

Examination of pre-service teachers' views on their knowledge and skills towards the practice of inclusive education in Ghana



Research article



Charles Redeemer Semordey

Department of Education studies, Mount Mary College of Education, Somanya, Ghana.

Email: sircharles12345@gmail.com

 <https://orcid.org/0000-0002-7324-6736>

Article History

Received: 2020-09-10

Revised: 2020-11-15

Accepted: 2020-11-17

Published: 2020-11-18

Keywords

curriculum, inclusive education, instructional materials, pre-service teacher, pupils with special needs, pedagogical knowledge

How to cite?

Semordey, C. R. (2020). Examination of pre-service teachers' views on their knowledge and skills towards the practice of inclusive education in Ghana. *Journal of Education, Curriculum and Teaching Studies*, 1(2). Retrieved from <https://royalliteglobal.com/ects/article/view/456>

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Published in Nairobi, Kenya by Royallite Global in the **Journal of Education, Curriculum and Teaching Studies**

Abstract

The study examined pre-service teachers' views on their knowledge and skills towards the practice of inclusive education in Ghana. The study utilized a cross-sectional survey design to ascertain views of pre-service teachers on their preparation towards inclusive education in selected Colleges of Education in the Eastern Region of Ghana. The researcher made use of quantitative approach to enable him collect data from pre-service teachers and tutors. Questionnaire formed the primary data collection instrument. Two different sets of questionnaires were designed for the study; one for the pre-service teachers and the other for the tutors who teach special education in the Colleges of Education. The findings revealed that 89.7% of the pre-service teachers either strongly agreed or agreed that the pre-service teachers are able to identify special needs pupils in the classroom. It was recommended that the programs designed in the Colleges of Education for pre-service teacher preparation should include more sessions of field experience to help equip them with the necessary skills towards inclusive education.



Public Interest Statement

In Ghana, education is free and compulsory for all children including those with and without disabilities. In order to ensure that children with disabilities have equal access to education, teachers are trained to help meet the diverse needs of all children. However, the initial teacher education in Ghana particularly has been criticized for failing to prepare teachers adequately for inclusive education (Lewin & Staut, 2003). In some cases, weaknesses in teachers' capabilities in promoting effective learning at the classroom level for individuals with special needs have been cited as an example. In a study by Mamah, Deku, Darling, and Avoke (2011), on university teachers' perception on inclusion, the researchers found lack of adequate training of teachers as a core barrier to teaching students with disabilities in inclusive settings.

Introduction

Inclusive education systems reflect growing awareness of the imperatives of 21st century societies to make quality education available to all students. The development of inclusive education in Ghana has been recognized as the process for orchestrating educational quality and equity for students with disabilities (Opoku, Agbenyega, Mprah, Mckenzil, & Badu, 2017). Ghana as a signatory to the United Nations Convention on the Rights of Persons with Disability (UNCRPD) has since taken steps to safeguard the right to education for all students regardless of their abilities. Evidently, inclusive education has been piloted- in Ghana since 2003-2004 academic year (Anthony, 2011; Gregorius, 2016; Opoku, Badu, Amponteng, & Agyei-Okyere, 2015). The achievement of inclusive education requires a lot of efforts of which the teacher is paramount. Thus, the critical need for teacher preparation has presented a significant demand for programmes not only at the pre-service level but also by including course-work for service teachers to increase their knowledge base in teaching all categories of children with special needs in inclusive classrooms.

Teachers are at the heart of implementing inclusive education, and they should be supported and trained to adopt different teaching strategies to support the learning needs of students with special needs in classrooms (Ashman, 2015). For instance, meeting the diverse needs of children with special needs require a teacher with requisite competences like professional values and attitudes, pedagogical knowledge and pedagogical content knowledge to be able to succeed in adequately teaching such children (Ministry of Education, Ghana, 2016). The primary aim of teacher education in Ghana is to produce teachers for the general education classroom which is mostly subject based. With the practice of inclusive education, the classroom is widespread of learners with special needs. With this, general educators must understand children with special needs, their curriculum needs, adapt the general curriculum to meet their diverse needs and also develop an assessment procedure and be ready to work with

them. All these call for adequate teacher preparation to ensure that the teacher trainees acquire the requisite competences.

In Ghana, however, pre-service teacher preparation in the various Colleges of Education largely focuses on subject teaching. This kind of preparation leaves teachers mostly deficient in teaching competences to adequately manage pupils with special needs when confronted with the situation. There is also the argument that the initial teacher education curricula in many African countries, including Ghana, are too theoretical with little emphasis on practical knowledge and practice (Akyeampong, Lussier, Pryor, & Westbrook, 2013). Agbenyega (2007), Mprah, Dwomoh, Opoku, Owusu, and Ampratwum (2016), and Obeng (2007), opined that since the implementation of inclusive education in Ghana, many challenges and barriers have affected how inclusive education has been interpreted and operationalized at all levels of schooling. For example, it was evident that teachers lacked skills to fully understand inclusive education within a classroom setting as they reported a sense of unpreparedness in their ability to effectively teach students with disabilities. In a study by Mamah, Deku, Darling, and Avoke (2011), the researchers found lack of adequate training of teachers as a core barrier to teaching students with disabilities in inclusive settings. With the findings above, pre-service teacher preparation programmes must be enhanced adequately to include knowledge and skills for teaching students with special needs. To be able to achieve this, the curriculum of the Colleges of Education must be redesigned to include areas of curriculum content, teaching strategies, assessment procedures and adequate management of behavioural needs of students with special needs.

Accordingly, some measures have been and continue to be taken to improve on teacher preparation in order to improve competencies of pre-service teachers to meet the learning needs of all learners in inclusive classrooms. Transforming Teacher Education and Learning (T-TEL) is supporting the Ministry of Education, the National Council for Tertiary Education, and the Ghana Education Service, including all their related agencies to transform initial teacher education programmes in all public Colleges of Education in Ghana. These periodic measures continue to be made because it is believed that teachers' knowledge and beliefs about teaching and learning are the most influential factors in the successful implementation of inclusive education. Teachers are key to educational changes and school improvement and that, teachers do not merely deliver the curriculum; they develop, define and interpret it too (Ainscow, 2013). It is what teachers think, believe and do in the classroom that ultimately shapes the kind of learning that their students get.

Literature Review

Knowledge and Skills of Pre-service Teachers towards the Practice of Inclusive Education

According to Deku and Vanderpuye (2017), teachers' knowledge, emotions and skills about inclusive education are particularly important in the successful implementation of the inclusive education programmes. Educators' knowledge and skills have direct impact on their preparedness to implement inclusive education effectively. Dapudong (2014) said the success of inclusive education and organized placement of children with disabilities depends on teachers' knowledge and skills. Drawing conclusion from the Deku and Vanderpuye (2017) and Dapudong (2014) assertions above, it can be established that the successful inclusive education depends on the knowledge and skills of teachers. In a recent study, Landasan (2017) recommended that teachers' knowledge, skills, and attitude must be given appropriate measures to further enhance the skills and academic performance of the pupils with special needs. Knowledge dispels misconception and clarifies misunderstanding; prejudice and fear then decreases. Educators and non-disabled class peers become more accepting as they learn more about the abilities and problems of special needs. According to Kapp (1994), pre-service teacher should have knowledge of the following:

- The importance of early identification of and aid to learners with problems and the educator's task in this regard.
- The most important causes and manifestations of learning and behaviour problems in learners.
- The identification procedures that may be employed, such as screening and criterion - reference tests.
- Informal methods of gathering information.
- The basic principles and possible forms of assessment (p. 76).

Additionally, Nell (2010) stated that knowledge includes educators being adequately prepared to assess special needs children, to adapt curriculum content to the needs of the learners in the classrooms, modification as well as medical and para-medical assistive devices required by some of the special needs children. It also includes the use of appropriate teaching strategies based on the learners' total level of functioning. Nell further stated that one of the aims of teacher education programme is to provide elective instruction to pre-service teachers in order to facilitate learning. Lewis and Doorlag (2011) maintained that limited knowledge and experience can lead to the development of prejudice and non-accepting attitudes.

Akomeah (2015) conducted a study on the perception of teachers on inclusive education in selected basic schools in Cape Coast Metropolis of Ghana. The study adopted descriptive survey design to help find answers to the problem under investigation and a questionnaire was used to collect data for the study. Systematic random sampling technique was used to select 76 basic school teachers as the respondents for the study. The background information of the respondents was analyzed using the frequency and percentage. The research questions were analyzed using frequency and percentage. The study revealed that almost all the respondents had knowledge and skills necessary to handle pupils with disabilities in inclusive settings. Another finding was that teachers implemented the curriculum by adopting strategies to suit learners and were using alternative assessment strategies in assessing pupils in the classroom. The findings suggest that teacher's knowledge about inclusive education will enable them to use the skills to assess and handle special needs pupils in the classrooms. These findings are consistent with Nell (2010) that knowledge includes educators being adequately prepared to assess special needs children, to adapt curriculum content to the needs of the learners in the classrooms.

UNESCO (2009) elaborates on how an inclusive education system should be by stating that: 'an inclusive education system can only be informed if normal schools become more inclusive'. This is to say, if they improve at educating all children in their communities. Knowledge that a learner has about a disability raises the anxiety level of educators. For example, knowledge that a learner is visually impaired causes tension and anxiety in the educator. Chaula, (2014) stressed that every child has an ultimate right to have education, and need to be given the chance to attain and maintain satisfactory level of learning. Every child has unique features, interests, learning needs and abilities. Education system should be designed and programmes need to be implemented in consideration of a wide diversity of these characteristics and needs. In fact, what is pertinent is that, although the learners read braille material, and interact with classmates. Learners with special needs should be included in as many activities as feasible and treated like any other learner, that is, as an individual. Special needs are with identified needs; despite these needs they remain individuals (Downing, 2002).

Shore (2013) further pointed out that the purpose of inclusive education is to help children with disabilities adjust to being with their non-disabled peers and to help them adapt to the demands of regular education class. Shore, further maintained that mainstream classroom educators must be prepared to buy into the philosophy that if material is presented appropriately, all learners can learn; it may have to be at their own pace, but they still can learn. Educators must also be risk takers and they must be willing to risk the way they have always done things. They must be willing to look at the same situation in different ways and even risk failure in order to grow and to look at obstacles as opportunities.

Skills of teachers

Teachers need to possess certain skills to enhance inclusion. According to Van Schalkwyk (1994), skills and competencies refer to the abilities, knowledge, expertise or techniques a person has. Pre-service teachers need to be trained to acquire necessary skills in order to implement inclusive education successfully. Downing (2002) suggested that the skills required for inclusive education are different. They involve being able to identify and assess special needs children, being able to adapt curricular content teaching and learning methods and assessment methods to assist special needs children and working in collaboration with colleagues, parents and the broader communities.

Goddard (2004) stated that the educator should be able to identify and assess the learner with learning and behavioral problems in their class by using informal diagnostic procedures and implement screening test such as reading and mathematical tests themselves or in cooperation with the remedial educator as school psychologist. The author further said, the educator should be able to adapt the curricular content and teaching methods to assess special needs children and collect relevant information in connection with the learners' problems by means of informal medium such as observation. The information gathered concerning the learning should be recorded and then discussed objectively and scientifically with others (classroom teachers and resource room teachers).

Finally, the educator should be able to formulate the objectives of the aid, based on the findings, either on his own or in co-operation with others, apply basic aid techniques on his own and evaluate the progress thereof. Work in collaboration with colleagues and broader community. The findings from Downing (2002) and Goddard (2004) are in line with Akomeah (2015) that teacher's knowledge and skills are necessary to handle pupils with disabilities in inclusive settings and implement the curriculum by adopting strategies to suit learners, assess pupils in the classroom and prepared to collaborate with other professionals to enhance inclusive education.

Methodology

This study utilized a cross-sectional survey design to ascertain views of pre-service teachers on their preparation towards inclusive education in selected Colleges of Education in the Eastern Region of Ghana. A cross-sectional design involves the collection of data on more than one case, and at a single point in time, in order to collect a body of data (quantitative and/or qualitative) in connection with two or more variables, which are then examined to detect patterns of association (Bryman, 2012). The population for the study comprised all level 300 pre-service teachers and the tutors who teach education in the three Colleges of Education in the Eastern Region of Ghana. The reason for the level 300 pre-service teachers was that it was presumed that they

might be taken through special needs education course as part of their preparation to meet the needs of all children including those with special educational needs in general. The total population for the study was 1,391 respondents (1,360 level 300 pre-service teachers and 31 tutors of the Colleges of Education who teach education).

The researcher made use of quantitative approach to enable him collect data from pre-service teachers and tutors in selected Colleges of Education in the Eastern Region of Ghana. A quantitative research approach relies primarily on the collection of quantitative data. According to Creswell (2014), quantitative research is “an inquiry approach useful for describing trends and explaining the relationship among variables found in the literature” (p. 58). O’Neill (2006) states that the use of standardized methods in quantitative research allows for greater objectivity and accuracy of results.

Questionnaire formed the primary data collection instrument. Two different sets of questionnaires were designed for the study; one for the pre-service teachers and the other for the tutors who teach special education in the Colleges of Education. Kuranchie (2016) defined questionnaire as a collection of statements and questions on a paper to elicit specific information from respondents to answer research questions and/or test hypotheses. McLeod (2019) also contend that a questionnaire is a research instrument consisting of a series of questions for the purpose of gathering information from respondents.

Data analysis

Data analysis is a process which involves drawing conclusions and explaining findings in words about a study (Creswell, 2005). The analysis of the data was done in twofold. The first phase focused on entering the data into the Statistical Package for Social Sciences (SPSS) version 22 software, and subsequently screening the data to ensure that all entries were accurate. To do this the data was coded and entered personally to be sure that the SPSS data file was error free. Also, the variables in the data file were reviewed to ensure that all values, labels and measurement levels were valid. In the second phase of the data analysis, data was analysed using descriptive statistics consisting frequency counts and percentages for all the demographic variables, research questions raised for the study, and these were presented in tables. Means and standard deviations were calculated for the four themes of the section B.

Findings/Results

What are pre-service teachers' views on their knowledge and skills towards the practice of inclusive education in Ghana?

Table 1 : Pre-Service Teachers' Views on their Knowledge and Skills about Inclusive Education (N=272)

Statement	Strongly Agree F (%)	Agree F (%)	Not Sure F (%)	Disagree F (%)	Strongly Disagree F (%)	Mean Score	Interpretation
Pre-service teachers can identify special needs pupils.	114 (41.9)	130 (47.8)	16 (5.9)	8 (2.9)	4 (1.5)	4.26	Agree
Pre-service teachers are able to screen and identify pupils.	60 (22.1)	140 (51.5)	46 (16.9)	21 (7.7)	5 (1.8)	3.84	Agree
Pre-service teachers understand the importance of early identification.	77 (28.3)	151 (55.5)	28 (10.3)	10 (3.7)	6 (2.2)	4.04	Agree
Pre-service teachers are exposed to the causes of learning and behaviour problems.	88 (32.4)	134 (49.3)	30 (11.0)	12 (4.4)	8 (2.9)	4.04	Agree
Pre-service teachers are able to use appropriate behavioural intervention skills in inclusive classroom.	87 (32.0)	135 (49.6)	33 (12.1)	16 (5.9)	1 (0.4)	4.07	Agree
Pre-service teachers are exposed to informal methods of assessing pupils.	60 (22.1)	144 (52.9)	40 (14.7)	20 (7.4)	8 (2.9)	3.84	Agree
Pre-service teachers are exposed to various methods of teaching in the classroom.	112 (41.2)	117 (41.9)	21 (7.7)	14 (5.1)	11 (4.0)	4.11	Agree
Pre-service teachers are exposed to appropriate classroom management skills.	108 (39.7)	121 (44.5)	25 (9.2)	12 (4.4)	6 (2.2)	4.15	Agree
Pre-service teachers are able to design a	64 (23.5)	123 (45.2)	50 (18.4)	29 (10.7)	6 (2.2)	3.77	Agree

learning programme for special needs pupils.							
Pre-service teachers value diversity among pupils in class.	73 (26.8)	140 (51.5)	37 (13.6)	14 (5.1)	8 (2.9)	3.94	Agree

Source: Field Data (2019)

Key: F = Frequency, % = Percent

***Mean Score** of 5.00 = Strongly Agree, 4.00 = Agree, 3.00 = Not Sure, 2.00 = Disagree, 1.00 = Strongly Disagree

Table 1 presents data on the pre-service teachers' knowledge and skills about inclusive education in order to answer research question one, and the responses revealed that majority of them agreed with the statements. For instance, it emerged that 89.7% of the pre-service teachers either strongly agreed or agreed that the pre-service teachers are able to identify special needs pupils in the classroom. Also, 73.6% of them indicated that the pre-service teachers are exposed to the procedures for screening and identification, while another 83.8% of them noted that their understanding of the importance of early identification is enabled by the school curriculum. The responses to other statements indeed showed that the pre-service teachers were knowledgeable about inclusive education. For example, 81.7% of the respondents stated that the pre-service teachers are exposed to the causes and manifestations of learning and behaviour problems, while another 81.6% noted that the pre-service teachers are able to use appropriate behavioural intervention skills in inclusive classrooms.

Furthermore, the data show that the pre-service teachers are exposed to various methods of teaching pupils with disabilities in the classroom. This was confirmed by 83.1% of the pre-service teachers who agreed to the statement, compared to the 9.1% who disagreed and the 7.7% who were not sure of their responses to the statement. Again, the data indicated that majority of the pre-service teachers (84.2%) agreed to the statement that they are exposed to appropriate classroom management skills in inclusive education settings. Finally, it was observed that 68.7% of the pre-service teachers agreed that the pre-service teachers were able to design a learning programme for special needs pupils in inclusive classrooms. These results suggest that the curriculum that is used in the Colleges of Education in Ghana helps pre-service teachers to acquire knowledge and skills about inclusive education.

Discussion

From Table 1, it was found out that almost all the pre-service teachers (89.7%) have knowledge about inclusive education by the results of either strongly agreed or agreed that they were knowledgeable about inclusive education. This is in agreement with Deku and Vanderpuye (2017) that:

Teachers' knowledge, emotions and skills about inclusive education are particularly important in the successful implementation of the inclusive education programme (p. 41).

Again, it emerged that 89.7% of the pre-service teachers either strongly agreed or agreed that the pre-service teachers are able to identify special needs pupils in the classroom. Also, 73.6% of them indicated that the pre-service teachers were exposed to the procedures for screening and identification, while another 83.8% of them noted that their understanding of the importance of early identification. This assertion is consistent with the view of Downing (2002) who suggested that the skills required for inclusive education involved being able to identify and assess special needs children, being able to adapt curricular content, teaching and learning methods and assessment methods to assist special needs children and working in collaboration with colleagues, parents and the broader communities.

On the issue of the pre-service teachers' knowledge on the causes of disability, 81.7% of the respondents stated that they were exposed to the causes and manifestations of learning and behaviour problems, while another 81.6% noted that the pre-service teachers were able to use appropriate behavioural intervention skills in inclusive classrooms. These responses confirmed what Anyagre and Dondieu (2006) indicated that knowledge of special education exposes the teacher to scientific causes of disabilities to offset negative traditional perception. This enables the teacher to incorporate ways of preventing disabilities in their teaching leading to mass education on prevention of disabilities in their communities. (p. 24).

Furthermore, the data showed that the pre-service teachers were exposed to various methods of teaching pupils with disabilities in the classroom. This was confirmed by 83.1% of the pre-service teachers who agreed to the statement, compared to the 9.1% who disagreed and the 7.7% who were not sure of their responses to the statement. Again, the data indicated that majority of the pre-service teachers (84.2%) agreed to the statement that pre-service teachers are exposed to appropriate classroom management skills in inclusive education settings. This result confirms a literature statement that Pedagogical knowledge refers to the specialized cognitive knowledge of teachers for creating effective teaching and learning environment for all learners (Guerriero, 2017).

Tutors' Views of Pre-Service Teachers' Knowledge and Skills on Inclusive Education

Views of college tutors who participated in this study on the knowledge and skills of pre-service teachers about inclusive education was sought. From their perspectives, it was noted that majority of the tutors agreed with the views of the pre-service teachers. This was evident from the fact that majority of the tutors indicated their agreement with the statements in the table. For examples, all the tutors agreed that the pre-service teachers were able to identify special needs pupils in the classroom. This is in agreement with Deku and Vanderpuye (2017) that:

Teachers' knowledge, emotions and skills about inclusive education are particularly important in the successful implementation of the inclusive education programme. (p. 41).

Also, 73.3% of the tutors indicated that they agreed to the statement that pre-service teachers are exposed to the procedures for screening and identification. Furthermore, 86.7% of the tutors agreed that the pre-service teachers understand the importance of early identification. This assertion is corroborated by Downing (2002) who were of the view that the skills required for inclusive education involve being able to identify and assess special needs children, being able to adapt curricular content, teaching and learning methods and assessment methods to assist special needs children and working in collaboration with colleagues, parents and the broader communities. Again, all of the tutors also agreed that pre-service teachers are exposed to the causes and manifestations of learning and behaviour problems. This result show that the tutors agree with the pre-service teachers on their views about how the curriculum enables pre-service teachers to acquire knowledge and skills about inclusive education. This is consistent with the view of Anyagre and Dondieu (2006) that:

the knowledge of special education exposes the teacher to scientific causes of disabilities to offset negative traditional perception. This enables the teacher to incorporate ways of preventing disabilities in their teaching leading to mass education on prevention of disabilities in their communities. (p. 24)

However, majority of the tutors disagreed with the pre-service teachers on the statement that pre-service teachers are able to design a learning programme for special needs pupils in inclusive classrooms. This was noted from the data which showed that whereas 68.7% of the pre-service teachers agreed with the statement, only 46.6% of the tutors agreed with the statement. This gave an indication that the tutors and the pre-service teachers had divergent views on the matter.

Conclusion

It can be concluded from the findings of the study that the pre-service teachers demonstrated enough knowledge in the following areas: knowledge of inclusive education, mode of identification, causes of disabilities, knowledge on instructional strategies and assessment procedures. Furthermore, the respondents described some mode of identification needed for successful inclusive education as observation, screening, giving the child a task and managing the behaviour of the child. The respondents also indicated a clear knowledge of the causes of disabilities. It also came out that pre-service teachers were able to use variety of methods in teaching the exceptional children in an inclusive setting which included the use of braille for the blind, sign language for the deaf, and demonstration methods.

Recommendations

The study recommends that the programmes designed in the Colleges of Education for pre-service teacher preparation should include more sessions of field experience to help equip them with the necessary skills towards inclusive education.

Funding: This research received no external funding, but funding was the solely funded by the author.

Acknowledgement: I am indebted to Dr. Daniel Dogbe my principal supervisor, Head of Department, Special Education, University of Education, Winneba, and Dr. Anthony Mensah my co-supervisor. They were never tired whenever I called on them for consultation, guidance, encouragement and professional advice which spurred me on until the work was completed. I also acknowledge Ms. Patience Faakor Kpeyibor, Department of Education Studies, Mount Mary College of Education, Somanya. I cannot forget to show appreciation to Ms. Joyfield Delight Djanduh, a course mate during my MPhil programme for her words of encouragement during the writing of this work. God bless us all.

Conflicts of Interest: The author declares no conflict of interest.

Disclaimer Statement: This work is part of a thesis submitted to the Department of Special Education, University of Education Winneba for the award of MPhil in Special Education. The work was extracted from a thesis with the title 'Views of pre-service teachers on their preparation towards inclusive education in selected colleges of education in the Eastern Region of Ghana and it was supervised by Dr. Daniel Dogbe and Dr. Anthony Mensah.

Author's Bionote:

Charles Redeemer Semordey is a tutor at the Department of Education, Mount Mary College of Education, Somanya in the Eastern Region of Ghana. He holds M. Phil in Special Education from the University of Education, Winneba.

Authorship and Level of Contribution

Charles Redeemer Semordey is the sole author of this paper. The paper was an extraction from his thesis.

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