

# A Study of the Current Status of Inclusive Education Literacy Development Among College Normal Students Majoring in Early Childhood Education—Taking Province G in China as an Example

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## Abstract

Inclusive early childhood education is a major trend globally in the pursuit of equitable and high-quality preschool education, and it is an indispensable part of building a high-quality education system in China. Developing an excellent teaching workforce in inclusive early childhood education is key to improving the quality of preschool integration, and pre-service training is particularly crucial. This study focuses on preschool education major students in G Province, China, using a questionnaire survey method to assess the levels of various dimensions of inclusive education literacy among these students, identify existing issues, draw research conclusions, and provide recommendations.

The results indicate that students have a high level of understanding of inclusive education concepts, but their knowledge and skills are relatively low. There are significant differences in inclusive education literacy levels among students from different school tiers and grades, with junior college students scoring higher than undergraduate college students. Additionally, there are no significant differences in inclusive education literacy based on gender or whether students have had face-to-face contact with exceptional children. The findings of this study can serve as a valuable resource for the pre-service training of early childhood teachers in inclusive education literacy.

**Keywords:** early childhood education, pre-service teachers, inclusive education literacy

## 1. Introduction

Inclusive early childhood education is designed to allow all children to attend general classes or schools that are suitable for their age and learning characteristics. Through multi-faceted collaboration, it provides them with

high-quality and effective education, enabling all children to achieve their full development. Inclusive early childhood education is a major trend in the global pursuit of equitable and high-quality early childhood education (Deng et al., 2024; Wu & Li, 2024) and is an essential task

in building a high-quality education system (Geng et al., 2022; Zhang & Deng, 2023; Zhao, 2024).

The Chinese government places great importance on the development of inclusive early childhood education. The Ministry of Education's "14th Five-Year Plan for the Development and Enhancement of Special Education" explicitly states the need to strengthen the integration of general and special education, create inclusive educational environments, and promote the integration of children with disabilities and their typically developing peers, thereby improving the quality of inclusive early childhood education (China's Ministry of Education, 2021). Furthermore, the "14th Five-Year Plan for the Development and Enhancement of Early Childhood Education" emphasizes the need to improve the quality of training for kindergarten teachers by adding special education courses in higher education early childhood education programs, enhancing pre-service teachers' competencies in inclusive education (China's Ministry of Education, 2021). A key factor in the effective implementation of inclusive early childhood education practices is the cultivation of an excellent teaching workforce in this area (Ding & Qin, 2024; Jin, 2023; Wang & Zhou, 2020). Among the many factors influencing the implementation of inclusive education, teachers' competence in inclusive education is an important factor that cannot be overlooked (Li & Zhao, 2019; Zhou, 2008).

Currently, the inclusive education literacy of kindergarten teachers needs to be improved (Zhang, 2019; Zhang, 2024). As the reserve force for early childhood educators, the cultivation of inclusive education literacy among pre-service teachers in early childhood education programs

is particularly important. The inclusive education literacy of preschool teachers is closely related to their pre-service education and training programs (Wang et al., 2021; Quan, 2016). Therefore, in the context of high-quality development of inclusive education, it is essential to conduct in-depth research on the current status of the cultivation of inclusive education literacy among pre-service early childhood education students and their training programs. This research is necessary to align inclusive early childhood education practices with their visions, and to provide recommendations for improving the inclusive education training programs in early childhood education departments of higher normal universities in China, thereby accelerating the cultivation of more professionals in inclusive early childhood education.

## 2. Research Methods

### 2.1 Research Participants

The study focuses on pre-service teachers in early childhood education programs at undergraduate and vocational colleges in G Province, specifically selecting those who are currently in the internship phase (fourth-year undergraduates and third-year vocational students). The reason for choosing students at these two stages, rather than other academic levels, is that they have nearly completed their professional coursework within their training programs. A total of 642 students were selected from Province G in China. During the data collection process, invalid questionnaires were removed, resulting in 603 valid questionnaires. Among the participants, there were 36 male students (5.97%) and 567 female students (94.03%). Additionally, 208 Junior college students and 395 undergraduate college students. The results are presented in Table 1.

**Table 1.** Demographic Factors of Participants ( $N=603$ )

Factor	Item	<i>N</i>	Percentage (%)
Gender	Male	36	5.97
	Female	567	94.03
School Level	Junior College	208	34.49
	Undergraduate College	395	65.51
Grade	Second year of junior college	23	3.81
	Third year of junior college	185	30.68
	Third year undergraduate	145	24.05

Factor	Item	N	Percentage (%)
	Fourth year undergraduate	250	41.46
whether had face-to-face contact	Yes	304	50.41
with exceptional children?	No	299	49.59

## 2.2 Research Tools

The survey questionnaire primarily references the “inclusive education literacy questionnaire for pre-service teachers” developed by Chen (2019). This questionnaire has a reliability coefficient of 0.944, indicating high reliability and a stable structure; the correlation coefficients between each dimension and the total test score range from 0.30 to 0.80, demonstrating good construct validity.

The questionnaire is divided into two main sections. The first section collects basic demographic data from participants, including gender, educational level, grade, whether they have interacted with exceptional children, and the nature of those interactions. The second section assesses the participants’ competence in inclusive education, focusing on their professional beliefs, knowledge, and abilities.

The measurement scale employs a 5-point Likert scale (1 representing “strongly disagree” and 5 representing “strongly agree”). The average score from the items reflects the inclusive education literacy of pre-service early childhood education teachers, with higher scores indicating a higher level of competence in inclusive education. The Cronbach’s  $\alpha$  coefficient value of the scale was .961, the value of KMO was 0.851, indicate that the scale is highly reliable.

## 2.3 Data Analysis

This study uses SPSS 26.0 software to conduct statistical analysis of the survey data, mainly employing descriptive statistics and independent samples t-tests as data analysis methods. Descriptive statistics are used to summarize and describe the basic characteristics of the sample, such as mean and standard deviation, while the independent samples t-test is used to compare the differences in inclusive education literacy scores between different groups. These analytical methods will help the research understand the current state of

inclusive education literacy among pre-service early childhood education teachers and its influencing factors.

## 3. Research Results

### 3.1 Descriptive Statistics

#### 3.1.1 Overall Characteristics of Inclusive Education Literacy

The overall average score for inclusive education concepts among pre-service early childhood education teachers is 4.161, the average score for inclusive education knowledge is 3.59, the average score for inclusive education ability is 3.795, and the total average score for inclusive education literacy is 3.835. The scores for each dimension, from highest to lowest, are as follows: inclusive education concepts, inclusive education ability, and inclusive education knowledge. The results are presented in Table 2.

**Table 2.** Overall Characteristics of Inclusive Education literacy (N=603)

Dimension	Mean	SD	Items	M/Items
Concept	33.287	5.271	8	4.161
Knowledge	32.307	6.651	9	3.59
Ability	37.946	6.4	10	3.795
literacy	103.542	14.348	26	3.835

### 3.2 Difference Analysis

#### 3.2.1 Gender

This study employed independent samples t-tests to analyze the differences in inclusive education literacy between male and female students. The results indicate that there are no significant differences in inclusive education concepts, inclusive education knowledge, inclusive education ability, and overall inclusive education literacy based on gender ( $p>0.05$ ). This suggests that samples of different genders exhibit consistency in their inclusive education literacy, the results are presented in Table 3.

**Table 3.** The differences in inclusive education literacy among pre-service early childhood education teachers based on gender

Item	Gender	N	M	SD	t	p
Concept	Male	36	4.13	0.57	-0.381	0.704
	Female	567	4.16	0.52		
Knowledge	Male	36	3.5	0.69	-0.778	0.437
	Female	567	3.6	0.74		
Ability	Male	36	3.78	0.71	-0.19	0.849
	Female	567	3.8	0.64		
literacy	Male	36	3.79	0.53	-0.557	0.578
	Female	567	3.84	0.53		

\*  $p < 0.05$  \*\*  $p < 0.01$

### 3.2.2 Grade

Using one-way ANOVA to analyze the differences in inclusive education literacy across different grade levels, Table 4 shows that there are no significant differences in inclusive education concepts among pre-service early childhood education teachers based on grade level ( $p > 0.05$ ). However, significant differences

are observed in inclusive education knowledge, inclusive education ability, and overall inclusive education literacy ( $p < 0.05$ ). In the dimensions of inclusive education concepts and inclusive education knowledge, higher-grade students have higher average scores than those in lower grades.

**Table 4.** The differences in inclusive education literacy among pre-service early childhood education teachers based on grade level

Item	Grade	N	M	SD	F	p
Concept	Second year of junior college	23	4.24	0.47	0.558	0.643
	Third year of junior college	185	4.15	0.62		
	Third year undergraduate	145	4.2	0.47		
	Fourth year undergraduate	250	4.14	0.49		
Knowledge	Second year of junior college	23	3.72	0.63	15.911	0.000**
	Third year of junior college	185	3.88	0.77		
	Third year undergraduate	145	3.5	0.67		
	Fourth year undergraduate	250	3.42	0.7		
Ability	Second year of junior college	23	3.83	0.68	7.693	0.000**
	Third year of junior college	185	3.97	0.68		
	Third year undergraduate	145	3.74	0.64		
	Fourth year undergraduate	250	3.69	0.57		
literacy	Second year of junior college	23	3.91	0.54	9.235	0.000**
	Third year of junior college	185	3.99	0.61		
	Third year undergraduate	145	3.79	0.48		
	Fourth year undergraduate	250	3.73	0.47		

\*  $p < 0.05$  \*\*  $p < 0.01$

### 3.2.3 School Level

Using independent samples t-tests to analyze the differences in inclusive education literacy based on school level, Table 5 shows that there are no significant differences in inclusive education concepts among pre-service early childhood education teachers based on school

level ( $p>0.05$ ). However, significant differences are observed in inclusive education knowledge, inclusive education ability, and overall inclusive education literacy ( $p<0.05$ ), with junior college students scoring higher than undergraduate college students.

**Table 5.** The differences in inclusive education literacy among pre-service early childhood education teachers based on school level

Item	School level	N	M	SD	t	p
Concept	Junior College	208	4.16	0.6	-0.165	0.869
	Undergraduate College	395	4.16	0.48		
knowledge	Junior College	208	3.86	0.76	6.753	0.000**
	Undergraduate College	395	3.45	0.69		
Ability	Junior College	208	3.96	0.68	4.632	0.000**
	Undergraduate College	395	3.71	0.6		
literacy	Junior College	208	3.98	0.6	5.102	0.000**
	Undergraduate College	395	3.76	0.47		

\*  $p<0.05$  \*\*  $p<0.01$

### 3.2.4 Access to Exceptional Children

Using independent samples t-tests to analyze the differences in inclusive education literacy based on whether there has been direct contact with exceptional children, Table 6 shows that there are no significant differences in inclusive education concepts, inclusive education

knowledge, inclusive education ability, and overall inclusive education literacy based on direct contact with exceptional children ( $p>0.05$ ). Additionally, there are no significant differences in inclusive education literacy across different types of contact with exceptional children ( $p>0.05$ ).

**Table 6.** The differences in inclusive education literacy among pre-service early childhood education teachers based on whether they have had direct contact with exceptional children

Item	Whether had face-to-face contact with exceptional children?	N	M	SD	t	p
Concept	Yes	304	4.13	0.54	-1.691	0.091
	No	299	4.2	0.51		
Knowledge	Yes	304	3.58	0.72	-0.169	0.866
	No	299	3.59	0.76		
Ability	Yes	304	3.75	0.65	-1.746	0.081
	No	299	3.84	0.62		
Literacy	Yes	304	3.81	0.54	-1.351	0.177
	No	299	3.86	0.53		

\*  $p<0.05$  \*\*  $p<0.01$

## 4. Discussion and Suggestions

The research results indicate that pre-service

early childhood education teachers in G Province have a high level of understanding of



inclusive education concepts, but their knowledge and ability related to inclusive education are relatively low. This is consistent with previous research findings (Guo, 2019; Liu & Li, 2023). There are significant differences in inclusive education competencies among students from different school levels and grades, with junior college students scoring higher than undergraduate students. This may be related to the educational model of junior colleges (Wang, 2022). Gender and whether students have had direct contact with children with special needs do not show significant differences in inclusive education competencies.

The findings emphasize that pre-service early childhood education teachers in China share a common understanding of inclusive education concepts, but they lack the appropriate knowledge and ability and do not know how to adopt suitable teaching methods to assist children with special needs (Zabeli et al., 2020). Higher education institutions should strengthen the quality of talent cultivation from both theoretical and practical aspects, such as improving the curriculum structure for inclusive education and providing diverse practical experiences in inclusive education (Cui, 2024; Tian, 2023; Yang & Zeng, 2023) to immerse students in real inclusive education classroom environments (Kilinc et al., 2017). This will help enhance the knowledge and ability of pre-service teachers in inclusive education and promote the high-quality development of preschool inclusive education in China.

Additionally, the sample size in this study is not large enough, the geographical sources of the samples are limited, and the research methods are relatively singular, which presents certain limitations. Therefore, future research should aim to expand the sample size, select subjects from cities at different levels of development, and combine qualitative research with various research methods to explore the development and cultivation of inclusive education competencies among pre-service early childhood education teachers in China.

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