

**UNIVERSITY TEACHERS' PERCEPTION OF INCLUSION OF VISUALLY IMPAIRED IN GHANAIAN UNIVERSITIES****Vincent Mamah***University of Education Winneba***Prosper Deku***University of Cape Coast***Sharon M. Darling***Florida Atlantic University***Selete K. Avoke***Bowie State University*

*This study was undertaken to examine the university teachers' perception of including students with Visual Impairment (VI) in the public universities of Ghana. The sample consisted of 110 teachers from the University of Cape Coast (UCC), the University of Education, Winneba, (UEW), and the University of Ghana (UG). Data were collected through questionnaire developed by the researchers (Chronbach's coefficient Alpha of .76). One research question and two hypotheses were formulated to guide the study.*

*The data were analyzed employing descriptive statistics, t-tests and ANOVA. The results showed that teachers perception toward inclusion of students with VI were favorable. Gender differences were noted showing that female teachers' perceptions were more positive than the males'. Teachers in the three universities also differed in their perception toward the inclusion of students with VI.*

**Introduction**

Formal attempts to educate children with visual impairment in Ghana began with the initiative of missionaries in the year 1936. Reverend Harker, a Scottish missionary started with two students at Akropong Akwapim in the Eastern Region of Ghana. This school happened to be the first residential special school in West Africa. The British Colonial Government gave it recognition in order to support the initiative. In 1958 another school was opened at Wa (a city in the Upper West Region) by the Methodist Church. The purpose for establishing these schools was to socialize students with visually impairments into the world of the students without visual impairments and to foster mutual understanding between the non-disabled and the disabled in society (Ocloo, 2000).

In Ghana, the major placement for the visually impaired children has been the residential, segregated option. However, in recent times, Human Rights Groups questioned the system and argued that any form of segregation is seen as a threat to the achievement of basic rights (Mittler, 2000). This ruling suggests that students with disabilities should be allowed to attend public schools with their non-disabled counterparts, inclusion.

The shift in the educational placement for students with disabilities, with emphasis on inclusion, is based on the premise that all students have right to be members of the school community and that no student should be excluded (Degan & Disman 2005; Hurrell, 2005; Kelly, 2004). Thus, the term inclusive education has become a more usual way of describing the extent to which a student categorized as having disabilities is truly integrated. However, it has to be noted that while there is considerable research that has focused on the perception of teachers towards inclusive settings (Vaughn, Schumn, Jallad, Slusher, Saumell 1996), there still lacks a definitive understanding of the term within the international context. By UNESCO's definition (1994), the term inclusion refers to the extent to which a school or community welcomes students with special needs as full members of the group and values them for the contribution which they make within the school environment. This definition implies that for inclusion to be seen as effective, all students must actively belong, be welcomed, and participate in a school and community. Ballard (1999) argued that inclusion is about

valuing diversity rather than a focus on assimilation. This implies that the students should be fully included in all aspect of school life.

Studies on perceptions and attitudes of teachers towards inclusive education have provided a wide range of information. The attitudes of teachers have been recognized as being paramount to the success of learners with disabilities into their classrooms (Norwich, 2002). Further studies undertaken between 1985 and 1989 demonstrated that teachers at various levels vary considerably in their perceptions and attitudes. Brown (1986), in her 14-nation UNESCO study of approximately 1000 teachers with experience of teaching children with special needs, reported a wide difference in perceptions regarding inclusive education. These teachers favored inclusion of different types of children with disabilities into ordinary class. Interestingly, Brown noted that in countries that had a law requiring inclusion, teachers expressed favorable views ranging from 47 to 93%. However, teachers from countries that offered mostly segregation education were less supportive to inclusion, with their favorable views ranging from 0 to 28 %. In a comparative study about attitudes about inclusive education for example, Sharma, Forlin, Lorman and Earle (2006) reported more positive perception and attitudes by those in the western countries studies (Australia and Canada) than those found in the east (Singapore and Hong Kong). These findings raise critical questions about the importance of cultural and social differences when attempting to understand attitudes towards those with disabilities

Leyser, Kapperman, and Keller (1994), also undertook a cross-cultural study of teacher perceptions towards inclusion in Germany, Israel, Ghana, Taiwan, and the Philippines and the USA. The findings showed that there were differences in perception and attitudes towards inclusive education in these countries. Their study revealed that teachers in the USA and Germany had the most favorable perceptions towards inclusion. Positive perceptions in the USA were attributed to inclusion being widely practiced there as result of Public Law 94-142 (1975 and its subsequent Individual with Disabilities Education Act (IDEA, 1997) reauthorized versions (IDEA, 2004, 2007). The positive views expressed by the Germans seemed to be surprising because at the time of this investigation Germany had no legislation on inclusive education. This finding goes against a simple relationship between legislative systems and inclusive attitudes as Brown's study has suggested that in countries that had laws requiring inclusion, teachers expressed views that are more favorable. Leyser, Kapperman and Keller (1994) speculated that the positive views expressed by German teachers represent an overall sensitivity of Germans towards minorities and, thus, towards the individuals with disabilities. They further revealed that teacher perception and attitudes were significantly less positive in Ghana, the Philippines, Israel, and Taiwan. The authors were of the view that it could probably be limited or non-existent training of teachers to acquire inclusive competencies. In addition, this could be related to the social and cultural constructs in perceptions towards individuals with disabilities. Avoke (2002) supported this view and indicated that in Ghana, most of the labels assigned to individuals with disabilities are derogatory and are influenced by the cultural practices of the various communities (Avoke, 2002).

Clough and Lindsay (1991) investigated the perception of 584 teachers towards inclusion in the UK. The result showed a wider positive view of inclusion. Their research provides some evidence that attitudes and perceptions have shifted in favor of inclusion. In Ghana, the concept inclusive education is so crucial especially to the education of children with visual impairment. For over half a century of education of students who are blind in Ghana, the Akropong, and later Wenchi schools, are the only schools for the education of the visually impaired at the basic level. To contextualize, access to these schools are out of reach for many children with visual impairment in Ghana due to limited facilities and vast nature of the school's catchment area (Avoke, 2002). The authors are in agreement with Ocloo (2000) that individuals with disabilities have the right to attend school to the highest level. Recent developments in Ghana have made it possible for student with visual impairment to access university education. The government of Ghana, having realized the barriers to participation of students with disabilities in society and regular schools, and due to the pressure disability active groups, such as the Ghana Society for the Blind (GSB) and the Ghana Society for the Physically Disabled (GSPD) entered into an agreement in September 2003 with Voluntary Services Overseas (VSO), a British non-governmental organization (Agbenyega, 2007). In this agreement the VSO would pilot inclusive education in ten districts within three regions, and upon its success extend it to other regions. During the 2008 and 2009 academic year, there were 17 students with Visual Impairments enrolled at the University of Education, Winneba, 30 students in the University of Cape Coast, and 12 from the University of Ghana, all pursuing various programs. Despite the presence of these students in the universities, it appears some lectures do not notice the presence of these students while teaching. Again

the visually impaired students also complained that there is always an undue delay in releasing their examination results and other assignments. Another disturbing aspect is the fact that the visually impaired students are often ignored when it comes to class discussions.

Generally speaking, most of the studies on the perception towards those with disabilities have been done within the Western context (D'Alonzo, Giordano & Vanleeuwen, 1997; Harvey 1998; Heflin & Bullock 1999; Agbenyega, 2007). Also, most of these studies tended to have been done within the elementary and secondary levels (Pearce 2009; Loreman, Forlin, & Sharma 2007; Bradon 2006). In fact, very little has been done to investigate university teachers' perception of inclusion of visually impaired in the university systems in Africa and Ghana in particular (Avoke, 2002). With this gap in the research identified, the authors of this work were motivated to investigate the issue of perception among university teachers in Ghana.

One research question and two hypotheses guided this study;

#### *Research question*

The research question guiding this investigation is: What is the perception of university teachers towards inclusion?

Further, the hypotheses proposed in relation to this question are:

- (1) There is no significant difference in perception between male and female university teachers, and,
- (2) there are no significant differences in perception among teachers in the University of Cape Coast, University of Education, Winneba, and University of Ghana.

### **Method**

#### *Participants*

A total of one hundred and ten (N = 110) university teachers/lecturers from University of Cape Coast (UCC), University of Ghana (UG), and University of Education (UEW) were involved in the study. These participants were randomly selected to meet the ratio that matched the population of the universities. Ultimately, 45 teachers were selected from UCC, 35 from UEW, and 30 from UG. The justification for the above ratios/numbers distribution is that, both UCC and UEW had greater number of students with visual impairment than UG. It is therefore assumed that teachers/lecturers in UCC and UEW might have come into contact with more students with visual impairment than those teachers at UG. See tables one and two for ages of respondents and teaching experience of respondents.

**Table 1**  
**Age of the Respondents**

Demographic Factor	Respondent Subgroups	Frequency	Percentage
Age in years	20-30	10	9.1
	31-40	12	10.9
	41-50	50	45.5
	51-60	38	34.5

**Table 2**  
**Teaching Experience of the Respondents**

Demographic Factor	Respondent Subgroups	Frequency	Percentage
Teaching Experience in years	1-5	12	10.9
	6-10	36	32.7
	11-15	50	45.5
	16-20	10	9.1
	21-30	2	1.8

#### *Sampling Technique*

In order to select the sample and the respondents for the study, a multi-stage sampling technique method was used. The sampling techniques used were purposive, quota and simple random sample techniques. The purposive sampling technique was used to select the three out of five public universities for the study. This technique was adopted because the targeted population was located in

the three selected public universities. In selecting the respondents for the study, a simple random sampling technique was utilized. A list of all teachers from the departments with students with visual impairment in the three selected Universities was obtained. The list was numbered (1) and (2) and those who had (1) against their names were selected for the study.

General perception of university teachers	SD	D	A	SA
1. I have knowledge about students with VI				
2. I am prepared to teach all types of students				
3. I took a course in Special Education				
4. I have read about teaching students with disabilities				
5. I have skills for teaching students with VI				
6. I adapt my lessons to meet the unique needs of students with VI				
Perceptions of university teachers on the concept of inclusion	SD	D	A	SA
7. It is good to teach both sighted and non-sighted together				
8. Only special educators can teach students with VI				
9. Teaching students with VI requires different techniques				
10. Teaching students with VI would prevent the teaching and learning of other students				
11. Teaching children with VI will give stress and anxiety				
12. Teaching children with VI will be too much work				
13. Inclusive education is a good idea				
14. Inclusive education should replace segregated education				
University's teachers' perception about types of disability	SD	D	A	SA
15. All children with disabilities can benefit from inclusive education				
16. I would like to teach students with physical disabilities than those with sensory problems				
17. Students with VI will benefit from inclusion				
18. Students with emotional disorders are easily managed in inclusive schools				
19. Visual impaired students are easily managed than other disabilities				
Perception on support from resource persons	SD	D	A	SA
20. My university has a resource room				
21. There are SPED Teachers in my University				
22. Lectures receive adequate support				
23. Lack of resource support affect the inclusion of students with VI				
24. Collaboration is needed between lectures and resource person				

**Figure 1**  
**Perception of university teachers' on capabilities to teach students with visual impairment**

### *Instrumentation*

The approach to this part of the research was quantitative and involved the administration of a questionnaire. Information was elicited about the perceptions of university teachers towards the inclusion of the visually impaired students in the universities. The instrument (see figure 1 previous page) was designed in a Likert scale format where the participants were asked to indicate the extent to which they agreed or disagreed with the statement by selecting one of the following four choices: Strongly Agree (SA), Agree (A), Disagree (D), and Strongly Disagree (SD). The University Teachers Perception of Inclusion Scale (UTPIS) was designed validated and used by the researchers.

The items were general in nature, but they related mostly to teachers' perception about inclusive education. Additionally, the items were developed from the literature reviewed that identified common perceptions, attributes and factors behind positive and negative perceptions. The instrument covered a range of themes about the knowledge of teaching students, who are visually impaired in the university system, perceptions of university teachers towards the concept *inclusion*, types of disability that can influence lecturers' perception and acceptance, and finally, the influence of support from resource persons on lecturers' perception towards the inclusion of students who are visually impaired. The Cronbach's reliability co-efficient on the overall scale measured 0.76.

### *Procedures*

Questionnaires were administered one-on-one with the selected participants by the researchers. Having employed the selection procedure described previously, researchers distributed the questionnaires after a brief self introduction was made by the researchers and the purpose of the study was explained to the respondents. The teachers were contacted in their offices therefore; it became easy for rapport to be established. A period of two months was used to collect data in the three universities. Since the questionnaires were administered one-on-one by the researchers, a 98% return rate was achieved.

### *Data Analysis*

As the study intends to find out the perception of lecturers towards the inclusion of students with visual problems, the responses from the questionnaire which were in a Likert scale format were coded and analyzed using frequency counts. These frequency counts were transformed into percentages, standard deviations and mean scores. A t-test was used to find out the differences in perception between male and female lectures towards inclusion, while ANOVA was used to find out the differences in perception among the lectures from the three selected institutions

### **Results**

The findings of the research are discussed under headings in relation to the research questions guiding the study. The first identifies the general perception of the university teachers on the variables such as teachers' ability to teach students with VI, concept of inclusive education, types of disability, and support from resource persons. The second analysis deals with the differences in perception between male and female teachers, while the third aspect considers the differences among the universities.

#### *General perception of the university teachers*

University teachers' overall perception towards their *capabilities to teach students with visual impairment* is 2.4, with standard deviation of .56. The level of agreement on the items generally did

**Table 3**

#### **Perception of university teachers' on capabilities to teach students with visual impairment**

Statement	Mean	sd	SD(%)	D (%)	A (%)	SA(%)
25. I have knowledge about students with VI	1.95	1.074	47.3	23.6	16.4	12.7
26. I am prepared to teach all types of students	1.70	1.010	59.1	22.7	7.3	10.9
27. I took a course in Special Education	1.83	1.148	60.0	12.7	11.8	15.5
28. I have read about teaching students with disabilities	2.10	1.180	46.4	15.5	20.0	18.2
29. I have skills for teaching students with VI	2.08	1.042	36.4	32.7	17.3	13.6
30. I adapt my lessons to meet the unique needs of students with VI	2.17	1.003	27.3	40.0	19.1	13.6

not show a strong perception. On items 1-3, the mean scores were between 1.70 – 1.95, indicating respondents disagreed with these statements. For items 4-6, the mean score ranges from 2.10 to 2.19, indicating that respondents disagreed with these statements. See table 3.

The University teachers' overall perception on the *concept of inclusion* was positive, with a mean of 3.05 and a standard deviation of .56 (see table 4). Respondents agreed with the statements in items 9, 10, 11, and 13. Although the perception on these statements of inclusive concepts was positive, teachers perception on the statement *it is good to teach both sighted and non-sighted together* yielded a negative mean 2.17.

**Table 4**  
**Perceptions of university teachers on the concept of inclusion**

Statement	Mean	sd	SD(%)	D (%)	A (%)	SA(%)
31. It is good to teach both sighted and non-sighted together	2.17	1.003	29.1	38.2	19.1	13.6
32. Only special educators can teach students with VI	2.81	1.027	12.7	25.5	30.0	31.8
33. Teaching students with VI requires different techniques	3.09	1.162	18.2	8.2	20.0	53.6
34. Teaching students with VI would prevent the teaching and learning of other students	3.15	.950	9.1	10.9	35.5	44.5
35. Teaching children with VI will give stress and anxiety	3.14	.908	7.3	17.3	40.0	35.5
36. Teaching children with VI will be too much work	2.70	1.185	9.1	19.1	20.0	51.8
37. Inclusive education is a good idea	3.30	.914	8.2	6.4	32.7	52.7
38. Inclusive education should replace segregated education	2.78	1.22	24.5	13.6	20.9	40.9

In Table 5, the overall perception showed a positive trend ( $M = 3.036$ ,  $SD = 188$ ). Participants agreed most strongly with the statements in items 18, 15, and 16 respectively. The teachers disagreed on statements students in items 17 and 19. In spite of their disagreement the University teachers perceived students with varied types of types of disabilities in a positive way.

**Table 5:**  
**University's teachers' perception about types of disability**

Statement	Mean	sd	SD(%)	D(%)	A(%)	SA(%)
39. All children with disabilities can benefit from inclusive education	3.00	.929	2.7	34.5	22.7	40.0
40. I would like to teach students with physical disabilities than those with sensory problems	2.90	1.47	19.1	10.0	32.8	38.2
41. Students with VI will benefit from inclusion	2.06	.921	27.3	50.9	10.0	11.8
42. Students with emotional disorders are easily managed in inclusive schools	3.04	1.149	20.0	3.6	29.1	47.3
43. Visual impaired students are easily managed than other disabilities	2.01	.883	30.0	47.3	14.5	8.2

As indicated in Table 6, teachers had a positive perception about the support from resource persons ( $M = 2.936$ ,  $Std .412$ ). The respondents agreed on with items 20, 21, 23, and 24. The respondents disagreed to the remaining statement in item 22.

**Table 6**  
**Perception on support from resource persons**

Statement	Mean	Std	SD(%)	D(%)	A(%)	SA(%)
My university has a resource room	3.32	.986	9.1	10.0	20.9	60.0
There are SPED Teachers in my University	3.32	.986	9.1	10.0	20.9	60.0
Lectures receive adequate support	2.05	1.128	48.2	11.8	27.3	12.7
Lack of resource support affect the inclusion of students with VI	3.05	1.091	16.4	7.3	30.9	45.5
Collaboration is needed between lectures and resource person	3.08	1.102	16.4	7.3	28.2	48.2

*Differences in perception between male and female teachers*

An independent sample t-test (see table 7) was conducted to evaluate hypothesis 1 which sought to find out whether there is a significant difference between male and female university teachers toward inclusion of visually impaired students. The result showed a significant difference between male and female teachers  $t(108) = -3.668$ ,  $p < 0.000$  (significant). This implies that female teachers have much more positive perception towards the inclusion. This is indicative of the fact that the females have a higher mean score (37.0) than the males (33.3). The hypothesis was not supported therefore it was rejected.

**Table 7**  
**Differences in perception between males and females teachers**

Group Statistics								
Gender	N	Mean	Std	Std Error				
Male	90	33.3	3.939	.41521				
Female	20	37.0	4.576	1.02341				
T-test for equality of means								
	F	Sig	t	df	Sig	Mean	Stat	
					(2tailed)	diff.	Error	
Equal var. Ass	.943	.334	-3.688	108	000	-3.700	1.00328	
Equal var. not Ass.			-3.30	25.621	003	-3.700	1.10443	

*Differences among the universities*

One way analysis of variance (ANOVA) was conducted to evaluate differences in the perception of lectures from the three universities UG, UCC, UEW. The result shows a significant difference among the teachers from the three universities,  $(F 2, 107) = 5.740$   $p = 0.004$  (see table 8); teachers from the three universities perceive the inclusion of students with VI differently. The hypothesis was rejected on the basis that differences were found. The Post Hoc Test (Scheffe Test) shows that direction of the difference lies between teachers from the UCC and the UEW and between the UG and the UEW.

**Table 8****One way ANOVA results showing differences in perception among lectures**

	Sum of sq	df	Mean sq	F	Sig
Between groups	369.090	2	184.545	5.740	004
Within groups	3440.083	107	32.150		
Total	3809.173	109			

**Discussion**

Overall, findings show that university lectures' perception of inclusion of VI in public universities is relatively positive. There were however, a significant misconceptions about the statement that it is good to teach both sighted and non-sighted. The 67.3% of teachers disagreeing with the statement suggest that teachers did not have accurate knowledge about the concept of inclusion of VI in the public universities. This negative trend in the perception confirms what Campbell and Oliver (1996) indicated, that societal perception and prejudices prevents the individuals with disabilities from participating fully in some sphere of communal life.

It is encouraging to find that university teachers recognized more benefits in inclusion and rated fewer negative responses (Bender, Vial, Scott, 1995). This is consistent with previous research that teachers with higher levels of education (i.e., tertiary degree and postgraduate qualifications) had more positive views about inclusion. Perhaps, their additional training provided them with knowledge about disabilities and also increased confidence in their own ability to cope within inclusive classrooms (Gilmore, Campbell, & Cuskelly, 2003). In spite of these positive perceptions of inclusion, findings on the capabilities to teach students with VI rather showed a negative trend, with an overall mean of 2.41 and a standard deviation of .5633. On a four point Likert scale, this indicates a negative perception. Table 1 shows that 72.7% of the University teachers indicated that they did not take any course in Special Education; about 69.1% also disagreed that *they have skills for teaching students with VI*, while

67.3% disagreed with the questionnaire statement *I adapt my lessons to meet the unique needs of students with VI.*

Skills of using adapted materials such as hand-held magnifier, embossed materials, hand frames while teaching students with VI are important. This finding confirmed that majority of university teachers in Ghana had very little level of awareness with regards to managing students with VI. Additionally, this is in tune with several earlier studies which suggest that general education teachers particularly those teaching at higher levels, may not be adequately prepared to provide educational modifications, accommodations to and successfully work with students with VI. (Hutchison & Martin, 1999; Semmel, Abrenathy, Butera, & Lesar, 1991) corroborated these findings in an earlier study, where they reported that teachers did not believe that they had skills they needed to adapt their teaching.

The negative perception as found in the teachers' capabilities can be attributed to lack of adequate knowledge and skills (Schumm & Vaughn, 1995). It could also be attributed to teacher unwillingness to use adaptive instructional strategies. These teachers tend to be, comfortable with generic and non-specific teaching strategies (Ellet 1993; Johnson & Pugach, 1990), which are unlikely to meet the individual needs of students with VI.

Nonetheless, the finding on the perception of types of disabilities shows a positive result. This is a clear indication that it is possible to include other students with other handicapping conditions in the universities. It is interesting to find that 62.7% of the teachers agreed or strongly agreed that all children with disabilities can benefit from inclusive education. However, Yellin, Yellin, Claypool, Mokhtari, Carr, Latiker, Risely, Szabo (2003) observed that the mere exposure to students with disabilities may not be enough to change attitudes in a positive way, but rather it is the quality of those experiences which produce the real change. Although this study is not about attitudes, it will not be farfetched if inferences are drawn from this conclusion regarding the perception of the teachers toward students with disabilities in general. This demonstrates the relevance to personal experiences of teachers working with diverse groups of individuals; it is imperative to strengthen teacher knowledge in the area of teaching diverse students and increase their exposure in order to foster a positive perception of including students with disabilities in education (Heflin & Bullock, 1999).

On the issue of resources, this research found that teachers' perceptions were positive. Majority agreed that there is need for resources to support the inclusion of students with VI. The extent of the supported practice is deemed necessary beyond what is traditionally available to teachers. Over 74% of participants agreed that lack of support affected inclusion of children with VI in the universities. Studies by Schumm and Vaughn (1995) found that support in school was necessary to implement the inclusion program. Scruggs and Mastropieri (1996) found that teachers who received adequate support become more positive about inclusive teaching. Even though there are resource persons in the universities in Ghana, their supporting roles were not perceived as beneficial to the lectures. This is reflected in the 60% of the lectures who disagreed that adequate support is provided. Supports include conditions that must be present for students to learn well. These supports include appropriate accommodations and assistive technology. Zalizan (2000), suggested that in order to ensure the success of an inclusive program there should be a tight collaboration or cooperation between lectures and resource persons.

One interesting finding of this study relates to gender differences in perception of inclusion  $t(108) = -3.89, p = 000$  (significant). This finding supports existing literature which pointed out gender differences in teachers' attitudes and perceptions toward inclusive education. For example, Harvey (1985) found that there was a marginal tendency for female teachers to express more positive perceptions towards the idea of including children with VI than their male counterparts. Similarly, Leyser and Tappendorf (2001) reported that female teachers had more positive perceptions than the male teachers. This has further been confirmed by Eleweke (1999), which revealed that the female participants in the study were more accepting to students with VI than the males. The mean score of 37.0 for the female lectures and the mean score of 33.3 for the male lectures in this study indicate that the females had a more positive perception of including students with VI in the public universities in Ghana.

The significant differences between UEW and UCC on one hand, and UEW and UG on the other hand are quite revealing. It should be noted that both UCC and UEW offer courses in Special Education both at undergraduate and postgraduate levels. One wonders why teachers in these universities viewed the

inclusion of students differently. Perhaps, the categorical nature of the program in the UEW is counter to the more integrated approach of UCC; this might account for the difference observed in this study. Implicit in these findings, is that efforts should be directed towards changing the nature of professional knowledge, skills, and values that teachers in the universities in Ghana are expected to have and which courses are needed to provide the knowledge skills and values that are likely to have positive perception on students with disabilities.

### *Conclusion*

This study was undertaken to enhance understanding teachers and their attitudes in regard to the inclusion of students with VI in universities in Ghana. The results of this study point to a positive perception of the concept of inclusion for students with VI. Deducing from these results, it can be said that this study has demonstrated the possibility to reduce barriers that are created as a result of the teachers' low knowledge about disabilities. This could be achieved through a radical coordinated effort of series of in-service training, conferences, and professional development activities for lectures from the various universities on disabilities, accommodation, modifications and accessibility issues. The study leads us to speculate that the universities in Ghana that follow the inclusive model can be effective not only in educating students with VI but also other students with other disabilities whose intellectual capacities and academic achievements can enable them to access the Ghanaian universities.

It is important that teachers' attitudes and perceptions toward inclusive education are studied in-depth on regular basis. The universities and other institution of higher learning need to effectively communicate the importance of diversity and respect for all. This will enable them to be able to transform how teachers/lecturers relate to and teach students with disabilities. Conversely it is clear from these findings that institutional support must be provided to further promote changes in perceptions beliefs and habits. Also, increased importance should be placed in helping teachers establish a fuller understanding of the philosophy of inclusion and in developing teaching strategies that support ways to take full account to sameness, while paying attention to differences and diversity among students.

While instructive, this study has its limitations. The small sample of the female population and the problem with self-reports instrument cannot be ruled out. These perceived factors likely affect the validity of the results. The findings therefore should be interpreted in the light of these factors and the generalization must be limited to university teachers who teach classes with VI students in the three universities.

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