.1016/j.tate.20
 11.12.004.
- Malinen, O., Savolainen, H., Engelbrecht, P., Xu, J., Nel, M., Nel, N., & Tale, D. (2013). Exploring teacher self-efficacy for inclusive practices in three diverse countries. *Teaching and Teacher Education*, 33, 34-44.https://doi.org/10.1016/j.tate.201 3.02.004.
- Martin, A., & Slepian, M. (2025). The process of gendering: gender as a verb. *Trends in Cognitive Sciences*, 29(1), 73-84. https://doi.org/10.1016/j.tics.2024.0 9.004.
- Massouti, A. (2021). Pre-service teachers' perspectives on their preparation for inclusive teaching: Implication for organizational change in teacher education. *The Canadian Journal for the Scholarship of Teaching and*, 12(1). https://doi.org/10.5206/cjsotlrcacea. 2021.1.10611.

- Mentel, H., Forster, N., Fothmann, B., & Souvinier, E. (2024). Predictors of teachers' behavioral intentions in inclusive education and their changes over time: A competitive test of hypotheses. *Teaching and Teacher Education*, 141, 104509.https://doi.org/10.1016/j.tat e.2024.104509.
- Michailakis, D., & Reich, W. (2009). Dilemmas of inclusive education. *Alter*, *3*(1), 24-44. https://doi.org/10.1016/j.alter.2008. 10.001.
- Migliarini, V., Allan, J., Hove, G., & Schauwer, E. (2023). Legislation policy in Europe. *International Encyclopedia of Education (Fourth Edition)*, 58-67.https://doi.org/10.1016/B978-0-12-818630-5.12034-2.
- Polat, F., Karakus, M., Helmer, J., Malone, K., Gallagher, P., Mussabalinova, A., Zontayeya, Z., & Mnazhatdinova, A. (2023). Factors affecting multistakeholders perspectives towards inclusive early childhood education (IECE) in Kazakhstan. *Children and Youth Services Review*, 155, 107224. https://doi.org/10.1016/j.childyouth. 2023.107224.
- Pov, S., Kawai, S., & Nov, S. (2024). Preparing pre-service teachers to work in cambodian inclusive classrooms; Knowledge, experience, and attitudes toward inclusion. *Teaching and Teacher Education*, 137, 104402. https://doi.org/10.1016/j.tate.2023.104402.
- Pozas, M., Letzel-Alt, V., & Schwab, S. (2023).

 The effects of differentiated instruction on teachers' stress and job



- satisfaction. *Teaching and Teacher Education*, 122, 103962. https://doi.org/10.1016/j.tate.2022.103962.
- Prisiazhniuk, D., Makoelle, T., & Zangieva, I. (2024). Teachers' attitudes towards inclusive education of children with special educational needs and disabilities in central Asia. *Children and Youth Services Review*, 160, 107535.
 - https://doi.org/10.1016/j.childyouth. 2024.107535.
- Quah, V., Lim, C.P., & Brook, C. (2010). Public-private partnerships for educational reform. *International Encyclopedia of Education (Third Edition)*, 73-80. https://doi.org/10.1016/B978-0-08-044894-7.00710-7.
- Rabi, N. M., Ghazali, , N. H. C. M., & Piragasam, G. A. G. (2018). The importance of inclusive education course for preparing pre-service teacher to teach students with special needs in school. *International Journal of Academic Research in Business and Social Sciences*, 8(11), 1848-1858.
- Ritter, R., Wehner, A., Lohaus, G., & Krämer, P. (2020). Effect of same-discipline compared to different-discipline collaboration on teacher trainees' attitudes towards inclusive education and their collaboration skills. *Teaching and Teacher Education*, 87, 102955. https://doi.org/10.1016/j.tate.2019.102955.
- Saloviita, T. (2015). Measuring pre-service teachers' attitudes towards inclusive education: Psychometric properties of the TAIS scale. *Teaching and Teacher Education*, 52, 66-72.

- https://doi.org/10.1016/j.tate.2015.0 9.003.
- Scanlon, G., Radeva, S., Pitsia, V., Maguire, C., & Nikolaeva, S. (2022). Attitudes of teachers in Bulgarian kindergartens towards inclusive education. *Teaching and Teacher Education*, 122, 103650.https://doi.org/10.1016/j.tat e.2022.103650.
- Schell, C., Dignath, C., Kleen, H., John, N., & Kunter, M. (2024). Judging a book by its cover? Investigating pre-service teacher's stereotypes towards pupils with special educational needs. *Teaching and Teacher Education*, 142, 104526.https://doi.org/10.1016/j.tat e.2024.104526.
- Sharma, U., Forlin, C., Loreman, T., & Earle, C. (2006). Pre-service teachers' attitudes, concerns, and sentiments about inclusive education: An international comparison of novice pre-service teachers . *International Journal of Special Education*, 21(2), 80-83.
- Sharma, U., Sokal, I., Wang, M., & Loreman, T. (2021). Measuring the use of inclusive practices among pre-service educators: A multi-national study. *Teaching and Teacher Education*, 107, 103506. https://doi.org/10.1016/j.tate.2021.1
 - https://doi.org/10.1016/j.tate.2021.1 03506.
- Soeharto, S., Singh, S., & Afriyanti, F. (2024).

 Associations between attitudes toward inclusive education and teaching for creativity for Indonesian pre-service teachers. *Thinking Skills and Creativity*, *51*, 101469. https://doi.org/10.1016/j.tsc.2024.1 01469.



- Song, J., Sharma, U., & Choi, H. (2019). Impact of teacher education on pre-service regular school teachers' attitudes, intentions, concerns and self-efficacy about inclusive education in South Korea. *Teaching and Teacher Education*, 86, 102901. https://doi.org/10.1016/j.tate.2019.102901.
- Steen, T., & Wilson, C. (2020). Individual and cultural factors in teachers' attitudes toward inclusion: A meta-analysis. *Teaching and Teacher Education*, *95*, 103127.httsps://doi.org/10.1016/j.ta te.2020.103127.
- Sun, Y., Lim, K., Jiang, C., Peng, J., & Chen, X. (2010). Do males and females think in the same way? An empirical investigation on the gender differences in web advertising evaluation. *Computers in Human Behavior*, 26(6), 1614-1624. https://doi.org/10.1016/j.chb.2010.0 6.009.
- Tiwari, A., Das, A., & Sharma, M. . (2015). Inclusive education a "rhetoric" or "reality"? Teachers' perspectives and beliefs. *Teaching and Teacher education* , 52, 128-136.https://doi.org/10.1016/j.tate.20 15.09.002.
- Todorovic, J., Stojiljkovic, S., Rsitanic, S., & Djigic, G. (2011). Attitudes towards inclusive education and dimensions of teacher's personality. *Procedia- Social and Behavioral Sciences*, *29*, 426-432. https://doi.org/10.1016/j.sbspro.2011.11.259.
- Unianu, E. (2012). Teachers' attitudes toward inclusive education. *Procedia- Social and Behavioral Sciences*, *32*, 900-904.

- https://doi.org/10.1016/j.sbspro.201 2.01.252.
- Vargas, T., & Yoon, S. (2004). Advertising psychology. *Encyclopedia of Applied Psychology*, 53-64. https://doi.org/10.1016/B0-12-657410-3/00001-5.
- Vieira, I., Rohmer, O., Jury, M., Desombre, C., Delaval, M., Camus, N., Chaillou, A., Goulet, C., & Roch, M. (2024). Attitudes and self-efficacy as buffers against burnout in inclusive settings: Impact of a training programme in pre-service teachers. *Teaching and Teacher Education*, 144, 104569. https://doi.org/10.1016/j.tate.2024.104569.
- Wächter, T., Gorges, J., Apresjan, S., & Klose, B. (2024). How can inclusion succeed for all? Children's well-being in inclusive schools and the role of teachers' inclusion-related attitudes and self-efficacy. *Teaching and Teacher Education*, 139, 104411.https://doi.org/10.1016/j.tat e.2023.104411.
- Waitoller, F., & Kozleski, E., (2013). Working in boundary practices: Identity development and learning in partnerships for inclusive education. *Teaching and Teacher Education*, 31, 34-35. https://doi.org/10.1016/j.tate.2012.1 1.006.
- Wang, L., Leudtke ., Malet, R., & Malinen, O. (2025). Can separate special education settings still be perceived as inclusive? a critical examination of finnish primary teachers' attitudes. *Teaching and Teacher Education*, 155,



104914.https://doi.org/10.1016/j.tat e.2024.104914.

Watkins, A., Donnelly, V., & Meijer, C. (2023).

Paying for inclusion and exclusion.

International Encyclopedia of
Education (Fourth Edition), 35-50.

https://doi.org/10.1016/B978-0-12-818630-5.12031-7.

Woodcock, S., Sharma, U., Subban, P., & Hitches, E. . (2022). Teacher self-efficacy and inclusive education practices: Rethinking teachers' engagement with inclusive practices. *Teaching and Teacher Education*, 117, 103802. https://doi.org/10.1016/j.tate.2022.103802.

Yada, A., Tolvanen, A., & Hannuh, S. (2018). Teachers' attitudes and self-efficacy on implementing inclusive. *Teaching and Teacher Education*, 75, 345-355. https://doi.org/10.1016/j.tate.2018.0 7.011.

Yang, L., Pang, F., & Sin, K. (2024). Examining the complex connections between teacher attitudes, intentions, behaviors, and competencies of SEN students in inclusive education. *Teaching and Teacher Education*, 144, 104595.

https://doi.org/10.1016/j.tate.2024.1 04595.

Yazici, M., & Uzuner, F. (2024). School based inclusive mentoring within the scope of an experiential learning model (IEM) for teacher education. *Teaching and Teacher Education*, *152*, 104799. https://doi.org/10.1016/j.tate.2024.104799.

Acknowledgment

The authors acknowledge all who have contributed to the success of this study. Special gratitude is given to Dr. Alma B. Manera, the journal manager for allowing this paper to be published free from APC.