

EARLY CHILDHOOD EDUCATION STUDENTS' PERCEPTION OF THEIR PREPAREDNESS IN TEACHING PHYSICAL EDUCATION TO CHILDREN WITH DISABILITIES AMONG UNIVERSITY COLLEGE TATI STUDENTS IN TERENGGANU, MALAYSIA

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Abstract

This study explores Early Childhood Education students' perceptions of their preparedness in teaching physical education to children with disabilities, focusing on key areas such as instructional methods, inclusive practices, and planning for curriculum access and transition programs. A quantitative study has been conducted by distributing a Likert scale questionnaire via Google Forms to 88 early childhood education students at University College TATI in Kuala Terengganu. Descriptive analysis revealed that students felt most confident in using effective instructional methods and implementing inclusive practices, while they reported less preparedness in areas like access to the general education curriculum and transition planning. Factor analysis confirmed the data's suitability for exploration, with a high KMO value (0.83) and significant correlations among variables. Correlation analysis demonstrated strong positive relationships between competencies, particularly between instructional methods and collaboration skills, suggesting that enhancing one area can benefit others. The findings underscore the importance of hands-on learning, immediate feedback, and the interconnected nature of teaching competencies, advocating for a comprehensive approach to preparing educators for inclusive teaching practices.

Keywords: Early Childhood Education, Physical Education, Disability, Perception

INTRODUCTION

Early Childhood Education (ECE) is widely acknowledged as the most critical stage in human development, laying the groundwork for a child's future learning, behavior, health, and overall well-being (Gibbs, 2022). During this formative period, children begin to acquire the fundamental physical, cognitive, emotional, and social competencies that shape their lifelong trajectories. Within this context, Physical Education (PE) serves as more than just physical activity—it acts as a vital educational domain that fosters gross motor development, spatial awareness, coordination, cooperation, and confidence.

The inclusion of PE in early childhood programs is essential in developing active, healthy habits and supporting overall child development.

For children with disabilities, however, access to quality PE can be limited due to a range of factors, including infrastructure challenges, lack of trained personnel, and insufficient institutional support. Yet, research consistently emphasizes the significant benefits of inclusive PE for this population. Inclusive PE programs have been shown to support the physical development of children with disabilities while also enhancing their self-esteem, social skills, and overall inclusion within peer groups (Wallhead & Buckworth, 2024; Nurul et al., 2024). When implemented effectively, inclusive PE becomes a powerful tool for equity and empowerment, contributing to broader national and international goals of inclusive education.

The success of inclusive PE programs depends significantly on the preparedness of educators. Teachers must possess the pedagogical knowledge, adaptive strategies, and empathetic attitudes necessary to tailor activities to diverse learning needs. However, concerns have been raised globally about whether pre-service teachers are receiving adequate preparation to teach inclusive PE. Numerous studies from the United States, Europe, and Australia reveal that pre-service teachers frequently report feeling unprepared and underconfident when it comes to teaching students with disabilities, citing a lack of training, limited exposure, and insufficient practicum experience in inclusive settings (Adams & Bourke, 2023; Karamani, 2024; Sullivan, 2024; Block, 2007; Kasser & Green, 2004). These challenges are compounded by the fact that many teacher education programs continue to prioritize general education content while treating inclusive education as a supplementary topic (Celestino, 2023; Moseng et al., 2021).

Studies suggest that pre-service teachers who receive targeted training in adaptive physical education and who engage in practical experiences with students with disabilities report significantly higher levels of confidence and perceived preparedness (Merga, 2020; Seidensticker & Seyda, 2022; Bertills, 2024). Experiential learning through practicum placements, as well as mentorship by experienced inclusive educators, have been identified as key strategies in building self-efficacy among future teachers (Phang, 2020; Killoran et al., 2021). Unfortunately, such opportunities are not uniformly available, especially in less urbanized or underfunded institutions. This highlights the role of structural barriers—including limited resources, lack of trained supervisors, and inadequate curriculum design—which often inhibit meaningful exposure to inclusive pedagogies during teacher training (Pitsillidou et al., 2021; Luis & Fuentes, 2021).

Despite growing international literature on this issue, research within Southeast Asia—and Malaysia in particular—remains limited. While Malaysia's Education Blueprint 2013–2025 emphasizes inclusive education as a national priority, there are concerns that actual implementation is not keeping pace with policy intentions. Studies by Salleh et al. (2012) and Saari et al. (2022) have pointed out that many teacher education programs in Malaysia still lack sufficient content related to disability awareness and inclusive instructional strategies. The issue is even more pronounced in rural or smaller institutions, where training resources and support systems may be less accessible.

This gap in the literature raises important questions about the preparedness of Malaysian ECE students to teach PE to children with disabilities. There is a pressing need to understand how future educators perceive their own readiness, what factors influence these perceptions, and how current training programs can be improved to better support inclusive teaching practices. Without this understanding, Malaysia risks falling short of its goals for inclusive education, particularly in early childhood settings where foundational habits and attitudes are formed.

Therefore, this study aims to explore the perceptions of ECE students at University College TATI in Terengganu regarding their preparedness to teach inclusive physical education. It seeks to identify both the enablers and barriers they experience in their training, and to examine how existing teacher education frameworks support or hinder the development of competencies required for inclusive PE. The findings of this study are intended to provide meaningful insights to educators, policy makers, and curriculum developers, ultimately contributing to the enhancement of teacher preparation programs in Malaysia. By localizing the discourse around inclusive PE, this research hopes to strengthen Malaysia's efforts in developing a truly inclusive early childhood education system—one that equips all future educators to teach with confidence, competence, and compassion.

METHOD

This study employed a quantitative approach, utilizing a questionnaire distributed via Google Forms to students of University College TATI in Terengganu. A total of 88 students were selected, comprising 44 students in semester 1 and 44 students in semester 2. Where the students involved are majoring in early childhood education and having experience teaching physical education to children with disabilities. The time given for students to answer are 15 minutes.

Instruments

This study adapted questionnaire items from the Aldabas (2020) study, where this study used a Likert scale (1) strongly disagree, (2) disagree, (3) neutral, (4) agree and (5) strongly agree for 30 question items. The 30 question items used included 6 subtopics, namely 'Collaboration and teamwork skills' which were 4 items from items 1 to 4, 'Using effective teaching methods' which were 7 items from items 5 to 11, 'Inclusion implementation skills', which is 7 items from items 12 to 18, 'Skills in planning and implementing behavioral interventions', which is 3 items from items 19 to 21, 'Skills to access the general education curriculum', which is 4 items from items 22 to 25 and 'Skills to plan transition programs', which is 5 items from items 26 to 30. The items adapted from the study by Aldabas (2020) have obtained a Cronbach's alpha coefficient for the entire questionnaire is 0.99, indicating high reliability (Creswell, 2009). Therefore, this questionnaire can be used because it is consistent.

Statistical Analysis

This study uses the KMO and Bartlett Tests to measure the extent to which the correlation between variables can be explained by common factors and the anti-image matrix to analyze factors and provide information about the extent to which each variable is suitable for use in the analysis. In addition, this study also uses descriptive analysis to evaluate the mean and standard deviation values and even uses correlation to measure the relationship or association between two variables. Finally, this study also measures data using a one-sample t-test to compare the average of a sample with a certain average value.

RESULTS

Descriptives Analysis

Descriptive data analysis was conducted to provide a general overview of the characteristics of the respondents and the study variables. Descriptive statistics such as mean, and standard deviation were used to analyze the data, with the aim of drawing conclusions about the patterns and distribution of the data obtained, hence Table 1 below shows the total descriptive data received through SPSS.

Table 1: Descriptive Analysis

Variable	N	Mean	Std. Deviation
Collaboration and teaming skills	88	3.80	0.774
Using effective instructional methods	88	3.82	0.760
Skills for implementation of inclusion	88	3.81	0.861
Skills for planning and implementation of behavioral intervention	88	3.73	0.868
Skills for access to the general education curriculum	88	3.63	0.880
Skills for planning transition programs	88	3.64	0.895

*N = Number of students

Based on Table 1, which presents the descriptive totals, it was found that the component 'Using effective teaching methods' was the most frequently chosen by early childhood education students, with a mean value of $M = 3.82$ and $SD = 0.760$. The second most selected component was 'Inclusive implementation skills,' with a mean value of $M = 3.81$ and $SD = 0.861$.

On the other hand, the component 'Access skills to the general education curriculum' was among the least selected by students, with a mean value of $M = 3.63$ and $SD = 0.880$. Similarly, the component 'Transition program planning skills' was the second least chosen, with a mean value of $M = 3.64$ and $SD = 0.895$. The components 'Collaboration and teamwork skills' ($M = 3.80$, $SD = 0.774$) and 'Skills in planning and implementing behavioral interventions' ($M = 3.73$, $SD = 0.868$) were moderately chosen by the students. The reason why 'Using effective teaching methods' got the highest vote among students is students valued real-time interactions with peers and the instructor. However, inappropriate asynchronous discussions were considered less effective in Blended Learning. In addition, immediate feedback from peers and the instructor motivated learners and improved the quality of their work. Based on Zhu, Berri and Zhang (2021), learning technologies played a critical role in Blended Learning, but the use of learning technologies should be simplified and streamlined. Technical support was essential to reduce learners' cognitive load.

KMO and Bartlett's Test

The Kaiser-Meyer-Olkin (KMO) measure and Bartlett's Test of Sphericity were conducted to assess the adequacy of the data for factor analysis. These tests determine whether the data meet the assumptions required for meaningful factor extraction. Table 2 below presents the analytical data for factor analysis derived from the Kaiser-Meyer-Olkin (KMO) measure and Bartlett's Test.

Table 2: KMO and Bartlett's Test

Test	Value	Interpretation
KMO Measure	0.83	Sampling adequacy: Meritorious
Bartlett's Test (χ^2)	792.80	Significant correlation among variables

Based on the table 2, KMO measure of sampling adequacy was 0.83, indicating that the dataset is highly suitable for factor analysis. According to Kaiser's criteria, values between 0.8 and 0.9 are considered 'meritorious'. Furthermore, for Bartlett's Test of Sphericity was conducted to assess whether the

correlation matrix is significantly different from an identity matrix, indicating sufficient correlations among variables for factor analysis. The test produced a chi-square value of 792.80, with $df = 15$ and $p < 0.001$. This significant result confirms that the variables are adequately correlated to proceed with factor analysis.

Correlations

Next, this study uses correlation analysis. Where this correlation analysis is conducted to determine the relationship between 6 variables. This study aims to investigate the extent of the relationship between the 6 variables. Based on table 3 below, it shows the results of the analysis for correlations.

Table 3: Correlations

		Collaboration and teaming skills	Using effective instructional methods	Skills for implementation of inclusion	Skills for planning and implementation of behavioral intervention	Skills for access to the general education curriculum	Skills for planning transition programs
Collaboration and teaming skills	Pearson Correlation	1	0.917**	0.780**	0.770**	0.652**	0.642**
	Sig. (2-tailed)		0.000	0.000	0.000	0.000	0.000
	N	88	88	88	88	88	88

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

Pearson correlation was conducted to assess the relationship between 6 variables. Based on table 3, the analysis showed a strong positive correlation for effective teaching methods, namely ($r=0.917$), indicating that effective teaching methods can help teachers deliver good teaching. This relationship is statistically significant ($p<0.000$) and based on the sample size $N=88$. This finding shows a positive correlation. For the analysis of inclusive implementation skills, it shows a positive correlation, namely ($r= 0.780$, $N= 88$, $p<0.000$). This finding shows a strong positive correlation. Meanwhile, the analysis of skills for planning and implementing behavioral interventions shows a positive correlation, namely ($r= 0.770$, $N= 88$, $p<0.000$). This finding shows a strong positive correlation. Next, the results of the analysis of access skills to the general education curriculum also show a positive correlation, namely ($r= 0.652$, $N= 88$, $p<0.000$). This finding shows a strong positive correlation. Finally, for the analysis of skills to plan transition programs also shows a positive correlation, namely ($r= 0.642$, $N= 88$, $p<0.000$). This finding shows a strong positive correlation.

DISCUSSION AND CONCLUSION

The descriptive data analysis provided an overview of the students' perceived proficiency across several key areas related to teaching and inclusion in physical education for children with disabilities. The analysis revealed that students felt most confident in using effective instructional methods, with a mean score of 3.82, followed closely by their skills for implementing inclusive practices. In contrast, students reported feeling less prepared in areas such as planning for access to the general education curriculum

and developing transition programs, which had lower mean scores. These findings suggest that students prioritize hands-on, real-time interactions and immediate feedback from instructors in their learning processes, valuing practical teaching methods over asynchronous discussions (Hizriani et al., 2022). The study suggests that the curriculum in early childhood education (DECE) programs provides more knowledge and skills related to inclusive education, helping students feel better prepared to teach children with disabilities.

Factor analysis results showed that the data was well-suited for such an analysis, with a Kaiser-Meyer-Olkin (KMO) value of 0.83, considered meritorious, and Bartlett's Test of Sphericity indicating significant correlations among the variables. This confirmed that the data met the necessary assumptions for factor analysis. The correlation analysis demonstrated strong positive relationships between various skills, particularly between the use of effective instructional methods and other key competencies. The highest correlation was found between effective instructional methods and collaboration/teamwork skills, followed by strong correlations with skills for inclusive implementation, behavioral intervention, and access to the general curriculum. All correlations were statistically significant, indicating that the development of one skill area tends to be positively associated with others. These findings underscore the interconnected nature of various teaching competencies, suggesting that strengthening one area may support improvements in others (Zhao, 2023).

CONCLUSION

In conclusion, the study highlights that student perceive themselves as most prepared in areas directly related to instructional methods and inclusive practices but feel less confident in areas requiring broader planning, such as curriculum access and transition programs. The strong positive correlations among the variables further suggest that enhancing one skill area can have a beneficial impact on others, providing a comprehensive approach to preparing educators for inclusive teaching practices (Deignan, 2023).

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