

## **BOTSWANA'S FAMILY AND CONSUMER SCIENCES TEACHERS' ATTITUDE TOWARDS THE INCLUSION OF STUDENTS WITH PHYSICAL DISABILITIES**

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*Botswana's vision of equal educational access for all its school-aged children has generated a move within the country towards inclusive education. The purpose of this study was to examine the attitudes of Botswana's Family and Consumer Sciences (FCS) teachers towards the inclusion of students with physical disabilities in mainstream classes. A sample of 38 FCS teachers from five geographical regions was assessed. Findings indicated FCS teachers had neither a positive nor a negative attitude towards the overall inclusion of students with physical disabilities into FCS classes. However, the FCS teachers' attitude towards the teaching of students with physical disabilities was negative. When compared to a larger group of teachers from the same regions, FCS teachers' attitudes were significantly more positive.*

Over the past 20 years, a considerable amount of research has been conducted and policies written towards correcting and changing the views and philosophies of how children with disabilities are to be educated. Various organizations worldwide have taken the lead in playing a pivotal role in promoting inclusive education as part of a human rights' agenda that advocates the increase participation of all learners in mainstream schools. The UN's Standard Rules on the Equalisation of Opportunities for Disabled Persons (1993) and the UNESCO Salamanca Declaration and Framework for Action (1994) are two initiatives that have encouraged governments to adopt policies that will increase the participation of all learners in mainstream schools that meet the needs and respect the differences of all learners.

Inclusion adapts schools to meet the needs of all children, not having the children make adjustments to meet the requirements of the school. This change in the school system requires a new and different school culture, a culture whereby teachers must change their beliefs, attitudes, and behaviors toward students with differences. A growing body of research has documented the effectiveness of inclusive schools and environments in meeting the academic and social needs not only of students with differences, but of all individuals involved. Hunt and Goetz (1997) analyzed nineteen research investigations of inclusive educational programs, practices, and outcomes for students with severe disabilities. Six themes emerged from these studies. Of the six themes, three related to how inclusive education contributes to the academic and social needs of all students. The themes identified were: (1) positive academic and learning outcomes can be achieved by students with severe disabilities in inclusive settings; (2) students with severe disabilities realized acceptance, interactions and friendships in inclusive settings; (3) positive outcomes were experienced by students without disabilities when students with severe disabilities were their classmates; (4) an essential component of effective inclusive schooling was parental involvement; (5) collaborative efforts among school personnel was essential to achieving successful inclusive schools; and (6) a vital component in effective inclusion efforts were curricular adaptations.

A large number of studies have looked at the beliefs and attitudes of the individuals who are responsible for implementing inclusive policies and found that the attitude of teachers is one of the key elements in the successful implementation of inclusive education (Avramidis & Norwich, 2002). The role of teachers' attitude in the success or failure of inclusive schools is evident in Mittler's (2003) findings from the 5<sup>th</sup> International Special Education Conference. He noted negative attitudes of teachers, parents, community leaders and politicians as the major obstacle to the progress of inclusive education worldwide. Similarly, Weiner (2003) conducted a study in New York on the conditions necessary for successful inclusion. The 72 inclusion teachers identified teachers' attitude as the first or second most important condition necessary for successful inclusion. In addition, Pivik, McComas, and Laflamme (2002) assessed 15 students with disabilities and their parents from eight schools to identify barriers and facilitators to inclusive education. Of the four barriers identified (environmental, intentional attitudinal, unintentional attitudinal, and limitations inherent to the physical disability), the most frequently reported barrier was a lack of understanding (unintentional attitudinal barrier) by teachers and staff. The researchers further noted that "attitudinal barriers were identified by our students as the most deleterious of their school experience" (p. 104).

In the African context, approximately 80% of the world's nearly six hundred million people living with disabilities live in low-income countries (World Health Organization, 2005). According to USAID Africa (2005),

the vast majority of Africans with disabilities are excluded from schools and opportunities to work, virtually guaranteeing that they will live out their lives as the poorest of the poor. School enrollment for the disabled is estimated at no more than 5-10%. (p. 3)

However, the way people view and cope with disability in Africa, as in other parts of the world, depends partly on culture. While there are cultural factors that result in some Botswana viewing disability as a curse or punishment, Botswana, overall, has long focused on responding to the needs of students with special needs. In 1969, the Dutch Reformed Church established the first center for blind children in Mochudi. Later in the 1970s, two schools for children with mental, physical, and hearing disabilities were established. In 1994, Botswana Revised National Policy on Education (Botswana Government, 1994) gave increased access and equity to education to all children, including those with special needs. Botswana National Population Policy (Ministry of Finance and Development Planning, 1997) and Vision 2016 (Botswana Government, 1997b) further encouraged the nation as a whole to work towards providing equal opportunities for people with disabilities.

According to Botswana's 2001 census, 2.99 percent of the 1,680,863 people living in Botswana were people with disabilities. The three most common types of disability were of sight, hearing, and inability to use one or both legs. Among the school-aged population, 2.68 percent (308,595) were disabled, with the largest percent (58.99%) residing in rural areas. The three most common types of disability among the school-aged population were impairment in hearing (both ears), seeing (both eyes), and speech. Nearly 27 percent of the school-aged population with disabilities had never attended school (Central Statistics Office, 2001).

Botswana, like many other Organization of African Unity (OAU) members have proclaimed the decade of 2000-2009 as the African Decade of Disabled Persons (United Nations, 2004). The "Plan of Action for the Decade," endorsed by the seventy-sixth ordinary session of the OAU Council of Ministers, outlines ten objectives for equalizing opportunities and providing

full participation of persons with disabilities in society. One of the ten objectives of the “Plan of Action for the Decade” that prompted this study urges African States and Governments to promote more efforts that encourage positive attitudes towards children, youth, women and adults with disabilities, and the implementation of measures to ensure their access to rehabilitation, education, training and employment, as well as to cultural and sports activities and access to the physical environment.” (p. 2)

A review of the literature revealed little is known about the attitudes of teachers in Botswana towards the inclusion of students with physical disabilities into mainstream classes. The increasingly diverse characteristics of students to be educated in Botswana are causing government officials, educators, parents, etc., to examine the benefits of educating all children in heterogeneous classrooms. Regardless of gender, ethnicity, language, social status, disability, etc., it has become clear to many that the needs of all students must be met and their differences must be welcomed, respected, and nurtured in heterogeneous classrooms. The attitude of Botswana teachers towards the inclusion of students with physical disabilities into the regular classroom is vital in determining the success of the government’s effort in implementing inclusive education nationwide.

### **Purpose and Objectives**

The purpose of the study was to identify the attitude of Botswana Family and Consumer Sciences teachers towards the inclusion of students with physical disabilities into the regular classroom. In this study, physical disability was defined as any visible impairment that substantially limits one or more of the major life activities. Although the American with Disability Act’s definition of disability includes both visible and hidden disabilities (not easy to observe), this study did not include hidden disabilities such as learning disabilities, mental illness, epilepsy, etc. The research objectives were:

1. To determine the attitude of Botswana’s Family and Consumer Sciences teachers towards teaching students with physical disabilities.
2. To determine the attitude of Botswana’s Family and Consumer Sciences teachers towards the classroom behavior of students with physical disabilities.
3. To determine the attitude of Botswana’s Family and Consumer Sciences teachers towards the classroom management of students with physical disabilities.
4. To determine the attitude of Botswana’s Family and Consumer Sciences teachers towards the academic and social growth of students with physical disabilities.
5. To determine the attitude of Botswana’s Family and Consumer Sciences teachers towards the inclusion of students with physical disabilities into Family and Consumer Sciences classes.
6. To determine if Botswana’s Family and Consumer Sciences teachers attitude towards the inclusion of students with physical disabilities differ from that of other teachers in Botswana.

### **Methodology**

#### **Sample**

Five geographical regions (Central, Kgatleng, Kweneng, Southern, and Southeast) in Botswana were selected. An up-dated list of all senior and community junior secondary schools

in the five districts was obtained from the Ministry of Education. Duplicates were removed. From within each region, 1 senior and 2 junior secondary schools were randomly selected. All Family and Consumer Sciences teachers within the 15 schools were selected. A sample of 38 consisted of 22 Family and Consumer Sciences teachers at the junior secondary level and 16 at the senior secondary level. The sample size among the different levels was disproportional because of the greater number of junior secondary schools in Botswana relative to senior secondary schools.

### Instrumentation

A five point Likert-type scale was used to measure attitudes on 4 dimensions: (1) perceived ability to teach students with a disability, (2) classroom behavior of students with a disability, (3) classroom management of students with a disability, and (4) academic and social growth of students with a disability. An aggregate score of the 4 dimensions made up individuals' attitude score toward the inclusion of students with a physical disability. A modified version of Larivee's Attitude toward Mainstreaming Questionnaire (ATMS) (Larivee, 1982) was utilized in assessing teachers' attitude toward the inclusion of students with a disability into mainstream classes. Respondents were asked to use the following scale in responding: (1) strongly disagree, (2) disagree, (3) undecided, (4) agree and (5) strongly agree. Negative items were reversed coded for summing each of the four dimensions of inclusion. Of the four dimensions mentioned above, eight questions related to dimension one, six questions to dimension two, five questions to dimension three, and nine questions to dimension four. Mean scores were used to obtain attitude scores for the four dimensions. Since 3.0 is the midpoint between the highest and the lowest possible mean, a score above 3.0 was considered a positive attitude score, a score below 3.0 was considered a negative attitude score, and a score of 3.0 was considered neutral.

A panel of experts from the University of Botswana was utilized in establishing the content validity of the instrument and its cultural relevance. Feedback from the panel of experts led to several modifications to the ATMS questionnaire. Two of the major modifications were the reduction from a total of 30 items to 28 items and the specification of persons with physical disabilities instead of disabilities. Twenty-seven teachers from schools not included in the sample were chosen to pilot test the instrument. Although the ATMS has never been used in Botswana, it has been used and accepted as a valid and reliable instrument in various parts of the world. The psychometric properties of reliability and construct validity of the ATMS has been found to be comparable within various settings (Roberts & Pratt, 1988; Hudson & Clunies-Ross, 1984). It has been noted as having internal reliability of 0.91. For purpose of this study, the instruments' internal reliability was re-assessed. Its overall internal reliability of .86 was assessed using Cronbach's alpha.

### Data Collection and Analysis

Permission to conduct the study was obtained from the Office of the President and the Ministry of Education. After obtaining permission, the head teacher (principal) of each school was notified of the study via phone. The questionnaires together with cover letters were hand-delivered to each school and given directly to the Family and Consumer Sciences teachers. Questionnaires were color coded to identify senior and junior secondary school teachers. After approximately 10 days, questionnaires were collected from each school.

## Findings

### Background Demographics

A total of 38 questionnaires were usable. The Statistical Package for Social Sciences (SPSS) was used for statistical analysis of the data. A .05 level of significance was established *a priori*. Results indicated that 100% of the respondents were female. Nearly half of respondents (49%) were between 22 and 30 years of age, 37% were between 31 and 40, and 14% were over 40. The majority (55%) worked at community junior secondary schools (CJSS) while 45% at senior secondary schools (SSS). Sixty-five percent had 10 or fewer years of teaching experience, 30% had between 11 and 20 years, and 5% had between 21 and 23 years. Most of the respondents (74%) had never had any coursework or training in working with students with disabilities.

### Attitude towards teaching students with physical disabilities

As indicated in Table 1, family and consumers sciences teachers' overall attitude towards the teaching of students with physical disabilities in regular classes was negative ( $M = 2.70$ ,  $SD = .49$ ). Their level of agreement was strongest for "the integration of children with physical disabilities will necessitate extensive retraining of regular teachers, students with physical disabilities should be given every opportunity to function in the regular classroom setting," and "identification of physical disabilities and prescriptions for teaching are better done in a resource-room and by special teachers than by regular teachers." The mean scores on these statements were between 4.24 and 3.79, respectively, ranging between agree and undecided. The mean scores 2.26 and 2.53 indicated that respondents disagreed most strongly with the statements that "regular teachers have sufficient training to teach children with physical disabilities" and "regular teachers possess a great deal of the expertise necessary to work with students who have physical disabilities."

Table 1

*Mean Attitude Scores of Botswana FCS Teachers Toward Teaching Students with Physical Disabilities*

Items	Frequencies and Percents					$\bar{x}$
	SD	D	U	A	SA	(SD)
1. Many of the things teachers do with students in a class are appropriate for students with a physical disability.	9 (24)	13 (34)	0 (-)	11 (29)	5 (13)	2.74 (1.45)
2. The needs of students with a physical disability can best be served through special, separate classes.	8 (21)	10 (26)	6 (16)	3 (8)	11 (29)	2.97 (1.55)
3. Regular teachers possess a great deal of the expertise necessary to work with students who have physical disabilities.	6 (16)	17 (45)	6 (16)	7 (18)	2 (5)	2.53 (1.13)
4. Regular teachers have sufficient training to teach children with a physical disability.	10 (26)	18 (47)	2 (5)	6 (16)	2 (5)	2.26 (1.18)
5. Identification of physical disabilities and prescription for teaching is better done in a resource-room and by special teachers than by regular teachers.	0 (-)	5 (13)	6 (16)	19 (50)	8 (21)	3.79 (.94)

6. Children with a physical disability have to be told exactly what to do and how to do it.	6 (16)	12 (32)	9 (24)	7 (18)	4 (11)	2.76 (1.24)
7. Integration of children with a physical disability will necessitate extensive retraining of regular teachers.	0 (-)	2 (5)	2 (5)	18 (47)	15 (40)	4.24 (.80)
8. Students with a physical disability should be given every opportunity to function in the regular classroom setting.	0 (-)	1 (3)	2 (5)	26 (68)	9 (24)	4.13 (.62)
Overall*						2.74 (.49)

Note. Percents are in parentheses below frequencies. Scale: 1 = Strongly Disagree; 2 = Disagree; 3 = Undecided; 4 = Agree; 5 = Strongly Agree. \*Questions 2, 5, 6, & 8 were reverse coded for calculation of overall score only.

### Attitude towards the classroom behavior of students with physical disabilities

Family and consumer sciences teachers' overall attitude towards the classroom behavior of students with physical disabilities in regular classes was positive (see Table 2). Respondents agreed most strongly with the statements that "most children with physical disabilities are well behaved in class" and "the extra attention required by a child with a physical disability will disadvantage other students." Although respondents' level of agreement was strongest for these two statements, the mean scores were 3.34 and 3.05 indicating that they were undecided about these statements. Also shown in Table 2, respondents' strongest disagreement was regarding "the behavior of students with physical disabilities will set a bad example for the other students, children with physical disabilities are likely to create confusion in the regular classroom; and most children with physical disabilities do not make an adequate attempt to complete their assignments." Mean scores for the statements ranged between 1.58 and 2.24; means are closest to 2.0 indicating that they disagreed.

Table 2

### *Mean Attitude Scores of Botswana FCS Teachers Toward the Classroom Behavior of Students with Physical Disabilities*

Items	Frequencies and Percents					<i>M</i> ( <i>SD</i> )
	SD	D	U	A	SA	
1. The extra attention required by a child with a physical disability will disadvantage the other students.	50 (13)	10 (26)	5 (13)	14 (37)	4 (10)	3.05 (1.27)
2. The behavior of students with a physical disability will set a bad example for the other students.	19 (50)	18 (47)	0 (-)	0 (-)	1 (3)	1.58 (.76)
3. Most children with a physical disability do not make an adequate attempt to complete their assignment.	7 (18)	19 (50)	9 (24)	2 (5)	1 (3)	2.24 (.91)
4. Most children with a physical disability are well behaved in class.	2 (5)	2 (5)	18 (47)	13 (34)	3 (8)	3.34 (.91)
5. It is likely that a child with a physical disability will exhibit behavior problems in a regular class setting.	4 (11)	18 (47)	7 (18)	9 (24)	0 (0)	2.55 (.98)

6. Children with a physical disability are likely to create confusion in the regular class.	14 (37)	18 (47)	4 (10)	1 (3)	1 (3)	1.87 (.91)
Overall*						3.67 (.45)

Note. Percents are in parentheses below frequencies. Scale: 1 = Strongly Disagree; 2 = Disagree; 3 = Undecided; 4 = Agree; 5 = Strongly Agree. \*Questions 1, 2, 3, 5, & 6 were reverse coded for calculation of overall score only.

### Attitude towards classroom management of students with physical disabilities

Overall, teachers' attitude towards the classroom management of students with physical disabilities in regular classes was neither negative nor positive ( $M=3.09$ ,  $SD=.57$ ) (see Table 3). They agreed most strongly with the statements that "the behavior of a child with a physical disability generally requires more patience from the teacher than does the behavior of a child without a physical disability and integration of children with physical disabilities will require significant changes in regular class activities." The respondents' mean scores of 3.97 and 3.66 on these items indicated that they agreed with the statements. The two statements of which respondents' agreed least were "it is difficult to maintain order in a regular class that contains a child with a physical disability," and "students with physical disabilities will monopolize the teacher's time." The mean scores for the statements were 1.55 and 2.59, between disagree and undecided.

Table 3

*Mean Attitude Scores of Botswana FCS Teachers Toward the Classroom Management of Students with Physical Disabilities*

Items	Frequencies and Percents					<i>M</i> ( <i>SD</i> )
	SD	D	U	A	SA	
1. The behavior of a child with a physical disability generally requires more patience from the teacher than do the behavior of a child without a physical disability.	1 (3)	4 (10)	4 (10)	15 (37)	14 (40)	3.97 (1.08)
2. It is difficult to maintain order in a regular class that contains a child with a physical disability.	21 (55)	15 (40)	0 (-)	2 (5)	0 (-)	1.55 (.76)
3. Integration of children with a physical disability will require significant changes in regular class activities.	1 (3)	5 (13)	5 (13)	22 (58)	5 (13)	3.66 (.97)
4. Students with a physical disability will monopolize the teacher's time.	30 (8)	19 (50)	7 (18)	6 (16)	2 (5)	2.59 (1.04)
5. Parents of a child with a physical disability present no greater problem for a class teacher than those of a child without a physical disability.	0 (-)	10 (26)	12 (32)	12 (32)	4 (10)	3.26 (.98)
Overall*						3.09 (.41)

Note. Percents are in parentheses below frequencies. Scale: 1 = Strongly Disagree; 2 = Disagree; 3 = Undecided; 4 = Agree; 5 = Strongly Agree. \*Questions 1, 2, 3, & 4 were reverse coded for calculation of overall score only.

Attitude towards the academic and social growth of students with physical disabilities

As indicated in Table 4, family and consumer sciences teachers had a positive attitude towards the academic and social growth of students with physical disabilities in regular classes ( $M=3.49$ ,  $SD=.41$ ). Respondents' agreed most strongly with the statements that "the presence of students with physical disabilities will promote the acceptance of differences on the part of students without physical disabilities, isolation in a special class has a negative effect on the social and emotional development of students with physical disabilities, inclusion of children with physical disabilities will promote their independence, the challenge of being in a regular class will promote the academic growth of a child with a physical disability," and "the integration of students with physical disabilities can be beneficial for other students." Respondents disagreed most strongly with the statement that "the interaction of students without physical disabilities with students with physical disabilities might be harmful." Of the remaining three statements, respondents were undecided with the statements that "the child with a physical disability will probably develop academic skills more rapidly in a special class than in a regular class, the inclusion of children with physical disabilities is likely to have a negative effect on their emotional development, and the child with a physical disability will be socially isolated by other students."

Table 4

*Mean Attitude Scores of Botswana FCS Teachers Toward the Academic and Social Growth of Students with Physical Disabilities*

Items	Frequencies and Percents					<i>M</i> ( <i>SD</i> )
	SD	D	U	A	SA	
1. The challenge of being in a regular class will promote the academic growth of a child with a physical disability.	2 (5)	3 (8)	4 (11)	19 (50)	10 (26)	3.84 (1.07)
2. The presence of students with a physical disability will promote the acceptance of differences on the part of students without a physical disability.	1 (3)	2 (5)	2 (5)	21 (55)	12 (32)	4.08 (.91)
3. Isolation in a special class has a negative effect on the social and emotional development of a student with a physical disability.	1 (3)	4 (11)	1 (3)	20 (53)	12 (32)	4.00 (1.01)
4. The child with a physical disability will probably develop academic skills more rapidly in a special class than in a regular class.	3 (8)	12 (32)	9 (24)	11 (29)	3 (8)	2.97 (1.13)
5. The interaction of students without physical disabilities with students having physical disabilities may be harmful.	12 (32)	18 (47)	5 (13)	2 (5)	1 (3)	2.00 (.96)
6. Inclusion of children with physical disabilities will promote their independence.	0 (-)	3 (8)	7 (18)	19 (50)	8 (21)	3.86 (.86)
7. The integration of students with a physical disability can be beneficial for other students.	0 (-)	5 (13)	10 (26)	19 (50)	3 (8)	3.54 (.84)
8. Inclusion of children with physical disabilities is likely to have a negative effect on their emotional development.	6 (15)	16 (42)	7 (18)	6 (16)	3 (8)	2.58 (1.18)

9. The child with a physical disability will be socially isolated by other students.	8 (21)	15 (40)	5 (13)	8 (21)	2 (5)	2.50 (1.20)
Overall*						3.49 (.41)

Note. Percents are in parentheses below frequencies. Scale: 1 = Strongly Disagree; 2 = Disagree; 3 = Undecided; 4 = Agree; 5 = Strongly Agree. \*Questions 4, 5, 8 & 9 were reverse coded for calculation of overall score only.

### Attitude towards the inclusion of students with physical disabilities

Overall, family and consumer sciences teachers' attitude towards the inclusion of students with physical disabilities into regular classes was positive ( $M= 3.31$ ,  $SD = .38$ ) (see Table 5). Similarly, their overall towards the classroom behavior and the academic and social growth of students with physical disabilities in regular classes was positive. Respondents' attitude was neither positive nor negative towards the classroom management of students with physical disabilities. However, family and consumer science teachers' overall attitude was negative towards the teaching of students with physical disabilities in regular classes.

Table 5

### *Mean Attitude Scores of Botswana FCS Teachers Toward Inclusion of Students with Physical Disabilities*

DIMENSIONS	<i>M</i>	<i>SD</i>
Teaching Students with Physical Disabilities	2.74	.49
Classroom Behavior of Students with Physical Disabilities	3.67	.45
Classroom Management of Students with Physical Disabilities	3.09	.57
Academic and Social Growth of Students with Physical Disabilities	3.49	.41
Overall	3.31	.38

Note. Scale: 1 = Strongly Disagree; 2 = Disagree; 3 = Undecided; 4 = Agree; 5 = Strongly Agree

### Differences in Attitude towards the inclusion of students with physical disabilities

A one-sample  $t$  test was conducted on the attitude scores to determine if the mean scores differed significantly from the mean scores of Junior and Senior Secondary "non-FCS" teachers in Botswana from the same regions and the same schools ( $N=439$ ). The mean scores for "non-FCS" teachers in Botswana on the overall scale, the teaching dimension, the classroom behavior dimension, the classroom management dimension, and the academic and social growth dimension were 3.31, 2.64, 3.54, 2.96, and 3.30, respectively (see Table 6). The sample mean of 3.31 ( $SD = .38$ ) was significantly different from 3.17,  $t(38) = 2.26$ ,  $p = .03$ . The effect size of .37 indicated moderate effects. Family and Consumer Sciences teachers' overall attitude towards the inclusion of students with physical disabilities into regular classes was significantly more positive than that of other teachers from the same regions and schools.

Looking at each dimension separately, the sample means of 2.74, 3.67 and 3.09 ( $SD = .49$ , .45 and .57) were not significantly different from 2.64, 3.54 and 2.96,  $t(38) = 1.25$ , 1.86 and 1.41,  $p = .22$ , .07 and .17, respectively. These results indicated that Family and Consumer Sciences teachers' attitude did not differ from "non-FCS" teachers' attitude towards the teaching, the classroom behavior and the classroom management of students with physical disabilities in regular classes.

As further indicated in Table 6, the sample means of 3.49 ( $SD = .41$ ) was significantly different from 3.30,  $t(38) = 2.85$ ,  $p = .01$ . The effect size of  $d = .46$  indicated moderate effects. Family and Consumer Sciences teachers' overall attitude was significantly more positive towards

the academic and social growth of students with physical disabilities who are included in regular classes than teachers from the same regions and schools.

Table 6

*One Sample T-test of FCS Teachers' Attitude Toward Inclusion of Students with Physical Disabilities with "Non-FCS" Botswana Teachers (N=38)*

Dimensions	<i>M</i>	<i>SD</i>	T	p	<i>M difference</i>
Teaching Students with Physical Disabilities (2.64)	2.74	.49	1.25	.22	.10
Classroom Behavior of Students with Physical Disabilities (3.54)	3.67	.45	1.86	.07	.14
Classroom Management of Students with Physical Disabilities (2.96)	3.09	.57	1.41	.17	.13
Academic and Social Growth of Students with Physical Disabilities (3.30)	3.49	.41	2.85	.01	.19
Overall (3.17)	3.31	.38	2.26	.03	.14

*Note. Numbers in parentheses represent mean scores used for test values. Effect size:  $d = \frac{t}{\sqrt{N}}$*

The purpose of this study was to identify the attitude of Family and Consumer Sciences teachers towards the inclusion of students with physical disabilities into mainstream classes. An important finding of this study is that although Family and Consumer Sciences teachers were neither positive nor negative in their attitude towards the overall inclusion of students with physical disabilities into mainstream classes, their attitude towards the teaching of students with physical disabilities was negative. Family and Consumer Sciences teachers also indicated that they believed that teachers do not have sufficient training nor do they possess the expertise necessary to teach students with physical disabilities. One of the reasons for teachers' neutral attitude towards the inclusion of students with physical disabilities into Family and Consumer Sciences classes may be low self-efficacy towards their ability to teach students with various needs. Based on both findings, it was concluded that these teachers may lack not only training, but confidence in their ability to teach in an inclusive school.

Undoubtedly, Family and Consumer Sciences teachers have mixed feelings towards the actual implementation of inclusive education. Findings indicate Family and Consumer Sciences teachers' attitudes towards the classroom behavior, the classroom management and the academic and social growth of students with physical disabilities were neither positive nor negative. These findings tend to suggest that teachers may not fully understand the social and academic impact of excluding students with physical disabilities from the mainstream classroom. Several studies identified a number of educational and social benefits of inclusive education for children with disabilities and those without (McDonnell, Thorson, Disher, Mathot-Buckner, Mendel, and Ray, 2003; Harrower, 1999; Hunt & Goetz, 1997). The Family and Consumer Sciences teachers also seem to have some uncertainty about the overall classroom management of inclusive classes. This could also be due to a lack of education or mis-education (stereotypes, cultural misconceptions, etc.) relative to students with disabilities.

Compared with a larger group of teachers from the same geographic regions, Family and Consumer Sciences teachers' attitudes were significantly more positive towards the overall inclusion of students with physical disabilities and towards the academic and social growth of

students with disabilities. These findings tend to suggest two things. First, there is a need for additional education and better preparation of all teachers in Botswana if the government wants its schools to become inclusive and reflective of the Tswana values. Second, teachers' attitude towards the inclusion of students with physical disabilities in mainstream classes may not be related to the subject being taught. In Botswana, as in many countries, academic subjects are classified as "*practical*" or "*non-practical*," Family and Consumer Sciences is a *practical* subject that requires a great deal of laboratory, "hands-on," or experiential learning. Much of the curriculum requires students to complete projects such as knitting/crochet projects, sewing projects, two to three course meals, home items, etc. Because of this, some individuals tend to think that students with physical disabilities will do better, academically, in courses that do not require as much *practical* work.

### Implications

With Botswana's national push on education for all its citizens, (Botswana Government, 1997a; Botswana Government, 1997b), educators, adequately prepared and who have a positive attitude, can assist the government in obtaining its vision for equality in education. Several studies have identified a number of educational and social benefits of inclusive education for all children (those with disabilities and those without) (McDonnell, et al., 2003; Harrower, 1999; Hunt & Goetz, 1997). Findings indicating Botswana's Family and Consumer Sciences teachers' neutral attitudes toward the inclusion of students with physical disabilities in mainstream classes pose a great concern for the effective implementation of inclusive education in Botswana. One implication of this study is that the Ministry of Education must focus on providing in-service training for all its teachers in working with students with special needs.

Teacher educators must also begin to re-evaluate their program's effectiveness in preparing teachers to work in inclusive schools. Education programs for teachers must be geared towards equipping all prospective teachers and serving teachers with the skills and confidence needed in teaching and working with students with differences. The focus must not be solely on the cognitive and psychomotor aspects of learning, but it is very important for education programs to address the affective and the social dimensions of learning relative to working with diverse student populations.

### **Conclusions and Recommendations**

The major purpose of this study was to identify the attitude of Family and Consumer Sciences teachers towards the inclusion of students with physical disabilities in the general classroom to better understand how to facilitate inclusive school environments in Botswana. The study also compared FCS teachers' attitude with the attitude of "non-FCS" teachers. The findings from this study indicate that FCS teachers in Botswana believed that teachers in Botswana do not have sufficient training nor do they possess the expertise necessary to teach students with physical disabilities. As well, findings indicate that FCS teachers had a negative attitude towards teaching students with physical disabilities in FCS classes, yet had neither a positive nor negative attitude toward the classroom behavior, classroom management, and the academic and social growth of physically disabled students in FCS classes. Lastly, another finding was that FCS teachers' overall attitude towards the inclusion of students with physical disabilities into mainstream classes was neither positive nor negative, yet their attitude was significantly higher than the attitude of "non-FCS" teachers. These findings lend empirical support to the idea that the attitude of teachers, an important element in the successful

implementation of inclusive education, should be further investigated (Avramidis & Norwich, 2002; Pivik et al., 2002; Weiner, 2003).

### Recommendations

Based on the findings of this study, it is recommended that the government of Botswana continue its effort to provide to all students equal opportunities and access to education. The purpose in doing so can assist in changing cultural practices and attitudes toward individuals with disabilities as well as provide all individuals a basic human right.

In addition, the education and training of not only FCS teachers, but all teachers, to work with students with physical disabilities need to be improved to ensure that teachers feel more confident about their own ability to teach students with physical disabilities. University and college programs and policies aimed at enhancing teachers' skills and ability to work with students with disabilities should not be limited to cognitive learning only. They need to change teachers' attitudes and beliefs about students with disabilities by providing prospective teachers the opportunity to see, interact, and work with individuals with disabilities.

As Pivik et al., (2002) found, teachers' negative attitudes can be very harmful for students with disabilities. Therefore, it is suggested that the Ministry of Education need to start a media campaign geared towards embracing and nurturing diversity in schools in Botswana. The Ministry of Education need also to offer a series of workshops for teachers that will focus on working with students with physical disabilities not only in FCS classrooms, but in all classrooms.

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