Challenges and experiences on inclusive physical education: The case of Bahir Dar elementary schools

Berhanie Asrat Bekele
Lecturer, Bahir Dar University, Ethiopia

Abstract
The intent of this study was to evaluate challenges and experiences of elementary school students with disabilities in inclusive physical education in the case of Bahir Dar Administrative Zone Elementary Schools. Purposive and random sampling techniques were employed. The participants in this study were a total 93. Of these, students from grade 5-8, who have a physical disability from seven schools (n=41). Peers were classmates (n=35), Physical Education Teachers (n=15) and expertise (n=2) from regional and zone education bureaus. Both close and open ended questionnaires, interviews and group discussions were used for data collection. The result showed that there was no uniformity across the schools on the implementation of inclusive physical education. The major identified problems were unavailability of appropriate facilities and equipments, absence of teachers’ CPD training on inclusive physical education, the text / teachers guide book not modified or adapted to meet the need of special students, attitudinal barriers. Then based on the findings, possible recommendations were suggested for improvements in implementing inclusive physical education at Bahir Dar Administrative Zone Amhara region and also at the country level.

Keywords: Students with disability, inclusive physical education, challenges, experience, physical disability

Introduction
According to Smith, (2003) [14] sport, exercise and physical activity settings may afford opportunities for children with and without disability to interact and develop friendships. Moreover, it can raise the children’s self-respect and social skills (Block, M.E 1999) [3]. Expected benefits for children of mainstream abilities include a more positive attitude to individuals with disability, a higher level of social skills, readiness to help others and increase self-respect. Teachers working in inclusive classes can also benefit from it: they can gain better insight in to individual differences between students, consult related specialists and increase or broaden their professional competence.

There have been efforts internationally to include children with disabilities in the educational mainstream. Giffard-Lindsay, K. (2007) [8] suggests that ‘inclusive education/mainstreaming is the key policy objective for education of children and young people with disabilities’. Inclusive education entails ‘increasing the participation of students, and reducing their exclusion from, the cultures, curricula and communities of local schools’ (Booth and Ainscow, 1998) [4]. Inadequate infrastructure and insufficiencies in terms of equipment pose a global problem in physical education (Hardman, 2008) [9]. The issue becomes more striking as we step in to the area of inclusive education. It is observable that, in the federal democratic republic of Ethiopia, many schools lack the prescribed material resources, which is a great challenge for the implementation of good physical education. Most Primary Schools in Amhara Region fail to fulfill the equipment standards for inclusive education teaching. (Asrat, 2013) [2]

In Bahir Dar administrative zone elementary schools there are about 277 SWD. Of these 177 SWD are learning from grade one to four by unit cluster separately while 100 of them are from grade five to eight learning in inclusive class rooms. However, these students not uniformly included to inclusive physical education and not benefited by doing physical activities like their class mates.
Even if some researchers tried to conduct a research on inclusive education in general, but according to the researcher’s view, challenges about inclusive Physical Education program has not been discovered (studied) deeply in Ethiopia. The latent problems in inclusive physical education need special attention and should be investigated further. Investigating the perspective of students with disabilities can give great insight in to what factors are important in being a participant during practical sessions. Thus, this research tried to answerer the following research questions:-

1. What were the factors that hinder the participation of students with disabilities in inclusive physical education?
2. Was physical education class unique for students with disabilities to create friendship and cooperation with their classmates?
3. What were the perceptions of stakeholders towards the students with disability?
4. What was the influence of physical education teachers against the students with disability?

**Objectives of the Study**

**General Objective**
The general objective of the study was to investigate challenges and experiences of elementary school students with disabilities in inclusive physical education.

**Specific Objectives of the study**
The specific objectives were:-

1. Determine factors that hinder the participation of students with disability in inclusive physical education.
2. Examine whether physical education class is unique for students with disabilities to create friendship and cooperation with their classmates.
3. Explore perceptions and experiences of stakeholders towards students with disability.
4. Examine teachers’ influence in physical activity class against students with physical disabilities.

**Methods and Materials**
The researcher was selecting survey method. The selected research method helps to look what the current experience and challenges on implementing inclusive physical education looks like in selected schools. It helps to conduct in-depth study of instances of phenomenon in real life settings and from the perspective of participants of involved in the phenomenon. Phenomenon is a process, event, person, document or other thing of interest to the researcher. (Gall and etal, 2007) [5]. This study was conducted on purposively selected 7 elementary schools from Bahir Dar Administrative Zone, in which inclusive education was practiced. Namely; Atse Sertse Dingil, Yekatit 23, Shimbit, Tsehay Gibat, Zenzelma, Tis Abay and Zegie Elementary Schools.

In selected schools there were students from grade 5- 8, who have a physical disability (n= 41), Of these, 17.1% were from grade five, 34.1% from grade six, 22% from grade seven and 26.8% from grade eight. Their sex composition was 43.9% female and 56.1% male. The categories of their impairments was 2.4% of Cardiac, 31.7% of Hearing, 4.9% of Neurological, 26.8% of Orthopedic and 34.1% of Visual. The educational background of their family was 41.5% literate and 58.5% illiterate.

Peers (SWOD) (n=35), Physical Education Teachers (n=15) and 2 educational expertise were also involved in the study and the total population were 93 participants. To gather valid and reliable data and achieve the objective of the study, the main instruments were questionnaire, qualitative interview and group discussion.

To explore the views about inclusive Physical education, researcher developed three sets of questionnaires which contained both close and open ended items for SWD, SWOD (able peers) and Physical Education Teachers. Qualitative interview was used as data collection tool from education expertise. The advantage of interviewing is that it gives opportunity for following up on answers to dig for deeper information and clarification which can help to avoid misunderstandings (Gall and etal, 2007) [5]. Researcher additionally held group discussions with physical education teachers across seven schools. Data gathered from respondents was analyzed both quantitative and qualitatively by using SPSS V-21

**Result and Discussion**

**Importance of the Participation of SWD in Physical Education Practical Class**

Doing physical activity has numerous values on the life of children with disabilities. Understanding this, Steve H., (2013) [15] mentioned that, sport and physical activity are important components in a healthy lifestyle for children. Physical activity contributes to developing healthy bones and efficient heart and lung function, and can positively impact on the functioning of the body’s immune system. Sport and physical activity contribute highly to the prevention of chronic diseases such as cardiovascular disease, diabetes, hypertension, obesity and osteoporosis.

From the open ended questionnaire, the importance of participation SWD in physical education practical class was assessed and SWD replied that they could get benefits like development of body strength, socialization with peers, equal opportunity to participation with others, happiness and avoidance of sense of inferiority, prevention from disease, having good posture and health, physical fitness qualities like strength, flexibility, speed power and so on, and efficiency of performing daily activities.

Their able peers also explained that SWD can build their knowledge and body strength, participate on sport races and got national and international recognition and waving the flag of their country in the world champion and be a proud for their citizens if they participate in physical education practical class. They also added that, SWD can best understand as they can perform any activity like their able peers and can also help them to build self-confidence and to be psychologically fit and safe. Moreover, they indicated that, SWD can improve their fitness and social interaction by avoiding sense of inferiority. In supporting this, Steve H., (2013) [15] mentioned the purpose of physical activity. As to him sport and physical activity can increase muscle strength and also improve functional ability, such as range of motion, gross motor skills (eg. walking, jumping, kicking), fine motor skills (eg. hand function – grasping, gripping), balance and coordination (eg. hand-eye coordination). While this is of benefit to all children, children with disabilities (especially physical or intellectual impairments) may be in particular need of developing these skills.

Physical education teachers also listed the advantages of participation of SWD in physical activity practical class including: development of self-confidence, prevention from diseases, increased country love, improved physical condition of disabilities, avoidance of attitudinal problems, increased communication with the community, avoidance of sense of
Socially interactive. Our result is in line with that of James, (2008) who reported that increasing the participation in physical activity among people with disabilities is an important goal for the health and fitness profession. He further explained that despite the enormous health benefits that can be attained from regular physical activity, most people with disabilities are not achieving it hence some countries like the U.S. recommended 30 minutes physical activity per day and five or more days per week.

### Interest, Ability to do and Participation Level of SWD on Physical Education Class and Support of Others

The result in Table 1 showed that, the interest of 68.3% of the students with disability towards physical education was high and above while, of 14.6% was moderate and of 17% was low. That is 83% of the students with disability showed high to moderate interest towards physical education.

<table>
<thead>
<tr>
<th>Description</th>
<th>Very high</th>
<th>High</th>
<th>Moderate</th>
<th>Low</th>
<th>Very low</th>
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<tr>
<td></td>
<td>No.  %</td>
<td>No.  %</td>
<td>No.  %</td>
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<td>No.  %</td>
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<tr>
<td>Your interest towards physical education</td>
<td>17 41.5</td>
<td>11 26.8</td>
<td>6 14.6</td>
<td>6 14.6</td>
<td>1 2.4</td>
</tr>
<tr>
<td>Your ability to do physical activity</td>
<td>4 9.8</td>
<td>14 34.1</td>
<td>9 22.0</td>
<td>3 7.3</td>
<td>11 26.8</td>
</tr>
<tr>
<td>Your interest to participate in physical education practical class</td>
<td>14 34.1</td>
<td>12 29.3</td>
<td>6 14.6</td>
<td>4 9.8</td>
<td>5 12.2</td>
</tr>
<tr>
<td>How often you are participating in physical education practical class?</td>
<td>4 9.8</td>
<td>5 12.2</td>
<td>9 22.0</td>
<td>16 39.0</td>
<td>7 17.1</td>
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</table>

Similarly, 43.9% of the SWD replied that they have high ability to do physical activities whereas 22% have moderate ability and 34.1% have low ability (Table 1). In addition, 63.4% of the respondents replied that they have high interest to participate in physical education practical class, 14.6% have moderate interest and 22% have low interest (Table 1). Although 78% of the SWD have interest to participate in the practical class of physical education (Table 1), only 22% were highly and 22% moderately participated while the rest were very rarely and even not participated (Table 1). Likewise, the able peers replied that 20% of the SWD highly participated in physical education practical class, 45.7% sometimes and 34.3% didn’t participate and even never get the chance. Moreover, physical education teachers also replied that, only 20% of the SWD always participated, 60% sometimes and 20% didn’t participate in physical education practical class. However, Active Living Research (2007) stated that schools serve as an excellent venue to provide students with the opportunity for daily physical activity, to teach the importance of regular physical activity for health, and to build skills that support active lifestyles. Amanda (2012) also points out that becoming physically active in school could result in an individual having a physically active lifestyle into adulthood.

Doing physical activity with peers or classmates helps the students to enhance their motivation, self-esteem, self-confidence and friendship. Especially students with disabilities have interest to play with their able peers and socialize. However, they responded that only 22% of them were having high opportunity to do physical education in and out of the school with their able peers, 43.9% moderate, 14.6% low opportunity and 19.5% never get chance.

The assessment on the interest of able peers (SWOD) spending time in performing physical education with SWD showed that 63.5% of them spend good time, 17.1% spend moderate time and 19.5% spent low time. This means even if some students with disability faced challenges due to lack of interest from their able peers most of them were accepted by their friends. Correspondingly, 65.7% of the able peers replied that they have high to very high interest to do physical exercise with SWD and 25.7% moderate interest while 8.6% have no interest. From the response it could be understood that 91.4% of the able peers have moderate to high interest to do physical exercise with SWD. Hence, the interest of able peers to do physical exercise with the SWD could not a cause to hinder the participation of SWD in physical education. Helena et al., (2009) also mentioned that physical education has potential for encouraging development of friendships between children with and without disabilities. In addition, Amanda (2012), described as unlike the other subjects in school, physical activity classes uniquely help creating friendships and learning to cooperate with classmates.

The social interaction created during sporting can help the SWD get support from their able peers. Hence, SWD responded that they received 83% support from their able peers while 17% received no support. This shows that majority of the SWD have support from their able peers and build social interaction. Likewise, 88.6% of the able peers replied that they have moderate and above support for the SWD in performing physical activities. The result is supported by cited on Amanda (2012) who explained that having friends in physical activity class who support and encourage physical activity is vital to wanting to participate in physical activities, and self-efficacy. In addition, Seymour et al., (2009) also observed that physical education encouraged the interactions and friendships. Different research findings in physical education also reported the positive effects of encouragement and reinforcement from classmates and peers, cited in Helena et al., (2009). Helena et al., (2009) also described that, recognition of accomplishments, praise, and self-esteem support from friends for the SWD contributed a positive experience in physical education.

In addition, the participation of the SWD in physical activity can be influenced by the support of their family. In relation to this, 39% of the SWD have high and 19.5% moderate support from their family while 41.5% have low/no support. This may be ascribed to the educational background of their family. The illiteracy of the family (low understanding of the importance of participating in physical education) coupled with the culture, might have negatively influenced the participation of their children in physical education. The result is supported by the finding of Hannah et al., (2012) who reported that parents of the children with disabilities (CWD) underestimate the capacities of their children, do not see the value of sending their children to school nor their potential for future employment. Parents were also critical in the development of friendship. Smith, (2003) and Weiss and Stuntz, (2004), also reported that parents of CWD have many additional
demands on their time because of their child’s disability but are consistently identified as playing an important role in sport socialization. Moreover, school teachers/special needs education teachers/are also accountable for their students by initiating and creating interest, showing future directions and guiding their life in the right way. In response to the support they received from their physical education teachers, 58.6% of the SWD replied that they received high support from their physical education teachers, 22% moderate support and 19.5% received low support. Similarly, 57.2% of able peers replied that the support of physical education teachers for SWD was high and above, 22.9% moderate and 20% low. In general, according to the able peers, about 80.1% of the SWD get moderate to high support from their physical education teachers. In support of the result, Saskatchewan Learning Special Education Unit, (2001) [12] stated that, the classroom teacher has tremendous influence on their students at the grass root level and is the primary role model for the students. Without the cooperation of the classroom teacher, effective inclusion will not take place.

**Major Factors Hindering Participation of SWD**

Even though the interest of the SWD to participate in physical education practical class was high, the level of participation was inversely related. The reasons for the low participation in the physical education practical class were due to lack of comfortable school sport fields/facilities, equipment, lack of interest from their teachers to participate them, the level of difficulty they have and lack of willingness by their peers to do the physical activities with and lack of support from the family, lack of interest from their physical education teachers to participate them in practical class and in some case even in physical education class.

<table>
<thead>
<tr>
<th>Description</th>
<th>Very good</th>
<th>Good</th>
<th>Moderate</th>
<th>Low</th>
<th>Very low</th>
</tr>
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<tbody>
<tr>
<td>The comfort of school sport facilities for SWD</td>
<td>4</td>
<td>9.8</td>
<td>16.3</td>
<td>13.9</td>
<td>24.4</td>
</tr>
<tr>
<td>The fulfillment of school sport equipment for SWD</td>
<td>6</td>
<td>14.6</td>
<td>6</td>
<td>14.6</td>
<td>7.3</td>
</tr>
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The comfort of school fields for sporting and/or the fulfillment of the necessary facilities is very important to conduct practical classes of physical education safely and prevent SWD from any injury. Hence, 48.8% of the SWD replied that the field was comfortable for sporting and 19.5% replied moderately comfortable. However, 32% of the respondents replied that the field was not comfortable and too terrible for sporting (Table 2). In line with this, 34.3% of the able peers replied that the sport fields/facilities are comfortable, 14.3% replied moderately comfortable and the rest 51.5% replied not comfortable/too much terrible for the SWD. In addition, 20% of the physical education teachers replied that the sport field/facilities were highly comfortable or low factor, 20% moderate factor and 60% were replied as it is a great factor or highly uncomfortable for SWD. In general, majority of the respondents agreed that the school fields/facilities were highly to moderately uncomfortable for SWD. Additionally researchers observed that, majority of the schools have only football court to teach all skills and its comfort is relative but not absolutely comfortable for all types and levels of difficulty students have.

Like sport facilities, sport equipment are also very essential to implement a designed physical education curriculum and achieve its goals, and plays a pivotal role. Especially, the participation of students with disability depends up on the availability of adapted and comfortable sport equipment. Of the total, 29.2% of the SWD replied that the availability of sport equipment was good and above and 7.3% moderate. But 63.5% of them responded that the equipment are not enough and even not available at all (Table 2). Similarly, 11.4% of the able peers replied that the sport equipment comfortable and 14.3% moderately comfortable while 74.3% replied that the equipment are not comfortable for the SWD. Like to the students, 100% of the physical education teachers replied that sport equipment are highly uncomfortable and not available for the SWD and considered it as a number one barrier that hinders participation of the SWD.

In addition to the inclusive education policy and system, the commitment, attitude, knowledge and skill level of physical education teachers could play vital role in the learning of students with disability in inclusive class rooms. In this regard, 34.1% of the SWD replied that their physical education teachers were always ready and planned to implement inclusion, 24.4% replied that their teachers were sometimes ready, 29.3% replied no special preparation, 4.9% replied that they treated them alone, and 7.3% replied that their teachers didn’t give them opportunity to attend the practical class. From the result it is clearly visible that in most schools, physical education teachers didn’t always plan and conduct inclusive class, but to the contrary exclusion, separation, and segregation of the students with disability were practiced. The group discussion members also explained that only in a few schools, physical education teachers implemented inclusion and most of them didn’t even design activities which are adapted or modified type by considering the level of difficulty of the SWD have. The group also underlined that especially the students with visual impairments were totally excluded not only from the practical class but also from taking physical education course as a whole.

Planning, Organizing, managing and implementation of inclusive physical education needs the dedication of physical education teachers. Respondents rated the readiness of their physical education teachers depending on their day today observations. Of the obtained results, 40% of the able peers observed that their physical education teachers always implement inclusive physical education, 14.3% sometimes and 2.9% treat them separately while 42.8% replied no extra preparation and even exclude the SWD from the practical class. However, cited in Amanda, (2012) [1] indicated the negative consequence of exclusion of the SWD from physical activities. He stated that, social isolation of children with disabilities have a detrimental effect on their social-emotional development, which results in low self-esteem and confidence, fear of failure and school attendance, lack of motivation, low test scores as well as deviant behaviors and dropping out of school.

On the assessment of the applicability of inclusion in the schools covered by this study, 13.3% of the physical education teachers replied that inclusion was implemented in all subjects, the other 13.3% in many subjects, 53.3% in some subjects and 20% replied totally not implemented. According...
to Hannah et al., (2012) [9], inclusive education is a process for increasing participation and reducing exclusion, in a way that effectively responds to the diverse needs of all learners. They further explained that inclusive education is an approach which values diversity as an essential part of the teaching and learning process which promotes human development. That is inclusive education aims to combat the marginalization of individuals and to promote difference and should be developed as part of a national strategy and not defined as a separate approach.

The knowledge of inclusion is mandatory for teachers for the proper implementation and realization of inclusive physical education programs. If teachers lack knowledge and skill their attitude also influenced and depends up on their ability. Thus, 60% of the physical education teachers replied that have high knowledge on inclusion and 40% have moderate knowledge about inclusion. But their response contradicts with the reality on their current practices as indicated on Table 5. In addition SWD (65.9%) and able peers (60%) replied the readiness of their physical education teachers to implement inclusion as it is sometimes, separate and even exclusive.

### Table 3: Participation of SWD by physical education teachers

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<tr>
<th>Description</th>
<th>Always</th>
<th>Sometimes</th>
<th>Not at all</th>
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<tbody>
<tr>
<td>Are SWD participating on your physical education practical class?</td>
<td>3</td>
<td>20.0</td>
<td>9</td>
</tr>
<tr>
<td>Do you prepare inclusive lesson plan and adapt activity to include SWD on practical class?</td>
<td>4</td>
<td>26.7</td>
<td>6</td>
</tr>
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</table>

Physical education teachers were also asked about the modification or adaptation of activities they made during the practical class. However, only 26.7% replied that they were adapting activities on their daily lesson plan and 40% made it sometimes while 33.3% didn’t totally make any activity adaptation to make their lessons inclusive for SWD (Table 3). The observation of the researchers and the group discussions held with physical education teachers indicates that the inconsistency and lack of uniformity on participation of SWD and even exclusion from physical education classes. In agreement to this result, Asrat (2013) [2], also reported that, though they are autonomous, teachers were not used to adapt and modify the standardized curriculum based on the needs and ability of students with learning barriers for the realization of best inclusive practice.

In addition to the barriers discussed above, the physical education teachers included other barriers hindering the participation of SWD in the practical physical education class. The barriers they mentioned were, knowledge gap of SWD about the relevance of physical activity, difficulty of activity selection and adaptation, lack of skill training for the teachers, low interest of the able peers to do with, difficulty of communication/ for hearing impairment/, difficulty of identifying the level disability, lack of skill to adapt activities, Attitude of the parents of SWD towards practical class, difficulty of class room organization and class room management, shortage of allotted period and lack of teaching aids are influential factors which affect the implementation of inclusive physical education.

**Possible Indicators for Active Participation of SWD**

Students with disabilities and their able peers suggested that, the physical education teachers should design proper activities on their daily plan and give ample time to practical activities for SWD. The concerned bodies (Education Bureaus) should make the sport facilities/fields as well as equipment available and comfortable by considering SWD and provide them sport wear to encourage and make them active participants. They also underlined that the SWD should be given equal opportunities like others so that they could develop interest to do physical activity. Moreover, physical education teachers should design exercise by considering their ability and demonstrate carefully. To improve the communication barriers for the students with hearing impairment, the students and teachers should learn sign language. They also suggested that priority should be given for the fulfillments of comfortable sport facilities and equipment followed by peers and teachers encouragements, activity selection and adaptation. Inclusion should also be taken serious issue to be considered while taking the corrective measures.

Physical education teachers forward their suggestion on the modification of physical education text books and teachers guides (type of activity to be adapted or modified from the physical education contents) to make the subject more inclusive and enhance the participation of SWD.

The researcher assessed what is being done about the inclusion of students with disability in physical education practical class at the Regional and zonal questioning the respective experts. Especially in fulfilling the necessary facilities and equipment including improvement of the sport text books in a way that it includes the aforementioned students. The researcher learned that the responsible body didn’t give special attention for implementation and realization of inclusive physical education by text book and teachers guide revision in collaboration with the ministry of Education. Trainings were not part of their yearly plan to upgrade teachers in inclusive physical education. There were no detail supervision and directions about the participation of students with visual impairment in physical education practical sessions.

As all participants mentioned, the availability of facilities and equipment were a great challenge and need focus of the higher officials. However, the regional and zonal experts explained that there is no special movement in finding fund from different sources to achieve the intended outcomes.

**Conclusion**

The main purpose of the study was to investigate challenges and experiences of elementary school students with disabilities in inclusive Physical Education. Through different data gathering tools, the researcher tried to identify the current experiences and challenges of implementing inclusive physical education from selected seven elementary schools which are located in Bahir Dar Administrative Zone. As the results of the findings indicate, across these seven elementary schools there is no uniformity in achieving the objectives of Physical education and making the subject inclusive in line with that of the philosophy of inclusion.

Their current experience showed that; only in some schools inclusion is implemented partially in physical education. Due to this students with hearing impairments/disabilities are taking a part with other students with the support of their physical education teachers and sign language /special need experts. But students with visual impairments do not take the
practical part of the course as a whole in all schools. The prevailing challenges are students with visual impairment relate their participation of taking physical education lesson with that of their grades or mark and due to this they totally excluded themselves from taking the course. The students’ text and teachers’ guide books were not modified or adapted to meet the need of SWD. In most schools teaching facilities and equipment are not comfortable for SWD to participate on physical education practical classes. The knowledge and skill level of physical education teachers to conduct the subject efficiently is limited. The concerned bodies attention is not that much satisfactory for proper realization of inclusive physical education.

**Recommendations**

From the findings the following recommendations were suggested:

- Sport Equipment and facilities would be fulfilled to create conducive ground for the SWD. To this end, collaboration of NGOs and GOs is crucial. In addition, the regional and zonal bureaus of education should collaborate with Technical and Vocational Schools to produce modified equipment locally.
- All elementary school physical education syllabuses, teacher’s guides and text books have to be modified by considering the philosophy of inclusion and show ways of adapting different physical activities to meet the need of various types and levels of difficulties of the SWD.
- Physical Education Teachers would get CPD training in the area of inclusive physical education continuously.
- Inclusive physical education and/or adapted physical education would be part of college level physical education and sport / sport science program curriculum so that new graduates can develop knowledge, skill and attitude.
- Attitudinal barriers have to be improved through continuous awareness creation strategies for students, parents and other stakeholders.
- The Regional Bureau of Education would follow and supervise the implementation of inclusive physical education like other subjects at schools.

**References**