Teachers' Professional Development Needs Regarding Inclusive Education in Ghana

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ABSTRACT

This study was designed to explore the professional development needs of both general and special education teachers in Ghana regarding students with disabilities in an inclusive environment. Unlike the traditional top-down approach, where professional development for teachers is designed from the top and thrust upon them, this study sought to do the opposite by letting the teachers identify their own professional development needs. The study also sought to explore the teachers' perceptions regarding educating students with disabilities together with their peers without disabilities. A sample of 232 teachers selected through convenience, purposeful, and simple random sampling techniques participated in the study by completing a survey instrument comprising of both Likert type and open-end questions. Data were analyzed using both quantitative and qualitative thematic analysis methods. The results indicated that the teachers felt inadequately prepared to teach students with disabilities in inclusive classrooms. Almost all the participants indicated that professional development was important. In addition to the teachers identifying all the topics presented to them as important, they were able to rank order the topics thereby identifying what they considered most important. Also, a slight majority of the teachers were in favor of educating students with disabilities together with their peers. Implications of these results are discussed. Implications of the results are discussed.

Key Words: Inclusive education; Special education; Ghana; Professional development; Teachers

Teachers' Professional Development Needs Regarding Inclusive Education in Ghana

As in many African countries, the formal education of children with disabilities in Ghana has its roots in missionary activities dating back to the colonial period. After gaining political independence in 1957, Ghana started educational and policy initiatives to promote the education and rehabilitation of children with disabilities (Avoke, 2001). Almost four decades later, the country ratified the 1994 Salamanca Statement and Framework for Action on Special Needs Education, which had a focus to promote the educational inclusion of children with disabilities in the general education system. Since then, the country has encountered many challenges in her efforts to make inclusive education a reality for children with disabilities. One of these challenges is the shortage of qualified special education professionals who create inclusive environments in their classrooms for students with disabilities together with their peers without disabilities.

According to Akyeampong (2003) about 80% of primary school teachers in 1998 were trained/qualified—meaning there was a 20% shortfall of qualified primary school teachers. Similarly, Adusei, Sarfo, Manukure, and Cudjoe (2016) noted that there was a deficit in the supply of secondary or high school teachers. Not surprisingly, the shortage of teachers extended to special education as well (Sayed, Akyeampong, & Ampiah, 2000). The shortage of qualified special education teachers in Ghana can be attributed to a variety of factors including unfavorable employment conditions and emigration of qualified teachers to other countries (Adusei, et al., 2016). This is compounded by the limited availability of both pre- and in-service training options for teachers in general (Ghana Education Service, 2004).

Another challenge has been the lack of educational resources needed to educate children with disabilities (Gyimah, Sugden, & Pearson, 2009). In order to learn successfully, children with disabilities may require specialized learning materials such as books on tape, braille, or assistive technology. In fact, "most children learn well if there are teaching and learning materials" (Gyimah et al., 2009, p. 801). Unfortunately, such materials have been reported to be in short supply in the country (Adera & Asimeng-Boahene, 2011; Obi, Mamah, & Avoke, 2007). This means while some children with disabilities may be physically present in the classroom to learn, they may fail to access the curriculum because the requisite accommodations are not available. Unfortunately, this lack of educational resources may result in negative experiences among the teachers, which may in turn promote negative attitudes towards inclusive education (Adera & Asimeng-Boahene, 2011).

Negative attitudes towards disabilities are still quite prevalent in Ghana and can be related to the lack of resources to educate students with special needs (Adera & Asimeng-Boahene, 2011). This is important because, if teachers do not hold positive beliefs about inclusive education, they may not support policies and practices that promote inclusive practices (Agbenyega, 2007; Chitiyo, Hughes, Changara, Chitiyo & Montgomery, 2016). Recently, Sarfo (2011) examined basic schoolteachers' attitudes towards inclusive education in the country and reported that the teachers predominantly did not support inclusive education. It is possible that the teachers may not support inclusive education because they may not feel prepared to teach students with special needs (Adusei et al., 2016).

According to Adusei et al. (2016), many Ghanaian teachers lack the pedagogical skills to effectively teach children with special educational needs in inclusive classrooms. While Gyimah et al. (2009) argue that the teachers lack confidence in teaching students with disabilities, Avoke

and Hayford (2000) argue that the teachers lack knowledge of methodology and principles to teach students with exceptional needs. Gyimah and Amoako (2016) further argue that the teachers lack skills for the identification and assessment of students with disabilities in the general education classroom. More recently, Deku and Vanderpuye (2017) reported that a majority of teachers in the country viewed the curriculum, in inclusive education classrooms, as not appropriate for students with disabilities as the teachers did not have the skills to make necessary accommodations. These studies provide evidence that lack of skill, in terms of special education, on the part of teachers may be a major hindrance to the effective delivery of inclusive education for students with disabilities in Ghana.

The teachers' lack of skill can be attributed to lack of or inadequate training on effective special education pedagogy (Kuyini, Yeboa, Das, Alhassan, & Mangope, 2016). This argument is buttressed by Kuyini and Mangope (2011) who assert that Ghanaian pre-service teachers receive less training in inclusive education in comparison to their peers in other African countries—highlighting the need for revising the pre-service teachers' curriculum as well as development of continuous professional development for in-service teachers in the area of special and inclusive education. It is generally agreed that quality preservice teacher preparation and professional development programs for in-service teachers positively affect teachers' pedagogical knowledge (Pryor, Akyeampong, Westbrook, & Lussier, 2012). Thus, these current authors argue that the country should review its pre-service teacher preparation programs and implement continuous professional development for in-service teachers with a focus on special and inclusive education pedagogy.

According to Tamanja (2016) professional development in Ghana currently "takes various forms: ranging from pre-service in training institutions, in-service training in school,

district, regional and national levels, distance and on-site sandwich education program in teacher training universities" (p. 94). Pre-service training is when the prospective teachers attend teacher training colleges/universities and graduate with a teaching certificate, diploma, or degree. Distance education is when students enroll in teacher preparation programs and study remotely—due to work and family commitments—while 'sandwich programs' would require that those students studying through distance education be physically present on campus periodically (Tamanja, 2016). Typically, in-service teachers use the 'sandwich programs' model for their professional development because it allows them to continue working and only visit their college campuses during school breaks. Regardless of which model is used, it is essential that the government ensures that professional development of teachers is of high quality and addresses the needs of teachers especially as researchers have queried the adequacy of teacher preparation in terms of inclusive education (e.g., Agbenyega & Deku, 2011; Agbenyega & Klibthong, 2011; Kuyini & Desai, 2008; Kuyini & Mangope, 2011).

In order to improve the quality and relevance of the professional development that teachers receive, it is important to include the teachers in the planning and development of that process (Charema, 2010). Unfortunately, as Charema argues, teachers are not often involved in that process even though they are the ones expected to implement educational practice—a situation that could adversely affect the intended outcomes of that process. It is against this backdrop that this current study was designed. This study was a replication of similar studies previously done to investigate the professional development needs of teachers in Zimbabwe, Malawi and Namibia (see Chitiyo, Hughes, Changara, Chitiyo & Montgomery, 2016; Chitiyo, Hughes, Haihambo, Taukeni, Montgomery & Chitiyo, 2016; Hughes, Chitiyo, Itimu-Phiri, & Montgomery, 2016). The researchers wanted to engage Ghanaian teachers to solicit their input

regarding inclusive education of students with disabilities and their professional development needs related to inclusion of students with special needs in their classrooms. Like Chitiyo et al. (2016), Chitiyo, Hughes, Haihambo et al. (2016), and Hughes et al. (2016) this current study was guided by the following research questions:

1. To what degree do schoolteachers in Ghana believe that students with disabilities should be educated together with students without disabilities?

2. To what degree do schoolteachers in Ghana consider professional development on teaching students with disabilities important?

3. What are Ghanaian schoolteachers' prioritized professional development needs regarding inclusive education knowledge and services?

4. What resources/materials would Ghanaian schoolteachers need to facilitate the successful learning of students with disabilities in their classrooms?

METHOD

Sampling and Procedure

Through a descriptive survey design, data were obtained from teacher respondents in order to address the research questions concerning professional development needs of both special and general education teachers in Ghana. Basic and secondary education teachers from both rural and urban towns within Cape Coast Metropolitan Assembly constituted the target population of the study. Multiple sample technique involving convenience, purposeful, and simple random techniques were used in this study. Out of six educational circuits in Cape Coast Metropolis, four circuits were randomly selected using the simple balloting technique. In each circuit, a list of teachers was obtained from the Metropolitan Education Office. The schools were

stratified into basic, secondary, private, public, urban, and rural schools and teachers randomly selected from each stratum. In all, the survey was administered to 250 teachers in their respective schools. Out of the target population of 250 teachers, 232 (93%) completed and returned their questionnaires for analysis.

Data analyses were conducted using SPSS. Quantitative data analysis was conducted, using descriptive statistics, to generate means and standard deviations of the items of interest and *t*-tests were conducted to determine relationships among the items. Qualitative data analysis methods were used to analyze data from the open-end items. Specifically, systematic thematic analyses were used to determine predominant themes that emerged from the data.

Participant Demographics

The demographic information about the participants is presented in Table 1. Approximately 42% (*n* = 97) of the participants were male, while 58% (*n* = 135) were female. Only 12.9% (*n* = 30) of the participants had a teaching certificate, about 57.8% (*n* = 134) had a diploma, about 25% (n = 58) had a bachelor's degree, 2.2% (*n* = 5) had a master's degree, and 0.9 participants (n = 2) mentioned that they have other degree. Few teachers (24%, *n* = 56) were certified special education teachers while a majority (73%, *n* = 170) were not. Some of the certified special education teachers indicated that they had specialized in hearing impairment (*n* = 8), learning disabilities (*n* = 3), and (*n* = 3) teaching individual with special needs.

A majority of the teachers (63.4%, *n* = 147) taught primary school, 4.7% (*n* = 11) taught secondary school and 13.8% (*n* = 32) taught pre-school; two participants did not indicate what grade level they taught. Most of the participants (58.6%, *n* = 136) taught at government schools while 35.8% (*n* = 83) taught at private schools. Thirteen teachers did not indicate the type of

school where they were employed. About half of the teachers (51.3%, $n = 119$) taught at rural schools while 44% ($n = 102$) taught at urban schools; 11 participants did not respond to this item.

While a majority of the teachers (53%, $n = 123$) indicated that they were not teaching students with disabilities at the time of this study, 39.7% ($n = 92$) indicated that they were teaching students with disabilities; 17 participants did not respond to this question. Fifty-seven percent ($n = 131$) of the teachers were teaching in a general education setting, 37% ($n = 75$) in inclusive setting, and 20% ($n = 48$) in a special education setting; 31 of the participants did not respond to this question.

Table 1.

Demographic Characteristics of the Participants

Demographic Characteristics	Number of Teachers	Percent of Teachers (%)
Gender:		
Male	97	42
Female	135	58
Academic/Professional Qualification:		
Certificate	30	12.9
Diploma	134	57.8
Bachelor's degree	58	25
Master's degree	5	2.2
other degree	2	0.9
Position Type:		
Certified special education teachers (total)	56	24
Specialized in hearing impairment	8	
Learning disabilities	3	
Teaching individual with special needs	3	

Grade Level Taught:		
Pre-school	32	13.8
Primary school	147	63.4
Secondary school	11	4.7
Did not disclose	2	
Type of School Taught:		
Government	136	58.6
Private	83	35.8
Did not disclose	13	0.1
Location of School:		
Rural	119	51.3
Urban	102	44
Did not disclose	11	
Teaching Students with Disabilities at the Time of Study:		
Not teaching students with disabilities	123	53
Teaching students with disabilities	92	39.7
Did not disclose	17	0.1
Type of Setting:		
Inclusive	75	37
Special education	48	20
General education	131	57
Did not disclose	31	0.1

Note: Not all participants responded to all the items on the questionnaire; Percentages are rounded.

Instrument

Researchers used a semi-structured questionnaire developed by Chitiyo, Hughes, Haihambo et al. (2016) that included open and closed-end questions designed to identify professional development needs and elicit participants' self-reported special education needs in African countries (See Appendix 1 for the instrument). The instrument was therefore,

administered without any changes. The questionnaire included 12 demographic questions, 26 Likert-type questions, and three open-response questions. The Likert-type questions required participants to indicate their beliefs about inclusion for students with special needs, the need for professional development in special education, and importance of special education professional development topics. The list of topics was developed by these authors based on a comprehensive literature review on special education teacher preparation. The open-response questions provided an opportunity for participants to list additional areas of special education in which they might need professional development, identify resources or materials needed to facilitate the successful learning of students with disabilities, and provide any additional thoughts or comments.

RESULTS

It should be noted that not all participants responded to all the items on the questionnaire; in such instances, the authors acknowledge this and state the number of participants who responded and those who did not. The participants were asked to indicate, on a scale ranging from zero (strongly disagree) to five (strongly agree), the extent to which they thought students with disabilities should be educated together with students without disabilities. Twelve participants did not respond to this item. Of the 220 who responded to this item, 19% ($n = 42$) strongly agreed while almost 24% ($n = 53$) strongly disagreed. About 60% ($n = 132$) of the participants responded with a rating of at-least three. The mean rating for the 220 participants who responded to this item was 2.58 (std. deviation, 1.843). Figure 1 presents the frequencies of the responses.

When asked to indicate how important they considered professional development on teaching students with disabilities to be, on a scale ranging from zero (least important) to five

(most important), a majority of the teachers (61%, $n = 125$) indicated it was most important while 5% ($n = 11$) indicated it was least important. Almost all the participants (90%; $n = 184$) responded with a rating of at least three. The mean rating for the 204 teachers who responded to this item was 4.17 (std. deviation, 1.332). Twenty-eight participants did not respond to this item. The responses to this item are displayed in Figure 2.

A test for differences between the means for males ($M = 2.82$) and females ($M = 2.41$) showed that there was no significant difference in the teachers' perceptions pertaining to the degree to which students with disabilities should be educated with students without disabilities [$t(218) = 1.665$, p > .05]. Similarly, males and females did not differ in terms of how important it was to have professional development on teaching students with disabilities [$M = 4.14$ for males and 4.18 for females; $t(202) = -.230$, p > .05]. No significant difference was found between teachers teaching in rural versus urban settings in terms of both perceptions regarding educating students with disabilities along their peers without disabilities [$M = 2.53$ for rural teachers and 2.64 for urban teachers; $t(208) = .425$, p > .05] and the importance of professional development [$M = 4.06$ for rural teachers and 4.26 for urban teachers; $t(196) = .995$, p > .05]. There was also no significant difference between teachers who were teaching students with disabilities at the time of this study versus those that were not in terms of their perceptions about teaching students with and those without disabilities together [$M = 2.60$ for those teaching students with disabilities and 2.57 for those not teaching students with disabilities; $t(203) = .894$, > .05] and in terms of their perceptions about the importance of professional development [$M = 4.35$ for those teaching students with disabilities and 4.05 for those not; $t(188) = .894$, p > .05]. Finally, there was no significant difference between special and general education teachers regarding their perceptions about teaching students with, and those without, disabilities together

[*M* = 2.58 for special education teachers and 2.61 for general education teachers; *t*(212) = .918, p > .05]. The only significant difference found was between special education and general education teachers' perceptions about the importance of professional development with special education teachers having a higher mean (*M* = 4.55) compared to general education teachers (*M* = 4.03) [*t*(114.736) = .005, p < .05].
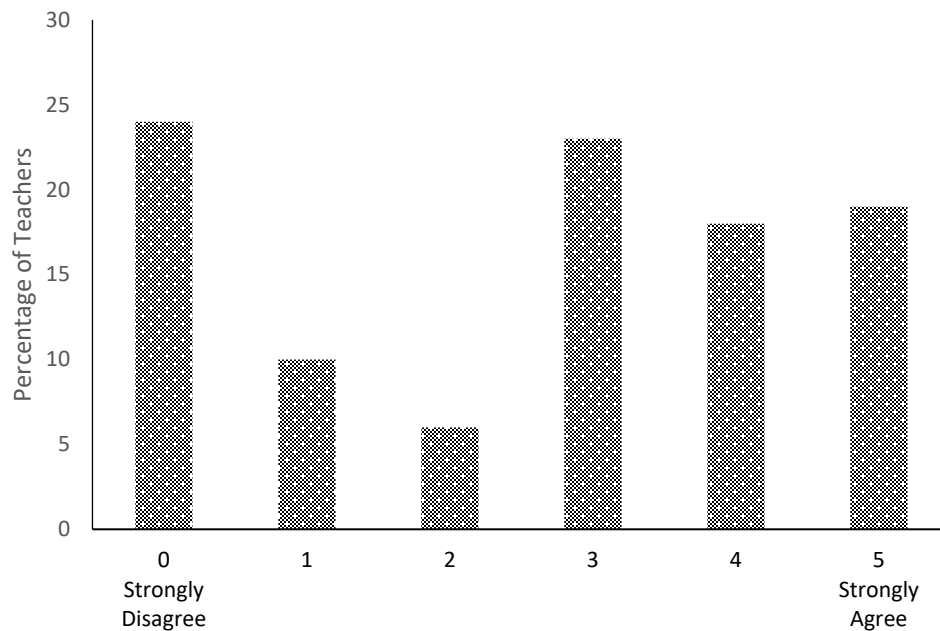

Figure 1. Teachers' ratings about teaching students with disabilities together with students without disabilities.
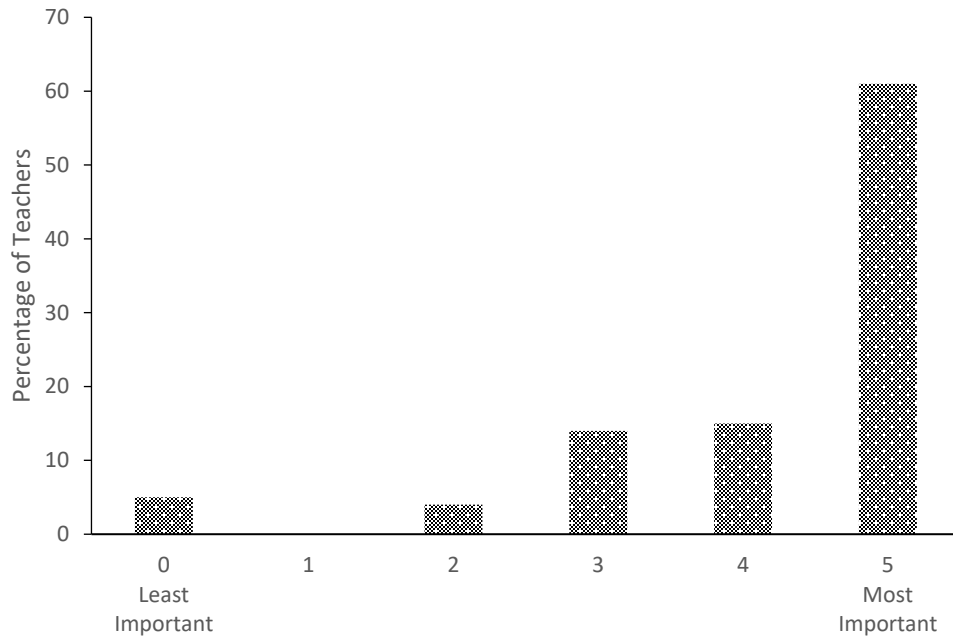
Figure 2. Teachers' ratings of the importance of professional development about teaching students with disabilities.

The participants were also presented with a list of different topics related to special education and were asked to rate the topics, using a scale from zero (least important) to five (most important), indicating how important they considered each of the topics for their in-service training/professional development. Table 2 indicates the mean ratings for each topic. The mean ratings suggest that all the topics were considered very important by the teachers, with *Organizing your teaching* (*M* = 4.35), *Instructional Methods* (*M* = 4.25), *Learning strategies* (*M* = 4.24), *Collaboration with parents/guardians* (*M* = 4.60), *Organizing your teaching* (*M* = 4.22), and *Behavior Management* (*M* = 4.20) receiving the highest ratings. The topic *Inclusive Education* received the lowest rating (*M* = 3.21).

Table 2

Mean Ratings of Professional Development Topics

Topic	*N*	Mean	Std. Deviation
Organizing your teaching	213	4.35	.973
Instructional Methods	216	4.25	1.049
Learning strategies	213	4.24	.994
Collaboration with parents/guardians	213	4.22	1.103
Behavior Management	218	4.20	1.080
Discipline	210	4.17	1.186
Teaching life skills	217	4.13	1.137
Assessment	219	4.05	1.222
Learning Disabilities	212	3.87	1.310
How to differentiate instruction	215	3.86	1.135
Other Health-related conditions	215	3.86	1.291
Disability characteristics	214	3.77	1.263
Physical Disabilities	212	3.75	1.264
Behavior Disorders	213	3.74	1.297
Intellectual Disabilities	216	3.72	1.381
Deafness or Hard of Hearing	211	3.68	1.437
Collaboration with peers	214	3.67	1.259
Diversity & Cultural Contexts	213	3.63	1.192
Autism	209	3.52	1.428
Blindness or Visual Impairment	210	3.51	1.535
Legal Aspects	212	3.50	1.413
Birth to age Three	204	3.30	1.540
Epilepsy	212	3.29	1.585
Inclusive Education	212	3.21	1.690

Note: Not all participants responded to all the items on the questionnaire

Qualitative data were analyzed using thematic analysis. The participants' statements were coded and categorized. The categories were analyzed to identify overarching emerging themes, which were reviewed to ensure they accurately depicted the data and meaning intended by the participants. The first open-response question gave the teachers an opportunity to identify, in their own words, any areas of special education in which they needed professional development. The predominant theme that emerged from these responses included how to teach students with different types of disabilities (i.e., sensory disabilities (hearing or visual impairment), autism, intellectual disabilities, physical disabilities, speech disorders, behavior disorders, and learning disabilities). Another common theme was sex education. The following are examples of what the participants stated in their own words regarding areas where they needed professional development:

Teacher 32: "*I need special training on disability characteristics.*"

Teacher 84: *"Educating pupils with various disabilities."*

Teacher 126: *"Instructional methods for behavior disorders."*

Teacher 156: *"Sex education."*

Teacher 151: *"Blindness or visual impairment and mental retardation."*

The second open-response question asked teachers to identify resources/materials needed to promote successful inclusive education and yielded several themes that are presented in Figure 3. The resources/materials identified included learning materials (e.g., textbooks, manipulatives, charts, technological equipment, and specialized student aids), infrastructural materials (e.g., elevators, resource rooms, and appropriate recreational facilities), and personnel resources (e.g., qualified special education teachers, counselors, and teaching assistants). The final question

required the participants to provide any additional thoughts or comments related to their needs. In general, the emerging themes were congruent with results from the quantitative analyses. Some teachers supported inclusive education while others preferred that students with disabilities should be taught separately from their peers without disabilities. The teachers also reiterated the need for training to equip them with skills to effectively teach students with disabilities. The following are examples of what the teachers specifically stated, in their own words:

Teacher 105: "*The school environment should be disability friendly and the teacher should be able to be accommodative.*"

Teacher 138: *"Schools should get enough resources and well trained special teachers before the inclusion begins"*

Teacher 59: *"I suggest that disabled children should be in the same learning environment with able children and teachers should be trained appropriately and provided with the needed material support."*

Teacher 67: *"I feel students with disabilities should be in the same school with the regular students but different class so that they can socialize with the regular students during recess"*

Discussion

It is encouraging that 60% of the participants indicated they were in favor of educating students with disabilities alongside their peers without disabilities by responding with a rating of at least three. Close to a decade ago, Sarfo (2011) conducted a similar study and reported that the teachers in that study mostly did not support inclusive education. While several factors may explain the differences in the outcomes of these studies, it is also possible that attitudes may be

changing in a positive way, albeit such a conclusion cannot be reached based solely on results of this current study. However, it is still worrisome that 40% of the participants—with 24% indicating they strongly disagreed—did not favor inclusive education. While not surprising, given previous research (e.g., Sarfo, 2011), this finding suggests that the government needs to do some work to promote the idea of inclusive education among educational professionals/service providers.

Even though 40% of the teachers did not favor inclusive education, almost all the participants (90%) supported the need for professional development on inclusive education. This finding dovetails with previous studies that have indicated that Ghanaian teachers lack the professional skills to effectively teach children with special educational needs in inclusive classrooms (Adusei et al., 2016; Agbenyega & Deku, 2011; Agbenyega & Klibthong, 2011; Kuyini & Desai, 2008; Kuyini & Mangope, 2011). Kuyini and Mangope, for example, stated that Ghanaian pre-service teachers received less training in inclusive education in comparison to their peers in other African countries. The overwhelming support for professional development may therefore, be an indication of the teachers' lack of preparation in terms of inclusive education. Whatever the reason, it is a very welcome and pleasant finding because it indicates the teachers' acknowledgement of the need to improve their own knowledge base and instructional repertoire in terms of special and inclusive education practices. This may promote the teachers' buy-in when it comes to actually engaging in the professional development.
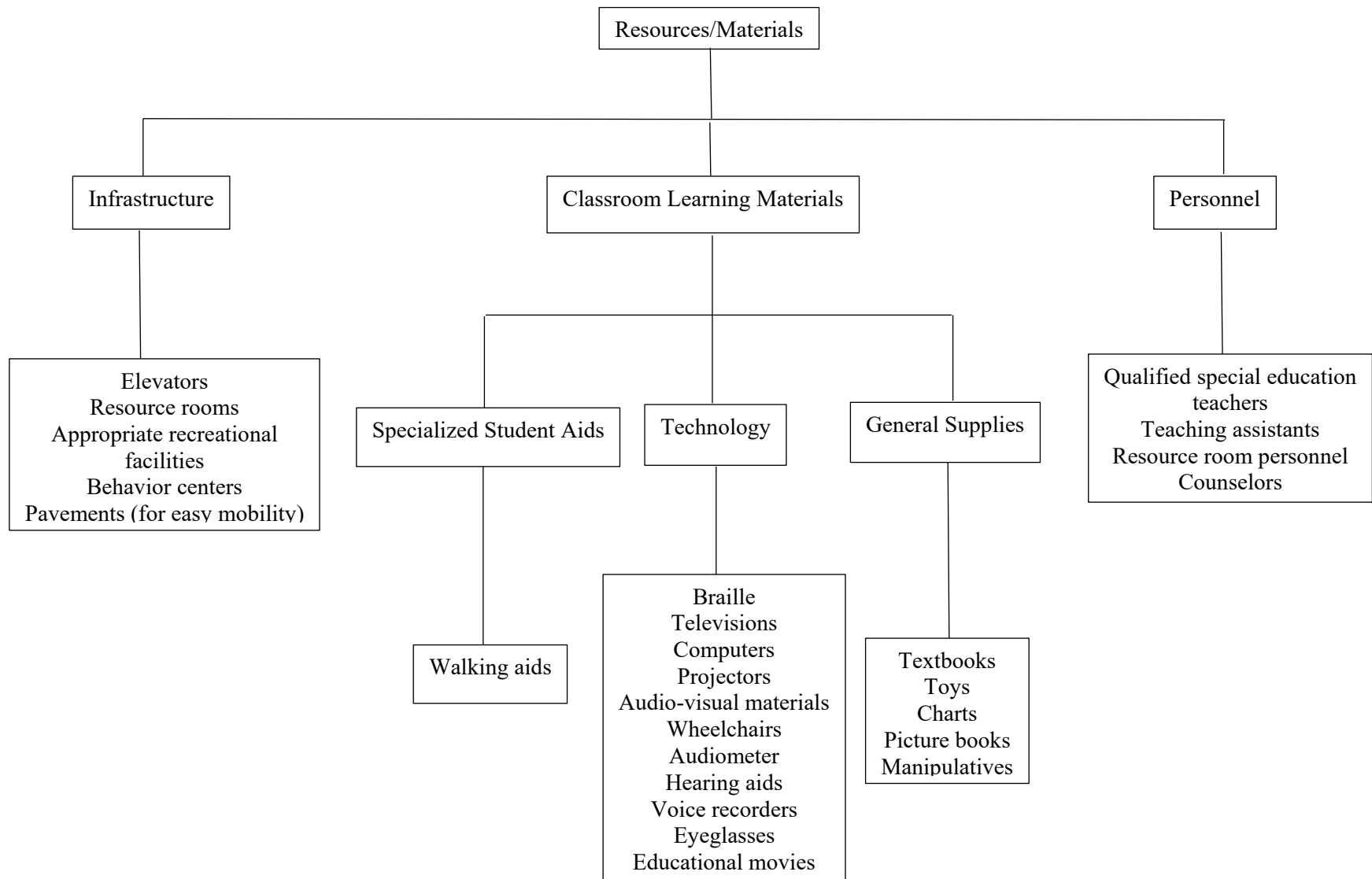
Figure 3. Material/resource needs from the teachers' perspectives.

There is some consensus that professional development for teachers is most effective if teachers are actively involved in the planning and implementation process instead of using the traditional top-down approach where teachers are simply told what to learn and how to participate (Charema, 2010; Colbert, Brown, Choi, & Thomas, 2008; Desimone, 2011). Getting teachers involved allows them to "utilize their professional judgment to determine their own professional development needs or make decisions regarding what professional growth activities are relevant to their classrooms" (Colbert et al., 2008, p.137). Such an approach is likely to promote the teachers' buy-in, which is crucial to the successful implementation of the professional development programs. Besides, teacher participation will also help to make sure their professional development is relevant by identifying their prioritized needs—the very reason this current study was conducted.

It is interesting that the tests of differences between the means of different subgroups (e.g., special education vs. general education teachers) in terms of their perceptions about educating students with disabilities together with their peers without disabilities as well as the importance of professional development yielded no significant differences. However, it is noteworthy that the only statistically significant difference found was between general and special education teachers' mean ratings about the importance of professional development; special education teachers considered professional development about teaching students with disabilities to be more important compared to their general education counterparts. This could be because special education teachers, on the one hand, felt more strongly the need to improve their instructional skills because they considered it their responsibility to teach students with disabilities. General education teachers, on the other hand, may not have considered it their responsibility to teach students with disabilities. However, since the push towards inclusive

education requires that both general and special education teachers have knowledge about teaching students with disabilities, it is important to promote buy-in across both groups.

When asked to rate the importance of specific professional development topics on a Likert scale the participants rated all the topics as important for professional development with the mean ratings ranging from 3.21 to 4.35. The results are not surprising and are consistent with findings from similar studies conducted elsewhere on the continent (i.e., Chitiyo et al., 2016; Chitiyo, Hughes, Haihambo et al., 2016; Hughes et al., 2016). Most important, the results seem to confirm what others have reported about Ghanaian teachers' deficits in terms of special and inclusive education. For example, Deku and Vanderpuye (2017) reported that a majority of Ghanaian teachers did not have the repertoire to teach social skills. Avoke and Hayford (2000) indicated the teachers lacked knowledge of methodology and principles to teach functional skills while Gyimah and Amoako (2016) reported that the teachers lacked identification and assessment skills. These skills were among the top rated skills in this current study (i.e., *teaching life skills* ($M = 4.13$), *instructional methods* ($M = 4.25$), and *assessment* ($M = 4.05$), respectively). These findings therefore, should inform policymakers and teacher preparation programs in terms of what skills should be addressed in preparing teachers to successfully teach inclusive classrooms.

In addition to teachers' specific skills deficits, several resources/materials, necessary for the successful learning of students with disabilities, were identified as lacking. That some of the identified material needs may be considered basic needs for any school environment may be an indication of the plight of some schools in the country. This is supported by previous research reporting poor or weak infrastructure, limited availability of buildings and classrooms, shortage of learning materials, and shortage of qualified teachers (Adera & Asimeng-Boahene, 2011;

Akyeampong, Rolleston, Ghartey- Ampiah, & Lewin 2012; Ampah-Mensah & Ampah-Mensah, 2016; Obi, Mamah, & Avoke, 2007). For inclusive education to work, the government will have to invest more in the education system to ensure that schools have the basic resources that support learning. For students with special needs, the schools and classrooms need to be equipped with the necessary infrastructure (e.g., ramps/pavements for mobility) and specialized materials (e.g., assistive devices and other learning aids). It is possible that the current lack of such resources may be contributing to some of the teachers' reluctance to fully embrace inclusive education at this point.

CONCLUSION

In summary, this study sheds light on the special and inclusive education professional development needs of both general and special education teachers in Ghana. According to the results, teachers felt inadequately prepared to teach special and inclusive classrooms. Even though the teachers identified all the topics presented to them as important, they were able to rank order the topics thereby identifying what they considered most important. Unlike the traditional top-down approach, where professional development for teachers is designed from the top, without their participation, and thrust upon them, this study sought to do the opposite. The authors wanted to let the teachers identify their own professional development needs. It is anticipated that doing so would promote the teachers' buy-in and therefore promote more successful outcomes. In order to promote successful professional development of teachers, future research should explore culturally relevant professional development methods that can promote sustainable development of special and inclusive education in the country.

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Appendix 1

<u>ASSESSMENT OF EDUCATORS' NEEDS FOR SPECIAL EDUCATION IN AFRICA©</u>

1. Country: _____

2. Gender: a. Male_____   b. Female _____

3. What is your highest earned academic/professional qualification?
   - a. Certificate_____   b. Diploma_____
   - c. Bachelors_____   d. Masters_____
   - e. Ph.D._____   f. Other, please indicate_____

4. Are any of your academic/professional qualifications in special education?
   - a. Yes _____   b. No ____

5. Are you a certified/qualified special education teacher?
   - a. Yes _____   b. No_____

6. If you answered YES to question 5
   - a. How many years of special education training did you have? _____
   - b. Did you specialize in any specific area? Yes____No____ (if yes, please specify) _____

7. What grade level do you teach?
   - a. Preschool _____   b. Primary school_____
   - c. Secondary school_____   d. Other, please specify. _____

8. If you teach at secondary level, what subject(s) do you teach?
   _____

9. Please select what most represents your place of employment
   - a. Government school _____   b. Private school_____

10. Please select what most represents your place of employment
    - a. Urban (city) _____   b. Rural (outside of city) _____

11. Are you currently teaching any student(s) with disabilities in your classroom?

    a. Yes_____   No_____

12. In what type of setting are you teaching?

    a. Regular setting/with no support (special educator or teaching assistant)_____

    b. Regular setting/with support either special educator or teaching assistant_____

    c. Inclusive setting with/no special educator support or teaching assistant_____

    d. Inclusive setting with/special educator support or teaching assistant_____

    e. Special education classroom_____

    f. Other, please specify. _____

13. To what degree do you think students with disabilities should be educated together with students without disabilities

                    0   1   2   3   4   5

          Strongly disagree   Strongly agree

On a scale with 0 indicating least important and 5 indicating most important:

14. How important is it to you to have professional development on teaching students with disabilities?

                    0   1   2   3   4   5

          least important   most important

15. How important are the following topics to you, regarding the education of students with disabilities, for your in-service training/professional development?

	least important					most important
Inclusive Education	0	1	2	3	4	5
Legal aspects	0	1	2	3	4	5
Behavior Management	0	1	2	3	4	5
Discipline	0	1	2	3	4	5
Instructional Methods	0	1	2	3	4	5
Organizing your teaching	0	1	2	3	4	5
Teaching life skills	0	1	2	3	4	5
Learning strategies	0	1	2	3	4	5

How to differentiate instruction	0	1	2	3	4	5
Diversity & Cultural Contexts	0	1	2	3	4	5
Assessment	0	1	2	3	4	5
Birth to age Three	0	1	2	3	4	5
Collaboration with parents/guardians	0	1	2	3	4	5
Collaboration with peers	0	1	2	3	4	5
Disability characteristics	0	1	2	3	4	5
Autism	0	1	2	3	4	5
Learning Disabilities	0	1	2	3	4	5
Intellectual Disabilities (mental retardation)	0	1	2	3	4	5
Physical Disabilities	0	1	2	3	4	5
Behavior Disorders	0	1	2	3	4	5
Blindness or Visual Impairment	0	1	2	3	4	5
Deafness or Hard of Hearing	0	1	2	3	4	5
Epilepsy	0	1	2	3	4	5
Other Health-related conditions	0	1	2	3	4	5

16. Please list any other area of special education that you would need professional development in?

_____

_____

_____

17. Please list any resources/materials you would need to facilitate the successful learning of students with disabilities in your classroom.

_____

_____

_____

18. Please feel free to share any additional thoughts.

_____

_____