

## **Teachers' attitudes towards children with special educational needs: A comparative case study with pre-service and in-service mathematics teachers**

Nejla Tugcem Sahin

*University of Aberdeen, UK*

Almost one in six children in England has special educational needs (SEN), and considering the large proportion of children with SEN in general education classrooms, teachers' preparedness to teach in inclusive settings has become an important issue. This study aims to examine the attitudes of in-service and pre-service secondary school mathematics teachers towards children with SEN in a comparative way, considering years of experience in teaching. The participants were interviewed using semi-structured interviews. The results indicated that teachers' attitudes were generally positive towards children with SEN. However, the in-service teachers were rather more positive than the pre-service teachers. Additionally, the findings suggested that teachers' prior experience with individuals with SEN affected their attitude positively. Interestingly, this prior experience was not only related to teaching; teachers with personal, non-teaching experience of SEN had highly positive attitudes compared with the other participants.

**Keywords: special educational needs; secondary school mathematics education; teacher attitude; inclusive education**

### **Introduction**

According to national statistics, the proportion of children with SEN in England is 14.4% (DfE, 2017). Considering the prevalence of pupils with SEN in general education classrooms, it becomes very important for teachers to be aware of diversity in schools as well as the problems which might arise in inclusive settings. Some studies have found that successful inclusion depends on teachers having a positive attitude towards inclusive education and children with SEN (Avramidis, Bayliss, & Burden, 2000; Delaney, 2016). There is a growing body of literature on primary school teachers' attitudes towards inclusion but very little is known about secondary school teachers who are teaching different subjects without long-term contact with their students. There are also issues about covering the set academic content in the given time and an exam pressure on teachers as well as students (DeSimone & Parmar, 2006). In this context, it is significant to explore the attitudes of secondary school teachers on the issue of inclusion and children with SEN.

### **Literature review**

#### ***Special Educational Needs (SEN) and inclusive education of children with SEN***

The term 'Special Educational Needs' (SEN) refers to (a) children who have significantly greater difficulties in learning compared with their same-age peers, and (b) children who have disabilities which prevent or hinder them from accessing educational facilities which are provided by schools or local authorities (DfE, 2014a).

There are many different aspects in the different areas of special needs and they are rather controversial. In the SEN Code of Practice (DfE, 2014b, pp.97-98), types of special need are represented using four domains: (1) Communication and interaction, (2) Cognition and learning, (3) Social, emotional and mental health difficulties, and (4) Sensory and physical needs. These categories have been criticised for being superficial since they were defined using the five key developmental dimensions: language, cognitive, social, emotional and physical development (Frederickson & Cline, 2015). It could therefore be argued that categorising special needs using the developmental dimensions might not be the best way since there are other types of need, such as temporary special need like a child's broken leg (Rodd, 1999), and different levels of its severity. Additionally, children who are in the same SEN category might require different help or teaching.

Inclusive education is an important term in the SEN field and it is open to discussion whether it is successfully applied in schools. Inclusive education means providing equal opportunities for all children in terms of receiving a good quality education regardless of their disabilities, difficulties, race, ethnicity and socio-economic situation. It includes various aspects and different levels: "international, regional, national, local, school and individual" (Armstrong, A., Armstrong, D., & Spandagou, 2010, p.106). So, inclusion in a school does not always ensure that a student will be fully included in all settings in that school. Giangreco (1997, p.194) discussed the misuse of this term and suggested that inclusion may be "not inclusive, a partial implementation effort, or poor quality efforts". What should be highlighted here is that even though inclusion may not be successfully implemented in all settings, new initiatives must still endeavour to improve it. It is, therefore, important to question the essential requirements to promote and improve successful inclusion. One of these requirements is teachers with positive attitude towards children with SEN and their inclusion (Avramidis, et al., 2000; Delaney, 2016).

### ***Teacher attitudes***

In this section, the definition of attitude will be presented in two different ways. First, the definition will be considered in psychological terms and then it will be represented in terms of teachers' attitudes in relation to SEN. In the psychological aspect, attitude is defined as "a disposition to respond favourably or unfavourably to an object, person, institution, or event" (Ajzen, 2005, p.3). Bohner and Wanke (2002) and Ajzen (2005) highlighted three responses, cognitive, affective and behavioural/conative, from which attitude can be inferred. (a) Cognitive responses are the way in which a person reflects on her/his thoughts, perceptions or beliefs about an object; (b) affective responses are reflections of emotions and feelings, such as "expressions of admiration or disgust, appreciation or disdain" (Ajzen, 2005, p.5); (c) behavioural/conative responses are associated with the behavioural intentions or planned actions related to an object. It should be noted that the types of response are not mutually incompatible and "do not necessarily represent three independent factors" (Bohner & Wanke, 2002, p.5). Three or two types of response might occur in an evaluative response at the same time.

Ernest (1989) stated that teachers' attitudes represent their personal reactions to their experiences combined with other factors. These factors might be experience in teaching, in-service/pre-service training, and their personal experience with people with disability. A quantitative study conducted by Parasuram (2006), in an Indian context, identified several factors which influence teachers' attitudes towards inclusive education and disability. The findings suggested that the most important factor was

prior knowledge and experience with individuals with disability. Teachers who had previous contact with pupils with SEN were more likely to have positive attitudes. Interestingly, in a Serbian context, Kalyva, Gojkovic, & Tsakiris (2007) found no significant relation between the years of teaching experience and teachers' attitudes towards children with SEN; nevertheless, they found that teachers' prior experience in teaching such children affected their attitude positively.

Teacher training can also influence teachers in terms of developing self-efficacy (Velthuis, Fisser, & Pieters, 2014); teachers with high self-efficacy can develop positive attitudes towards inclusive education (Sari, Celikoz, & Secer, 2009). Kurniawati, Boer, Minnaert, and Mangunsong (2017) examined the effects of an in-service training scheme on teachers' knowledge and attitudes about SEN. During that programme, the following topics were addressed: (a) an overview of SEN with current debates and the philosophical ideas behind inclusion, (b) an overview of the types of SEN, (c) curriculum-based assessment, (d) teaching strategies (specific to SEN) and (e) Individual Education Programmes (IEP). The results showed that in-service training significantly and positively affected teachers' attitudes as well as their knowledge of SEN.

Considering the literature, this study aimed to compare attitudes of a group of teachers who had almost no experience (pre-service) and another group of teachers who had various years of experience in teaching (in-service) to evaluate the effect of experience on teachers' attitudes. The findings will help to identify implications for teacher education to improve PGCE special education courses which can enable pre-service teachers to develop positive attitudes towards children with SEN and their inclusion.

## **Methodology**

Ten secondary school mathematics teachers (five pre-service and five in-service) were interviewed for the present study. The main purpose of the selection of the participants was to be able to compare the attitudes of the teachers considering the difference in years of teaching experience. The participants were named I1, I2, I3 and so on. Interviewees I1 to I5 were pre-service teachers who had been doing their PGCEs at UCL/IOE. Interviewees I6 to I10 were in-service teachers who had been teaching at secondary schools in London, doing their MA in Mathematics Education at UCL/IOE, and their years of teaching experience ranged from two to eleven years. All in-service teachers had similar type of experience with children with SEN throughout their teaching career. They taught mathematics to children with SEN in general education classrooms, and almost all of them had a teaching assistant who helped the students with SEN during the lessons.

Semi-structured interviews were conducted and the responses of the interviewees were transcribed and analysed. In the evaluation of the attitudes of participants, three responses were considered (Ajzen, 2005; Bohner & Wanke, 2002): (1) teachers' feelings while teaching children with SEN (affective response), (2) their expectations for these children's achievement (cognitive response), and (3) their future plans regarding their teaching and their current actions in their classrooms (behavioural responses). The data were categorised into themes by identifying co-occurring statements in relation to the three elements described above.

## Findings and discussion

The findings revealed that the participants, both in-service and pre-service, held positive attitudes towards children with SEN and their inclusion; this finding was consistent with those of Avramidis et al. (2000) and Mintz (2007). Although they all had positive attitudes, the in-service teachers seemed to be more positive about children with SEN. Overall, the in-service teachers thought that children with SEN are capable of success but need more attention than other children. The pre-service teachers, on the other hand, were less positive and held low expectations about the achievement of children with SEN. They seem to feel that poor results of students with SEN were inevitable. The following quotations illustrate this point:

I4: To be honest, considering my bottom set and looking at the GCSE exams, it is impossible for them to get a good grade [...] they have special needs but they have a mind to think, they asked me how it is possible for them to get 5 for example [...] They are at 2, they don't know how to solve simple equations, it is impossible for these students to get a better grade.

I5: At the end of the lesson, I knew that some of them would not achieve anything. It is sad.

Although the in-service teachers held more positive attitudes towards children with SEN, surprisingly, years of experience in teaching did not seem to play a determining role in teachers' attitudes but a strong relationship was found between teachers' prior experience with children with SEN and their attitude towards them.

In-service teacher I7, who had been teaching for only two years, seemed to hold the most positive attitude compared with the other in-service teachers who had more than two years' experience in teaching. This interviewee has a younger sister on the autistic spectrum, and when he was asked about his thoughts on the attainment of students with special needs, regardless of the reality in the school in which he had been teaching, he said:

I7: I think that's quite hard to say; children with SEN are all low achievement [...] they have done lots of studies where they have shown autistic children can often do really well, in mathematics specifically, because of rules and routines and following structures. But, in my school, there are more special educational needs in the bottom sets across the school, maths and other subjects [...] I feel like [...] we should look at how we can support them to be meaning-makers or how we can look at the instruction to support that, and everything that goes around it.

The following response is from an interview with a pre-service teacher from an immigrant background. His family moved to England when he was in secondary school and he had been supported in the school as an EAL (English as an Additional Language) student. He stated that he could reflect on the feelings of children with SEN. He also stated that his secondary school environment was very problematic with many students who had social, emotional and behavioural problems:

I1: When I started at the school [in England] my English was not that fluent. So, I can relate to that – it is not a nice feeling. Not being able to, you know, communicate as well as you like to [...] I wasn't bullied but I do know a lot of people that were bullied. And a lot of the time it was to do with their needs in terms of linguistic needs or educational needs or physical disabilities. As I said, a lot of kids were quite careless. So, I did witness a lot of bullying ....

When asked what he thought about the idea that having special needs affects their attainment, he mentioned the deficit in their psychological readiness to learn, referring to his prior experience in secondary school:

I1: Education is not forefront in their mind [...] they have got bigger things to deal with, such as implications of the threats that they get from other students, so I don't think any student who is facing such problems is going to attain as he or she could have [...] but actually they can learn maths as much as anybody. It is just about those issues ...

When asked about their feelings about students with SEN, the majority of the in-service teachers described their feelings by talking about a specific child who they had taught, and they talked about them very positively. This might suggest that the relationship which they build with their students affects their attitude positively in general. An in-service teacher described her feelings about her visually impaired student as follows:

I9: We want him getting great results. We want him to be able to function as a member of the society. We want him to have the same opportunities that other kids have. You know, we want him to be able to go to university, get a job, travel and lead a full life in the same way that all our students can. That starts now ...

Parasuram (2006) examined teachers' attitude regarding the teachers' years of experience in teaching. She indicated that new generation teachers who had less than five years of experience were more positive about children with SEN in comparison to the teachers with more than five years of experience in teaching. The results of the current study support the idea that there is no direct relation between years of teaching experience and teachers' attitude. The participant (I7) who has a younger sister on the autistic spectrum was the most positive participant about inclusion and children with SEN even though he had only two years of experience in teaching. This outcome is contrary to one of the findings of Parasuram (2006) which indicated "no difference in attitudes between those [teachers] who had a family member with disability and those that did not have a family member with disability (p.239)."

Kalyva et al. (2007), on the other hand, found that teachers with prior experience in teaching children with SEN were more positive about their inclusion into general education comparing with teachers without such experience. The finding of the current study is in line with that of Kalyva, et al. (2007). However, the findings of the current study differ from the previous study in the sense that the prior experience of the participants in the present study was mostly non-teaching, personal, experience and, interestingly, it seemed to have a very significant effect on their attitude.

## **Conclusion**

The present study has shown that teachers' prior experience, mostly personal experience, affects their attitude towards children with SEN. An implication of this is the possibility that in teacher education the placement schools might be determined carefully to enable pre-service teachers to work with children with SEN. Also, since personal, non-teaching experience seems to play a significant role in developing positive attitudes, pre-service teachers might be encouraged to meet people with special needs. These people might be invited to PGCE workshops or sessions to interact with pre-service teachers to develop their understanding of SEN issues. This might lead to the teachers developing a positive attitude.

One of the most important limitations of this study is that behavioural responses were not revealed from the interview data. Questions related to the teachers' current actions and plans were not in the interview protocol. It was anticipated that these responses would be revealed during the interviews but this did not happen as expected. For further studies, I suggest that such questions be added to the interview protocol.

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