Teachers' Pedagogical Competence in Adapting Curricula for Children with Learning Difficulties (LD) in Primary Schools in Ghana

Abdul-Razak Kuyini Alhassan
University College of South East Norway

Chigorom Okechukwu Abosi
University of Botswana

Abstract

Ghana education service (GES) has not achieved much in curriculum adaption to address the needs of children with disability. The aim of this study is to investigate teachers' pedagogical competence (TPC) in curriculum adaptation to include children with LD in primary schools. Mixed-Method Design Strategy involving 387 sampled teachers was used. The results will add to the body of research that show that teachers are inadequately prepared for inclusion of learners with disabilities in primary schools. Specifically, this study showed that some Ghanaian primary school teachers (PST) have limited competences in curricula adaptation. There was a significant association between curriculum adaptation and teachers' competences in teaching children with LD in Primary schools in Ghana. The PSTs are increasingly facing challenges in meeting the needs of children with LD due to: limited competence, poor class environment and inadequate teaching and learning resources. The study recommends that the Government of Ghana (GoG) provides intensive training in curriculum adaptation to PST to enable them address the needs of children with LD effectively.

Key words: inclusion, curriculum adaptation, differentiation, competence, Ghana, learning disabilities.

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Ghana is currently running an eight-year primary education system. It consists of Two-Year Kindergarten and Six-Years-Primary Education. The subjects taught include basic mathematics, citizenship education, English language, Ghanaian language, music and dance, natural/integrated science and physical education. The Ghanaian languages are the mediums of instruction at the lower primary (primary 1-3) and English language is used at the upper primary (primary 4 and 6). The objective of GES is to ensure that primary education curricula are responsive to the needs of all learners so that every learner can derive benefits from teaching and learning in the primary school (GES, 2004; 2008; 2010).

To achieve this goal, great emphasis is placed on curriculum adaptation, participatory pedagogies and child-friendly teaching/learning materials. Additionally, teaching manuals, teacher-guide and other supportive teaching materials are developed to facilitate effective teaching in the general

education classroom (GES, 2004; 2008; 2010; Casely-Hayford,et al., 2011). While it is the policy and objective of the GoG to provide equal educational opportunities for every Ghanaian child, GES (2004) indicates "... Not much has been achieved in the area of curriculum adaptation ..." (p.15). Teaching in the primary school in Ghana is saddled with inaccessible, inflexible curriculum, and leaves little or no room for assessment and identification of children's learning needs, let alone addressing them during instruction (GES, 2004; Agbenyega & Deku, 2011). The rigidity of curriculum, conditions of service coupled with lack of knowledge of inclusive teaching practices exacerbate teaching for teachers, especially those practicing multi-grade teaching, to adapt curriculum to address the diverse learning needs of children with learning difficulties and disabilities in primary schools.

Curriculum adaptation

Curriculum adaptation or differentiation "…is the process of modifying or adapting the curriculum according to the different ability levels of the students in one class" (UNESCO, 2004, p.14)**.** Also, Wrights (2005) argues that curriculum adaptation is comprised of a modification to the following: quality; time; the level of support; input; difficulty; output; participation; alternate goals ; and substitute or functional curriculum (p.1). This means that curriculum adaptation is viewed in terms of reorganizing curricula content, the use of appropriate grouping, instructional strategies, methods and application of appropriate instructional resources to meet diverse needs of all pupils in the regular classroom (Yuen, Westwood & Wong, 2005).

In addition, UNESCO (2009) emphasizes that curriculum should be adapted to meet all aspects of children's development: cognitive, emotional, social, skills and creative abilities. Similarly, it takes into consideration all characteristic of learners' variations: multi-ability, multiage, sex, religion, culture, conception and misconceptions etc. to offer curriculum rich in meaning (Ford, Davern & Schnor, 1992; Shulman, 1987). UNESCO (2009) states that:

> *An inclusive approach to curriculum policy has built-in flexibility and can be adjusted to different needs so that everyone benefits from a commonly accepted basic level of quality education. This ranges from varying the time that students devote to particular subjects, to giving teachers greater freedom to choose their working methods, and to allowing more time for guided classroom-based work (p.18-19).*

Clearly, this implies that teachers who teach children with LD must first have competence to adapt and attuned to curricula goals, content, lesson materials and working methods in order to meet the needs of all learners. Hoover and Patton (2005), however, observed that in adjusting curricula to the needs of learners with LD, teachers must: select learning content that must be relevant and related to students' culture, back- ground, environment, and prior experiences; employ multiple content knowledge and skills that must be taught overtime and across subject areas; integrate cognitive and academic goals; all those involved in students' learning must have high expectations of the students, at the same time valuing their diverse learning needs and abilities; and active learning and inquiry-based tasks should be employed in teaching the students (p.76).

Similarly, Tomlinson and Javius (2012) argue that the inclusion of children with various disabilities is possible if teachers are willing to develop the capacities to teach up for excellence.

To do this, teachers would have to ensure that "All students deserve equitable access to an engaging and rigorous curriculum" (p. 1). In addition, teachers and all those involved in the inclusion must apply the following inclusive principles: accept that human differences are not only normal but also desirable; develop a growth mind-set; work to understand students' cultures, interests, needs, and perspectives; create a base of rigorous learning opportunities; understand that students come to the classroom with varied points of entry into a curriculum and move through it at different rates; create flexible classroom routines and procedures that attend to learner needs; be an analytical practitioner (Tomlinson & Javius, 2012, p.2-5).

Also, Shulman (1987) asserts that teachers' ability to learn and comprehend subject matter or curricula and their capacity to adapt the curricula, reorganize it in new ways and represent it for learners to understand is a competence every teacher must have. He implies that to teach is to understand what is to be taught. The comprehension of curriculum helps teachers to adapt it to fit into the diverse needs of learners. This should be done using appropriate activities and emotions to make learning easy for understanding. Recent studies underscore the importance of teachers' skills in curricula adaptation (goals, content and materials) for pupils with LD in inclusive classrooms (Stainback & Stainback, 1992; Mastropieri & Scruggs 2000; Kuyini & Desai, 2008; Alhassan & Abosi, 2014).

Agbenyega and Deku (2011), for instance, have found in their study in Ghana, that PSTs still use prescriptive curriculum and inflexible teaching methods in the regular classroom. Similarly, Kuyini and Desai (2008) research in Ghana has disclosed that most teachers, were making minimal instructional adaptation for learners with disabilities. The problem was exacerbated by large class size, lack of teaching assistants and teaching and learning materials. Consistent with this, UNESCO (2004) observes that some teachers find it difficult to modify curriculum. However, some studies for instance, Vaughn, Schumm, Klingner and Samuell's (cited in Vaughn & Argüelles, 2000) found that teachers even have to adapt textbooks and other reading materials in order to meet learners' needs in regular classroom. Likewise, Schumm and Vaughn (cited in Vaughn and Argüelles, 2000) revealed that learners tend to respect and prefer teachers who adjust curriculum and teaching styles to their needs to teachers who do not do adapt curriculum and teaching styles. Akin to this, Simpkins, Mastropieri and Scruggs' (2009) study on curricula adaptation showed that children at risk had better learning outcomes when curriculum is adapted to learners needs. Both learners and teacher reported to have high degree of satisfaction with the curricula adaptation strategies and the materials used.

On the contrary, Westwood (2001) argues that "any approach that suggests giving 'less' to some students is open to criticism under principles of equity and social justice" (p. 6). Westwood and his colleagues argue that some learners may not even be comfortable using a watered down curriculum. Further, they argued that curriculum content and materials are often watered down in situations teachers have large class size, more workload, and inadequate preparation time. On the basis of this argument, they recommend that teachers be rather trained to develop the required competences and skills to effectively teach the same curriculum to all children, rather than watering down curriculum (Westwood & Arnold, 2004; Westwood, 2001; 2004; 1997; van Kraayenoord, 2007).

Overall, curricula adaptation or differentiation plays a pivotal role in the inclusion of all learners, particularly those with LD in the primary school. Any effective curricula adaptation or differentiation must comprise of modification in the curricular, learning content, methods of teaching and assessment and the environment where the learning takes place. It is not "a variety of activities". It is a way of planning, assessing and teaching a heterogeneous group of students in one classroom where all students are learning at their optimal level" (UNESCO, 2004, p.4).

Children with learning difficulties (LD)

Several factors create difficulties for children to learn or socialize with their age peers in schools and at home. Although LD is thought to be relatively new among Africa educators, major causes of LD among African children are not new. The major causes of LD in Africa are socio-economic and environmental factors. This is not to suggest that LD in Africa is not caused by biological and other psychological factors. For instance, Abosi (2007), Aro et al. (2011) and Author (2011) point out that apart from biological and physiological causes of LD, several other potential causes of LD among African children including: school related factors, culture, language of instruction, home related factors, and factors within the child. Children who experience LD in Africa often fail class exercises, perform poorly and loose respect from their peers and, at times, from teachers, who ought to have protected and supported them to overcome these barriers.

According to Abosi (2007), children with LD in Africa are those "…who experience learning difficulties independent of obvious physical defects such as sensory disorders. It is understood that such children have the ability to learn but it takes them a longer time to comprehend than the average child. These children are generally and frequently referred to as slow learners or underachievers" (p. 197). The Australian National Health and Medical Research Council (1990), Westwood (1997) also states:

> *'…the term is applied to students whose difficulties are not directly related to a specific intellectual, physical or sensory disability, although students with disabilities often do experience problems in learning and in social adjustment. Students who have, in the past, been referred to as 'slow learners', 'low achievers' or simply 'the hard to teach', certainly fall within the category 'learning difficulties' (p.1).*

LD is a broad term, describing learners, who show both the signs of developmental and academic problems and challenges irrespective of the origin of the problem (Julie & Peter, 2005; Kavale & Forness, 2000; Westwood, 1997). In most African countries, however, children with LD are often referred to as "slow learners" (Author, 2007; Aro, et al., 2011). Although African experts do not have their own definition of LD, they often have their own local terminologies describing individuals who exhibit characteristics and symptoms of learning disabilities and difficulties (Avoke, 2001; Agbenyega, 2003; Alhassan, 2013). In Ghana, for example, terminologies such as "*Asotowo*" and "*Buluus*" (idiots or fools, and reduced intellectual abilities) are often used to refer to children with LD and disabilities in Ewe and Ga communities (Avoke, 2001; Agbenyega, 2003). Among the Dagbambas and some communities in the Northern Region of Ghana, "*Zuðkping lana*" and "*Zuuku*" (empty-headed) are used for children, who manifest difficulties in learning basic social skills, basic calculation; and those experiencing difficulties in organizing their daily activities and adjusting well in social events.

In Ghana, it is a constitutional right of every child, at the pre-tertiary levels, to have equal educational opportunity to quality education independent of their ability or disability. This is to promote access, participation, quality and inclusion of all children (GES, 2004). Therefore, several adaptations need to be made to facilitate the inclusion of children with LD in the general education classroom. One of the fundamental adaptations required to be made is curriculum. According to GES' (2004) report, curriculum adaptation is one of the areas Ghana's policy of inclusive education has not made impressive strides. In the general education classroom, Ghana national education curriculum does not address the diverse learning needs of all learners, especially those with special needs.

Research objectives

This study aimed to address the following objectives:

a) To find out the level of primary school teachers' pedagogical competences in adapting curricula to meet the needs of learners with LD in primary school.
b) To find out whether or not teachers' pedagogical competency in curricula adaption is associated with their skills in teaching children with LD.
c) To explore teachers experiences of adapting curricula to meet the needs of learners with LD.

Methods and Design

Mixed-Method Design was used. The underlying philosophical assumption for using mixed-method design was its *dialectical position* (Rocco, et al., 2003). This approach was required for a holistic comprehension and meaningful investigation of teachers' competences in curricula adaptation. Accordingly, mixed design strategies (descriptive and phenomenology) were combined and carefully applied in the study.

Sampling design

The sampled teachers (n=387) were carefully selected using a multi-stage sampling strategy. To do this, the entire population of the general primary school teachers in Ghana (N= 198,403) (GNAT, 2009) was grouped into ten regions. Then, the Northern Region was randomly selected. The population of teachers in the Northern Region was 11538 (The Northern Region Education Directorate- Statistics Unit [EMIS], 2012). The sample size (n=387) was then determined using the following formula: $n = N/1+Ne^2$ (Carlderon & Gonzales, 2010).

Having had the appropriate sample size, the population of teachers in the region was again clustered into 26 districts. Twenty districts were randomly selected for the study. At the district level, a proportionate stratified sampling technique was used to draw the sample (n = 387) from the population of teachers in each of the districts. This was to ensure that all teachers in the districts were properly represented. At the district level, teachers were sampled and stratified based on the characteristics of the population.

Participants (10 informants) for the qualitative phase of the study were selected based on the following criteria: a) The participants must have some experience of teaching children with LD in the primary school, b) The participant must have a child or children with LD in his or her

class, c) participants must consent to be observed and interviewed, and d) have ample time to participate in the study.

Instrument

Three types of instruments were used to gather the data for this study: questionnaire, observation checklist and interview-guide. The questionnaire has three sections: demographic information, aimed to gather data on teachers' background variables (e.g. age, gender and class size). Section two, sought to find out association between adaptive instruction and teachers' competences in teaching pupils with LD. In this study, curricula adaption was *the independent variable,* and teachers' competence in teaching pupils with LD was the *dependent variable.* To answer the questions in this section, teachers were asked to use a scale of 1 to 3 to respond to their competence and skill level in teaching pupils with LD. The scale was interpreted as: "1" Limited competence, "2" Moderate competence and "3" Adequate competence. Similar scale was used for skills in curricula adaptation: "1" represented Poor skills, "2" Good skills, and "3" Very good skills.

Section three of the questionnaire had a self-developed Teachers' Competence Scale for curriculum Adaptation (CA Scale), made up of 5 items describing effective curriculum adaptation behaviors in the regular classroom. It embodied a collection of teaching practices and behaviors carefully identified in the inclusive education literature. Current thinking suggests that those teaching practices/behaviors produce better inclusion of pupils with diverse learning needs in the regular classroom. The competence scale for curricula adaptation contained self-assessment items, measured on the 4-point Likert-type statements aimed to measure teachers' competence in curricula adaptation. The scale was developed and worded in the following fashion:

a) Adapting curricula materials for pupils with LD: 1, 2, 3, 4.
b) Modifying learning content for pupils with LD: 1, 2, 3, 4.

The scale was interpreted as: "1" representing "No competence", "2" representing "Limited competence", "3" representing "Moderate competence" and "4" representing "Adequate competence". The data gathered from this section offered answers to research question one and were analysed using descriptive statistic. The same items were also used as observation checklist. It was designed to cross-check the responses or data the respondents provided on the scale for curriculum adaptation. This gives one the opportunity to comment as to whether or not teachers used their perceived competence on the scale for curriculum adaptation in their actual teaching practices in the general education classroom.

The interview guide dealt with teachers' experiences of teaching children with LD in the general education classroom. Some of the questions that guided the interviews were:

Tell me about your experiences of adapting curriculum to meet the needs of children with learning difficulties in primary school.
Tell me about some of the challenges you face in teaching children with LD in primary school.

All questions in the interview guide were not strictly followed during the interview. Teachers could stray from one topic, question or subject to another without being forced to stick strictly to the original plan in the interview guide. What was important was that the researchers were able to track the topical trajectories that got lost during the interview whenever those trajectories were considered appropriate and central to the subject matter (Turner, 2010; Cohen & Crabtree, 2006). The interview guide provided a great freedom and flexibility in sequencing the questions and in the amount of time and attention given to different topics and interviewees.

Reliability and validity

The researchers conducted a field-test involving 31 PST to see whether the research instruments were reliable and feasible to obtain the relevant data needed for the study. Prior to the reliability test and factor analyses, a group of experts in special/inclusive education including one university lecture, two teacher educators and three general education teachers carefully scrutinized and assessed the instruments for their relevance, content, cultural, face and construct validity. The feedbacks from the experts recommended that some of the items be removed whereas others were recommended to be included. In the end, the 22 items were reduced to 13, which, was further reduced by reliability test to 5 items, suggesting a very good sign of data reduction and consistency.

The reliability test was performed. The result showed Cronbach's alpha coefficient of 0.88, indicating that the instrument was reliable. Also, factor analytic approach was applied. Principal component factor analysis with Varimax Kaiser Normalization was used to examine the commonalities among the items. Factors ranged from 1 to 2 with coefficient of 0.79 to 0.98. Most of the items scored above 0.70, suggesting that the research instrument was consistent and reliable. Reliability of the observation data was assessed using inter-observer scores to measure the consistency of the data. In doing this, inter-observers or raters were carefully trained on how to score the observation checklist during observation.

On the part of the qualitative data, we cross-checked the data gathered from individual interviewees and we also posed questions to determine whether other interviewees also experienced similar situations. The reliability was assessed using multiple data sources, triangulation, member checking and external audit.

Data collection

In order to gather data for the study, 463 questionnaires were administered to teachers in the twenty districts (20) of the Northern Region. It took four months (7th May, 2012 to 29th August 2012) to receive all the administered questionnaires. The returned questionnaires were more than the determined sampled size (n=387). However, only 387 questionnaires were used in the study. Out of the 387 sampled teachers, 50 respondents were observed using observation checklists to cross-check the responses provided in the survey questionnaire. The observation was conducted in 25 primary schools with the assistance of inter-observers (inter-rate or scorer). The inter-observers' main role in the observation was to observe if teachers were demonstrating the skills listed in the observation checklist and scored them accordingly. The observation of every teaching session lasted for 35-45 minutes. That was the time scheduled for each subject in the school time table. At the end of every observation, the researchers and the inter-scorers met to compare scores and determine the final scores for each observation.

The qualitative data were generated from 10 informants using in-depth and group interviews. Individual interview lasted 45 minutes to 1 hour for each informant, while 1 hour to 1hour 30 minutes was used for the group discussion. The groups were three consisting of four members each. In addition, archival sources such as lesson notes and class exercises were used to aid the selection of qualified candidate for the interviews and also to see how curriculum was adapted.

Data analysis

The quantitative data which were generated from research question one, two and three were analyzed using descriptive statistic, Chi-Square (χ^2) test (cross-tabulation) and linear correlation. On the other hand, the qualitative data were analyzed using Interpretive Phenomenological Analysis (IPA).

Results

Background variables

The result on the teachers' background variables showed that 53.7 % (208) of the sampled teachers (n=387) were rural schools teachers, while 179 teachers (46.3) urban teacher. Female teachers were 74(19.1%), whereas their male colleagues were 313(80.9%). 315(81.4%) of the teachers were trained, while 72(18.6) were untrained. 198(51.2%) had training in special needs education and 189 (48.8%) did not have any training in special needs education. 203(52.5%) of the teachers taught small class size (45 and below pupils), while 184 (47.5%) taught large class sizes (46 and above). The largest class size observed was 138, while 17 being the smallest. Teachers' qualification ranged from Senior High School (SSS) to bachelor degree. Majority of them, 54.0 %(209), had diploma degree, whilst 63(16.3%), 59(15.2%), 32(8.3%), 24(6.2%) had degree, SSS, Post-Middle Teachers Certificate "A" and Post-Secondary Teachers' Certificate "A" respectively. Participants' ages ranged from 20-54, though they had 6 to 30 years of teaching experience.

Teachers' pedagogical competence in curricula adaptation

To find out the pedagogical competence levels of teachers, curriculum adaptation scale (CA Scale) was used to gather the data. The data were analyzed by means of descriptive statistic. The CA Scale was interpreted based on the total means scores with "1" representing "No" competence, "2" representing "Limited" competence, "3" representing "Moderate" competence and "4" representing "Adequate" competence.

Based on this interpretation, the result in Table 1 shows that the mean composite scores is 10.1(2.0), suggesting that the 387 sampled teachers have limited competence in curricula adaptation. Their competence level is between 1.38 and 2.42, implying limited competence in curricula adaptation. The highest mean scores (M=2.42, SD=0.93) is item 2(Using assessment information to plan lesson). This was followed by item 1(Adapting curricula materials for pupils with LD), item 4(Using different instructional strategies), item 3(Modifying learning content for pupils with LD) and item 5(Using IEP to support pupils with LD) with means scores of M=2.27, SD=0.89; M=2.06, SD=0.89; M=1.94, SD=0.87 and M=1.38, SD=0.77 respectively.

Table 1: Curricula adaptation (CA Scale)

	N	Minimum	Maximum	Mean	SD
1. Adapting curricula materials for pupils with LD	387	1	4	2.27	0.89
2. Using assessment information to plan lesson	387	1	4	2.42	0.93
3. Modifying learning content for pupils with LD	387	1	4	1.94	0.87
4. Using different instructional strategies	387	1	4	2.06	0.89
5.Using IEP to support pupils with LD	387	1	4	1.38	0.77
Valid N (listwise)	387				

Source: Survey data, 2012

In order to establish whether or not a relationship exists between the responses of teachers on the CA Scale and what they actual do in practice, 50 teaching sessions of the sampled respondents (n=387) were observed. The result (Table 2) shows that the relationship between the two variables is not significant and negative (r= -0.10, p=0.48). This suggests that teachers responded that they had limited competence in curricula adaptation on the CA Scale, and in practice, they were, indeed, not adapting curriculum to support children with LD in the general education classroom.

Table 2: Correlations between observed and perceived competence in curriculum

		Observed competence in curricula adaptation	Perceived competence in Curriculum adaptation
Observation data curricula adaptation	Pearson Correlation	1	-0.10
	Sig. (2-tailed)		0.48
	N	50	50
Curriculum adaptation	Pearson Correlation	-0.10	1
	Sig. (2-tailed)	0.48	
	N	50	50

Source: Survey data, 2012

Curriculum adaptation and teachers' competence in teaching children with LD

The result in Table 3 shows that there is an association between curricula adaptation and teachers' pedagogical competence in teaching children with LD in the general education classroom. A higher percentage of the teachers, 32.1% (124), reported having "Limited competence" and "Poor skills" in curriculum adaptation. Whereas 24.4% (94) concurrently had Good skills and Moderate competence in curriculum adaptation, only 11.4 %(44) claimed to have "Very Good skills" and "Adequate competence". Furthermore, the test result indicated that χ^2 statistic (*df*) = 215.697 (4), *P*-value < 0.00. The result of Cramer's V was = 0.53 with *P*-value of 0.00. This implies that there is a strong statistical relationship between curricula adaptation and teachers' competence in teaching children with LD in the general education classroom. GES, therefore, should encourage teachers to increase their curricula adaptation practices in order to meet the needs of children with LD in the general education classroom.

Table 3: Cross-tabulation of curricula adaptation and teachers' competence

			Curriculum Adaptation			Total
			Poor Skills	Good Skills	Very Good Skills	
Curriculum Adaptation	Limited	Count	124	38	2	164
		% of Total	32.0%	9.8%	0.5%	42.4%
	Moderate	Count	38	94	20	152
		% of Total	9.8%	24.3%	5.2%	39.3%
	Adequate	Count	7	19	45	71
		% of Total	1.8%	4.9%	11.6%	18.3%
Total		Count	169	151	67	387
		% of Total	43.7%	39.0%	17.3%	100.0%

χ^2statistic (*df*) = 215.697[a] (4), *P* value <0.00. Cramer's V value = 0 .528, *P* value <0.00 a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 12.29.
Source: Survey data, 2012

Teachers' experience of adapting curricula for children with LD in classrooms
The qualitative phase of the study generated two categories of themes: meeting the learning needs of children with LD and schedules and instructional times. The finding is presented in a narrative form. Only few informants' voices are utilized to generalize for the rest of the interviewees (internal statistical generalization).

Meeting the needs of children in the classroom
The qualitative study reveals that teachers faced increasingly difficult challenges meeting the learning needs of children with LD in the general education classroom. The situation of teachers, who benefited from non-governmental organizations (NGOs) support, was even better compared to teachers who did not. The support some teachers received from NGOs included training on child-centered methodologies, curricula differentiation and teaching and learning materials. Such NGOs included UNICEF, VSO, GTZ, FDF and other local NGOs. The few supported teachers were familiar with inclusive teaching practices. But the bulk of teachers who did not receive such support depended largely on the traditional ways of teaching. They said that they lacked the most vital teaching and learning aids/materials including chalk, furniture, text and exercise-books. When researchers asked the teachers to tell them how they managed to adapt curriculum to meet the needs of children with LD, they said:

> *Most of us do not have any other option than to use lecture method in the classroom. In fact, the basic things that should be made available for us to teach are not available. To use techniques like child-centered methods require lots of resources and materials and they are just not available in schools. For example, we all know that chalk is a basic necessity in all classrooms. It would not be a good practice to teach without demonstrating on the chalkboard. So, the chalks are supposed to be provided by the GES. Can you believe that sometimes we come to school and do not get chalk to use? In my school for instance, GES hasn't provided chalk for the entire year, not to talk of textbooks and other TLMs. So, in this school, we have our rule that no child should wear a slipper (sandals) to school. Those who violate this rule are made to pay 10 pesewas*

(less than one cent). This money is collected by the pupils and used for chalk. Any day this money is not available to buy chalk, we sit at the office and allow the children to play for the whole day. If the teacher is kind, he or she will use his or her own money to buy the chalk and teach. Although I learnt some schools are now using markers, when we get to that point, teachers will not be able to teach at all because they may not want to use their salary for markers since they are expensive (verbatim expression of interviewee).

The interviewee revealed that the basic resources that should be available for any effective inclusive education practice is not available in schools. Also, teachers talked about how they met the needs of children with LD in regular classrooms in under-resourced schools.

Researchers: *I can see that you have limited furniture, textbooks and classrooms. Please tell me how you meet the needs of learners under this condition?*

Teacher Henriatta (not real name): *"It is funny the way we teach here"* she said:

We run six-classroom system in the school. But we don't have enough classrooms to accommodate all the pupils. So, we have to think strategically. Class 2 has 51 pupils and class 4 has only 35 pupils. So we have to combine the two classes (class 2 and 4) in order to accommodate all the pupils. That is the only way we can accommodate all the children because the remaining classes have more than 51 pupils in each (verbatim expression of interviewee).

Teacher Henriatta explained that "*In a situation where this type of grouping ought to be done to ease tension in school, teachers described it as a compulsory multi-age teaching"*. In one of the focus group discussions, teachers unveiled that although the compulsory multi-stage teaching made accommodation of all pupils possible; it was difficult to meet the needs of all learners. It made class management, instruction delivery and assessment of pupils' progress cumbersome. Fascinatingly, when the researchers probed further to find out if the compulsory multi-stage teaching solved the tensions of classroom shortages in the school, teachers replied affirmatively. But teacher Feruza (a class 4 teacher) explained further:

Yes, but with some problems. It is not normal to force two classes into one, especially when two teachers are teaching simultaneously; the two voices are interrupting each other. I don't know how the pupils feel. Our voices should be confusing them. But we have to carry on, that is the only way we can handle the situation. Alternatively, I sometimes wait for Henriatta to finish before I start my lesson. But then, we waste a lot of time.

Yes, Teacher Henriatta interrupted: *I have been feeling the same way, the two classes distract each other and it is affecting the teaching process. But the children may not tell how it affects them too. But this is the affect. We have never discussed this problem together, because we all know the problem and the goal we are trying to achieve. But, I didn't know that when she uses morning hours to mark register and homework, it is because she is waiting for me to finish teaching before she can start her lessons. That*

could also be a way out. Honestly, it is annoying teaching at the same time in one class (verbatim expression of interviewee).

Indeed, it was obvious that distractions and confusions were unavoidable in compulsory multi-class teaching. Teacher Henriatta again said, "*Sometimes no matter how we try to stop the children from playing during lessons, they always find their way to do it*". As they kept narrating their story, the researcher were deeply reflecting on the outstanding characteristics of these two classes, pupils' seating arrangement (pupils sat facing each other at the back), teacher-pupil relationship and the sonority of the teachers' instruction without its corresponding concrete examples.

The pedagogy in those classrooms also boiled down to what Freire called "narrative education" (1970). It was obvious that the teachers' phenomenological experiences of teaching included compromises to teach separate classes in one classroom, empathizing with the pupils, their judgment of teaching practices and their own evaluation of the experiences gained through teaching under such conditions. Subsequently, the researchers empathized by restating what the teachers said earlier: "… *the two classes distract each other and may be affecting pupils' learning*" and then asked: if compulsory multi-stage teaching distracts teaching and learning process, how do you then meet the needs of the slow learners? Teacher Feruza commented immediately:

Impossible! You know, this can't be done here. How can we do it? Sometimes when we are teaching, the big boys in the class four are stretching their hands hitting those in class two. In worse scenarios, they just get into the side of my class and beat the children up while we are there. And sometimes too, they will be throwing stones at each other as if they are in a war front. More to the point, there are certain activities we can't perform with them in this kind of environment. Assuming one of us is to teach music and dance or do any group activity, we can't teach this group together because the gap between them is too wide. Therefore, the question of paying attention to the slow learners is not possible. Therefore there is the need for teachers to shift in how they are presenting content (verbatim expression of interviewee).

Teacher Henriatta, explained:

Even in a typical normal classroom. Teachers cannot meet the needs of the slow learners. The environment does not allow you even if you want to do it. Even to organize a physical space for those who can't hear or see very well is a problem. There is no axial for easy movement. Whether Ghanaians like it or not, this phenomenon affects teaching and learning tremendously (verbatim expression of interviewee).

In schools such as that of Henrriatta, the common solution to inadequate textbooks was to write the entire passage on the chalkboard for pupils to copy. That was the only means teachers could ensure that all pupils participated in lessons. Some of the teachers expressed their views in the following script:

In my school, class four English reading books are only ten copies. They are to serve more than 56 children any time we have English language. So, we have to copy the entire passage on the blackboard for them to copy. Besides, the classrooms are packed with children and it is very troubling to teach using any other method apart from the lecture method. Therefore, we are not able to focus on the slow learners or give them the necessary attention they need. Even to put the slow learners into different groups so that their colleagues could help them is a problem. I have tried this method many times and wasted my time in the end. It was difficult to control the groups. Even in the normal class, it is difficult to attend to or have time for all of the students. My intention was to cover the whole topic once and for all, while everyone gets the chance to participate actively. This did not work out well because we could not achieve the goal of the lesson (verbatim expression of interviewee).

Schedules and instructional times

Under the GES official rule, all basic schools that run one-session system must start school at 8:00 a.m. and close at 2:00 a.m. But all schools that run shift system must begin at 7:00 a.m. and close at 12:15 a.m. The afternoon shift begins at 12:15 p.m. and ends at 4:45p.m. Teachers, however, start school very late and close very early. In most of the cases, teachers in some of schools the researchers visited came to school around 9:30a.m and closed as early as 11a.m. In focus group discussions teachers said: "*most of us do not have ample time to adjust curriculum, and teaching pace to the children's learning styles because we rush through lessons in order to leave school early or to cover much of the syllabus*". The paragraph that follows exemplifies the level of commitment teachers have for the teaching profession.

It was exactly 8:43 a.m. when the researchers arrived at B3 School (pseudonym). There was no single teacher and pupils were everywhere playing. Later at 9:10 a.m. Mr. Thomson (pseudonym), the assistant head teacher of the school arrived. He was in his late forties and had also taught in the school for many years. "*I thought you were an officer from the District Education Office*" was the first remark he made after the researchers introduced themselves. Teacher Naima and Joseph (pseudonym) came together on a motor-bike twenty minutes after Mr. Thomson came. Teacher Naima was the only teacher the researcher interviewed in B3 School:

The researchers: Madam kindly explains to us some of the reasons why teachers in Ghana come to school very late.

Teacher Naima:

If a country pretends to pay its teachers, the teachers pretend to teach. Let be frank with you. You see, all schools in the country have the same official opening and closing times. They also have the same school days and vocations. And all syllabuses and schemes of work are provided by the GES and they are the same throughout the country. For example, all one session schools are supposed to start lessons at 8.a.m. and close at 2 p.m. likewise, all schools that go on shift system have to start at 7 a.m. and close at 12:15 p.m. for the afternoon shift to begin and then close at 4:45 p.m. This is how school

schedules and instructional times are supposed to be operating officially. But teachers plan the timetable to suit their school conditions.

Researchers: Does it mean that in practice teachers can teach the subject the way they find suitable to them?

Teacher Naima:

Yes, in practice, teachers have the freedom to arrange or teach school subjects in a manner that suit them. But they are required to teach 4 -5 subjects in a day out of the 8 subjects. But most of us usually teach less than four subjects in a day. The 35 minutes allocated for teaching a subject is not enough, giving the fact that most of the children do not understand lessons easily. We will overburden them if we teach more than two or three subjects.

Researchers: Could you kindly reflect on how effective teachers follow school schedules and instructional times.

Teacher Naima:

You see, officially we are supposed to be seven teachers, that is p1 to p6 plus kindergarten. Is it not seven teachers? But we are only five teachers here. But personally, I only know four teachers. But the fifth person I have never seen him or her. This means the four teachers including me have to handle the six classes in addition to the kindergarten. And the day any one of us hasn't come to school, the situation becomes worse. So, it is very tight here.

Researchers: Then kindly explain to me how you and your colleagues take care of the needs of slow learners in your tight schedules?

Teacher Naima:

It is difficult to talk about them. Throughout the country, all government schools follow the same curricula no matter your ability or disability or location. Once a child is in the normal government school, they have to use the same curriculum. But we have been encouraged to take pupils' individual characteristics into consideration. And that is where the problem lies. If one is to take children's individuality into account, can one finish a topic within a term? Almost half of the children in my class are slow learners. Let me give you an example, I have a 17 year old girl in my class, who has just started school this term. She is over age but has never been to school. Because of her age she is placed in class two. And there are similar cases in other classes. That girl may not necessarily be stupid or slow learner, but because of her background she has problems picking up lessons. I wish I could help her, but it is difficult to do so because there is no time to help her. And I don't even know how to do it.

In most schools, some children are considered slow learners either because they are the first people to start attending school (first generation learners) in their families or those children who have started school at a very late age. The researchers probed further to comprehend what she meant by the phrase "*because there was no time to help her*". She elaborated:

> *None of us live in this community. Although there is a two or so bedrooms apartment for all the teachers in this school, there is no electricity, no good drinking water and if anything happens to us here at night, there is no hospital or clinic to go to. It takes each one of us more than an hour to get here. We arrive here sometimes after 9 and sometime 10.00 a.m. depending on the type of means one gets. And by 11a.m. to 11.30 a.m. we will be preparing to go back, though we are supposed to close at 2 p.m. officially. But one thing is important for you to know. We handle more than two classes and I can't handle two classes and be able take care of the slow learners. Even those in the cities can't do that. Because after teaching each subject, one has to give exercise to make sure that more than half of the pupils in the class understand the lessons. These exercises have to be marked. We can't do everything.*

Discussion

The results of the Chi-Square test showed that there was a statistical relationship between curriculum adaptation and teachers' pedagogical competence (χ^2 statistic (*df*) = 215.697(4), *P*-Value < 0.00; Cramer's V value = 0.53, *P* value < 0.00). This suggests that teachers' ability to teach children with LD in the regular classroom depends on their competence in curricula adaptation. Therefore, curriculum adaptation is one of the key competency domain GES must not ignore if the inclusion of children with LD in the regular classroom is to be successful. While the study finds that curricula adaptation is strongly related to teachers' pedagogical competence in teaching children with LD, the joint frequency (Table. 3) indicates that majority (32.1%) of the teachers have "Poor skills and Limited competence" in curricula adaptation. Likewise, an examination of the individual items on CA Scale (Table 1) has shown that teachers are not making significant use of the items related to curricula adaptation. They have "Limited competence" in all the five items. Thus, item 2(Using assessment information to plan lesson) has the highest mean scores of M=2.42(SD=0.93), implying that teachers have "limited competence" in using assessment information to plan lessons. The same explanation applies to item 1(Adapting curricula materials for pupils with LD, M=2.27, SD=0.89), item 4(Using different instructional strategies, M=2.06, SD=0.89), item 3(Modifying learning content for pupils with LD, M=1.94, SD=0.87) and item 5(Using IEP to support pupils with LD, M=1.38, SD=0.77) respectively. Since the mean scores of the items are within "1" to "2" (No competence to Limited competence), it suggests that teachers, in this study, have limited competence in adapting curricula for children with LD in the regular classroom.

Correspondingly, in the qualitative phase of the research, most teachers related that they had challenges adapting curricula to address the needs of children with LD in regular classrooms. In the same vein, the findings from the observed teaching sessions have revealed that children performed poorly. Teachers did not adapt curricula objectives, content and materials to the levels of the learners' abilities. In addition, they did not incorporate learners' interest and background information into their lessons plan and instructions. None of the teachers observed or

interviewed, for instance, more attention on children who experienced LD as a means of adapting curricula and instruction to meet the needs of the learners. All learners, independent of their ability and disability, used the same curricula and were taught with the same instructional strategies. Teachers' difficulties in adapting curricula to the needs of learners were clearly expressed in the following extract:

> *It is difficult to modify curriculum to meet the needs. We are not able to satisfy the needs of the normal children, not to talk of the slow learners. It is even more difficult when we are forced to combine two classes into one. In such classes, we don't even think of them [slow learners] because of the workload and time constrains. Even if we have the time, how to do it is another problem. Practically, it is impossible to meet every child's needs in a learning environment. We have not yet acquired that knowledge (verbatim expression of interviewee).*

Interestingly, this finding is consistent with a study conducted in Botswana. Mukhopadhyay (2012) found that many children with disabilities did not succeed in general classrooms due to teachers' lack of time and knowledge to differentiate curricula materials and learning content to meet the needs of learners with disabilities. Due to that, learners with disabilities were excluded from teaching and learning process in the general classrooms (Mukhopadhyay, 2012).

Also, some teachers gave extra time for certain children to complete their learning tasks. But they did not allow extra time during class test for children with LD to complete their tests. One of the teachers explained why that was not possible:

> *We teach all the children the same subjects and topics, and give them the same class work and exercise. And they must take the same examination or test. Even though we know that some children perform better than others, they all have to write the same test. We will be discriminating if we decide to give the slow learners easy test and give the good one difficult test. The children themselves will complain that we don't like them. And they will be teased by their peers. In addition to this, GES does not have any regulation telling us that we should give extra time to the slow learners during class test or examination (verbatim expression of interviewee).*

In the same way, the study unearthed that teachers did not prepare teaching and lesson notes prior to teaching a lesson. Interestingly, most of the adaptations in curricula such as material selection and adaptation, goal setting, interest and background of learners, instructional strategies and assessment procedures occur at the lessons preparation stage. Yet, most teachers did not see the value of lesson notes, let alone using them during instruction. In connection with this, one of the teachers said:

> *Lesson notes preparation outlived its usefulness in the Ghanaian school system. Even the education officers, who have monitoring responsibility of our activities, pay lip service to it. They don't care about it. Whether we have it, use it or not. Once we can get them something to make them happy, they leave us in peace. The officers don't observe how the teachers teach using the lesson notes; neither do they check exercise books of pupils*

to ensure that lesson notes presented to them, in fact, were used during teaching (verbatim expression of interviewee).

This finding is interesting in the sense that lesson notes preparation and its use in teaching is fundamental to any effective inclusive teaching. Recent thinking suggests that effective inclusion is dependent on the decisions teachers make during lesson notes preparation, instruction and for instructional adaptations (Kuyini, 2013, Shulman, 1987). In inclusive teaching, lesson notes help teachers shape and scrutinize decisions they make about the aims and objectives of the lesson, teaching and learning materials selected, teaching strategies adopted in teaching, learners background and interest (Shulman, 1987; Yuen et al., 2005). To a large extent, these processes and practices are under the control of the regular teacher. So, if teachers do not realize the value of lesson notes preparation, prioritize adaption of curricula objectives and teaching strategies, children with LD will, presumably, continue to experience difficulties in the school.

Hido & Shehu (2010), for instance, asked teachers in Albania about the possible causes of children's LD in general education classrooms. They found that teachers did not think about or reflect on their own methods of teaching, the way they communicated, their attitudes and behaviors towards learners, their instructional styles, actions, skills and how their position of power in classroom affected the way learners learnt. Only few teachers attributed the problem to curricula and lesson notes preparation. Yet, majority of the teachers blame children for not doing enough to learn. Similarly, contemporary views of effective inclusive teaching lead educators to believe that when learners' needs are not met in the learning environment, they indirectly feel or become alienated, marginalized and excluded from the learning and its environment. This feeling can invite variety of negative outcomes such as loss of self-esteem and poor motivation can easily occur (Kuyini & Abosi, 2014; Author, 2007; Kuyini & Desai, 2008; Hido & Shehu, 2010; Shulman, 1987; Ainscow & Goldrick, 2010; Mastropieri & Scruggs, 2000). In that way, learners' difficulties are compounded by teachers' teaching practices and lack of pedagogical competence.

It is clear from the above discussion that teachers encounter challenges in adapting curricula. Two main factors could be attributed to this problem: 1.Teachers might not have knowledge of curriculum adaptation due to their poor knowledge of inclusive teaching practices (Agbenyega & Deku, 2011; Author, 2007), and 2. They might generally be unwilling to adapt curriculum because it might be considered an additional workload for under-resourced schools and teachers especially in an environment, where the basic teaching and learning materials are so hard to come by. For example, some of the interviewee revealed that the basic teaching and learning material such as chalk that were not available in their schools. If this basic teaching and learning materials are not available, it would surely be hard for teachers to adapt curricula and teaching to meet the needs of learners, particularly those with LD. In such situations, teachers do not even have options than to rely on the traditional methods of teaching. This also indicates that Ghana inclusive education policy is at risk since teachers are likely to face serious problems in implementing the policy. One key issue about inclusion is that resources should be available and accessible to teachers to support children in schools. Once these basic materials are not available, teachers, who already complain of large class size, low salary, and workload, would lose confidence and enthusiasm to practice inclusion. It was also one of the reasons all governments were encouraged to provide resources for effective inclusion in schools during the Salamanca conference (Salamanca, 1994).

In respect of this finding, Shulman (1987) consistently reiterated that effective learning will not take place, and some learners will be excluded from teaching and learning once curricular objectives, materials and content are not prioritized and carefully adapted to learners' needs. Teachers might also consider its application in the general education classroom demanding and complicated. For instance, a study conducted in elementary school showed that teachers were generally unwilling to adapt instructional practices to include children with diverse learning abilities in general education classrooms (Kuyini & Desai, 2008). Other studies indicated that regular teachers were, however, more willing to adapt instructional practices when they were incorporated into the overall classrooms routines than to accommodate individual learners' needs (Schumm, Vaughn, Gordon, & Rothlein, 1994).

In view of this, it is possible that a traditional approach of using inflexible, prescriptive and examination-driven curriculum during instructions might create inequalities in terms of access to curriculum and knowledge acquisition among learners in the classroom. These practices again can lead to exclusion and school dropout of children with LD as their needs might not be met in the regular classroom.

Conclusion and Recommendation

Generally, the results of this study showed that teacher's competence to teach or include children with LD in the general education classroom depends on their pedagogical competences in curricula adaptation. Once teachers' competence in curricula adaptation and classroom practices are enhanced, they are more likely to have the capacity to address the needs of children with LD in the general education classroom. Therefore, the GES should provide intensive training in inclusive teaching practices for the general education teachers. It is still unclear what this training content should be when there are such limited resources in the schools. The question here is what types of strategies will one provide for teachers in a setting with such limited resources? Secondly, the teaching conditions in most schools are not conducive and need to be improved for effective teaching and learning. In the case of rural teaching conditions, teachers lack social amenities such as clinics, portable drinking water, electricity, good roads and trained teachers. On the other hand, in the semi-urban and urban schools classroom are overcrowded and often lack appropriate teaching and learning materials (TLMs).

Here, apart from effective teaching strategies that work in the classroom settings, teachers should be given training on effective collaborative strategies. This type of training should concentrate on how teachers can work effectively with parents, community leaders and governmental and non-governmental organizations. The issue here is that Head teachers and their teachers should be able to communicate their needs out clearly to stakeholders in education (parents, community leaders and governmental and non-governmental organizations). Sometimes there are non-governmental organizations such as IBIS, UNISEF etc. who are ready to support in situations teachers and learners in this studies found themselves. Also, those supporting organizations should always conduct effective needs assessment before providing any support, training and other material resources to schools. When these resources are provided, teachers should be trained on how to use them in their teaching and learning processes and be monitored. One key issue that reduces the quality of in-service training programs is the way trainers or facilitators

and training materials are selected. Therefore, trainers for the inclusive teaching practices who have the appropriate skills, experiences and the background should be selected for such training. The selection should not be based on "whom you know and who knows you" process. This issue of "whom you know" is what subtracts the quality of our education system today. Regarding the multi-grade teaching, where teachers were forced to combine classes due to lack of teachers, space and teaching and learning materials, we need to find ways of creating more opportunities for teachers and learners. But what resources can we use to create alternative ways of breaking up this transmission model of teaching in limited resourced schools so that all children will have the opportunity to benefit from instruction? This is a challenge. As researchers and teachers, we need to start thinking of alternative ways learners in limited resourced schools can be supported to succeed.

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About the Authors

Okechukwu Abosi was a professor of special education at university of Brunei but currently teaching at the University of Botswana.

Abdul-Razak Kuyini Alhassan holds a PhD in Special Education and currently works at the University College of Southeast Norway as Associate Professor in Pedagogy (Førsteamanuensis).