# Inclusive Education in Bangladesh: Are Pre-service Teachers Ready to Accept Students with Special Educational Needs in Regular Classes?

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#### ABSTRACT

**Purpose:** The aim of this study was to examine pre-service special education (PSpE) teachers' attitudes towards inclusive education (IE) for students with special educational needs (SEN) in Bangladesh.

**Method:** 100 PSpE teachers from a leading teacher education institute in Bangladesh were purposively sampled. A 20-item based survey questionnaire was used to measure participants' attitudes. Items of the survey were developed from a literature review in which Attitudes Towards Inclusive Education Scale (ATIES) by Wilczenski (1992), Concern about Inclusive Education Scale (CIES) by Sharma and Desai (2002), and Interaction with Persons with a Disability (IPD) Scaled by Gething (1994) were considered as the key specialist resources. Both descriptive and inferential statistics were utilised in the analysis.

**Results:** The results revealed that while the PSpE teachers hold favourable attitudes towards students with SEN, they are concerned about some basic issues of inclusion. Practicum and close contact with children with SEN were found to be important variables which shaped the attitudes of the PSpE teachers. Implications of the findings are discussed and further suggestions are made as to how teacher education institutes may engage PSpE teachers more effectively with their programmes to promote better inclusive practices.

**Conclusion:** The study suggests that there is a need for providing PSpE teachers with experiential learning prior to school practicum.

Key words: inclusion, attitudes, practicum, special education, SEN

### INTRODUCTION

Inclusive education (IE) for students with special educational needs (SEN) has been one of the most discussed issues in the school community for the last two

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decades. IE is defined as a strategy to ensure "education for all" (Ainscow et al, 2006). The goal of IE is to act as a catalyst to ensure access, achievement, presence, participation of all students including those from diverse backgrounds (UNESCO, 1994). One of the guiding principles of IE is that schools should accommodate all children regardless of their diverse backgrounds (Pearce, 2009). This means that in an IE setting the environment, curriculum, teaching methods, assessment and reporting need to be adjusted or differentiated. Putting students with SEN into ordinary classrooms without offering support and academic engagement cannot be the purpose of IE. In an actual inclusive classroom, teachers provide their students with SEN with equitable support to enable them to participate physically, socially and academically with their peers (Pearce, 2009).

Generally, one of the key reasons for the segregation of students with SEN from the regular schools is the negative attitudes of teachers towards disability (Grieve, 2009). The success of IE largely depends on teachers because they are to play the most crucial role in classroom practice (Jerlinder et al, 2010). A number of recent studies suggest that while teachers develop negative attitudes towards students with SEN, they are less likely to accept any changes in their pedagogical practices (Barnyak & Paquette, 2010; Malak, 2013).

"Attitude is a psychological tendency that is expressed by evaluating a particular entity with some degrees of favour or disfavour" (Eagle & Chaiken, 1993). Attitudes are comprised of three components - cognitive, affective and behavioural (Eagle & Chaiken, 1993; Bizer et al, 2003). In literature there are a number of words to express attitude, such as values, judgement, opinions, perceptions, dispositions and perspectives (Ajzen, 1991; Ben-Yehuda et al, 2010). Ajzen (2005) argued that attitude is the most significant factor which largely influences the behaviour of an individual.

Teachers' knowledge of diverse learning needs influences their attitudes and overall behaviour towards students with SEN (Ryan, 2009). Their motivation may also be connected to behaviour. The behaviour of teachers in the classroom determines how students will learn. Forlin et al (2009) argue that the inclusion of students with SEN is associated with the regular teachers' willingness to work with them.

Pre-service teachers are important agents for the implementation of IE. With the increasing inclusion of students with SEN in ordinary classes, it has become essential to create 'pathways' for pre-service teachers (Lancaster & Bain, 2010) to

enhance skills for teaching more diverse groups of students. Many researchers have demonstrated that participation in a pre-service preparation course positively influences the attitudes, self-efficacy and professional efficacy of pre-service teachers to work with students with SEN (Burton & Pac, 2009). However, it is also evident that teacher education institutes sometimes fail to motivate pre-service teachers towards inclusion due to inappropriately designed preparation programmes. For instance, the study of Li et al (2010) revealed that although pre-service teachers in some parts of the United States and China had favourable attitudes towards inclusion, they were inadequately prepared to teach students with SEN. They suggested that the teacher preparation institutions in both countries ought to concentrate on the issues of teacher attitudes and self-efficacy so that pre-service teachers could be better prepared to meet the challenges of inclusion.

### Background of the study

IE is at an early stage in Bangladesh (Malak & Khanam, 2011). Most children with SEN are segregated from Bangladeshi regular schools (Akter & Malak, 2008; Das, 2011). One of the reasons for this segregation is that regular teachers are not skilled enough to facilitate learning for students with SEN (Kibria, 2005). Teachers and school administrators in Bangladesh have superstitions and misconceptions about students with SEN (Kibria, 2005). An empirical study of Malak et al (2005) reported that about 90% of the parents of students with hearing impairment studying in special schools demanded IE for their children.

In recent years, the Government of Bangladesh (GOB) has committed to ensure education for all by 2018 (Islam, 2010). Further, the GOB is one of the signatory countries of the Salamanca Declaration-1994, Dakar Framework for Action-2000, and United Nations Convention on the Rights of Persons with Disabilities-2006, in which education of children with SEN is to be implemented through an inclusive approach. Moreover, the Constitution of Bangladesh (Article 28.3 of part III) protects human rights on the grounds of religion, race, caste, sex, and place of birth or disability (Ministry of Law, Justice & Parliamentary Affairs, 2000). Article 17 (a, b and c) of the Constitution also ensures education for all (Ministry of Law, Justice & Parliamentary Affairs, 2000). Similarly, the Bangladesh Persons with Disabilities Welfare Act, 2001, ensures education of children with SEN through mainstreaming (Ministry of Social Welfare, 2001).

The most recent education policy, known as the National Education Policy 2010, indicates the need for inclusion of children with special needs as a strategy for

reducing dropout rates in primary education (Ministry of Education, 2010). Consequently, the Directorate of Primary Education (DPE) has been running several projects, including Primary Education Development Programme-2 (PEDP-2) to prepare for addressing IE in regular classrooms. Regular teachers have been provided with professional development focussing on IE under PEDP-2; however, there is still a lot of work to be done to change the attitudes of teachers towards students with SEN (Ahuja & Ibrahim, 2006).

In Bangladesh, there are only two teacher education institutes which offer a fouryear Bachelor of Education (Honours) programme. Special education is one of the four streams of this programme. The aim is to provide the PSpE teachers with an overall understanding of all categories of disability so that they can provide essential services to any students with SEN. The PSpE teachers serve as resource teachers in 64 districts and many of them join the Upazilla (subdistrict) Resource Centres (URCs) as instructors responsible for conducting training with teachers. They also can serve as Upazilla Education Officers (UEOs) who train and monitor teachers in the primary education sector.

The rationale behind studying PSpE teachers' attitudes towards IE is compelling in Bangladesh. Although Ahsan and Burnip (2007) reported that "Bangladesh is not behind other countries in enacting laws and declarations in favour of special education", such legislations have not been implemented in practice (Khan et al, 2007). One of the reasons for the gap between policy and practice in primary education in Bangladesh is the lack of research-based IE policy in primary education.

Most research regarding students with SEN is based on disability rights and government policy, rather than IE practice. A small number of empirical studies (Directorate of Primary Education; CSID, 2002, 2003, 2005; Malak et al, 2005; Akter & Malak, 2008; Ahsan et al, 2011) have focused on education for children with SEN. However, little published evidence is available regarding examining PSpE teachers' attitudes towards including students with SEN in regular classrooms. The present study attempts to fill this gap. Since attitude influences behaviour (Ajzen, 2005), it is therefore imperative to understand pre-service teachers' attitudes in order to promote IE in regular classes.

## **OBJECTIVES**

The general objective of the study was to examine pre-service special education (PSpE) teachers' attitudes towards IE for students with SEN. Specific objectives were conceptualised as the following research questions:

- 1. What attitudes do PSpE teachers hold towards the inclusion of students with SEN in regular classrooms?
- 2. Is there any significant difference in the attitudes of the PSpE teachers based on their demographic characteristics:
  - A. Gender: male or female
  - B. Close contact: having a family member with disability (more specifically, having a primary or secondary school-aged boy or girl who has SEN in the PSpE teacher's family)
  - C. Area of specialisation: major areas of study (e.g. hearing impairment, visual impairment and intellectual impairment)
  - D. Practicum: school placement for practice teaching for one semester (at least six months of school placement)

## METHOD

A survey questionnaire was used in this study. Creswell (2008) suggested the survey design for measuring attitudes, beliefs and opinions in educational research, as it is the most popular method to collect information from a large population.

### Participants

All the PSpE teachers who were enrolled in a four-year Bachelor of Special Education (Honours) programme at a public university were invited to participate in the study. The Special Education programme offers three major areas of specialisation, namely a) hearing impairment, b) visual impairment, and c) intellectual impairment. All the PSpE teachers specialising in these three areas were invited. The sample consisted of a total of 100 pre-service teachers – 56 females and 44 males.

### Sampling

With permission from the chairperson of the Special Education programme, the objectives of this study were explained orally at a student-teacher meeting. It should be noted that in addition to Special Education, the teacher education institute has three other streams, namely Science Education, Social Science Education and Language Education. The students of Special Education are treated as PSpE teachers. All the participants in this study were PSpE teachers rather than general

pre-service teachers, because the objective was to explore the attitudes of PSpE teachers towards inclusion. Around 140 students were present at the student-teacher meeting. They received a survey package (a survey questionnaire and an explanatory statement) which they were requested to return within one week via a drop-box located at a corner of the Departmental Library. 103 questionnaires were returned; however, 3 questionnaires were rejected for several reasons. For example, only demographic information was provided, only one-third of the items were answered or there were more than two answers in most of the items.

#### Instrument

Scales which were found in the literature helped in preparing the survey statements. Attitudes Towards Inclusive Education Scale (ATIES) developed by Wilczenski, (1992), Concern about Inclusive Education Scale (CIES) of Sharma and Desai (2002), and Interaction with Persons with a Disability (IPD) Scale designed by Gething (1994) were helpful in developing the items of the survey. It is important to note that the existing Scales were not directly used. The items were modified according to the study's context and research questions.

A cross-sectional survey consisting of two parts was employed. Part one was designed to gain demographic information (eg, gender, disability-related experience, area of specialisation and school practicum) about the participants. Part two employed a 20-item based survey (Appendix) to measure participants' attitudes towards IE. The items were rated on a five-point Likert scale, ranging from 'strongly agree'-5 to 'strongly disagree'-1. Survey statements were translated to Bangla language and were pilot tested on a small number (n-10) of PSpE teachers who were asked to comment on the clarity of the survey items. The translated survey was then verified by an expert on IE at University of Dhaka, prior to application.

### RESULTS

### **Demographic Information**

100 PSpE teachers were selected from the Special Education programme of a teacher education institute in Bangladesh. Table 1 shows the demographics of the participants.

Females comprised 56% of the group. Areas of specialisation included hearing impairment (27%), vision impairment (17%) and intellectual disability (30%). In

addition, 26% of participants who were yet to choose their area of specialisation were also included in the survey.

Gender, practicum, close contact (that is, having had direct contact with schoolaged children with SEN in one's family) and specialisation were the measured independent variables by which the attitudes of the PSpE teachers were compared. 45% of participants had completed their practicum and 20% had close contact with children with SEN in their family. It should be mentioned that there were no participants who had both practicum and close contact with SEN children.

Gender		Area Specialisation			Practicum		Close Contact		
Female	Male	HI	VI	II	Undecided	Yes No		Yes	No
56	44	27	27 17 30 26 4		45	55	20	80	
100				100		1	00	100	

Table 1: Demographics of the Participants

Note: HI: Hearing Impairment; VI: Visual Impairment; II: Intellectual Impairment

### **General Attitudes of the Participants**

Table 2 demonstrates that the overall attitudes of the PSpE teachers were positive towards IE for students with SEN. For example, all items on a 5-point Likert scale had a mean score of 2.83 or greater. In fact, 5 items scored 4.0 or greater, and 10 items scored 3.5 or greater.

Table 2 also demonstrates variations of responses among different items. Participants showed maximum agreement on the school managing committee (M= 4.6, SD= 0.87) having to be supportive to facilitate IE better. The evidence reflects that pre-service teachers are strongly in favour of some changes in collaboration between parents and teachers (M= 4.58, SD= 0.85) and in modifying assessment systems (M=4.59, SD= 0.86) in order to promote IE.

Participants had mixed attitudes towards including different types of students with SEN who would be able to function academically in the mainstream classes. Table 2 shows highly positive attitudes towards students with physical impairments (item 7) (M= 4.16, SD= 0.99). Attitudes were also positive towards students with hearing impairments (M=3.99, SD= 1.11) and those with vision impairments (M=3.93, SD= 1.19). However, data shows comparatively unfavourable attitudes (M=2.93, SD= 1.17) of pre-service teachers towards students with intellectual impairments (item 5).

Participants' responses about training (item 4) to enable teachers to be effective for inclusion (M= 4.23, SD= 0.96) and about the preparation course (item 12) they were studying (M=4.03, SD= 0.86) also reflected their positive attitudes.

In contrast, PSpE teachers' attitudes generally were not positive to the items relating to concerns about IE for students with SEN. The concern related items were negatively phrased in the scale. For example, item 10 says "I am concerned that mainstream students will be disadvantaged academically by having students with disabilities in their classes". Responses to this item were reversed while coding data into SPSS. Therefore, higher agreement with this item indicates belief that the mainstream students will not be disadvantaged. The scores of most of the concern related items range from 3.01 to 3.20, indicating negative attitudes. The scores of item 10 (M=3.13, SD= 1.36), item 11(M=3.04, SD= 1.21), item 13 (M=3.01, SD= 1.32), item 14 (M=3.20, SD= 1.11) and item 20 (M=3.02, SD= 1.49) represent negative attitudes of the participants (Table 2). Participants' responses to item 3 (M=2.98, SD=1.50) and item 6 (M=2.83, SD=1.37) also represent negative attitudes towards inclusion. Therefore, the findings related to concerns about inclusion indicate that the participants were worried due to large classes, heavy workloads, interruption of regular students' progress, and negative peer interaction between students with SEN and regular students. These results also point out that the participants were anxious that students with SEN could become frustrated in regular classrooms.

No	Items	Ν	Mean	Standard Deviation
01	Students with hearing impairments	100	3.99	1.11
02	Students with vision impairments	100	3.93	1.19
03*	Inclusion delays learning of SEN	99	2.98	1.50
04	Training enables teachers to be effective	100	4.23	0.96
05	Students with intellectual impairments	100	2.93	1.17
06*	Large class hinders inclusion	100	2.83	1.37
07	Students with physical impairments	100	4.16	0.99
08	My teaching approach suits with SEN	100	3.80	1.19
09	Diverse groups enhance learning in the class	100	3.42	1.47
10*	Mainstream students will be disadvantaged	99	3.13	1.36
11*	Workload increases unusually	100	3.04	1.21

### Table 2: Mean Scores and Standard Deviation

12	Preparation programme is effective	100	4.03	0.86
13*	Inclusive practice is only for small class	99	3.01	1.32
14*	Students with SEN will be frustrated	100	3.20	1.11
15	Support teacher is required	100	3.21	1.26
16	Teachers' skills are enhanced by having SEN in classrooms	100	3.52	1.32
17	Collaboration among teachers and parents	100	4.58	0.85
18	Support of school managing committee	100	4.60	0.87
19	Modification of assessment system		4.59	0.86
20*	Students with SEN will be rejected	100	3.02	1.49

Note. \*Responses of these items were reversed in coding into SPSS. Therefore, higher agreements always represent positive attitudes towards IE.

### Gender Breakdown of the Attitudes of the Participants

Table 3 shows no major differences in the participants' responses based on gender. Males' agreements were slightly higher than that of females in some items (items 2, 5, 8, 9 and 12). While over 80%, of males agreed that students with visual impairment could perform academically in the mainstream classes, female participants' agreement was below 70%. However, female participants had slightly higher agreement to several other items (items 1, 4, 7 and 19) in comparison with their male counterparts. In item 5 (about intellectual impairments) both male and female participants' disagreements (M=31.8%, F=44.6%) were higher than on other items. Higher level of uncertainty (M=25%, F=21.4%) was observed in male participants for item 5 (about intellectual impairments). At the same time, greater uncertainty (F= 26.8%, M= 18.2%) was found among female participants for item 8 (about teaching confidence).

No.	o. Items		N	Responses (%)		
INO.	Items	Gender	IN	Α	U	D
1	Students with hearing impairments	F	56	80.4	7.1	12.5
		М	44	77.3	0	22.7
2	Students with vision impairments F		56	69.6	8.9	21.4
		М	44	81.8	2.3	15.9
3	Training enables teachers to be effective	F	56	82.1	8.9	8.9
		М	44	79.5	11.4	9.1
4	Students with intellectual impairments	F	56	33.9	21.4	44.6
		М	44	43.2	25.0	31.8

### Table 3: Attitudinal Differences between Male and Female

5	Students with physical impairments	F	56	85.7	3.6	10.7
		М	44	79.5	9.1	11.4
6	My teaching approach suits with SEN	F	56	60.7	26.8	12.5
		М	44	65.9	18.2	15.9
7	Diverse groups enhance learning in the class	F	56	51.8	5.4	42.9
		М	44	61.4	9.1	29.5
8	Preparation programme is effective	F	56	41.1	19.6	39.3
		М	44	47.7	20.5	31.8
9	Teachers' skills are enhanced by having SEN	F	56	94.6	0	5.4
		М	44	90.9	4.5	4.5

### Attitudes based on Specialisation

Items 1, 2 and 5 were formulated to measure participants' attitudes regarding the ease of including students with particular impairments in a regular classroom. It is noteworthy that the participants tended to align favourably with the disability specialisation that they were studying (Table 4). For example, participants whose specialisation was "Hearing Impairment" had stronger agreement on students with hearing impairment, compared to students with visual impairment and students with intellectual impairment. Similarly participants studying "Visual Impairment" and "Intellectual Impairment" had stronger agreement on students with visual impairment and students with intellectual impairment with intellectual impairment.

Types of impeirment	Maior area of study	Responses (%)					
Types of impairment	Major area of study	SA	Α	U	D	SD	
Item 1	Hearing impairment	55.6	33.3	0	7.4	3.7	
Hearing impairment	Vision impairment	47.1	30.1	10.9	11.9	0	
	Intellectual impairment	43.3	30.3	13.7	12.7	0	
Item 2	Hearing impairment	51.9	20.7	13.7	10.7	3.0	
Vision impairment	Vision impairment	64.7	23.5	10	1.8	0	
	Intellectual impairment	43.3	23.3	13.3	16.7	3.3	
Item 5	Hearing impairment	7.4	33.3	22.2	18.5	18.5	
Intellectual impairment	Vision impairment	5.9	35.3	29.4	17.6	11.8	
	Intellectual impairment	10.0	46.7	13.3	16.7	13.3	

Table 4: Attitudes based on Areas of Specialisation

At the same time, results show that participants who had not yet chosen their area of specialisation, held stronger agreement on students with physical impairment. Also, their attitudes were more positive towards including students with visual

impairment, as compared to students with hearing impairment and intellectual impairment.

### Teaching Confidence based on Specialisation

Participants' responses regarding their confidence about teaching students with SEN varied according to their areas of specialisation.

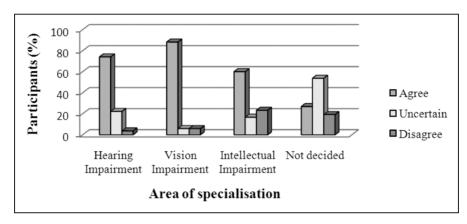


Figure 1: Participants' confidence on teaching students with SEN.

Participants whose major area of study was visual impairment were more confident (88.2%) in their approaches (Figure 1) to accommodate students with SEN in mainstream classes. Those who were yet to decide on their area of specialisation showed distinctly higher levels of uncertainty (53.8%) regarding teaching confidence. It is important to mention that the numbers of participants with practicum experience in the areas of visual impairment, hearing impairment and intellectual impairment were 12, 16 and 17 respectively.

### Findings based on Practicum

Major differences between participants who did their practicum and those without practicum were recorded in many items

In the responses to item 6 about 'large classes hindering inclusion (Reversed in coding)', a big difference was found between participants who did their practicum and those without practicum. While 77.8 % pre-service teachers with practicum experience agreed that large classes are not a barrier towards inclusion, only 9.1% pre-service teachers without practicum agreed with this (Figure 2).

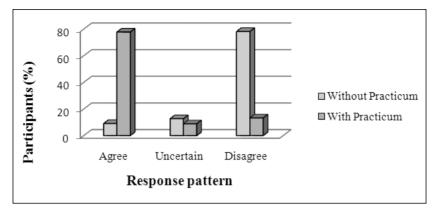


Figure 2: Participants' concern about class size

Like item 6, there was also a major difference found in the responses to item 10 about 'whether mainstream students are disadvantaged due to inclusion' (Reversed in coding). Around 90% pre-service teachers with practicum experience agreed that students with SEN do not hinder their mainstream peers' learning. However, strong disagreement was identified among participants (69.1%) who did not have practicum experience (Figure 3).

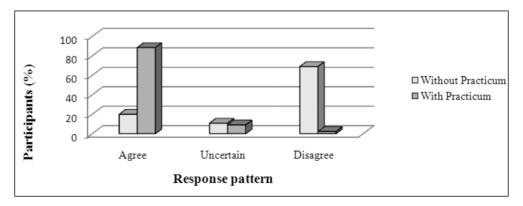


Figure 3: Participants' concern about regular students' achievement

Participants' responses regarding confidence (item 8) about teaching strategies to deal with students with SEN, also varied tremendously, based on practicum. 100% (Table 5) of participants with practicum experience were confident, whereas only 32.7% of those without practicum agreed that they would be able to teach students with SEN.

Items	Practicum	Responses (%)					
Items	riacticum	SA	Α	U	D	SD	
Item 8: Confidence on teaching	Yes	64.4	35.6	0	0	0	
approach	No	14.5	18.2	41.8	14.5	10.9	
Item 9: Diverse groups enhance	Yes	64.4	33.3	2.2	0	0	
learning in the class	No	10.9	10.9	10.9	45.5	21.8	
Item 16: Teachers' skills are	Yes	48.9	48.9	2.2	0	0	
enhanced by having SEN in classrooms	No	12.7	18.2	14.5	40.0	14.5	

### Table 5: Attitudes towards Learning and Teaching based on Practicum

Major differences were also found in items 9 and 16 which were constructed to measure pre-service teachers' attitudes towards the benefits of inclusive education (Table 5). While no disagreement was recorded from the participants who did their practicum, 67.3% of those without practicum disagreed with the statement that diverse students enhance learning for all (item 9).

### **Findings based on Close Contact**

Pearson Chi-Square ( $\chi$ 2) statistics were used to examine whether the attitudes of the participants were different in terms of some dependent variables (items 6, 9, 10, 13, 16 and 20) based on "close contact". It is necessary to explain that close contact refers to having a primary or secondary school-aged child in the family of the participants. 20 participants had close contact with children with SEN in their families. Interestingly, no participant was found to have both practicum and close contact experiences. Therefore, close contact should not be overlapped with practicum.

Table 6 shows that 68.8% of participants with "close contact" agreed and 60.3% of participants without "close contact" disagreed with item 6, with Pearson Chi-Square ( $\chi$ 2) test=4.468, *df* =1, resulting in a *p* value less than 0.05 (*p* = 0.035). Similarly, in item 9 ( $\chi$ 2=4.256, *df*=1, *p*<0.05), item 10 ( $\chi$ 2=5.946, *df*=1, *p*<0.05), item 13 ( $\chi$ 2=6.345, *df*=1, *p*<0.05), item 16 ( $\chi$ 2=6.940, *df*=1, *p*<0.05) and item 20 ( $\chi$ 2=7.094, *df*=1, *p*<0.05) significant differences were found between the two groups on the basis of "close contact".

Cro	ss-tab	ulation				
	No	Items	Yes/No	Respo	nse (%)	N of Valid Cases
				Α	D	
	06	Large class hinders inclusion	Y	68.8	31.3	20
			N	39.7	60.3	- 89
נד	09	Diverse groups enhance learning	Y	82.4	17.6	- 93
Close Contact		in the class	N	55.3	44.7	93
ů	10	Mainstream will be	Y	80.0	20.0	- 89
lose		disadvantaged	N	49.3	50.7	09
0	13	Inclusive practice is only for	Y	81.3	18.8	- 83
		smaller classes	N	46.3	53.7	00
	16	Teachers' skills are enhanced by	Y	94.1	5.9	- 91
		having SEN in classrooms	N	60.8	39.2	91
	20	Students with SEN will be	Y	82.4	17.6	- 88
		rejected by peers	N	46.5	53.5	00
Chi	-Squa	re test statistics				
	No	Items	Pearson Chi-Square Value	df		mp. Sig. (2-sided)
	06	Large class hinders inclusion	4.468	1	(	0.035
ntact	09	Diverse groups enhance learning in the class	4.256	1	(	0.039
Close Contact	10	Mainstream will be disadvantaged	5.946	1	0.015	
Ŭ	13	Inclusive practice is only for smaller classes	6.345	1	0.012	
	16	Teachers' skills are enhanced by having SEN in classrooms	6.940	1	(	0.008
	20	Students with SEN will be rejected	7.094	1	(	0.008

#### Table 6: Chi-Square Analysis based on Experience

*Note:* A = Agree, D = Disagree, *df* = Degrees of Freedom, Asymp. Sig = Asymptotic Significant.

Inferential statistics, including 't' tests for independent samples and factor analysis showing correlation, were utilised to find whether the participants differed in their responses on the basis of several independent variables.

### **Factor Analysis**

To test the construct validity of the statements, an explanatory factor analysis was conducted in which a principal components analysis was followed by varimax rotation (Table 6). The principal components analysis revealed three factors (absolute value >0.40 considered) which accounted for 63.23% of total variance. Factor 1 (General beliefs and concerns perspective) explained 38.59% of the variance. The second factor (Training and confidence perspective) explained 15.38% of the variance. The third factor, which consisted of a small number of statements expressing collaboration perspective, explained 9.26% of the variance. Internal consistency of the items (20 items) were calculated by using Cronbach's alpha ( $\alpha$ = 0.941). The related values for Factors 1, 2 and 3 were estimated as 0.944, 0.729 and 0.629 respectively (Table 7).

Factors	Items	Item loading
Factor 1: General beliefs and	1) Hearing Impairment	0.659
feelings	2) Vision Impairment	0.618
$(38.59\%, \alpha = 0.944)$	3) Special education better	0.725
	5) Intellectual impairment	0.611
	6) Large class	0.799
	7) Physical impairment	0.556
	8) Teaching confidence	0.611
	9) Learning enriched	0.786
	10) Mainstream- disadvantaged	0.866
	11) Workloads	0.784
	13) Smaller classes	0.773
	14) Frustration	0.729
	20) Teasing-rejection	0.852
Factor 2: Training	4) Teacher training	0.637
$(15.38\%, \alpha = 0.729)$	12) Preparation course	0.534
	16) Teacher instructions	0.696
	19) Public examination	0.601
Factor 3: Collaboration	17) Collaboration	0.627
(9.29% , <i>α</i> = 0.629)	15) Support teacher	0.585
	18) School Managing Committee	0.804

### Table 7: Varimax Rotated Matrix

Note: N=100, principal component analysis; Varimax rotation, listwise deletion; Loadings lower than 0.40 were omitted.

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Significant and positive correlations were revealed between all three factors (Table 8). Higher level significant and positive correlation (r = 0.631, p<0.01) was found between Factor 1 and Factor 2. This indicates that if a participant has positive attitudes towards the general issues of IE, then he/she would emphasise teachers' professional development. Moderately significant and positive correlation (r = 0.440, p<0.01) was identified between Factor 2 and Factor 3, indicating that participants who underpin teacher training also support collaboration among school communities for better inclusion. In addition, lower level significant correlation (r = 0.313, p<0.01) was found between Factor 1 and Factor 3, which implies that if one participant holds positive attitudes towards the general issues of inclusion, he/ she would support collaboration in school communities.

Factors	R	Factor-01	Factor-02	Factor-03
Factor-01	R	χ	0.631**	0.313**
Factor-02	R	0.631**	χ	0.440**
Factor-03	R	0.313**	0.440**	χ

#### **Table 8: Correlation among the Factors**

Note. *r* = Pearson Correlation, \*\*. Correlation is significant at the 0.01 level (2-tailed)

#### Significant Differences in Attitudes based on Close Contact and Practicum

To determine whether the factors were significant or not on the basis of the participants' independent measured variables, several t-tests were conducted (Table 9). "Close contact" played a major role in influencing pre-service teachers' attitudes as there was significant difference found in Factor 1 (t = -2.477, df=95, p<0.05) between participants with and without "close contact" with SEN within the family. Moreover, highly significant differences were measured in participants who did 'practicum', compared to those without practicum in Factor 1 (t=-12.606, df =95, p<0.05).

Table 9: t-test	based on	Independent	Measured	Variables
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Factors	Variables	Y/N	N	Mean	Std. Deviation	<i>T</i> Value	df	Sig. (2-tailed)																	
	Close	No	77	-0.125	1.004	-2.477	2 477	2 477	2 477	2 477	2 477	2 477	2 477	2 477	2 477	2 477	2 477	2 477	2 477	2 477	2 477	2 477	2 477	OF	.015
Easter 1	Contact	Yes	20	0.481	0.845		95	.015																	
Factor-1	Drug at i arrage	No	54	-0.702	0.687	12 (0)	OF	000																	
	Practicum	Yes	43	0.882	0.510	-12.606	95	.000																	

*Note: df*=Degrees of freedom

## DISCUSSION

Results show that the pre-service teachers enrolled in the Special Education programme generally hold positive attitudes towards IE. They showed higher level of positive attitudes about IE for students with physical impairments, hearing impairments and vision impairments. This result is similar to the outcomes reported by Gyimah et al (2009) and Mdikna et al (2007). This finding is also consistent with the research of Conderman and Johnston-Rodriguez (2009), and Sari et al (2009) who reported that due to effectively designed teacher education programmes, pre-service teachers' attitudes were changed positively towards students with SEN. This finding however contradicts the findings of Gill et al (2009) who observed that many pre-service teachers develop negative attitudes towards students with SEN during their preparation programmes.

Despite the fact that the PSpE teachers hold overall positive attitudes towards including students with physical impairment, hearing impairment and vision impairment, their attitudes were comparatively unfavourable towards including students with intellectual impairment into the mainstream classrooms. This result supports the findings of Forlin et al (1996) who reported that teachers' attitudes were less positive towards including students with intellectual disabilities in comparison to other forms of disabilities. In Bangladesh, examinations are a must from grade one onwards, for all students to get promoted to the next grade. Predictably, the PSpE teachers may have thought that due to the rigid assessment system, the students with intellectual impairment would drop-out if they were included in the regular classrooms.

The study indicates that the pre-service teachers were concerned about some issues of IE like extra workloads, large class size and interruption of regular students' progress due to the presence of students with SEN. This result is consistent with the findings of Horne and Timmons (2009) who observed that pre-service teachers were concerned about planning time, meeting all students' learning needs and mainstream students' performance. In a qualitative study, Malak (2013) reported that pre-service teachers in Bangladesh are worried about inclusion of students with SEN because of the extremely large classes and heavy workloads in primary education. This result partially supports the findings of Meng (2008) who revealed that although the rural and urban teachers in China held very positive attitudes regarding the benefits of IE, they supported segregated settings for severely impaired children. There could be several possible explanations for this finding. First, the assessment system of Bangladesh is completely examination-focused, and not focused on functional assessments. Second, in Bangladesh the class size is generally large (for instance, a classroom would have around 65 to 90 students being taught by one teacher). Third, the workload on teachers is heavy. Taking all these challenges into consideration, one may not support students with SEN being included in regular classrooms.

There are highly significant differences between the attitudes of the PSpE teachers who performed practicum and those who did not. In every case, including general attitudes, advantages of inclusion, concerns regarding inclusion, and collaboration and support services, pre-service teachers who did their practicum had more positive attitudes than those without practicum. This result supports the findings of Bortoli et al (2009) who reported that teachers' confidence and efficacy improved because of the increased exposure to teaching students with SEN in practicum placement. Many scholars (Pearce, 2009) also consider practicum as a significant factor in preparing teachers for better inclusive practices. It is also evident that in order to encourage changes in the attitudes of prospective teachers, it is necessary to design practice teaching programmes explicitly (Malak, 2012). Research shows (Golder et al, 2009) that practicum assists pre-service teachers to enhance their understanding and professional skills regarding teaching and learning strategies for inclusive practice.

Research however, revealed that the principals of several teacher training colleges in Bangladesh acknowledged challenges in providing effective practicum facilities in inclusive settings for pre-service teachers as inclusive schools were unavailable (Ahsan et al, 2011). Findings of an action research (Malak, 2012) indicated that pre-service special education teachers in Bangladesh were not satisfied with their experiential learning facilities and demanded more hands-on experience prior to practicum placement. Research in other contexts also suggests that recent graduates wanted more time to practice teaching within diverse settings during pre-service education programmes (West & Hudson, 2010).

Another important independent demographic variable in this study was "Close Contact". Here close contact refers to the presence of a primary or secondary school-aged child in the family of the PSpE teacher. The present study consisted of 20 pre-service teachers who had early close contact with children with SEN in their own families. The result shows significant difference in attitudes between PSpE teachers with and without this close contact. This result supports the research of Roni and Leyser (2006) who reported the correlation between early experience of working with students with SEN and more positive attitudes about

the benefits of inclusion. In this study, in most cases PSpE teachers who had close contact with children with SEN in their families demonstrated higher positive attitudes. Since close contact with SEN plays a major role in pre-service teachers' attitudes, experiential learning (e.g. early field experience) could be useful. Carroll et al (2009) suggest that an early field visit has a great influence on motivating pre-service teachers to promote inclusion.

Due to their superstitions and misconceptions about disabilities, people in Bangladesh still tend to hide family members if they have any disability. Research shows that only 11% of children with SEN attend formal or non-formal schools in Bangladesh (CSID, 2003). It would be worthwhile in this context if PSpE teachers could be involved in building school-home relationships with children with SEN at the beginning of their studies. In this way, the pre-service teachers would be able to receive early experience, and at the same time children with SEN and their families would also get quality support.

The present study indicates that PSpE teachers whose area of specialisation is visual impairment have stronger agreement on the confidence of inclusive teaching approaches, compared to those who specialised in hearing impairment and intellectual impairment. There are several public universities in Bangladesh that allocate seats (1-3%) for students with visual impairment. Accordingly, this programme also has some students with visual impairment who are undergoing Special Education in the area of vision impairment. Perhaps the PSpE teachers who were specialising in the same field may have been influenced by the performance of their visually impaired peers.

A further result of the study indicates that PSpE teachers hold more positive attitudes towards the disability in which they have specialised. A possible explanation could be that the particular disability may have been covered comprehensively in their study programme. As a result, they may have developed more confidence in dealing with it.

## CONCLUSION AND IMPLICATIONS

Experiential learning (e.g. practicum and close contact) appeared to be the most significant variable in shaping the positive attitudes of the PSpE teachers towards IE for students with SEN. Therefore, every teacher education institute in Bangladesh should design its programme to ensure that prospective teachers have adequate opportunities for experiential learning.

There are very few institutions in Bangladesh that consider teacher education as a separate discipline and offer Bachelors and Masters Degrees in education. Teacher Training Colleges (TTCs) offer one year B.Ed and one year M.Ed courses for teacher candidates, but it is important to note that the curricula hardly focus on the trends and issues of IE and students with SEN. In recent years, the National Education Policy, 2010, recommended every teacher training institute to revise the existing curriculum by incorporating disability and IE related courses (Ministry of Education, 2010). Therefore, the time is right for the TTCs to design such a programme that could substantially facilitate IE related experiential learning for pre-service teachers.

Moreover, concern-related attitudes of the participants regarding the inclusion of students with SEN strongly support the need for more hands-on learning opportunities in the teacher education programme. Also, the negative attitudes of the PSpE teachers towards IE for students with intellectual impairments could point to several reasons for the lack of confidence in mainstreaming these students. For example, students with intellectual impairment may exhibit difficulties in behaviour and attention which could impede classroom interaction, especially when classes are large. Therefore, adequate exposure to experiential learning in the pre-service education programme may help teacher candidates develop more favourable attitudes towards IE.

Teacher education institutes at university level should focus on offering more pedagogical courses of inclusive approach rather than offering disability studies only. These courses may enhance the confidence of pre-service teachers to teach students with SEN in regular classes. In addition, continuous professional development (short training, seminars and workshops) is also necessary. Teacher education institutes can organise such professional development activities apart from their mainstream programmes.

The nature of the primary education curriculum in Bangladesh is traditional and inflexible (Mullick et al, 2012). Examination-based assessment system and absence of functional assessment procedures are recognised as vital factors that influence pre-service teachers to develop unfavourable attitudes towards IE (Malak, 2013). Thus, the Directorate of Primary Education (DPE) in collaboration with the Ministry of Primary and Mass Education (MoPME) needs to work towards making the assessment system adaptive for all students, including those with SEN. In addition, the National Curriculum Committee and Textbook Board (NCTB) needs to make some essential adjustments in the existing curriculum, enabling students with SEN to participate academically in regular classes. If necessary changes are made, it would have an impact on the attitudes of both pre-service teachers and in-service teachers towards including students with SEN in their classes.

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These statements presented in the Table refer to your general experience; personal preference /beliefs/ opinion/concerns about including children with disabilities in regular schools.

S1.	Please circle (O) your response to each of the statements below	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
1	I believe that students who are hard of hearing can learn equitably with their peers in mainstream classes.	SA	A	U	D	SD
2	Students who have vision impairments and use Braille can learn in regular classes.	SA	А	U	D	SD
3	Students with disabilities will develop academic skills more rapidly in special education than in general education settings.	SA	A	U	D	SD
4	I believe that appropriate training can enable teachers to be effective in teaching for inclusive classes.	SA	А	U	D	SD
5	Students who have intellectual impairments can achieve in regular classes.	SA	А	U	D	SD
6	I feel that large classes hinder a teacher's ability to facilitate inclusive classroom practices.	SA	A	U	D	SD
7	I believe that students who have physical disabilities can participate academically in regular classes.	SA	A	U	D	SD
8	I am confident that my teaching approaches are suitable to meet the needs of students with disabilities.	SA	A	U	D	SD
9	I believe that having diverse learners in the classroom enriches all students' learning.	SA	A	U	D	SD
10	I am concerned that mainstream students will be disadvantaged academically by having students with disabilities in their class.	SA	A	U	D	SD

11	I am concerned that my workload will increase substantially if I have students with disabilities in my class.	SA	A	U	D	SD
12	I feel that the teacher preparation courses of this programme are effectively designed to prepare teachers in inclusive practices.	SA	A	U	D	SD
13	Inclusive practices will only be effective in a small class setting.	SA	A	U	D	SD
14	Students with disabilities in a regular classroom setting might experience frustration.	SA	A	U	D	SD
15	I feel that I would need a support teacher for teaching mainstream class having students with disabilities.	SA	A	U	D	SD
16	I believe teachers' instructional skill is enhanced by having a student with disabilities in their class.	SA	A	U	D	SD
17	I feel that collaboration among teachers, mainstream parents and parents of children with special needs is essential for effective inclusion.	SA	A	U	D	SD
18	School Managing Committee needs to be supportive of including children with disabilities in the regular schools.	SA	A	U	D	SD
19	Assessment system in the public examinations (SSC & HSC) should be modified for students with disabilities.	SA	A	U	D	SD
20	I am concerned that students with special needs will be rejected by the mainstream students in the class.	SA	A	U	D	SD