




## Sustainability of inclusive education in Ghana: teachers' attitude, perception of resources needed and perception of possible impact on pupils


Irene Vanderpuye , Gideon Kwesi Obosu & Mikako Nishimuko

To cite this article: Irene Vanderpuye , Gideon Kwesi Obosu & Mikako Nishimuko (2020) Sustainability of inclusive education in Ghana: teachers' attitude, perception of resources needed and perception of possible impact on pupils, International Journal of Inclusive Education, 24:14, 1527-1539, DOI: [10.1080/13603116.2018.1544299](https://doi.org/10.1080/13603116.2018.1544299)

To link to this article: <https://doi.org/10.1080/13603116.2018.1544299>

 Published online: 15 Nov 2018.

 Submit your article to this journal [↗](#)

 Article views: 323

 View related articles [↗](#)

 View Crossmark data [↗](#)

 Citing articles: 3 View citing articles [↗](#)



## Sustainability of inclusive education in Ghana: teachers' attitude, perception of resources needed and perception of possible impact on pupils

Irene Vanderpuye <sup>a</sup>, Gideon Kwesi Obosu<sup>a</sup> and Mikako Nishimuko<sup>b</sup>

<sup>a</sup>Department of Education and Psychology, Faculty of Educational Foundations, University of Cape Coast, Cape Coast, Ghana; <sup>b</sup>Faculty of Language Studies, Teikyo University, Tokyo, Japan

### ABSTRACT

Using the descriptive survey design and a sample of 142 teachers from eight inclusive schools in Cape Coast Ghana, the study investigated teachers' attitude, their perception about resources they need for the effective implementation of inclusive education (IE) and the impact of IE on pupils. Descriptive and inferential statistics were used to analyse the data. Results showed that teachers have a relatively positive attitude towards IE, and indicated the resources needed for the successful implementation of IE. Furthermore, their perceptions of the impact of IE on pupils were positive. Additionally, there was a weak statistically significant positive correlation between teachers' attitude about IE and their perceptions about its impact on pupils. It was recommended among other things that to sustain the practice of IE, teacher needs must be met. These include sufficient TLMs, information about special needs and disabilities, training on how to effectively teach pupils with SEN, training on adapting instructional materials for pupils with SEN and training on how to promote social interaction. Teachers need to be given, training and information on all aspects of IE.

### ARTICLE HISTORY

Received 19 April 2018  
Accepted 31 October 2018

### KEYWORDS

Teachers' attitude; inclusive education; resources; impact; sustainability

## Introduction

Ghana recognises that education is a universal human right and extends this right to all children including pupils with special education needs (SEN) (Agbenyega 2007). This is evidenced by the many educational reforms and policies that have been implemented to address the needs of school-age children since Ghana's attainment of independence from colonial rule in 1957. The Education Act of 1961, for example, decreed free compulsory education for all children aged 5–16 years and was intended to alleviate the differences between rural and urban populations and those in diverse geographic regions (Botts and Owusu 2013). Additionally, the Dzobo Committee Report on Education in 1974, and the New Education Reform in 1987, also became instrumental in educational policies that addressed basic education needs of children in Ghana. In recent years, Ghana has seen several constitutional revisions (Articles 25, 26, 37, and 38 of the 1992 constitution) and other special acts such as the Persons with Disability Act 715 (2006),

the Education Act (778) of 2007 and the Children's Act 560 of (1998) with the prime objective of ensuring quality education for all children (Alhassan and Abosi 2014; Botts and Owusu 2013).

Consequently, provision of basic education for children in Ghana is structured in two paralleled system; children with visible disabilities such as intellectual disabilities, blindness and deafness are enrolled in segregated special schools while those presumed to be without disabilities are enrolled in regular schools. This system appears to marginalise some children on the basis of their disability and in effect segregate them from mainstream education. In line with this situation, Ghana became signatory to the Salamanca Statement and Framework for Action on Special Needs Education adopted by UNESCO's World conference in 1994 (Ministry of Education 2015).

Subsequently, inclusive education (IE) became one of the core areas for revision in the Education Strategic Plan for 2003–2015. The ESP 2003–2015 describe IE in Ghana as the enrolment of children with non-severe disabilities and SEN as well as disadvantaged children in mainstream schools (Ministry of Education 2003). This initiative ushered the nation into IE project in some districts at the start of the 2003/04 academic year. It started with 35 schools in 3 of the 10 regions of Ghana and progressed tremendously to 3022 inclusive schools in 48 of the 216 districts in Ghana (Deku and Vanderpuye 2017).

In 2015, the IE agenda was signed into a policy. Among other things, the policy acknowledges the diverse learning needs of learners and requires stakeholders in the education sector to meet the diverse needs of different groups of citizens in the education system (Ministry of Education [MOE] 2015). For example, the objective 4 of the policy addresses the sustainability of IE and designates its implementation as the responsibility of the MOE and its collaborating agencies. For the purposes of the policy, section 5.1.1.1b focuses on training, capacity building and professional development. The MOE is to ensure professional development of teachers, who shall be equipped with pedagogical skills, adequate knowledge on educational policies to meet the needs of children with special educational needs (SEN).

Perhaps to ensure that classrooms are accommodating and learner-friendly, more light has been thrown on teachers as primary stakeholders of IE in Ghana (Deku and Vanderpuye 2017; Ahsan 2015). Several studies have shown that teachers' knowledge, attitudes and perceptions impact heavily on IE (de Boer, Pijl, and Minnaert 2011; Crane-Mitchel and Hedge 2007; Banerji and Dailey 1995; Sapon-Shevin 1996). For instance, Avramidis, Bayliss, and Burden (2000a, 278) have noted that 'professionals' attitudes may act to facilitate or constrain the implementation of policies ... therefore the success of innovative and challenging programmes must surely depend upon the cooperation and commitment of those most directly involved, [teachers]'. This statement makes teachers' attitudes crucial to the implementation of any educational programming for children with SEN such as IE. Similarly, Dapudong (2014) believes that the progress and results of IE largely depend on teachers' attitudes.

However, research on teachers' attitudes towards IE is inconclusive. Whereas some studies report that teachers have a positive attitude toward IE (Scruggs and Mastropieri 1996; Todorovic et al. 2011; Cheng 2011), others reports that teachers show less positive or even negative attitudes towards IE (Vaughn et al. 1996; Avramidis et al. [2000a] 2000b; Alghazo, Dodeen, and Algaryouti 2003; Kuyini 2004). In Turkey, for example, Sucuoglu et al. (2013) report that teachers are indifferent towards IE and show a less positive attitude towards it. This situation buttresses the need to continuously look into attitudes of teachers to ascertain its impact on the implementation of IE.

Besides, in Ghana, many mainstream teachers show little confidence in IE because they do not have the adequate experience to address the academic, social and emotional needs of pupils with SEN (Agbenyega and Deku 2011). This lack of confidence also stems from inadequate preparation of the teachers (Ahsan, Deppeler, and Sharma 2013; Kim 2011; Ahsan, Sharma, and Deppeler 2012; Forlin et al. 2009). Therefore, teacher-training in all aspects of IE is critical to elevate teachers' confidence and foster a more positive attitude towards IE. Consequently, Lipsky and Gartner (1998) are of the opinion that school districts must upgrade teachers' skills in inclusive practices prior to inclusion and to engage teachers in continuous professional development. Similarly, Mamah et al. (2011) advocate for a regular in-depth investigation of the perception and attitudes of teachers towards IE in Ghana because perceptions and attitudes can change with time.

Undoubtedly, the sustainability of IE also requires adequate resources and support. Although Ghana is only three years into the implementation of IE, many challenges have already been identified. One of the major factors debilitating against the effective implementation of IE around the globe is the lack of resources (Arrah and Swain 2014; Campos, Ferreir, and Block 2014). For instance, basic teaching and learning materials (TLMs) are awfully inadequate in Ghana schools (Anthony 2009; Opoku et al. 2017; Mprah et al. 2016; Opoku et al. 2016; Opoku et al. 2015; Arrah and Swain 2014; Agbenyega 2007). This seems to impact negatively on teachers' attitude towards teaching in schools which require specific resources and services such as sign language interpreters, braille machines and accessories and other assistive technology for effective implementation of IE. The crux of the matter is that if teachers are lacking basic teaching and learning materials, it could serve as a disincentive to them and impact on the successful implementation of the IE agenda. Another problem that has been identified but mentioned briefly in the literature is the issue of teachers' knowledge and conceptualisation of IE. This is of serious concern because as Crane-Mitchel and Hedge (2007) noted, teachers' knowledge of inclusive practices correlates with teachers' attitudes. Forlin and Sin (2010) acknowledge that for a successful implementation of IE, teachers must have knowledge in SEN, inclusive pedagogies and motivational strategies when teaching learners with diverse needs. Similarly, Brownell and Pajares (1999) posit that teachers' possession of knowledge about disabilities boosts their confidence and efficacy. Therefore, the simple assumption is that if teachers' knowledge about IE is positive, their attitude could also be positive.

Kurniawati et al. (2012) note that teachers' attitude would be more positive if they received sufficient training and gained more knowledge and experience. Some studies have also reported that when teachers receive more content on special education during their initial or in-service training, their attitude towards IE becomes positive (Secer 2010; Clough and Nutbrown 2004; Mastropieri and Scruggs 2000) which in part demonstrates that teachers would be more positive toward the implementation of IE if they have more knowledge about it. To ensure that teachers have adequate knowledge about IE to impact on their attitudes, Lewis and Doorlag (2011) suggest that teachers will have to be provided with more information and training. Training is therefore critical to the sustainability of IE, which may be why Mukhopadhyay (2009) and Chhabra, Strivasta, and Strivasta (2010) mention teachers' lack of training as one of the main potential barriers to the success of IE.

Invariably, teachers' knowledge is tied to their perception about the benefits of IE. Vanderpuye (2013) establish that there is a positive relationship between knowledge

about IE and the perceived benefits of IE. This means that the more teachers are knowledgeable about IE, the more likely they will perceive IE to be beneficial. The benefits include improvements in academic performance (literacy and numeracy skills) for pupils with SEN (Cosier, Causton-Theoharis, and Theoharis 2013; Cole, Waldron, and Majd 2004). Pupils with intellectual disabilities in IE classrooms can also improve in literacy skills compared to pupils placed in segregated settings (Dessemontet, Bless, and Morin 2012). Cole, Waldron, and Majd (2004) also report that pupils without SEN have a high propensity to improve in literacy and numeracy skills in Inclusive classrooms. There is an academic achievement for both children with SEN and those without which is supported through peer tutoring (Cushing and Kennedy 1997). IE also helps to promote cordial relationships between pupils with SEN and those without SEN to promote appropriate behaviours from well-behaved peers. Pupils become familiar with the features of the other group and learn to understand themselves (Hines 2001). According to Schwab (2015), inclusion is beneficial to all students and can support the social skills development of pupils with SEN.

Despite these benefits, several concerns have arisen from IE practices. For example, Bateman and Bateman (2002) report that Inclusive placements do not favour all pupils, as some pupils may require more intensive and individualised intervention. Similarly, Irmsher (1995) acknowledges that pupils with SEN who are disruptive in class may slow the academic progress of pupils without SEN. However, it is important to note that the benefits of IE may far outweigh the perceived challenges, especially if the goal is to promote equality in education.

There appears to be few robust investigations into the relationship between teachers' attitude towards IE and their perception of the impact of IE on pupils. The current study acknowledges that studies have been conducted on the various variables under discussion. However, as noted in this discussion, the findings are inconclusive.

Although Mamah et al. (2011); Nketsia, Saloviita, and Gyimah (2016) and Agbenyega (2007) have conducted some studies on IE and its implementation in Ghana, they did not inquire from the teacher-participants what resources they would need to facilitate effective IE. The existing studies did not also explore the relationship that exists between teachers' attitude and their perception of the impact of IE on pupils.

This situation creates a gap in the current literature in Ghana's implementation of IE. It is, therefore, necessary to know the current attitudes teachers have towards IE. It is also necessary to know teachers' perception of the resources they need and the impact they think IE may have on pupils. These variables are essential if IE is to be implemented and sustained successfully. To address these gaps, the following research questions and hypothesis have been posed to guide the study.

- (1) What is the attitude of teachers towards IE?
- (2) What do teachers need for the effective implementation of IE?
- (3) What perception do teachers have of the impact of IE on pupils?

$H_0$ : There is no statistically significant relationship between teachers' attitude towards IE and the impact that they perceive IE to have on pupils.

## Materials and methods

The study was a descriptive survey, and a census of 153 teachers from eight inclusive schools constituted the population. Purposive sampling was used to select the eight schools because they were the only schools designated as pilot inclusive schools in the Cape Coast metropolis that had been running the IE programme on pilot basis since 2003. The eight schools, therefore, formed the unit of interest that provided information to help answer our research questions.

The data collection instrument was a questionnaire developed by the researchers. The instrument was examined by three experts in special education and two in measurement and evaluation from a university in the region to ascertain its validity. Subsequently, the questionnaire was tested on 30 teachers from two pilot inclusive schools in the Effutu municipality of the Central Region of Ghana. No item was removed from the scale after the pilot testing of the instruments as none of the items had an item-total correlation less than .25.

The Cronbach's Alpha of the various components of the instrument was, teachers' attitude towards IE, 0.63; resources teachers need for effective IE, 0.84; and teachers' perception of the impact of IE on pupils, 0.75. The overall reliability of the instrument was 0.76.

The questionnaire consisted of three sections. The first section elicited information on attitude towards IE, the second section also elicited information on the resources teachers need for effective IE and the third section was on teachers' perception of the impact of IE on pupils. The teachers were requested to indicate their responses on a 5-point Likert-type scale (strongly agree, 5; agree, 4; undecided, 3; disagree, 2; and strongly disagree, 1), which measured their views of the variables.

A sample of 142 teachers (52 males; 90 females) successfully completed the questionnaire. The teachers were all trained teachers with the minimum teaching qualification required by the Ghana Education Service. They all had taught in their current inclusive schools for a number of years. Nineteen (13.4%) of teachers had taught for 1–5 years; 1(0.7%) of teachers had taught for 6–10 years; 52(36.6%) had taught for 11–20 years; 70(49.9%) had taught for 21 or more years. Of the 142 teachers, 86(60.6%) of them had received inclusive education training while 56(39.4%) of the teachers had no training in inclusive education practices.

We collected data from the selected schools after obtaining written permission from the District Education Office, Cape Coast. In each school, permission was elicited from the head teacher and the informed consent of the teachers was obtained. The distributed questionnaires were collected one week after the distribution, and the return rate was 92.8%.

The completed questionnaires were serially numbered and coded. Negative statements such as; 'Pupils with SEN should not be taught in inclusive classes because they will take too much of the teacher's time' were reverse coded. Descriptive statistics were used to analyse the data for research questions one to three, while the Pearson correlation coefficient was used to test the hypothesis.

## Results

### *Teachers' attitude towards inclusive education*

Responses to the items from section A of the questionnaire were analysed to answer this research question. [Table 1](#) presents the results of the analyses using the mean and standard deviation values of the various items.

**Table 1.** Teachers' attitude towards inclusive education.

Teachers' attitude	N	M	SD
(1) All-inclusive classrooms can be modified to meet the needs of pupils with SEN	142	4.01	0.93
(2) I am willing to engage in team teaching to help meet the needs of pupils with SEN	142	3.84	0.87
(3) IE increases the workload of the teacher	142	3.80	1.16
(4) It is not necessary to remove pupils with SEN from inclusive classes to meet their needs	142	3.74	1.27
(5) Pupils with SEN can be effectively educated in inclusive classes as opposed to special schools	142	3.44	1.20
(6) All pupils with SEN should be educated with pupils without SEN to the fullest extent possible	142	3.39	1.30
(7) IE is good, but it does not work in practice	142	3.17	1.30
(8) General education teachers often do not succeed with pupils with SEN even if they try their best	142	2.93	1.27
(9) Pupils with SEN should not be taught in inclusive classes because they will take too much of the teacher's time	142	2.92	1.45
(10) Most or all separate classes for pupils with SEN should be abolished	142	2.49	1.35
(11) Pupils with SEN lack the academic skills for success and therefore should not be in inclusive classrooms	142	2.45	1.36
(12) Pupils with SEN lack social skills for success and therefore should not be in inclusive classrooms	142	2.23	1.39
Average of means and standard deviations		3.20	2.26

Table 1 shows the teachers' attitude towards IE. The teachers' responses to the first seven items in the table were quite high, since they were above the mean cut-off point of 3.0. The data in the table further shows that all-inclusive classrooms can be modified to meet the needs of children with SEN, with a very high recorded mean of 4.01 and a standard deviation of 0.93, while responses to some of the statements show relatively weak means. Furthermore, the overall mean for the teachers' attitude was positive, though weak ( $M = 3.20$ ,  $SD = 2.26$ ), since it was slightly above the mean cut-off point of 3.0.

### Resources teachers need for effective inclusive education

Responses to the items from section B of the questionnaire were analysed to address this research question. Table 2 presents the results of the analyses using the mean and standard deviation values of the various items.

Table 2 clearly indicates teachers' need for effective IE. The teachers' responses to almost all the statements were high since they were above the mean cut-off point of 3.0. Furthermore, the overall mean for the needs of teachers/schools for effective IE was very high ( $M = 4.19$ ,  $SD = 0.91$ ) since it was far above the mean cut-off point of 3.0.

**Table 2.** Teachers' need for effective inclusive education.

Need	N	M	SD
(1) I need sufficient teaching materials to teach effectively	142	4.56	0.79
(2) I need additional training to effectively teach pupils with SEN	142	4.34	0.82
(3) The physical accessibility of my school needs to be improved	142	4.31	0.83
(4) I need more information about special needs and disabilities	142	4.30	0.82
(5) I need parents to collaborate with me for effective IE provision	142	4.29	0.90
(6) I need a special educationist to collaborate with me	142	4.27	0.89
(7) I need training in adapting instructional materials to teach pupils with SEN	142	4.23	0.85
(8) I need training in how to promote social interaction	142	4.01	0.96
(9) I need colleagues' support in teaching pupils with diverse needs	142	3.89	1.06
(10) I need a teaching assistant to support me in my classroom	142	3.74	1.18
Average means and standard deviations		4.19	0.91



**Table 3.** Teachers' perception of the impact of inclusive education on pupils.

Impact of inclusive education on pupils	N	Mean	SD
(1) Pupils with SEN improve their language and communication skills in inclusive classrooms	142	3.97	1.03
(2) Pupils with SEN learn appropriate behaviours from pupils without SEN	142	3.92	0.93
(3) IE is likely to have a positive effect on the social and emotional development of pupils	142	3.89	1.07
(4) Pupils without SEN benefit from friendship with their peers with SEN	142	3.80	1.05
(5) Pupils with SEN actively socialise with their peers without SEN	142	3.78	1.07
(6) Pupils understand the values of individual differences and involvement	142	3.70	1.15
(7) IE leads to the improved academic performance of all pupils	142	3.64	1.17
(8) Pupils with SEN are sometimes isolated	142	3.58	1.19
(9) Pupils with SEN are sometimes bullied/neglected by peers	142	3.36	1.22
(10) Pupils with SEN are called names such as 'stupid/weird' by peers	142	3.10	1.33
Average of means and standard deviations		3.67	1.12

### *Teachers' perception of the impact of inclusive education on pupils*

Responses to the items from section C of the questionnaire were analysed to answer this research question. Table 3 presents the results of the analyses using the mean and standard deviation values of the various items.

Table 3 shows the teachers' perception of the impact of IE on pupils. The teachers' responses to all the statements were positive based on the mean cut-off point of 3.0. Furthermore, the overall mean for the teachers' perception of the impact of IE on pupils was moderately positive ( $M = 3.67$ ,  $SD = 1.12$ ).

Most of the respondents ( $M = 3.97$ ,  $SD = 1.03$ ) agreed that pupils with SEN improve their language and communication skills in inclusive classrooms. Additionally, most of the respondents ( $M = 3.92$ ;  $SD = 0.93$ ) agreed that pupils with SEN learn appropriate behaviours from pupils without SEN.

### *Relationship between teachers' attitude towards IE and their perception of its impact on pupils*

Table 4 presents the results of the testing of the hypothesis on the relationship between teachers' attitude towards IE and their perception of the impact of IE on pupils. The Pearson correlation coefficient was used to test the relationship.

As shown in Table 4, there is a weak statistically significant positive correlation between teachers' attitude towards IE and their perception of its impact on pupils ( $r = 0.123$ ;  $n = 142$ ;  $p > .01$ ). The positive correlation coefficient of 0.228 between teachers' attitude towards IE and their perception of its impact on pupils and the significant value of  $P$  being less than 0.01 ( $p < 0.01$ ) indicate that the relationship between the two variables is statistically significant. This finding implies that teachers' attitude towards IE is significantly related to their perception of its impact on pupils. However, the positive correlation of  $r = 0.288$  shows that as teachers attitude towards IE become more positive they tend to perceive IE as having a greater positive impact on pupils.

**Table 4.** Correlation matrix (Pearson's  $r$ ) for teachers' attitude towards IE and their perception of its impact on pupils.

	Attitude towards IE	Impact on pupils
Attitude towards inclusive education	1	0.228**
Impact on pupils	0.228**	1

\*\* $p < .01$  (two-tailed),  $N = 142$  (attitudes towards IE) and  $N = 142$  (impact on pupils).



## Discussion

IE is intended to equip schools to meet the diverse needs of pupils and to enable them to efficiently learn together despite their unique attributes (Page 2013). Teachers' attitudes play a pivotal role in IE (Dapudong 2014). It is therefore important to continually monitor teachers' attitudes to ensure that they are positive if the sustainability of IE is the ultimate goal. In the current study, teachers' attitude was found to be positive but weak in terms of practice. This finding contrasts with an earlier finding by Kuyini (2004), who recorded negative attitudes of teachers towards IE. It is important to note that his research was done at the early stage of the pilot programme for IE in Ghana; thus, teachers' knowledge of and information about IE were minimal at the time. Though weak, the positive attitude revealed by the current study indicates that there has been an improvement in teachers' attitude, which may be attributable to increased knowledge of inclusive practices and special education (Secer 2010; Clough and Nutbrown 2004; Mastropieri and Scruggs 2000; Sucuoğlu et al. 2013). Equipping teachers with knowledge of inclusive practices and special education may therefore be the right approach to improve attitudes and help sustain teachers' commitment to inclusive classrooms.

The overall mean ( $M = 4.19$ ,  $SD = 0.91$ ) was high for the items that constituted resources teachers' need for effective IE. This finding means that in the teachers' view, a number of elements are needed for effective IE to occur. The first is sufficient TLMs, which are essential in facilitating teaching. TLMs are concrete objects and other materials that the teachers and pupils use to facilitate teaching and learning (Ghana Education Service n.d.). Furthermore, teachers use TLMs to explain concepts and present information to pupils in a meaningful way. As pupils interact with teachers, peers and TLMs, meaningful learning occurs (Chingos and Whitehurst 2012). Lack or insufficiency of TLMs can therefore negatively affect teaching and learning in inclusive schools (Agbenyega 2007; Arrah and Swain 2014; Mprah et al. 2016; Opoku et al. 2015, 2016, 2017).

Teachers also indicated that they need various kinds of training in various aspects of IE (see Table 2). The issue of inadequate pre-service and in-service training in teacher preparation for IE in Ghana was identified by Vanderpuye, Gyimah, and Deku (2009). The fact that teachers are still requesting training means that the educational system that trains teachers and oversees their professional development has failed to some extent. The findings of the current study to some extent confirm the findings of Nketsia, Saloviita, and Gyimah (2016), who showed that the majority (68%) of teacher educators indicated that they were somewhat prepared for IE. These results indicate that the teachers were not sure of their ability to teach pupils with SEN in inclusive schools. The teachers' low level of confidence in their preparation clearly indicates that they may have little or no training in teaching pupils with SEN.

Collaboration is another pertinent need indicated by the data in Table 2. There can be no IE without the effective collaboration between professionals and parents. For this reason, Salend (2001) identifies collaboration as one of the four frameworks and philosophy that form the foundation of IE. UNESCO (2005) emphasises collaboration among all key stakeholders for effective inclusion. The stakeholders should share skills and resources and work together to meet the needs of the pupils they serve. IE is, therefore, a shared responsibility. Teachers in this study are calling for collaboration with parents, special educationists and colleagues to promote the sustainability of IE.

Insufficient training results in inadequate knowledge, which leads to teachers' unpreparedness to include pupils with SEN (Agbenyega and Deku 2011). Scruggs and Mastropieri (1996) attribute this unpreparedness to teachers' lack of skills to manage diverse needs in the classroom and inability to engage in appropriate curriculum and instructional adaptations. Vanderpuye, Gyimah, and Deku (2009) noted that these issues compound teachers' anxiety and stress. High-quality and comprehensive teacher training therefore is a catalyst for the sustainability of inclusive programmes.

The first item in Table 1 was the item that had the highest mean value ( $M = 4.01$ ,  $SD = 0.930$ ). The response of the teachers to this item shows that the majority of the teachers believed that inclusive classrooms can be modified to meet the needs of pupils with special needs. This means that inclusive classrooms can serve the needs of pupils with special needs. However, this may only be possible if some changes are made to cater for diversity in the school. It is for this reason that several researchers have reported that IE is the transformation of a school to meet the needs of diverse learners which includes pupils with special needs (Flem, Moen, and Gudmundsdottir 2004; Ainscow 1995).

In meeting the needs of diverse pupils in inclusive classrooms, the focus is to ensure that all pupils benefit from their educational placement. The respondents in the current study are of the view that there are academic gains for all pupils in inclusive classrooms. This finding supports earlier findings which report that both pupils with SEN and those without improve academically in inclusive schools (Cosier, Causton-Theoharis, and Theoharis 2013; Dessemontet, Bless, and Morin 2012; Cole, Waldron, and Majd 2004).

The current study shows that teachers are of the view that IE improves friendships and social interaction between the two groups of pupils. This finding corroborates those of Hines (2001). Schwab (2015) believes that IE can even help pupils with SEN develop social skills. Teachers acknowledge the fact that IE is a good way to help pupils with SEN who have difficulty developing relationships (Bossaert et al. 2015).

However, concerns have also been raised about the impact of IE on pupils. The findings of the current study show that some teachers think that pupils with SEN will be isolated, neglected/bullied or be called names by their peers without SEN. If such behaviours occur, pupils without SEN will need to be educated to bring about attitudinal change (Lewis and Doorlag 2011).

Although we were unable to identify any study that sought to establish a relationship between teachers' attitude and their perception of the impact IE has on pupils with SEN, the current study has established that there is a weak, statistically significant positive correlation between teachers' attitude towards IE and their perception of its impact on pupils. The implication of this finding is that if we improve teachers' attitude positively towards IE there is the corresponding likelihood that teachers' perception of the positive impact of IE on pupils will also improve.

## Conclusion

The sustainability of IE is critical for the provision of high-quality education for pupils with diverse educational needs. Teachers, as the focal providers of education, must have a highly positive attitude towards IE. However, based on the findings, we concluded that while teachers have a relatively positive attitude towards IE, this attitude alone is not strong enough to sustain the implementation of IE hence, resources needed to

implement effective IE must be considered. Based on these findings, the following recommendations are made.

- (1) To achieve the sustainability of IE, based on the available literature and the findings of the current study, we propose that teachers are given the necessary resources, including sufficient TLMs, information about special needs and disabilities, training in how to effectively teach pupils with SEN, training in adapting instructional materials for pupils with SEN and training in how to promote social interaction. Teachers should receive training and information about all aspects of IE. This approach calls for intensive staff training and continuing professional development to sufficiently prepare teachers for IE.
- (2) Teachers need to collaborate with special educationists, parents and their colleagues. Meeting these needs will result in a change in teachers' attitude. As teachers' attitude becomes highly positive as a result of the various information and training they receive, their knowledge of IE will improve, which will influence their perception of the impact IE has on pupils. Teachers will come to appreciate the benefits of IE in meeting the needs of all pupils. The end result is that teachers will do their best to ensure that IE is sustained.

### Disclosure statement

No potential conflict of interest was reported by the authors.

### Funding

This work was supported by the FY2015 United Nations University (UNU) grants for Global Sustainability "Development of the Inclusive Education System Model for Learning Improvement in Developing Countries" Rep: Prof. Kazuhiro Yoshida, Centre for the Study of International Cooperation in Education, Hiroshima University, Japan.

### Notes on contributors

*Irene Vanderpuye* is a special educationist and a Senior Lecturer at the University of Cape Coast. Her research interests include parental involvement in inclusive education, social attitudes towards inclusive education and educational intervention for children with special educational needs. She has been a Ph.D. holder from the University of Leeds, United Kingdom, since December 2013.

*Gideon Kwesi Obosu* lectures at the University of Cape Coast. He holds an M.Phil. in special education from the University of Education, Winneba and is currently a doctoral student in special education at the University of Cape Coast. His research interests include inclusive education, sign language and deaf education.

*Mikako Nishimuko* is a lecturer in international development studies at Teikyo University, Japan. Her research interests include gender and basic education in Ghana and Sierra Leone. She received her Ph.D. from Institute of Education, University of London.

### ORCID

*Irene Vanderpuye*  <http://orcid.org/0000-0003-1239-1005>

## References

- Agbenyega, Joseph. 2007. "Examining Teachers' Concerns and Attitudes to Inclusive Education in Ghana." *International Journal of Whole Schooling* 3 (1): 41–56.
- Agbenyega, Joseph, and Prosper Deku. 2011. "Building New Identities in Teacher Preparation for Inclusive Education in Ghana." *Current Issues in Education* 14 (1): 1–36. <http://cie.asu.edu/Googlescholar>.
- Ahsan, M. T. 2015. "Teachers' Perspective of Inclusive Education: A Central Agenda for Successful Implementation." *Asian Journal of Inclusive Education* 3 (1): 1–2.
- Ahsan, M. T., J. M. Deppeler, and U. Sharma. 2013. "Predicting Pre-Service Teachers' Preparedness for Inclusive Education: Bangladeshi Pre-Service Teachers' Attitudes and Perceived Teaching-Efficacy for Inclusive Education." *Cambridge Journal of Education* 43 (4): 517–535.
- Ahsan, M. T., U. Sharma, and J. M. Deppeler. 2012. "Exploring Pre-Service Teachers' Perceived Teaching-Efficacy, Attitudes and Concerns About Inclusive Education in Bangladesh." *International Journal of Whole Schooling* 8 (2): 1–2.
- Ainscow, Mel. 1995. "Education for All: Making it Happen." *Support for Learning* 10 (4): 47–157.
- Alghazo, E. M., H. Dodeen, and I. A. Algaryouti. 2003. "Attitudes of Pre-Service Teachers Towards Persons with Disabilities: Predictions for Success of Inclusion." *College Student Journal* 37 (4): 515–521.
- Alhassan, A. R. K., and O. C. Aboasi. 2014. "Teacher Effectiveness in Adapting Instruction to the Needs of Pupils with Learning Difficulties in Regular Primary Schools in Ghana." *Sage Open*, 1–16. doi:10.1177/2158244013518929.
- Anthony, J. H. 2009. *Access to Education for Students with Autism in Ghana: Implications for EFA*. Background paper prepared for the Education for All Global Monitoring Report 2010 (Reaching the marginalized). April. Paris, France: UNESCO.
- Arrah, R. O., and K. D. Swain. 2014. "Teachers' Perceptions of Students with Special Education Needs in Cameroon Secondary Schools." *International Journal of Special Education* 29 (3): 101–110.
- Avramidis, Elias, Phil Bayliss, and Robert Burden. 2000a. "Student Teachers' Attitudes Towards the Inclusion of Children with Special Educational Needs in the Ordinary School." *Teaching and Teacher Education* 16 (3): 277–293.
- Avramidis, Elias, Phil Bayliss, and Robert Burden. 2000b. "A Survey Into Mainstream Teachers' Attitudes Towards the Inclusion of Children with Special Educational Needs in the Ordinary School in One Local Education Authority." *Educational Psychology* 20 (2): 191–212.
- Banerji, Madhabi, and Ronald Dailey. 1995. "A Study of the Effective of an Inclusion Model on Students with Specific Learning Disabilities." *Journal of Learning Disabilities* 28 (8): 511–522.
- Bateman, D., and C. Bateman. 2002. *What Does a Principal Need to Know About Inclusion?* Arlington, VA: ERIC Clearinghouse on Disabilities and Gifted Education.
- Bossaert, G., A. A. de Boer, P. Frostad, S. J. Pijl, and K. Petry. 2015. "Social Participation of Students with Special Educational Needs in Different Educational Systems." *Irish Educational Studies* 34 (1): 43–54. doi:10.1080/03323315.
- Botts, B. H., and N. O. Owusu. 2013. "The State of Inclusive Education in Ghana, West Africa, Preventing School Failure." *Alternative Education for Children and Youth* 57 (3): 135–143.
- Brownell, M. T., and F. Pajares. 1999. "Teacher Efficacy and Perceived Success In Mainstreaming Students with Learning and Behavior Problems." *Teacher Education and Special Education* 22 (3): 154–164.
- Campos, M. J., J. P. Ferreir, and M. E. Block. 2014. "Influence of an Awareness Program on Portuguese Middle and High School Students' Perceptions of Peers with Disabilities." *Psychological Reports* 115 (3): 897–912.
- Cheng, Y. 2011. "Perceptions of Inclusion by Kindergarten Teachers and Parents in Taiwan." *Special Need Education* 3 (5): 13–19.
- Chhabra, S., R. Strivasta, and I. Strivasta. 2010. "Inclusive Education in Botswana: The Perceptions of School Teachers." *Journal of Disability Policy Studies* 20 (4): 219–228.

- Chingos, M. M., and J. G. Whitehurst. 2012. *Choosing Blindly: Instructional Materials, Teacher Effectiveness and the Common Core*. Washington, DC: Brown Center on Education Policy.
- Clough, P., and C. Nutbrown. 2004. "Special Educational Needs and Inclusion: Multiple Perspectives of Preschool Educators in the UK." *Journal of Early Childhood Research* 2 (2): 191–210. doi:10.1177/1476718X04043015.
- Cole, C. M., N. Waldron, and M. Majd. 2004. "Academic Progress of Students Across Inclusive and Traditional Settings." *Mental Retardation* 42 (2): 136–144.
- Cosier, M., J. Causton-Theoharis, and G. Theoharis. 2013. "Does Access Matter? Time In General Education and Achievement for Students with Disabilities." *Remedial and Special Education* 34 (6): 323–332.
- Crane-Mitchel, L., and A. V. Hedge. 2007. "Belief and Practices of In-Service Preschool Teachers in Inclusive Settings: Implications for Personnel Preparation." *Journal of Early Childhood Teacher Education* 28 (4): 353–366.
- Cushing, L. S., and C. H. Kennedy. 1997. "Academic Effects of Providing Peer Support in General Education Classrooms on Students Without Disabilities." *Journal of Applied Behavior Analysis* 30 (1): 139–151.
- Dapudong, R. C. 2014. "Teachers' Knowledge and Attitude Towards Inclusive Education: Basis for an Enhanced Professional Development Program." *International Journal of Learning Development* 4 (4): 7–24.
- de Boer, A., S. J. Pijl, and A. Minnaert. 2011. "Regular Primary Schoolteachers' Attitudes Towards Inclusive Education: A Review of the Literature." *International Journal of Inclusive Education* 15 (3): 331–353.
- Deku, Prosper, and Irene Vanderpuye. 2017. "Perspectives of Teachers Regarding Inclusive Education in Ghana." *International Journal of Whole Schooling* 13 (3): 39–54.
- Dessemontet, R. S., G. Bless, and D. Morin. 2012. "Effects of Inclusion on the Academic Achievement and Adaptive Behaviour of Children with Intellectual Disabilities." *Journal of Intellectual Disability Research* 56 (6): 579–587.
- Flem, A., T. Moen, and S. Gudmundsdottir. 2004. "Towards Inclusive Education Schools: A Study of Inclusive Education in Practice." *European Journal of Special Needs Education* 19 (1): 85–98.
- Forlin, C., T. Loreman, U. Sharma, and C. Earle. 2009. "Demographic Differences In Changing Pre-Service Teachers' Attitudes, Sentiments and Concerns About Inclusive Education." *International Journal of Inclusive Education* 13 (2): 195–209.
- Forlin, C., and K. Sin. 2010. "Developing Support for Inclusion: A Professional Learning Approach for Teachers in Hong Kong." *International Journal of Whole Schooling* 6 (1): 7–26.
- Ghana Education Service. n.d. *Handbook on Lesson Notes Preparation and Teaching Learning/Materials in Primary Schools*. Accra: Ministry of Education.
- Hines, R. A. 2001. *Inclusion in Middle Schools*. Champaign, IL: ERIC Clearinghouse on Elementary and Early Childhood Education.
- Irmsher, K. 1995. *Inclusive Education in Practice: The Lessons of Pioneering School Districts*. Oregon: Oregon School Study Council, University of Oregon.
- Kim, J. 2011. "Influence of Teacher Preparation Programs on Pre-Service Teachers' Attitudes Towards Inclusion." *International Journal of Inclusive Education* 15 (3): 355–377.
- Kurniawati, F., A. Minnaert, F. Mangunsong, and W. Ahmed. 2012. "Empirical Study on Primary School Teachers' Attitudes Towards Inclusive Education in Jakarta, Indonesia." *Procedia-Social and Behavioral Sciences* 69: 1430–1436.
- Kuyini, A. B. 2004. "Principals' and Teachers' Attitudes and Knowledge of Inclusive Education as Predictors of Effective Teaching Practices in Ghana." PhD diss., University of Melbourne, Australia.
- Lewis, R. B., and D. H. Doorlag. 2011. *Teaching Special Students in General Education Classrooms*. 8th ed. Upper Saddle River, NJ: Pearson Education.
- Lipsky, D., and A. Gartner. 1998. "Taking Inclusion Into the Future." *Educational Leadership* 56 (2): 78–81.

- Mamah, V., P. Deku, S. M. Darling, and S. K. Avoke. 2011. "University Teachers' Perception of Inclusion of Visually Impaired in Ghanaian Universities." *International Journal of Special Education* 26 (1): 70–79.
- Mastropieri, M. A., and T. E. Scruggs. 2000. *The Inclusive Classroom: Strategies for Effective Instruction*. Upper Saddle River, NJ: Merrill.
- Ministry of Education. 2003. *Education Strategic Plan for 2003-2015*. Accra: MOE.
- Ministry of Education. 2015. *Inclusive Education Policy*. Accra: MOE.
- Mprah, K., A. Dwomoh, M. Opoku, I. Owusu, and J. Ampratwum. 2016. "Knowledge, Attitude and Preparedness of Teachers Towards Inclusive Education in Ejisu- Juaben Municipality in Ashanti Region of Ghana." *Journal of Disability Management and Special Education* 6 (2): 1–15.
- Mukhopadhyay, S. 2009. "Factors Influencing the Status of Inclusive Education For Learners with Disabilities in Botswana Primary Schools." PhD diss., University of Botswana.
- Nketsia, W., T. Saloviita, and E. K. Gyimah. 2016. "Teacher Educators' Views on Inclusive Education and Teacher Preparation in Ghana." *International Journal of Whole Schooling* 12 (2): 1–18.
- Opoku, M. P., J. Agbenyega, W. K. Mprah, T. Mckenzie, and E. Badu. 2017. "Decade of Inclusive Education in Ghana: Perspectives of Educators." *Journal of Social Inclusion* 8 (1): 4–20.
- Opoku, M. P., E. Badu, M. Amponteng, and E. Agyei-Okyere. 2015. "Inclusive Education at the Crossroads in Ashanti and Brong Ahafo Regions in Ghana: Target Not Achievable By 2015." *Disability, CBR and Inclusive Development* 26 (1): 63–78.
- Opoku, M. P., W. K. Mprah, I. Owusu, E. Badu, and E. L. Torgbenu. 2016. "Challenges in Accessing Education for Students with Disabilities in Ashanti and Brong Ahafo Regions of Ghana." *Journal of Disability Studies* 1 (2): 61–68.
- Page, H. 2013. *Children with Special Needs: Transition to Inclusive Education in Armenia*. UNICEF. <http://www.google.se/>.
- Republic of Ghana. 2006. *Persons with Disability Act*. Accra: Ghana Publishing Cooperation.
- Salend, J. S. 2001. *Creating Inclusive Classrooms: Effective and Reflective Practices*. 4th ed. New Jersey: Merrill.
- Sapon-Shevin, M. 1996. "Including All Students and Their Gifts Within Regular Classrooms." In *Controversial Issues Confronting Special Education, Divergent Perspectives*, edited by W. Stainback and S. Stainback, 69–80. Boston, MA: Ally and Bacon.
- Schwab, S. 2015. "Social Dimensions of Inclusion in Education of 4th And 7th Grade Pupils in Inclusive and Regular Classes: Outcomes From Austria." *Research in Developmental Disabilities* 43–44: 72–79. doi:10.1016/j.ridd.2015.06.
- Scruggs, T. E., and M. A. Mastropieri. 1996. "Teacher Perception of Mainstreaming /Inclusion, 1958-1995: A Research Synthesis." *Exceptional Children* 63 (1): 59–74.
- Secer, Z. 2010. "An Analysis of the Effects of In-Service Teacher Training On Turkish Preschool Teachers' Attitudes Towards Inclusion." *International Journal of Early Years Education* 18 (1): 43–53.
- Sucuoglu, B., H. Bakkaloglu, I. F. Karasu, S. Demir, and S. Akalin. 2013. "Inclusive Preschool Teachers: Their Attitudes and Knowledge About Inclusion." *International Journal of Early Childhood Special Education* 5 (2): 107–128.
- Todorovic, J., S. Stojiljkovic, S. Ristanic, and G. Djigic. 2011. "Attitudes Towards Inclusive Education and Dimensions of Teacher's Personality." *Procedia - Social and Behavioral Sciences* 29: 426–432.
- UNESCO. 2005. *Guidelines for Inclusion: Ensuring Access to Education for All*. Paris: UNESCO.
- Vanderpuye, I. 2013. *Piloting Inclusive Education in Ghana: Parental Perceptions, Expectation and Involvement*. PhD diss., University of Leeds. <http://etheses.whiterose.ac.uk/>.
- Vanderpuye, I., E. K. Gyimah, and P. Deku. 2009. "Preparation for Inclusive Education in Ghana." *Ghana Journal of Education* 1 (1): 11–21.
- Vaughn, J. S., J. Schumm, B. Jallad, J. Slusher, and L. Saumell. 1996. "Teachers' Views of Inclusion." *Learning Disabilities Research and Practice* 11 (2): 96–106.