frontiers | Frontiers in Education

TYPE Original Research
PUBLISHED 29 September 2022
DOI 10.3389/feduc.2022.985123



OPEN ACCESS

EDITED BY
Antonio Iudici,
University of Padua, Italy

REVIEWED BY
Sharon Wolf,
University of Pennsylvania,
United States
Dickson Adom,
Kwame Nkrumah University of Science and Technology, Ghana
Eric R. Hamilton,
Pepperdine University, United States

*CORRESPONDENCE
Maxwell Peprah Opoku
Maxwell.p@uaeu.ac.ae

SPECIALTY SECTION
This article was submitted to Teacher Education, a section of the journal Frontiers in Education

RECEIVED 03 July 2022
ACCEPTED 06 September 2022
PUBLISHED 29 September 2022

CITATION
Opoku MP, Nketsia W and Mohamed AH (2022) The self-efficacy of private school teachers toward the implementation of inclusive education in Ghana: A mixed-methods study.
*Front. Educ.* 7:985123.
doi: 10.3389/feduc.2022.985123



# The self-efficacy of private school teachers toward the implementation of inclusive education in Ghana: A mixed-methods study

Maxwell Peprah Opoku[1]*, William Nketsia[2] and Ahmed H. Mohamed[1]

[1]Special Education Department, United Arab Emirates University, Al Ain, United Arab Emirates, [2]School of Education, Western Sydney University, Sydney, NSW, Australia

**Background:** Although efforts toward practicing inclusive education have stalled in countries such as Ghana, the available data have mainly centred on enacting inclusive education in public schools. With private schools being notable alternative service providers to public schools, understanding private school teachers' perceived self-efficacy toward teaching students with disabilities in the classroom is essential.

**Method:** To develop insights into inclusive practices, a two-phase mixed-methods design was adopted for this study. In the first phase, 82 teachers from six private schools responded to the self-reported Teacher Efficacy for Inclusive Practice (TEIP) scale. In the second phase, there were 10 participants, including principals ($n = 3$), heads of department ($n = 4$) and teachers ($n = 3$). While the quantitative data were subjected to confirmatory factor analysis, *t*-tests, analysis of variance and linear regression, the qualitative data were analysed thematically using the components of the TEIP scale as *a priori* themes.

**Result:** The study confirmed the structural validity of the TEIP scale in measuring teachers' self-efficacy and the correlations and covariances between efficacy in managing behaviour and performing instruction and collaboration. There was divergence between the quantitative and qualitative data and background variables, such as educational qualifications, pre-service training in inclusive education and participation in professional development, which provided additional insights into the teachers' self-efficacy.

**Conclusion:** The findings show that some private school teachers teach students with disabilities despite having no confidence in their capabilities. The study findings underscore the need to create more training opportunities for private school teachers to enhance their confidence in practicing inclusive education in schools.

KEYWORDS

**inclusion, confidence, effective teaching, students, private school, teachers**

## Introduction

Inclusive education has been envisaged as a useful policy in attaining equitable access to education (United Nations Educational Scientific Cultural Organisation, 1994; Ainscow and Miles, 2009; Ainscow and Sandill, 2010). This study was guided by the narrow lens that the implementation of inclusive education creates opportunities for children with disabilities to participate in schools located in their community (Ainscow and Sandill, 2010; World Health Organization [WHO], 2011). Disability refers to physical, cognitive and sensory impairments that impact the day-to-day living experiences of individuals (World Health Organization [WHO], 2011). There is heterogeneity between individuals with disabilities, with conditions ranging from mild to profound. In many societal contexts, vulnerable groups such as individuals with disabilities are denied access to life-changing opportunities in areas such as education, which contributes to their inability to access employment and other opportunities (United Nations, 2007; Sharma et al., 2013, 2017, 2019). Following the 1994 Salamanca Conference, a strong statement was made for the implementation of inclusive education to enable children with disabilities to enjoy rights to education and maximise their potential in society (United Nations Educational Scientific Cultural Organisation, 1994). The promulgation of the Convention on the Rights of Persons with Disabilities (CRPD) reiterated the need for countries to support the education of children with disabilities in schools located in their communities (United Nations, 2007). In Ghana, the government has embraced the implementation of inclusive education and taken steps toward this end (Republic of Ghana, 2015). However, while some efforts have been made to support the implementation of inclusive education in public schools, they have been unsuccessful (Anthony, 2011; Singal et al., 2015; Subbey, 2020; Opoku et al., 2021), and there has been even less focus on understanding teachers' preparedness to support the implementation of inclusive education. Thus, this study attempted to understand private school teachers' self-efficacy, which has been identified as an important attribute in directly or indirectly impacting inclusive teaching behaviours.

In this study, confidence, self-efficacy and efficacy are used interchangeably. Central to the implementation of inclusive education are qualified teachers who are expected to support students with disabilities in the classroom (Ainscow and Miles, 2009; Ainscow and Sandill, 2010; Sharma et al., 2013, 2017, 2019; Ashman, 2015; Subbey, 2020). Unsurprisingly, most teacher training institutions have reformed their curriculum to incorporate content on inclusive education so as to expose pre-service teachers to inclusive teaching pedagogies (Florian et al., 2010; Forlin and Chambers, 2011; Dessemontet et al., 2014; Ametepee and Anastasiou, 2015). Furthermore, educators have explored possible ways to provide professional development in inclusive education to teachers to ensure that they obtain appropriate information to practice inclusive education (Chao et al., 2016, 2018; Carew et al., 2019). Indeed, it has been suggested that the more qualified the teachers, the more confident they are in their ability to support teaching in inclusive classrooms (Forlin et al., 2014; Chao et al., 2016, 2018; Ekins et al., 2016; Monteiro et al., 2019). However, teachers' confidence in their ability to practice inclusive education does not only depend on their acquired pedagogical skills but also the teaching resources and learning support provided to them and students in inclusive classrooms (Sharma et al., 2012). Therefore, understanding the self-efficacy of private school teachers could inform policymakers of their strengths and weaknesses, which could further inform policy directions and system reforms.

There are contemporaneous discussions on the ability of private schools to provide quality and accessible education to all (Tooley et al., 2007; Akyeampong, 2009; Adoho et al., 2014; Akaguri, 2014; Heyneman and Stern, 2014). This has led to intense discussions regarding creating a conducive environment for the private sector to venture into education and provide learning opportunities for all (Tooley et al., 2007; Akyeampong, 2009; Adoho et al., 2014). In several countries, including Ghana, the private sector can establish educational facilities in communities or areas where the government has failed to provide accessible education (Akyeampong, 2009; Adoho et al., 2014; Heyneman and Stern, 2014). Although there are many discussions around the ability of the private sector to promote equitable access to education to most children (Tooley et al., 2007; Adoho et al., 2014), information regarding their contribution toward the implementation of inclusive education in sub-Saharan African countries such as Ghana remains limited. Against this backdrop, this study explored the self-efficacy of private school teachers toward teaching students with disabilities in regular classrooms.

## Research context

Ghana is located in West Africa and has an estimated population of 30 million (Ghana Statistical Service, 2021). The country recognises education as the key to national development. It is useful here to state that, in Ghana, there is a three-tier educational structure under the direct supervision of the Ministry of Education (2015, 2016): basic education (early childhood, 2 years; primary, years one to six; junior secondary education, 3 years, i.e., years 7–9), senior secondary (years 10–12) and 2 to 4 years of tertiary education (universities, nursing training colleges and colleges of education for teachers training) (Ministry of Education, 2015, 2016).

Education services are provided by both the government and private investors, with the private sector playing a pivotal role in providing quality education (Tooley et al., 2007; Akyeampong, 2009; Heyneman and Stern, 2014) due

to the inability of the central government to provide accessible educational facilities (Akyeampong, 2009). Data for the 2017/18 academic year showed that out of 42,569 educational facilities in Ghana, 15,902 were private, including 9,488 primary facilities, 6,066 junior secondary schools, 286 senior secondary schools and 62 tertiary institutions (Ministry of Education, 2018).

Anecdotal evidence shows that within Ghanaian society, private schools provide quality basic education compared to public schools. Furthermore, according to Adoho et al. (2014) the private sector provides quality education compared to public schools. However, private schools charge tuition fees to pay teachers and handle other administrative duties (Akyeampong, 2009; Heyneman and Stern, 2014), in effect, marrying efficiency and profitability. Consequently, most private schools employ less qualified teachers as a cost-cutting measure (Heyneman and Stern, 2014). There is no direct financial support from the government to private schools, however, the Ministry of Education, through its allied bodies, serves private schools in a supervisory capacity. They ensure that private schools uphold standards and provide quality education to all children. Furthermore, in efforts toward providing equitable access to education, the perspective of private school teachers toward practicing inclusive education has received less research attention.

Inclusive education was introduced during the 2003/04 academic year to ensure that all children, including those with disabilities, had access to education (Opoku et al., 2015; Ministry of Education, 2016; Subbey, 2020). Its implementation is synonymously linked to providing accessible education to children with disabilities (Ministry of Education, 2016) as they are at risk of exclusion from societal activities because of the traditional understanding of disability (Anthony, 2011; Kassah et al., 2012, 2014, 2018; Baffoe, 2013; Opoku et al., 2019). In Ghanaian society, disability is believed to be caused by supernatural forces. Others believe that it is a punishment resulting from a sin committed by immediate family members (Baffoe, 2013). Due to these beliefs, individuals rarely support the development of children with disabilities, who are themselves dependent on others (Kassah et al., 2012, 2014, 2018; Baffoe, 2013; Opoku et al., 2019). The lack of participation of persons with disabilities in education contributes to unemployment as they lack the necessary skills to support themselves (Kassah et al., 2012, 2014; Opoku et al., 2019). Ghana has participated in various international fora relating to disability and developed the Disability Act 715 to promote the participation of persons with disabilities in society (Republic of Ghana, 2006).

Despite the government's commitment to implement inclusive education, progress seems to have stalled (Anthony, 2011; Singal et al., 2015; Opoku et al., 2021). While some efforts have been made to train teachers and support the implementation of inclusive education in schools (Ametepee and Anastasiou, 2015; Subbey, 2020), school-based practices have been ineffective (Anthony, 2011; Singal et al., 2015; Opoku et al., 2021). For example, it has been reported that teachers who are supposed to support the teaching of students with disabilities lack the requisite skills to teach (Anthony, 2011; Singal et al., 2015; Opoku et al., 2021). Furthermore, the very government spearheading the implementation of inclusive education is unable to provide teaching materials to schools (Singal et al., 2015; Opoku et al., 2021). In effect, teachers do not have the requisite teaching and learning materials to teach students (Subbey, 2020). Moreover, because of lack of funding, school leaders have been unable to provide professional development to teachers (Subbey, 2020; Opoku, 2021). This has contributed to the inability of teachers to offer quality teaching services to children with disabilities in regular classrooms, thereby reenergising discussions around the need for educational reforms to enhance inclusive practices (Lamptey et al., 2015).

Discussions around the implementation of inclusive education have been limited to public schools practices. With both the private and public sectors involved in education service provision, it is critical to pay attention to the implementation of inclusive education in private schools. With teachers regarded as implementors of inclusive education (Ainscow and Miles, 2009; Ainscow and Sandill, 2010), their perspectives about their self-efficacy could provide useful, tailored information to educators promoting the implementation of inclusive education. Self-efficacy studies are important in providing information about whether teachers will be able to adopt inclusive teaching practices in the classroom (Pajares, 1997; Sharma and George, 2016). Specifically, such studies can indicate whether teachers will be able to collaborate, use appropriate pedagogical skills and manage behaviour in the classroom (Sharma and George, 2016). Indeed, the call to practice inclusive education has transitioned from access to what actually happens in the classroom (Pullen et al., 2020). There is a need for self-efficacy studies in Ghana to gather baseline information about teaching practices in private school classrooms. Consequently, this study attempts to develop an in-depth understanding of the self-efficacy of private school teachers toward the implementation of inclusive education.

## Theoretical framework

Motivation is central to the successful performance of any behaviour. In effect, people are likely to engage in or execute a given behaviour if they feel competent or confident in their ability (Pajares, 1997). Following these precepts, the study reported here was guided by Bandura's (Bandura, 1977, 1978, 1982) social cognitive theory. Self-efficacy is among the components of social cognitive theory, which Bandura, 1993, 1995, 1997 argued is an interplay between personal competence,

the environment and a specific situation. Individuals are within a self-system that influences the control they have over an activity (Bandura, 1982, 1993, 1995, 1997). Self-belief enables individuals to evaluate their skills and capacity to perform a behaviour. Such an evaluation would consider the environment within which the behaviour is expected to occur. Individuals will use their intuition to determine whether their skills are suited to their task. They will then interpret the behaviour and determine whether the environment would support the execution of the task. Bandura, 1977, 1978, 1982 used the term "reciprocal determinism" for the triadic interaction between the self-environment and behaviour.

In the theory of planned behaviour, Ajzen (1991) and Ajzen and Albarracin (2007) argued that the interplay between the self and the environment is central to the performance or an intention toward a behaviour. Before performing the behaviour, the individual may think about the activity and consider whether it is within their capability. If they are convinced that the behaviour is within their capability, they will perform it. If they perceive that they have the power or resources to perform the behaviour, their intention will be positive (Ajzen and Albarracin, 2007). If they perceive that their skills and environment are unsupportive of such an activity, they will have a low self-efficacy toward performing the behaviour. Conversely, if individuals perceive their skills as adequate and the behaviour is occurring in a supportive environment, they will demonstrate high self-efficacy toward performing the behaviour. This proposition is called the "expectancy-value model" (Ajzen, 1991). For example, individuals have beliefs about their competence and information, enabling them to succeed in executing a task. Following this, it is essential to explore their perceived competence and whether their environment will enable them to perform the task (Sharma et al., 2012).

In this study, self-efficacy was conceptualised as teachers' belief in their ability and capacity to teach students with disabilities in regular classrooms. The subjective view of an individual regarding their innate potential to execute a function, along with them having the information needed to complete the function, is important in understanding inclusive practice (Ajzen, 1991). Teachers are the key players charged with implementing inclusive education in the classroom (Ainscow and Sandill, 2010). Accordingly, their training in inclusive education helps them acquire the pedagogical skills to perform in the classroom (Ainscow and Sandill, 2010). Likewise, teachers need a supportive school environment where all required resources are provided to facilitate the teaching and learning process (Sharma et al., 2012; Sharma and George, 2016). This encompasses the provision of the required support services in schools and the availability of teaching resources, such as the Job-Related Affective Well-Being Scale (JAWS) and computer-assistive devices, to teach diverse students in the classroom. A combination of pedagogical skills and a supportive environment is required before teachers can have the necessary efficacy to teach in an inclusive classroom (Sharma and George, 2016).

## Literature review: Self-efficacy of teachers

The most common measures of teachers' self-efficacy toward the implementation of inclusive education are the Teachers' Sense of Efficacy Scale (Ajzen, 1991) and the Teacher Efficacy for Inclusive Practices Scale [TEIP (Sharma et al., 2012)]. The TEIP scale is the most commonly used as it covers three important areas where teachers' confidence is required to support classroom practices. For example, the sub-scales of the TEIP scale – efficacy managing behaviour, instruction and collaboration – are the three dimensions where teachers' confidence is required to facilitate the teaching of students with disabilities in the classroom. Teachers' training in inclusive education helps them acquire the pedagogical skills to perform in the classroom (Sharma et al., 2015, 2018; Sharma and Nuttall, 2016). Once they are provided with the necessary training, they will have confidence in their ability to provide appropriate instructions to students (Chao et al., 2016, 2018). Likewise, teachers need a supportive school environment where all required resources are provided to facilitate the teaching and learning process (Sharma et al., 2012). This encompasses the provision of required support services in schools as well as teaching resources, such as JAWS and computer-assistive devices, to teach diverse students in the classroom. Additionally, teachers can collaborate with each other and parents to teach students with disabilities in a supportive school environment (Sharma et al., 2012). The dimensions of the TEIP scale reflect the attributes needed by teachers to practice inclusive education. While the TEIP scale has yielded appropriate psychometric properties in diverse contexts (Sharma et al., 2015, 2018; Sharma and Nuttall, 2016; Shaukat et al., 2019), its dimensions have yet to be validated in a sub-Saharan African context.

In the Ghanaian context, some attempts have been made to study the self-efficacy of teachers in relation to the implementation of inclusive education (Kuyini et al., 2016, 2020). For example, as part of a study exploring teachers' self-efficacy, attitudes and concern, Kuyini et al. (2020) found that teachers were moderate on self-efficacy and less so on attitudes and concern toward the implementation of inclusive education. However, it was not clear whether the participants were from private or public schools. In a previous study, Kuyini et al. (2016) examined the perceived competence of teachers in efforts toward the implementation of inclusive education. The results showed that the competencies of importance to teachers were adapting instructional materials and behaviour management in classrooms. In effect, the teachers discussed training, access to teaching materials, collaboration and parental support as vital

to enhancing their teaching competencies. Unfortunately, the study appears to have focused on practices in the public sector without understanding practices that might be germane to the private sector.

The influence of background variables on the self-efficacy of teachers has been well explored. Ajzen (1991) argued that background variables (e.g., gender, age, qualification, experience, teaching level, experience, training in inclusive education and access to professional development) could provide additional explanation into a given phenomenon. Although many studies conducted in Australia, India and Italy have reported on teachers' high sense of efficacy toward practicing inclusive education (Sharma and Nuttall, 2016; Sharma et al., 2018), there is a lack of uniformity regarding the background variables that may influence teachers' self-efficacy. For example, there is disagreement in the literature regarding how gender impacts teachers' self-efficacy. While some studies have found male teachers to be more positive than female teachers about their self-efficacy (Ekins et al., 2016; Monteiro et al., 2019; Shaukat et al., 2019), other studies have reported otherwise (Shaukat et al., 2019). Conversely, several studies have reported no significant differences between male and female teachers (Ekins et al., 2016; Monteiro et al., 2019; Subban et al., 2021). While a study reported that older teachers are more confident in their abilities than younger ones (Ekins et al., 2016), some researchers have found no difference between teachers regarding age (Shaukat et al., 2019). Moreover, while some studies have reported that teachers' educational qualifications do not affect their self-efficacy (Ekins et al., 2016; Subban et al., 2021), others have reported differences between teachers' educational qualifications and self-efficacy (Shaukat et al., 2019).

There seems to be a consensus that teachers with more than years of experience are more confident in their ability to teach students with disabilities than those with less teaching experience (Ekins et al., 2016; Shaukat et al., 2019; Kuyini et al., 2020; Subban et al., 2021). Likewise, training in inclusive education has been found to predict self-efficacy and improve teachers' self-efficacy toward practicing inclusive education (Forlin et al., 2014; Chao et al., 2016; Sharma et al., 2018). Some studies have found significant differences between teachers who have taken units in inclusive education and those who have not (Chao et al., 2016; Monteiro et al., 2019). While these studies provide useful information, none of them attempted to understand practices in private schools, which have been identified as an alternative provider of education to the public sector (Akyeampong, 2009; Adoho et al., 2014; Akaguri, 2014; Heyneman and Stern, 2014). Thus, the aim of this mixed-methods study was to develop deeper insights into the self-efficacy of private school teachers toward the implementation of inclusive education in Ghana. The following questions guided the study:

1. Is the TEIP scale a valid instrument to measure the self-efficacy of teachers toward practicing inclusive education in Ghana?
2. What is the association between private school teachers' background variables and self-efficacy toward the implementation of inclusive education?
3. What are the predictors of private school teachers' self-efficacy toward the implementation of inclusive education?
4. How do private school teachers perceive their self-efficacy toward the implementation of inclusive education?

# Phase 1: Method

## Study participants

This study forms part of a larger study on the effectiveness of inclusive practices in secondary school (Opoku et al., 2020, Opoku et al., 2021a,b; Opoku, 2021). Teachers serving in private junior and senior secondary schools were invited to participate in this study. The region was selected because UNICEF had selected it for a pilot study on inclusive education. Within the region, UNICEF selected three districts for piloting. The three districts were selected for this study, and an additional two districts were conveniently added to compare teachers' experiences. The teachers were selected based on the following inclusion criteria: (a) teaching full-time at the selected private schools, (b) awareness of the implementation of inclusive education, and (c) capacity to consent to participate in this study.

Six private schools in three districts (Ejisu-Juaben Municipality, Kumasi Metropolitan and Obuasi Municipality) accepted the invitation to participate in this study. Two of the participating schools were senior secondary schools, and four were junior secondary schools. A total of 82 teachers completed the questionnaire. Seventy-seven percent of them were male compared to 23% female. Seventy-one percent were between the ages of 25 and 35 years, while 29% were at least 36 years old (see **Table 1** for details).

## Instrument

A two-part instrument was used for the data collection. The first part collected information on the demographic characteristics of the participants, including data relating to gender, age, qualifications, teaching level, years of teaching experience, teaching subject, pre-service training in inclusive education and professional development in inclusive education.

The TEIP scale was developed by Sharma et al. (2012) to assess teachers' self-efficacy toward practicing inclusion.

TABLE 1 Demographic characteristics and its association with self-efficacy.

| | Sample | Manage behaviour | Instruction | Collaborate | Total TEIP |
|---|---|---|---|---|---|
| ***Gender*** | | | | | |
| Male | 63 (77%) | 5.23 (0.48) | 5.03 (0.68) | 5.15 (0.65) | 4.83 (0.53) |
| Female | 19 (23%) | 5.36 (0.55) | 5.23 (0.59) | 5.18 (0.59) | 4.96 (0.50) |
| *t* | | −1.03 | −1.18 | −0.16 | −0.96 |
| Partial eta squared | | 0.01 | 0.02 | 0.001 | 0.01 |
| ***Age*** | | | | | |
| 25–35 years | 58 (71%) | 5.28 (0.49) | 5.08 (0.66) | 5.22 (0.59) | 4.88 (0.50) |
| 36 years and above | 24 (29%) | 5.22 (0.54) | 5.06 (0.70) | 5.01 (0.73) | 4.81 (0.57) |
| *t* | | 0.44 | 0.12 | 1.36 | 0.49 |
| Partial eta squared | | 0.002 | 0.001 | 0.02 | 0.003 |
| ***Qualification*** | | | | | |
| At most, diploma | 28 (34%) | 5.48 (0.53) | 5.14 (0.71) | 5.28 (0.67) | 4.99 (0.54) |
| At least bachelor | 53 (66%) | 5.15 (0.45) | 5.04 (0.66) | 5.08 (0.62) | 4.78 (0.50) |
| *t* | | 3.04** | 0.68 | 1.36 | 1.75 |
| Partial eta squared | | 0.11 | 0.01 | 0.02 | 0.04 |
| ***Level of teaching*** | | | | | |
| Junior secondary | 51 (62%) | 5.31 (0.52) | 5.04 (0.66) | 5.15 (0.63) | 4.86 (0.53) |
| Senior secondary | 31 (38%) | 5.19 (0.16) | 5.12 (0.69) | 5.17 (0.66) | 4.85 (0.50) |
| *t* | | 1.06 | −0.50 | −0.19 | 0.14 |
| Partial eta squared | | 0.01 | 0.003 | 0.001 | 0.001 |
| ***Teaching subject*** | | | | | |
| ***(n = 81)*** | 44 (54%) | 5.31 (0.51) | 5.11 (0.71) | 5.16 (0.66) | 4.89 (0.53) |
| Art/social sciences | 37 (46) | 5.20 (0.49) | 5.03 (0.63) | 5.15 (0.63) | 4.82 (0.52) |
| STEM | | 1.02 | 0.54 | 0.13 | 0.62 |
| *t* | | 0.01 | 0.004 | 0.001 | 0.005 |
| Partial eta squared | | | | | |
| ***Teaching experience*** | | | | | |
| 5 years or less | 33 (41%) | 5.37 (0.43) | 5.17 (0.53) | 5.22 (0.64) | 4.94 (0.41) |
| 6–10 years | 24 (29%) | 5.20 (0.47) | 4.96 (0.77) | 5.20 (0.52) | 4.80 (0.53) |
| At least 11 years | 25 (30) | 5.17 (0.59) | 5.06 (0.73) | 5.03 (0.73) | 4.80 (0.63) |
| *F* | | 1.44 | 0.67 | 0.66 | 0.73 |
| Partial eta squared | | 0.04 | 0.02 | 0.02 | 0.02 |
| ***Pre-service in IE*** | | | | | |
| No unit | 19 (23%) | 5.23 (0.55) | 4.90 (1.00)[a] | 5.06 (0.91) | 4.77 (0.74)[a] |
| 1 unit | 36 (44%) | 5.17 (0.55) | 4.93 (0.65)[a,b] | 5.07 (0.67) | 4.75 (0.54)[b] |
| 2 or more units | 27 (33%) | 5.45 (0.38) | 5.40 (0.33)[a,c] | 5.32 (0.41) | 5.08 (0.29)[b,c] |
| *F* | | 2.52 | 7.69#** | 1.84# | 5.55#** |
| Partial eta squared | | 0.07 | 0.12 | 0.04 | 0.09 |
| ***PD in IE*** | | | | | |
| None | 19 (23%) | 5.29 (0.62) | 4.80 (0.86) | 5.09 (0.83) | 4.75 (0.71) |
| Taken PD in IE | 63 (77%) | 5.27 (0.47) | 5.18 (0.58) | 5.20 (0.56) | 4.91 (0.45) |
| *t* | | 0.16 | −2.08* | −0.66 | −0.86 |
| Partial eta squared | | 0.001 | 0.05 | 0.01 | 0.02 |

*$P < 0.05$; **$P < 0.01$; PD, professional development; IE, inclusive education. [a,b,c]Difference between the background variables. #Means violation of assumption of homogeneity of variance and reporting of Welch Statistic.

The scale measures teachers' self-efficacy regarding their preparedness and confidence teaching in inclusive classrooms. The scale comprises 18 items on a six-point Likert scale ranging from "strongly disagree" (1) to "strongly agree" (6). It also comprises three factors containing six items each: efficacy using inclusive instruction, efficacy in collaboration and efficacy managing behaviours. The mean score was used instead of the sum score to be able to gauge the actual level of teacher self-efficacy. The sum score was divided by the number of anchors on the Likert scale. A mean score of at least 4 was interpreted as indicating high self-efficacy.

Some of the items on the scale included as follows: "I can make my expectations clear about student behaviour," "I can make parents feel comfortable coming to school," and "I can provide an alternative explanation or an example when students are confused." The scale was tested in four countries (Australia, Canada, Hong Kong, and India) and reported a reliability value ranging from 0.64 to 0.97 (Sharma et al., 2012). Furthermore, Sharma et al. (2015) indicated a reliability between 0.80 and 0.93. In this study, reliability was computed using Cronbach's alpha (TEIP = 0.89, managing behaviour = 0.70, instruction = 0.75 and collaboration = 0.78).

## Procedure

The study and its protocols were approved by the Social Sciences Human and Research Ethics Committee at the University of Tasmania. Further permission was sought from the Special Education Department of Ghana Education Service. Subsequent institutional approvals were given before the data collection in the various schools. The study objectives were explained to the potential participants before they were invited to participate in the study. Clarification was provided regarding concerns raised by the teachers before distributing the printed questionnaires. Teachers interested in participating were each given a copy of the questionnaire, which was returned to the researcher within one week. Participant anonymity and confidentiality were assured.

## Data analysis

The data from the questionnaires were entered and analysed using the Statistical Package for the Social Sciences (SPSS), version 26. Little's missing completely at random test showed missing data between 2.6 and 4.5%. Estimation maximisation was used to impute the missing data. The mean scores of the TEIP scale were computed before answering the research questions. To answer research question 1, structural equation modelling was used to ascertain the validity of the TEIP scale in the African context. It is worth noting that several goodness-of-fit indicators were checked to ascertain the model's adequacy. For instance, according to Schumacker and Lomax (2016) chi-square ($\chi^2$) tests and the difference between the chi-square and the degree of freedom ($\chi^2$/ df) are good measures of the adequacy of the CFA model. Other measures include RMSEA values close to or below 0.08, SRMR values close to or below 0.08, CFI and TLI values close to 0.95 or greater and *P*-values > 0.5 ($P > 0.05$) (Hu and Bentler, 1999; Schumacker and Lomax, 2016; Alavi et al., 2020). The covariance and correlation between the sub-scales were noted. The correlations were interpreted as small (0.1–0.29), moderate (0.30–0.49) and large (0.50–1) (Schumacker and Lomax, 2016).

To answer research question 2, a *t*-test and analysis of variance (ANOVA) were computed to understand the relationship between two-level and three-level demographics and self-efficacy. Here, the results showed that homogeneity of variance was not violated. The magnitude of the relationship was assessed using a partial eta squared, which was interpreted as follows: (0.01–0.05), moderate (0.06–0.09) and large (at least 0.1) (Pallant, 2020).

To answer research question 3, a four-model linear regression was computed for the total scale and the three sub-scales. Checks were made to ensure that the assumptions of linearity and homoscedasticity were not violated (Pallant, 2020).

# Phase II

## Study participants

The participants in this data collection phase were private school teachers drawn from three private schools, who had participated in the first phase of the study. Three groups of participants participated in this stage: principals ($n = 3$), heads of departments ($n = 4$) and teachers ($n = 3$). While the principals did not participate in the first phase, the heads of departments and teachers completed the questionnaire. The private school principals who first agreed to participate in the larger study were considered for this phase. Also, the heads of departments and teachers who were willing to participate in this phase were interviewed (see **Table 2** for details).

## Instrument

Slightly different interview guides were developed for each participant group. Since this study sought to develop a deeper

TABLE 2 Detailed profile of study participants.

| | Code | Role | Gender | Age | Experience | Qualification | Location |
|---|---|---|---|---|---|---|---|
| **1** | HOD_2 | Head of department | Male | 31–40 | | Bachelors | Semi-urban |
| **2** | HOD_ 3 | Head of department | Male | 31–40 | 8 years | Masters | Semi-urban |
| **3** | Princ. _4 | Principal | Male | 60–70 years | 35 years | Masters | Semi-urban |
| **4** | Princ. _5 | Principal | Female | 60–70 years | 40 years | Diploma | Urban |
| **5** | HOD 15 | Head of department | Male | 31–40 years | 9 years | Bachelor's degree | Urban |
| **6** | HOD 16 | Head of department | Male | 41–50 years | 16 years | Bachelor's degree | Urban |
| **7** | Princ. _17 | Principal | Male | 70–80 years | 40 years | Masters | Urban |
| **8** | Teach_1 | Teacher | Male | 26–35 years | 14 years | Bachelor's degree | Semi-urban |
| **9** | Teach_2 | Teacher | Male | 26–35 years | 17 years | Diploma | Urban |
| **10** | Teach_3 | Teacher | Male | 26–35 years | 6 years | Bachelor's degree | Semi-urban |

understanding of inclusive practices, the interview guide was developed to enable the participants to shed light on their perspectives. It is important to state that questions aligned to each sub-scale were asked in order to develop insights into the participants' perspectives. The interview guide comprised two parts: Part 1 elicited information about the demographic profiles the of participants (e.g., age, qualification), while Part 2 comprised several open-ended questions aligned to the components of the TEIP scale (efficacy managing behaviour, efficacy in instruction and efficacy in collaboration), which guided the development of the interview guide, as *a priori* themes. The tools were piloted with three graduate teachers with experience working as teachers and principals. Their feedback was audio recorded, and the content was discussed during supervisory meetings. The questions were refined to ensure that prospective participants would understand them and provide appropriate responses.

## Procedure

School leaders from each district were interviewed from the first school where permission was granted by the principal. One principal and two heads of departments from the various schools were considered for participation, and face-to-face interviews were conducted with them. The interviews with the teachers were conducted via telephone. While completing the questionnaire, teachers who wished to participate in this phase provided their mobile phone numbers and contact details on the consent form. After analysing the quantitative data, emails and text messages were sent to the teachers to remind them of this phase of the study. Those who wished to participate provided details about their availability, and arrangements were made for the data collection. All participants signed an informed consent form, and the interviews were audio recorded. The interview guide was sent to them a day or two before the interviews to provide information on the focus of the discussion. The idea was to give the participants time to read and provide appropriate responses that would enrich the data. The interviews were audio recorded with permission from the participants. The participants were assured that neither their names nor any information describing the location of their school would be used in the reporting of the study. The interviews were conducted between January and October 2018, and each interview lasted between 30 and 50 min.

## Data analysis

The data were transcribed by the first author, who subsequently sent them to the participants for feedback. Almost all of the participants expressed satisfaction with the data.

At this stage, the data were subjected to thematic analysis because the key components of the TEIP scale (efficacy managing behaviour, efficacy in instruction and efficacy in collaboration), which guided the development of the interview guide, were used as *a priori* themes (Braun and Clarke, 2006). The analysis followed several steps: reading, deductive coding, sorting and mapping, categorising, thematising and writing the results section (Braun and Clarke, 2006). The first author coded two transcripts along with a graduate student with experience in qualitative research. The two met to compare the documents, then reached a consensus on the codes to use for the interviews. The interrater agreement between the two was estimated at 69%. The first author continued to code the remaining interviews. Second, a coding framework containing all the phrases used as codes was developed. Here, the first author sorted and mapped similar and differing codes. Categories were assigned to clusters of codes depicting similar ideas, and differences between the participants were noted. Third, the categories were grouped under the *a priori* themes (efficacy managing behaviour, efficacy in instruction and efficacy in collaboration). Quotations associated with the categories were extracted onto a new file. Fourth, the first author continued writing the data analysis.

# Results

## Structural validity of the Teacher Efficacy for Inclusive Practice scale

Confirmatory factor analysis using the Amos software (version 27.0) was used to establish the structural validity of the TEIP scale. The findings reflected a three-latent factor measurement model (**Figure 1**). Almost all the factor loadings reached the acceptable threshold of 0.40 (Alavi et al., 2020). The present model produced a chi-square ($\chi^2$) of 232.614, with a degree of freedom of 132 and ($\chi^2$/ df) of 1.762. The analysis shows a TLI of 0.89, CFI of 0.90 and RMSEA of 0.05. Conclusively, the TEIP scale is a useful instrument for the study of teachers' self-efficacy in the sub-Saharan African context.

The results revealed significant covariance between the sub-scales. For instance, the covariances were as follows: efficacy in instruction and collaboration ($P = 0.056$), behaviour management and collaboration ($P = 0.018$) and behaviour management and instruction ($P = 0.016$). Furthermore, a high positive correlation was found between behaviour management and collaboration ($r = 0.99$), behaviour management and instruction ($r = 0.79$), and instruction and collaboration and ($r = 0.89$).

## Association between demographics and self-efficacy

The computation of the mean produced the following scores: TEIP ($M = 5.16$, SD $= 0.54$), efficacy managing behaviour ($M = 5.26$, SD $= 0.50$), efficacy in instruction

10.3389/feduc.2022.985123

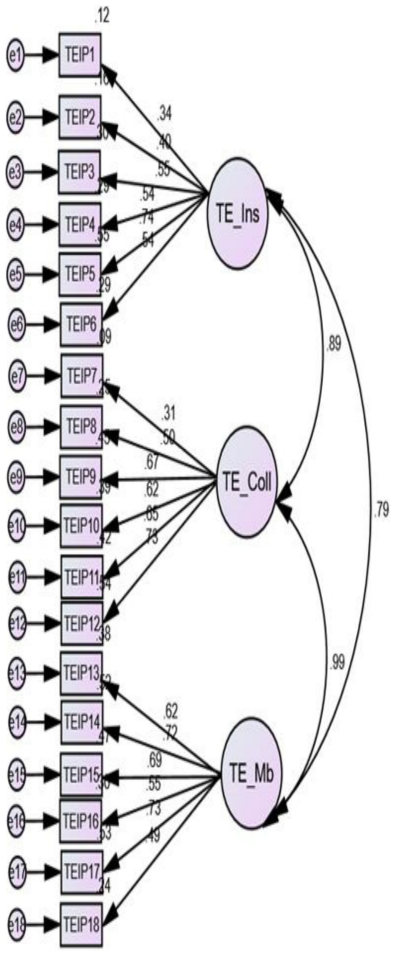


FIGURE 1
Summary of confirmatory factor analysis.

($M$ = 5.07; SD = 0.67) and efficacy in collaborating ($M$ = 5.16, SD = 0.64).

Table 1 summarises the results of the association between the demographic variables and self-efficacy. Independent samples $t$-tests were computed for the two-level demographic variables. Here, a significant difference was found between the participants only for the variables of qualification and participation in professional development. Concerning educational qualification, a difference was found between the participants on the sub-scale managing behaviour, $t$ (79) = 3.04, $P$ = 0.003, with a large effect size, partial eta squared = 0.11. It appeared that the lower the participants' qualifications, the likelier they were to manage children's behaviour.

Also, a significant difference was found between the participants in professional development in inclusive education and efficacy in instruction, $t$ (77) = −2.09, $P$ = 0.04, with a small effect size, partial eta squared = 0.05. The participants who indicated that they had taken courses in professional development seemed to score higher on efficacy in instruction than those indicating otherwise.

TABLE 3 Summary of demographics regressed on self-efficacy.

| | *B* | *S. E* | *B* | *t* | *p* |
|---|---|---|---|---|---|
| Gender | 1.46 | 2.57 | 0.07 | 0.57 | 0.57 |
| Age | −1.18 | 2.49 | −0.06 | −0.47 | 0.64 |
| Qualification | −4.53 | 2.32 | −0.23 | −1.95 | 0.05* |
| Level of teaching | 1.09 | 2.45 | 0.06 | 0.45 | 0.66 |
| Teaching subject | −1.59 | 2.18 | −0.09 | −0.73 | 0.47 |
| Pre-service in IE | 2.78 | 1.64 | 0.21 | 1.69 | 0.09 |
| PD in IE | 3.96 | 2.77 | 0.17 | 1.43 | 0.16 |

*$P$ < 0.05; PD, professional development; IE, inclusive education.

ANOVAs were computed for demographics with at least three levels. A significant difference was found for participation in pre-service training in inclusive education on two sub-scales and overall self-efficacy. To expand, a significant difference was found between the participants on overall self-efficacy and pre-service training in inclusive education, $F$(2,73) = 3.72, $p$ = 0.03, with a moderate effect size, partial eta squared = 0.09. A post-hoc comparison using Tukey HSD showed that those undergoing two or more sets of training differed from those with no pre-service training in inclusive education. Similar trends were observed for the instruction and collaboration sub-scales.

## Predictors of self-efficacy

A four-model linear regression was computed to ascertain the predictors of self-efficacy (Tables 3–6). In the first model, the demographic variables were regressed on self-efficacy. The demographic variables made a 15% significant contribution to the variance in self-efficacy, $F$(7,73) = 1.67, $P$ = 0.03. For the individual variables, only educational qualification contributed significantly to the variance in self-efficacy ($b$ = −0.23, $P$ = 0.05). The lower the educational qualifications of the private school teachers, the higher their self-efficacy in supporting students with disabilities (see Table 3).

Second, the demographic variables were regressed on behaviour management. The results showed a significant contribution of the demographic variables to the variance in behaviour management, $F$(7,73) = 2.11, $P$ = 0.05. Again, only educational qualification significantly contributed to the variance in behaviour management; and the lower the educational qualifications, the higher the ability of teachers to manage the behaviour of students with disabilities (see Table 4).

Third, the demographic variables were regressed on self-efficacy regarding instruction (see Table 5). The results

TABLE 4 Summary of demographics regressed on managing behaviour.

| | *B* | *S. E* | *B* | *t* | *p* |
|---|---|---|---|---|---|
| Gender | 0.56 | 0.82 | 0.08 | 0.69 | 0.49 |
| Age | −0.37 | 0.79 | −0.06 | −0.47 | 0.64 |
| Qualification | −2.23 | 0.74 | −0.35 | −3.01 | 0.004** |
| Level of teaching | −0.11 | 0.78 | −0.02 | −0.14 | 0.89 |
| Teaching subject | −0.55 | 0.69 | −0.09 | −0.79 | 0.43 |
| Pre-service in IE | 0.50 | 0.52 | 0.12 | 0.96 | 0.34 |
| PD in IE | 0.33 | 0.88 | 0.04 | 0.37 | 0.71 |

**$P < 0.01$; PD, professional development; IE, inclusive education.

TABLE 5 Summary of demographics regressed on instruction.

| | *B* | *S. E* | *B* | *t* | *p* |
|---|---|---|---|---|---|
| Gender | 0.89 | 1.06 | 0.10 | 0.84 | 0.41 |
| Age | −0.30 | 1.03 | −0.04 | −0.29 | 0.77 |
| Qualification | −0.97 | 0.96 | −0.18 | −1.01 | 0.32 |
| Level of teaching | 1.00 | 1.01 | −12 | 0.99 | 0.33 |
| Teaching subject | −0.70 | 0.90 | −0.09 | −0.77 | 0.44 |
| Pre-service in IE | 1.68 | 0.68 | 0.30 | 2.47 | 0.02* |
| PD in IE | 2.39 | 1.15 | 0.24 | 2.08 | 0.04* |

*$P < 0.05$; PD, professional development; IE, inclusive education.

showed that the demographic variables made a significant contribution of 19% to the variance in efficacy regarding instruction, $F(7,77) = 2.23$, $P = 0.04$. Here, pre-service training and participation in professional development in inclusive education contributed significantly to the variance in instruction. The more pre-service training and professional development the participants underwent, the more confident they were in their ability to adopt inclusive teaching pedagogy. Participation in pre-service training in inclusive education contributed significantly to the variance in instruction.

Fourth, the demographic variables were regressed on efficacy in collaboration (see Table 6). The demographic variables made an eight percent insignificant contribution to efficacy in collaboration, $F(7,73) = 0.80$, $P = 0.59$. However, professional development in inclusive education helped enhance the teachers' collaboration skills.

## Results: Follow-up interviews

The participants expressed high self-efficacy toward practicing inclusive education. However, they also expressed low confidence in teaching students with disabilities in regular classrooms. The assertions by the study participants were grouped under the *a priori* themes of efficacy managing behaviour, efficacy in instruction and efficacy in collaboration.

TABLE 6 Summary of demographics regressed on collaboration.

| | *B* | *S. E* | *B* | *t* | *p* |
|---|---|---|---|---|---|
| Gender | −0.08 | 1.09 | −0.01 | −0.08 | 0.94 |
| Age | −0.97 | 1.06 | −0.12 | −0.92 | 0.36 |
| Qualification | −1.40 | 0.99 | −0.18 | −1.42 | 0.16 |
| Level of teaching | 0.37 | 1.04 | 0.05 | 0.35 | 0.73 |
| Teaching subject | −0.34 | 0.93 | −0.04 | −0.37 | 0.72 |
| Pre-service in IE | 0.67 | 0.70 | 0.13 | 0.96 | 0.34 |
| PD in IE | 1.27 | 1.18 | 0.14 | 1.08 | 0.03* |

*$P < 0.05$; PD, professional development; IE, inclusive education.

### Efficacy managing behaviour

The participants discussed the importance of extending accessible education to students with disabilities in regular classrooms. Although five participants discussed teachers' readiness to support students with disabilities in the classroom, they addressed their inability to support students with severe disabilities in regular classrooms. One principal indicated that although they were open to admitting students with disabilities, having students with challenging behaviours could be difficult for teachers (Princ. 17).

> I think that it is good, but then there should be levels. I think that not all forms of disability could be allowed for inclusive education, and I have been discussing with my colleagues that if somebody is deaf and dump outright and he is in a class like this, and you happen to teach any subject, what are the possibilities for that child? I do not think that I am confident enough to support such a student. (HOD_3_Male).

> They cannot perform like any other student, which is why the school administration hesitates to admit them. One student we had was mentally retarded, who needed much time and explanation to understand lessons. Teachers who did not have the heart to support such students would not spend time on them. They would just brush through the lesson so that those who can understand would. They do not have time for students who cannot cope with their teaching speed. (Teach 2).

The study participants also discussed teachers' capacity to manage students' behaviour. While one principal indicated that teachers did not need additional training, six participants stated that they did not feel confident in their ability to manage students with challenging behaviours in the classroom. One principal indicated that they had declined admission to students with disabilities and, as such, did not consider

teachers' capacity to support students with disabilities as an employment condition.

> I am saying that it is part of the teachers' programme in Ghana. From a diploma in education, bachelor's in education, master's in education; special education is part of them, so most times, they prepare their mind before they come to the class. (Princ. 4).

> Well, here so far, as we do not have teachers who are trained to teach students with disabilities; they would find it difficult to cope. The teachers here are not trained to teach them, and it would be hard for them to pay attention to them. The teachers will not leave other students and focus on them. Once we do not have those teachers here, it will not help to admit them to study with regular students. (Princ 5).

> We do not admit students with disabilities. Since I came here, I have seen only one physically impaired student. We have special schools for them, so they should not come here. If they do, who would teach them? I do not think that they would even come to study in an environment like this. (HOD_15).

Four participants who had encountered students with disabilities reported that they could not support them in their classroom and felt that they lacked the capacity to manage these students in the classroom context.

## Efficacy in instruction

Almost all of the participants discussed that teachers might not be able to teach students with disabilities. Some said that teachers would be confident in their skills to promote the learning of students with disabilities and that the school environment would enable them to perform such tasks. Almost all of the participants discussed the absence of facilities for enhancing the development of students with disabilities in the classroom.

> As it now stands, if they want to implement it, then, like I said earlier, they will have to do something in addition because we need teaching and learning materials like books. For instance, if a blind student is in my class, I know they read with Braille, but we do not have something like that here. Also, I thought about the deaf people. As it now stands, there is no way I can interpret for them. (HOD_3_Male).

Indeed, the principals confirmed this, placing blame on the failure of the government to support private schools in teaching all students.

> This is a difficult question. I would say that teachers are not up to the task of supporting the teaching of students with disabilities. The types of facilities and cooperation required to support teachers in teaching students with disabilities are unavailable. They do not exist. Some teachers try. (Princ. 17).

> We do not receive any support from the government. They were giving us books, and officers were coming from the education office to supervise what we are doing. Aside from that, nothing comes from the government to private schools. Only in December, they sent us 130 dictionaries: 70 for primary and 60 for JHS. (Princ. 5).

The nature of the school curriculum was discussed as a notable barrier to teachers' ability to provide instructional support to students with disabilities. Although one principal indicated that there was no need for specialised curricula for students with disabilities, other participants noted that the school curriculum was geared toward meritocracy, which left little room for teachers to make time for "slow learners." For example, one head of department asserted that ". . .curriculum wise, I mean, how do you teach these children? What should we teach them?" (HOD_3_Male).

> I do not think so. You have limited time to complete the syllabus, and your focus is on completing the syllabus and getting them to have the knowledge. Your focus too is to get the exams right and excel. Now that we are actually preparing students, the headmaster will ask us to reach our target. (HOD_3_Male).

> Yeah, they do not need any curriculum. If you are teaching maths, the same thing should be taught. But if he has a defect, maybe in the mind or some reasoning and those things, then you have to give them special knowledge. That is why I am saying that. (Princ. 4).

While the three teachers and two heads of departments noted the absence of teaching resources and limited training in enabling the practise of inclusive education in classrooms, they also discussed poor remuneration as a barrier to teaching students with disabilities in regular classrooms. As one head of department said, "There is no inclusive education since teachers are not well paid to work. Until we recognise the need to pay teachers well, our education system will remain like this, and it will be hard for us to introduce new policies" (HOD_15).

## Efficacy in collaboration

Almost all of the participants acknowledged the importance of collaboration in efforts toward practicing inclusive education. Indeed, they all indicated that they consulted colleagues when they needed additional information about ways to manage teaching particular students. All the principals discussed promoting a culture of collaboration and encouraging teachers to seek assistance from each other. Two principals also discussed guiding teachers on how to accommodate students with particular disabilities in their lessons.

> Here, it is very good. We work as a team. We have regular meetings where we discuss how teaching and learning are going on, how some students are coping and all that. So, at that level, we are able to discuss across the board. So, we try to work together, collaborate to the extent that even sometimes when we see that some subjects are not doing too well, we can sacrifice some periods for that teacher. (HOD_3_Male).

> When you are a teacher, you are not an island. Even here, when you are teaching something, sometimes, some subjects interrelate. For example, when you are doing home economics, you are teaching them food and nutrition. A time will come when you will need some accounting, how to prepare a balance of payments statement. Most home economics madams cannot teach, so the business accounting teacher can teach. That is how we do our work. Some of the subjects pair with other areas. We share ideas most of the time when we have those pupils. Even when we are selecting the prefects, sometimes, we consider areas where people can function. So, we include them in leadership. (Princ. 4).

Almost all of the participants discussed the limited opportunity for them to meet to discuss the welfare of students with disabilities. They reported that this was the result of inclusive education not being a priority in schools. During meetings, they discuss the general academic wellbeing of students, without paying particular attention to the teaching of students with disabilities. However, when concern about a specific student with a disability arises, they discuss it, though it might not be a major focus of their meetings. One principal noted as follows:

> Yeah, at every point in time, teachers need training because the world is changing, new things are coming, new challenges are coming, but unfortunately, most institutions do not do it. But here, at the beginning of every term, I use 2 days to look at the environment and challenges, and then, we do some training for them. We discuss general academic issues but not inclusion. (Princ. 4).

Regarding collaboration with parents, most participants indicated that parents are not really concerned about the education of their children with disabilities. According to some participants, while parents do not avail themselves for meetings, they turn around to blame teachers for the poor progress of their children with disabilities.

> I do not understand some parents because they blame teachers for the failure of children. When you call them, they do not come. I have come and taught students with disabilities, but when they go home, what do they tell them? They have to insist that the child learns, but they are not doing it. Can we follow the students with disabilities to their house? (HOD_15).

# Discussion

Bandura's (Bandura, 1977, 1978) social cognition theory underpinned this study, which sought to understand the self-efficacy of private secondary school teachers toward inclusive education. While the TEIP scale has been widely used to study teachers' self-efficacy, its structural validity has yet to be assessed in the sub-Saharan African context. The study findings confirmed the three-component structure of the TEIP scale and its usefulness in measuring self-efficacy. Indeed, there was significant covariance between the sub-scales, arguably underscoring the usefulness of these variables in measuring teachers' self-efficacy. This suggests that as efficacy in instruction increases, efficacy in managing behaviour and collaboration also increases and *vice versa*. Previous studies have confirmed the centrality of training in enhancing the self-efficacy of teachers (Forlin et al., 2014; Chao et al., 2016; Ekins et al., 2016; Monteiro et al., 2019). Specifically, trained teachers would have confidence in their pedagogical skills and managing behaviour and work with other stakeholders in providing quality teaching services to students with disabilities. However, all of this depends on the teaching environment in terms of equipping teachers with the requisite resources to enable them to teach all students. The results suggest that the private school teachers who participated in this study believed that training teachers to enhance their self-efficacy ought to take into account aspects of behaviour management, instruction and collaboration. Furthermore, the results point to the need for a supportive environment to equip teachers with an inclusive environment to practice inclusive education.

There appeared to be some divergence between the teachers in the qualitative and quantitative data. While the

quantitative data suggested that the teachers were high in self-efficacy, the qualitative data suggested otherwise. This finding partly confirms the result of a scoping review of studies on inclusive education, which reported divergences between qualitative and quantitative data (Opoku et al., 2021a). The qualitative data, which contradicted the mean score of the quantitative data, enabled a further rethink of the use of a single research method to inform educational reform. The study indicated that the teachers' show of confidence in supporting students with disabilities may not correspond to actual classroom practice. This could be attributed to social bias and the tendency of participants to be seen in a positive light when completing questionnaires. Individuals want to appear positive when responding to questions and, thus, are likely to respond in a socially desirable way (Chung and Monroe, 2003). The study also showed that while teachers might be ready to support inclusive practices, situations beyond their control could derail classroom practices. For instance, regarding instruction and behaviour management, it was clear that the teachers would struggle to practice inclusive education. It is useful to state that the mere assertions of the teachers may not be reflective of actual practice. This finding arguably underscores the need for studies geared toward policy reform to adopt a mixed-methods design to develop useful insights into practices.

An interesting finding was the difference between the participants in terms of educational qualifications. Although educational qualification emerged as a significant predictor of efficacy toward behaviour management, the direction of the association was unexpected as the lower the qualification of the private school teachers, the higher the self-efficacy toward managing behaviour. This finding is inconsistent with that of previous studies on cases in which there were either no differences between teachers on educational qualifications (Ekins et al., 2016; Sharma and Nuttall, 2016; Subban et al., 2021) or that those with higher qualifications were more efficacious than those with lower qualifications (Sharma et al., 2015). This finding could be attributed to job insecurity and the difficulty that individuals with low qualifications face in accessing jobs. Anecdotal evidence suggests that due to low salaries in private schools, more qualified teachers are believed to be in constant search for jobs in public schools with higher salaries and tenure security. However, those with lower qualifications may not have the chance to move to public schools. Thus, teachers who are less qualified may be inclined to provide effective services to students with disabilities in general classrooms in order to keep their jobs. While this situation may be refreshing, it calls for more training or upskilling for such teachers to enable them to provide effective teaching services to students with disabilities.

There was also a relationship between training in inclusive education and self-efficacy. The more training teachers had undergone in inclusive education, the higher they scored on collaboration and instruction. Although this finding substantiates those of previous studies reporting the intricate relationship between training and high self-efficacy (Forlin et al., 2014; Chao et al., 2016; Ekins et al., 2016; Monteiro et al., 2019) the qualitative study suggests the need for more action before teachers can support students with disabilities. The teachers' discussion revealed their limited training in inclusive education and, unfortunately, limited opportunities for them to participate in professional development in inclusive education. There is a high possibility for teachers to accept teaching students with disabilities, despite not having the requisite teacher training to do so. This could lead them to neglect students with disabilities who may be denied quality teaching services in regular classrooms. Private schools are important stakeholders in providing education services in Ghana (Akyeampong, 2009; Heyneman and Stern, 2014); therefore, this finding supports teacher educators in extending professional development services to teachers in private schools.

While the private schools teachers struggled to manage behaviour and provide useful instruction to students with disabilities, there seemed to be collegiality amongst them. Individually, it seems that the teachers either struggled or were not confident in their teaching skills, which potentially explains their inability to provide teaching instructions and manage the behaviour of students with disabilities in their classrooms. Collaboration consistently emerged as useful in inclusive education as teachers could leverage each other's strengths to teach students with disabilities (Ashman, 2015; Pullen et al., 2020). Nevertheless, there is a tradition of communality in Ghanaian culture, with individuals seeing it as a duty to support others in need. If a family in the community is without food, neighbours will provide support, which could be reciprocated in the future. This seems to influence the practice in schools as collaboration is encouraged to enable teachers to complement each other's efforts. However, such a support system, as discussed by the study participants, is *ad hoc*, sporadic and unplanned.

In fact, parents, who are key actors and are supposed to support teachers, appeared not to contribute much to the education of their children with disabilities. Parents could offer useful support at home, which could complement efforts. According to Ainscow and Miles (2009), inclusive education is a process; thus, a continuum of support is required in schools to enable sustainable support for teachers. Unfortunately, as the study participants discussed, private school practices might prevent them from accruing the benefits of collaboration in inclusive education. This finding arguably provides a basis for teacher educators to develop a collaboration system based on the local culture as part of efforts toward the implementation of inclusive education in private schools. This could spell out stakeholder roles, such as for parents of children with disabilities, on the contribution or

support they have to provide to teachers to enhance inclusive practices.

## Study limitation

The study findings are not generalizable because of some study limitations. First, several variables, such as attitudes, self-efficacy and perceived school support, have been found to impact teachers' efforts in providing accessible education to all (Sharma et al., 2015, 2018; Sharma and Nuttall, 2016). However, the study reported here covered one such variable, that is, self-efficacy, which is believed to directly (Ajzen, 1991; Sharma et al., 2012) influence teaching practices. Notwithstanding, future studies could use a mixed-methods design to develop holistic insights into areas such as attitudes of and perceived support for teachers in an effort toward practicing inclusive education. Additionally, this study relied on the accounts of teachers in relation to their perceived self-efficacy. Future research could compare the perceived self-efficacy of teachers to actual teaching practices.

Second, the study participants were recruited from private schools in a single region; thus, their experiences could differ from those of teachers in private schools in other regions or districts outside the study area. However, similarities do exist between private schools and teachers. For example, they follow similar curricula and all rely on private investors for learning materials and salaries. This arguably suggests that the patterns in private schools in one region or district could reflect the situation in other areas. Also, the heterogeneity of the study participants was a major strength of this study, for example, they were recruited from schools in different locations (urban and suburban areas). The diversity among the study participants could mirror the patterns in other schools that were excluded from the study. Nevertheless, future research could draw participants from different regions to compare the self-efficacy of teachers.

Furthermore, the sample was slightly below the recommended 100–120 participants for confirmatory factor analysis. However, Field (2013) argued that if there are many entries for each participant, such data could be suitable for factor analysis. Overall, a major strength of this study was validating the structural validity of the TEIP scale in a novel context and using a mixed-methods design to develop deep insights into teachers' experiences.

# Conclusion and policy implications

This study attempted to understand the self-efficacy of private school teachers toward the implementation of inclusive education for students with disabilities. The study confirmed the TEIP scale as a valid tool for measuring teachers' efficacy toward the implementation of inclusive education in the African context. Indeed, the positive correlations and covariances between the sub-scales suggest the need for all measures to be in place or developed before the private school participants could be sufficiently confident to teach students with disabilities. Developing a collaboration framework in the absence of training to enable teachers to manage challenging behaviours and adopt useful pedagogical skills might result in limited inclusive teaching practices. Furthermore, the quantitative and qualitative data pointed toward different directions. While the teachers may be prepared for or efficacious toward teaching students with disabilities, situations within the environment may hinder practices. This arguably calls for more support from policymakers to private schools to enable teachers to provide effective teaching services to students with disabilities in regular classrooms. The current situation suggests that the private school teachers who participated in this study may be teaching students with disabilities while lacking the confidence in their ability to do so. This could affect the provision of quality education to students with disabilities who are enrolled in private schools.

According to Bandura, 1977, 1978, 1982, an individual's confidence in their capacity to undertake a given behaviour does impact outcomes. The study findings showed the need for appropriate steps to be taken to ensure that private school teachers receive the requisite training. For instance, it is useful for teacher educators to develop behaviour management skills, pedagogical skills and collaborative teaching skills. This could be achieved by designing appropriate training programmes for private school teachers. Specifically, teacher educators could partner with private schools in providing professional teacher training in inclusive education. This could help enhance teachers' confidence in the implementation of inclusive education for students with disabilities. Second, there is a need for the government to demonstrate commitment by providing necessary assistance to private schools to implement inclusive education. This assistance could be in the form of training programmes for teachers, inclusive teaching resources and the supervision and evaluation of inclusive education. This would enable the government to track the progress and effectiveness of inclusive practices in these schools. Such actions could help students with disabilities enjoy the right to quality education in an environment noted for providing high standards of education in Ghana.

# Data availability statement

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

## Ethics statement

The studies involving human participants were reviewed and approved by the Social Sciences Human and Research Ethics Committee at the University of Tasmania. The patients/participants provided their written informed consent to participate in this study.

## Author contributions

MO: conceptualisation, data curation, investigation, project administration, and resources. MO and AM: formal analysis. MO, WN, and AM: methodology, software, writing – original draft, and writing and reviewing the draft. All authors contributed to the article and approved the submitted version.

## Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

## Publisher's note

All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers. Any product that may be evaluated in this article, or claim that may be made by its manufacturer, is not guaranteed or endorsed by the publisher.

## References


Adoho, F., Tsimpo, C., and Wodon, Q. (2014). Public, private, and faith-inspired schools in Ghana: A comparative assessment. *Rev. Faith Int. Aff.* 12, 51–60. doi: 10.1080/15570274.2014.918745

Ainscow, M., and Miles, S. (2009). *Developing inclusive education systems: How can we move policies forward*. Available Online at: https://pdfs.semanticscholar.org/e849/cf5de98a03304867093fff0a5d8265a6e20e.pdf (accessed January 28, 2019).

Ainscow, M., and Sandill, A. (2010). Developing inclusive education systems: The role of organisational cultures and leadership. *Int. J. Inclusive Educ.* 14, 401–416. doi: 10.1080/13603110802504903

Ajzen, I. (1991). The theory of planned behavior. *Organ. Behav. Hum. Decis. Process.* 50, 179–211. doi: 10.1016/0749-5978(91)90020-T

Ajzen, I., and Albarracin, D. (2007). "Predicting and changing behaviour: A reasoned action approach," in *Prediction and change of health behaviour: Applying the reasoned action approach*, eds I. Ajzen, D. Albarracin, and R. Hormik (Mahwah, NJ: Lawrence Erlbaum Associates). doi: 10.4324/9780203937082

Akaguri, L. (2014). Fee-free public or low-fee private basic education in rural Ghana: How does the cost influence the choice of the poor? *Compare* 44, 140–161. doi: 10.1080/03057925.2013.796816

Akyeampong, K. (2009). Public–private partnership in the provision of basic education in Ghana: Challenges and choices. *Compare* 39, 135–149. doi: 10.1080/03057920902750368

Alavi, M., Visentin, D. C., Thapa, D. K., Hunt, G. E., Watson, R., and Cleary, M. (2020). . Chi-square for model fit in confirmatory factor analysis. *J. Adv. Nurs.* 76, 2209–2211. doi: 10.1111/jan.14399

Ametepee, L. K., and Anastasiou, D. (2015). Special and inclusive education in Ghana: Status and progress, challenges and implications. *Int. J. Educ. Dev.* 41, 143–152. doi: 10.1016/j.ijedudev.2015.02.007

Anthony, J. (2011). Conceptualising disability in Ghana: Implications for EFA and inclusive education. *Int. J. Inclusive Educ.* 15, 1073–1086. doi: 10.1080/13603116.2011.555062

Ashman, A. (ed.). (2015). *Education for inclusion and diversity*, 5th Edn. Melbourne, VIC: Pearson Australia.

Baffoe, M. (2013). Stigma, discrimination & marginalization: Gateways to oppression of persons with disabilities in Ghana, West Africa. *J. Educ. Soc. Res.* 3, 187–198.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychol. Rev.* 84, 191–215. doi: 10.1037//0033-295x.84.2.191

Bandura, A. (1978). Reflections on self-efficacy. *Adv. Behav. Res. Ther.* 1, 237–269. doi: 10.1016/0146-6402(78)90012-7

Bandura, A. (1982). Self-efficacy mechanism in human agency. *Am. Psychol.* 37, 122–147. doi: 10.1037/0003-066X.37.2.122

Bandura, A. (1993). Perceived self-efficacy in cognitive development and functioning. *Educ. Psychol.* 28, 117–148. doi: 10.1207/s15326985ep2802_3

Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York, NY: Freeman.

Bandura, A. (ed.). (1995). *Self-efficacy in changing societies*. New York, NY: Cambridge University Press. doi: 10.1017/CBO9780511527692

Braun, V., and Clarke, V. (2006). Using thematic analysis in psychology. *Qual. Res. Psychol.* 3, 77–101. doi: 10.1191/1478088706qp063oa

Carew, M. T., Deluca, M., Groce, N., and Kett, M. (2019). The impact of an inclusive education intervention on teacher preparedness to educate children with disabilities within the Lakes Region of Kenya. *Int. J. Inclusive Educ.* 23, 229–244. doi: 10.1080/13603116.2018.1430181

Chao, C. N. G., Forlin, C., and Ho, F. C. (2016). Improving teaching self-efficacy for teachers in inclusive classrooms in Hong Kong. *Int. J. Inclusive Educ.* 20, 1142–1154. doi: 10.1080/13603116.2016.1155663

Chao, C. N. G., Lai, F. T. T., Ji, M., Lo, S. K., and Sin, K. F. (2018). Which inclusive teaching tasks represent the highest level of teacher efficacy in primary and secondary schools? *Teach. Teach. Educ.* 75, 164–173. doi: 10.1016/j.tate.2018.06.014

Chung, J., and Monroe, G. S. (2003). Exploring social desirability bias. *J. Bus. Ethics* 44, 291–302. doi: 10.1023/A:1023648703356

Dessemontet, S. R., Morin, D., and Crocker, A. G. (2014). Exploring the relations between in-service training, prior contacts and teachers' attitudes towards persons with intellectual disability. *Int. J. Disabil. Dev. Educ.* 61, 16–26. doi: 10.1080/1034912X.2014.878535

Ekins, A., Savolainen, H., and Engelbrecht, P. (2016). An analysis of English teachers' self-efficacy in relation to SEN and disability and its implications in a changing SEN policy context. *Eur. J. Spec. Needs Educ.* 31, 236–249. doi: 10.1080/08856257.2016.1141510

Field, A. (2013). *Discovering statistics using IBM SPSS statistics*, 4th Edn. London: Sage.

Florian, L., Young, K., and Rouse, M. (2010). Preparing teachers for inclusive and diverse educational environments: Studying curricular reform in an initial teacher education course. *Int. J. Inclusive Educ.* 14, 709–722. doi: 10.1080/13603111003778536

Forlin, C., and Chambers, D. (2011). Teacher preparation for inclusive education: Increasing knowledge but raising concerns. *Asia Pac. J. Teach. Educ.* 39, 17–32. doi: 10.1080/1359866X.2010.540850

Forlin, C., Sharma, U., and Loreman, T. (2014). Predictors of improved teaching efficacy following basic training for inclusion in Hong Kong. *Int. J. Inclusive Educ.* 18, 718–730. doi: 10.1080/13603116.2013.819941

Ghana Statistical Service (2021). *2020 population and housing and census*. Accra: Ghana Statistical Service.

Heyneman, S. P., and Stern, J. M. (2014). Low cost private schools for the poor: What public policy is appropriate? *Int. J. Educ. Dev.* 35, 3–15. doi: 10.1016/j.ijedudev.2013.01.002

Hu, L. T., and Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Struct. Equ. Model.* 6, 1–55. doi: 10.1080/10705519909540118

Kassah, A. K., Kassah, B. L. L., and Agbota, T. K. (2012). Abuse of disabled children in Ghana. *Disabil. Soc.* 27, 689–701. doi: 10.1080/09687599.2012.673079

Kassah, B. L. L., Kassah, A. K., and Agbota, T. K. (2014). Abuse of physically disabled women in Ghana: Its emotional consequences and coping strategies. *Disabil. Rehabil.* 36, 665–671. doi: 10.3109/09638288.2013.808272

Kassah, B. L. L., Kassah, A. K., and Phillips, D. (2018). Children with intellectual disabilities and special school education in Ghana. *Int. J. Disabil. Dev. Educ.* 65, 341–354. doi: 10.1080/1034912X.2017.1374358

Kuyini, A. B., Desai, I., and Sharma, U. (2020). Teachers' self-efficacy beliefs, attitudes and concerns about implementing inclusive education in Ghana. *Int. J. Inclusive Educ.* 24, 1509–1526. doi: 10.1080/13603116.2018.1544298

Kuyini, A. B., Yeboah, K. A., Das, A. K., Alhassan, A. M., and Mangope, B. (2016). Ghanaian teachers: Competencies perceived as important for inclusive education. *Int. J. Inclusive Educ.* 20, 1009–1023. doi: 10.1080/13603116.2016.1145261

Lamptey, D. L., Villeneuve, M., Minnes, P., and McColl, M. A. (2015). Republic of Ghana's policy on inclusive education and definitions of disability. *J. Policy Pract. Intellect. Disabil.* 12, 108–111. doi: 10.1111/jppi.12114

Ministry of Education (2015). *Education sector annual performance report*. Accra: Ministry of Education.

Ministry of Education (2016). *Education sector annual performance report*. Accra: Ministry of Education.

Ministry of Education (2018). *Education sector annual performance report*. Accra: Ministry of Education.

Monteiro, E., Kuok, A. C., Correia, A. M., Forlin, C., and Teixeira, V. (2019). Perceived efficacy of teachers in Macao and their alacrity to engage with inclusive education. *Int. J. Inclusive Educ.* 23, 93–108. doi: 10.1080/13603116.2018.1514762

Opoku, M.P. (2021). Exploring the Intentions of school leaders towards implementing inclusive education in secondary schools in Ghana. *Int. J. Leadersh. Educ.* 1–22. doi: 10.1080/13603124.2021.1889034 [Epub ahead of print].

Opoku, M. P., Badu, E., Amponteng, M., and Agyei-Okyere, E. (2015). Inclusive education at the crossroads in Ashanti and Brong Ahafo regions in Ghana: Target not achievable by 2015. *Disabil. CBR Inclusive Dev.* 26, 63–78. doi: 10.5463/dcid.v26i1.401

Opoku, M. P., Cuskelly, M., Pedersen, S. J., and Rayner, S. C. (2021a). Applications of the theory of planned behaviour in assessing intentions of teachers towards practicing inclusive education: A scoping review. *Eur. J. Spec. Needs Educ.* 36, 577–592. doi: 10.1080/08856257.2020.1779979

Opoku, M. P., Cuskelly, M., Pedersen, S. J., and Rayner, S. C. (2021b). Attitudes and self-efficacy as significant predictor of intention of secondary school teachers towards the implementation of inclusive education in Ghana. *Eur. J. Psychol. Educ.* 36, 673–691. doi: 10.1007/s10212-020-00490-5

Opoku, M. P., Cuskelly, M., Rayner, S. C., and Pedersen, S. J. (2020). The impact of teacher attributes on intentions toward practicing inclusive education in secondary schools in Ghana. *Int. J. Disabil. Educ. Dev.* [Epub ahead of print]. doi: 10.1080/1034912X.2020.1731434

Opoku, M. P., Rayner, C., Pedersen, S., and Cuskelly, M. (2021). Mapping Ghana's research evidence base in inclusive education to policy and practice: A scoping review. *Int. J. Inclusive Educ.* 25, 1157–1173. doi: 10.1080/13603116.2019.1600055

Opoku, M. P., Swabey, J.-F., Pullen, K., and Dowden, D. T. (2019). Poverty alleviation among persons with disabilities via United Nations' sustainable development goals in Ghana: Voices of stakeholders with disabilities. *Sustain. Dev.* 27, 175–182. doi: 10.1002/sd.1899

Pajares, F. (1997). Current directions in self-efficacy research. *Adv. Motiv. Achiev.* 10, 1–49. doi: 10.1037/t63762-000

Pallant, J. (2020). *SPSS survival manual*, 7th Edn. Maidenhead: Open University Press. doi: 10.4324/9781003117445

Pullen, J.-F., Lombard, D. S., and Opoku, M. P. (eds). (2020). *Lifespan human development for educators*, 1st Edn. Melbourne, VIC: Cengage.

Republic of Ghana (2006). *Persons with disability act 715*. Accra: Ghana Publishing Press.

Republic of Ghana (2015). *Inclusive education policy*. Accra: Ghana Publishing Press.

Schumacker, E., and Lomax, G. (2016). *A beginner's guide to structural equation modeling*, 4th Edn. London: Routledge. doi: 10.4324/9781315749105

Sharma, U., Aiello, P., Pace, E. M., Round, P., and Subban, P. (2018). In-service teachers' attitudes, concerns, efficacy and intentions to teach in inclusive classrooms: An international comparison of Australian and Italian teachers. *Eur. J. Spec. Needs Educ.* 33, 437–446. doi: 10.1080/08856257.2017.1361139

Sharma, U., Armstrong, A. C., Merumeru, L., Simi, J., and Yared, H. (2019). Addressing barriers to implementing inclusive education in the Pacific. *Int. J. Inclusive Educ.* 23, 65–78. doi: 10.1080/13603116.2018.1514751

Sharma, U., Forlin, C., Deppeler, J., and Yang, G. X. (2013). Reforming teacher education for inclusion in developing countries in the Asia Pacific region. *Asian J. Inclusive Educ.* 1, 3–16.

Sharma, U., Forlin, C., Marella, M., and Jitoko, F. (2017). Using indicators as a catalyst for inclusive education in the Pacific Islands. *Int. J. Inclusive Educ.* 21, 730–746. doi: 10.1080/13603116.2016.1251979

Sharma, U., and George, S. (2016). "Understanding teacher self-efficacy to teach in inclusive classrooms," in *Asia-pacific perspectives on teacher self-efficacy*, eds S. Garvis and D. Pendergast (Rotterdam: SensePublishers). doi: 10.1007/978-94-6300-521-0_3

Sharma, U., Loreman, T., and Forlin, C. (2012). Measuring teacher efficacy to implement inclusive practises. *J. Res. Spec. Educ. Needs* 12, 12–21. doi: 10.1111/j.1471-3802.2011.01200.x

Sharma, U., and Nuttall, A. (2016). The impact of training on pre-service teacher attitudes, concerns, and efficacy towards inclusion. *Asia Pac. J. Teach. Educ.* 44, 142–155. doi: 10.1080/1359866X.2015.1081672

Sharma, U., Shaukat, S., and Furlonger, B. (2015). Attitudes and self-efficacy of pre-service teachers towards inclusion in P akistan. *J. Res. Spec. Educ. Needs* 15, 97–105. doi: 10.1111/1471-3802.12375

Shaukat, S., Vishnumolakala, V. R., and Al Bustami, G. (2019). The impact of teachers' characteristics on their self-efficacy and job satisfaction: A perspective from teachers engaging students with disabilities. *J. Res. Spec. Educ. Needs* 19, 68–76. doi: 10.1111/1471-3802.12425

Singal, N., Mahama Salifu, E., Iddrisu, K., Casely-Hayford, L., and Lundebye, H. (2015). The impact of education in shaping lives: Reflections of young people with disabilities in Ghana. *Int. J. Inclusive Educ.* 19, 908–925. doi: 10.1080/13603116.2015.1018343

Subban, P., Round, P., and Sharma, U. (2021). 'I can because I think I can': An investigation into Victorian secondary school teacher's self-efficacy beliefs regarding the inclusion of students with disabilities. *Int. J. Inclusive Educ.* 25, 348–361. doi: 10.1080/13603116.2018.1550816

Subbey, M. (2020). Awareness of basic school heads in Agona Swedru towards the policy of inclusive education in the Ghana Education Service. *Int. J. Inclusive Educ.* 24, 341–350. doi: 10.1080/13603116.2018.1464067

Tooley, J., Dixon, P., and Amuah, I. (2007). Private and public schooling in Ghana: A census and comparative survey. *Int. Rev. Educ.* 53, 389–415. doi: 10.1007/s11159-007-9042-3

United Nations (2007). *Convention on the rights of persons with disabiliteis*. New York, NY: United Nations.

United Nations Educational, Scientific and Cultural Organisation (1994). *Salamanca conference on special needs education and optional protocols*. Paris: UNESCO.

World Health Organization [WHO] (2011). *World disability report*. Geneva: WHO.