

Pre-service teachers' beliefs about inclusive education in the Netherlands: In exploratory study

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Teachers' beliefs are crucial to the success of inclusion programmes and reform efforts for children with special educational needs (SEN). Based on this evidence, one hundred and thirty-nine primary pre-service teachers from one training institution in the Netherlands completed an adapted version of a measure of beliefs towards inclusive education. In contrast to previous studies on pre-service teachers, results of this study showed participants held neutral or negative beliefs towards this matter. In addition, limited time for pupils received the highest rating as a barrier to inclusion, whereas direct teaching experience was the most preferred method of inclusion. The implications of this study for practice and indications for future research are discussed.

Key words: inclusive education, pre-service teachers, training teachers, beliefs.

Introduction

Inclusive education encompasses mainstream schooling in which the school curriculum accommodates every child, irrespective of his/her disability (Avramidis *et al.*, 2000a). In the last decades inclusive education has become one of the major topics in education. In this respect a great concern is the issue whether mainstream schools are capable of functioning as inclusive educational institutions (Mooij and Smeets, 2006). To realize the goal of including pupils with SEN effectively in regular education classrooms, many educators agree that staff members in regular schools should be willing to accept the philosophy and practice of inclusion (Ainscow, 2007). This acceptance depends mainly on the positive beliefs of school teachers about inclusive education (Jordan *et al.*, 2009).

Beliefs are claimed by Bandura (1986) to be the best predictors of the actions people make throughout their life. This also implies that if a person does not believe that he or she can generate a desired effect through his or her acts, he or she will not be motivated to behave accordingly (Bandura, 1997). Pajares (1992) argued that beliefs around a particular situation (for example regarding inclusive education) are more influential than knowledge, and therefore they are strong predictors of behaviours.

A review of research in educational contexts indicates that teachers' beliefs may have an enduring influence on the learning environment teachers create for children (Fives and Buehl, 2012). More specifically, teachers develop expectations about their own functioning in an inclusive setting, about how the child with SEN might function, and about the outcomes of inclusion (Beacham and Rouse, 2012).

Pre-service teachers' beliefs about inclusive education

Pre-service teachers' beliefs about inclusive education are formed on the basis of societal views towards individuals with SEN (Pajares, 1992), on their personal school experiences (Mahat, 2008), and, most importantly, during teacher preparation (Bransford *et al.*, 2005; Lambe and Bones, 2006; Rouse 2010; Sharma *et al.*, 2006). Teacher education is viewed as the principal vehicle to ensure that teachers acquire the appropriate knowledge and skills necessary to enable inclusion to be successful (Sharma *et al.*, 2006). However, developing effective inclusive practices begins in the teachers' professional preparation,

with pre-service teachers reconsidering their own beliefs about human differences (Bransford *et al.*, 2005; Lambe and Bones, 2006; Rouse, 2010).

Studies focusing on pre-service teachers' beliefs generally report that student teachers are positive towards inclusive education (Beacham and Rouse, 2012; Forlin *et al.* 2009; Hoskin *et al.*, 2015; Kraska and Boyle, 2014; Oswald and Swart, 2011; Spandagou *et al.*, 2008; Varcoe and Boyle, 2014). Additional findings on pre-service teachers have also highlighted that certain variables might shape these beliefs. Child-related variables such as the nature of a pupil's disability has been found to have an impact on acceptance of inclusive practices (Jordan *et al.*, 2009), with teachers being less willing to include children with behavioural and emotional disorders than pupils with intellectual disabilities (Avramidis *et al.*, 2000b; Hasting and Oakford, 2003; Sharma *et al.*, 2006). Teacher-related variables such as gender have been reported to influence pre-service teachers' beliefs. For example, female pre-service teachers have generally been found to have a greater tolerance for implementing inclusive education than male pre-service teachers (Forlin *et al.*, 2009).

Most controversial are the results of studies on the effects of holding a special education qualification for children with SEN or not. Previous research found a positive correlation between student teachers' educational backgrounds (e.g., holding a special education qualification) and their beliefs and attitudes towards inclusive education (Avramidis *et al.*, 2000b; Beacham and Rouse, 2012; Spandagou, *et al.*, 2008; Varcoe and Boyle, 2014). However, Kim (2011) reported that pre-service teachers from combined programmes (special education and regular education certification) and those from single-certification regular education programmes had similar views towards inclusion. In a study that combined a special education course with field experiences with children with SEN (McHattton and Parker 2013), results showed that regular education pre-service teachers' perceptions were significantly more positive towards inclusion, while special education pre-service teachers were slightly more negative following the co-teaching field experience.

Barriers to and facilitators to inclusion

Previous studies have pointed out what pre- and in- service teachers perceive to be the barriers to and facilitators of implementing inclusive education in mainstream schools. These practical factors may, in turn, contribute to influencing personal beliefs about inclusion (Strogilos and Stefanidis, 2015).

A barrier commonly cited by teachers is the lack of sufficient time (Klingner *et al.* 2003). In questionnaire-based studies, limited time and logistical challenges such as limited opportunities for collaboration with colleagues and specialists received the highest rating as barriers to successful inclusion (Stoiberg *et al.*, 1998; Rheams and Bain, 2005; York and Tundidor, 1995). Lack of experience of inclusion and limited knowledge of the special education field are also considered as obstacles to the implementation of inclusive practices (Ahsan *et al.*, 2012).

Direct teaching experience and observation of other teachers in inclusive settings are often reported as facilitators that help with the implementation of inclusive education (Avramidis and Kalyva, 2007). Similarly, teachers who positively perceive cooperation among staff members and co-teaching with special education professionals are also more positive towards inclusive education (Strogilos and Stefanidis, 2015).

Inclusive education in the Netherlands

The Netherlands has ratified several international agreements with regard to inclusive education such as the Council Resolution Integration of Children and Young People with SEN into ordinary systems of education (EU, 1990), the Salamanca Statement (UNESCO, 1994), the Convention on the Rights of Persons with SEN (UNESCO, 2006), and the Policy Guidelines on Inclusion in Education (UNESCO, 2009). However, together with other European countries (e.g., Germany), the Netherlands has for long time adopted a two-track approach for SEN pupils with two distinct education systems: the mainstream school system and the special school education (Mooij and Smeets, 2006). Based on a psycho-medical evaluation, different types of special schools host four categorizations of pupils with special needs (sensory impairments, communication disorders, motor and mental disabilities, and behaviour problems). Yet, special schools function as part of the Dutch educational system (Pijl, 2010), with over 2.7% of students with SEN segregated in special settings (Watkins, 2010). Only recently, the Dutch government has started promoting the inclusion of pupils with SEN into primary mainstream schools (Fanchamps *et al.*, 2011).

On 9 October 2012, the Dutch Senate adopted a new public law, called *Duty of Care in Appropriate Education* (Ministry of Education, Culture, and Science, 2011). The law came into effect the 1st of August 2014. This act on inclusive education focuses on the following measures: (1) to diminish the number of

pupils placed in a special education setting; (2) to create a collaborative network of schools in regular and special education regionally as well as to develop a more comprehensive school service system; and (3) to implement parental involvement with more emphasis on participation of parents in the decision-making processes regarding the content of service delivery (Fanchamps *et al.*, 2011). The implementation of inclusive education in the Netherlands will create a challenge for pre-service and in-service teachers who have to meet the learning needs of students with and without SEN. As a result, such legislation requires future teachers to acquire new beliefs regarding inclusive education.

Although the majority of mainstream schools in the Netherlands now includes children with a large range of impairments or difficulties, teachers often hesitate to accept responsibility for students with SEN (Pijl, 2010). De Moor and colleagues (2008) reported that 75% of a sample of Dutch in-service regular teachers was supportive of the inclusion of SEN pupils but when asked about placing those children in their classroom, the percentage dropped below 50%. In addition, in a study among 304 Dutch teachers in mainstream education, 79% of the teachers indicated a need for additional training to educate students with SEN appropriately (de Moor and Bakker, 2009).

Teacher education

In the Netherlands, it takes four years to gain a mainstream teaching qualification. Primary pre-service teachers study at institutions of higher professional education. They are trained to teach all curriculum subjects. An introductory module on teaching children with SEN is part of the regular teaching qualification. In addition, in the third or fourth year training institutions offer academic minors in different specializations. Because of inclusive policies, a growing number of pre-service teachers hold a minor in ‘Special Educational Needs’ (SEN) or attained an additional 2-year master’s special educational programme at university level (Pijl, 2010). The minor in SEN generally encompasses an introductory module on teaching pupils with all kinds of special educational needs, whereas master’s programmes provide a more in-depth preparation about sensory disabilities, severe mental disorders and remedial teaching (Pijl, 2010). However, the inclusion philosophy across different teacher training programmes designed to prepare future inclusive educators is not uniform. Thus the content of the minor in SEN might largely vary between teacher training programmes across the country.

Aims and research questions

There is a significant body of contemporary research investigating teachers' beliefs and attitudes about inclusive education (De Boer *et al.*, 2011). However, limited research has focused on pre-service teachers' beliefs towards inclusive education in the Netherlands. Therefore, this study aimed at examining the beliefs of pre-service teachers towards inclusive education, and barriers and facilitators to improving the implementation of inclusive practices in the Netherlands.

Specifically, the following research questions will be addressed: 1) what are the pre-service teachers' beliefs towards inclusion of children with SEN into the mainstream primary schools? 2) What are pre-service teachers' beliefs on barriers to and preferred methods for improving inclusive practices? 3) What is the relationship between following a minor in SEN and pre-service teachers' beliefs about inclusive education?

Methods

Participants

A convenience sample of 139 pre-service teachers (87.8% female) at a training institution for primary school educators in the Netherlands was included in the study. Respondents attended the third ($n = 59$) and fourth and last ($n = 80$) year of their study. The mean age of the sample was 22.8 years ($SD = 4.5$), with a range from 19 to 48 years. Forty percent of the respondents ($n = 57$) followed a minor in special educational needs (SEN), while 60% ($n = 82$) did not. During their internship, 134 (96.4%) students had teaching experience with pupils with SEN, and only five (3.6%) did not have any practical experience with those children.

Course description

Training on special education involved an elective minor where students in their third year received an introduction to a diverse range of issues in inclusive education, embracing national and international legislation on inclusion, teachers' and parents' perceptions, and behaviour management. This elective minor in SEN consisted of classroom meetings and field experience over the course of

one semester. The minor was not based on a specific disability approach but instead a general education to SEN was taught in a non-categorical way.

Instrument

Beliefs about inclusive education

The questionnaire used in this study is divided in two parts. The first part assessed teachers' beliefs about inclusive education of children with SEN. The second part focused on perceived barriers to inclusive education and desired facilities to improve inclusive education.

The original questionnaire (*My Thinking About Inclusion*, MTAI; Stoiberg *et al.*, 1998) was translated from English into Dutch. With the first draft of the questionnaire a pilot study was conducted amongst 127 students, who also attended a teacher training institution but in another location. After their feedback several adjustments were made in order to improve the translations using more appropriate wording and clarity for the students.

Participants were asked to answer the question on a five-point Likert scale (1 = *strongly agree*, 2 = *agree*, 3 = *undecided/neutral*, 4 = *disagree* and 5 = *strongly disagree*). The final scale used for assessing pre-service teachers' beliefs consisted of 26 items. Fourteen out of 26 items were coded in reverse to prevent response tendencies, with high scores indicating positive beliefs. The scale was divided into three sub-scales of belief domains to inclusion: *Core Perspectives* (11 items), *Expected Outcomes* (10 items) and *Classroom Practices* (5 items). *Core Perspectives* are beliefs related to the right of children with special needs to be educated in a classroom with typical developing children. The belief domain of *Expected Outcome* refers to the outcomes of inclusion, namely the expectations related to academic and social achievements of a child with special educational needs that is placed in a regular classroom. *Classroom Outcomes* provides an overview of teachers' beliefs towards the influence of inclusion on classroom life and their instructional practices.

Beliefs about barriers to and facilitators for inclusion

The second part of the questionnaire referred to pre-service teachers' beliefs concerning barriers to and facilitators for inclusive education. Eleven barriers to inclusion were shown to the respondents. Each of those items contained a specific factor with a supposed negative influence on inclusion. Participants were asked to rank these items from 1-11, based on the extent of interference with the

inclusion practice, with 1 being the most interfering for inclusive education. Eight facilitators to inclusion were defined as methods or as positive ideas for improving inclusion practices. Participants were asked to rank these items from 1-8, with 1 being the most supportive for inclusive education.

Procedure

The first author contacted the coordinators of the third and fourth year of the teacher training institution. After an explanation of the project and a description of the procedures were given, agreement to participate was requested. Filling in the survey was voluntary and did not affect grades. All participants who were present during data collection agreed to fill in the questionnaire. Pre-service teachers who were not present on the days of data collection were excluded from the analysis (less than 5% of the total students population enrolled in the third and fourth year). The first author provided a brief explanation of the nature and the purpose of the study, assuring that the data would be processed anonymously. Informed consent was obtained. The respondents independently filled in the questionnaires, which were given back to the researcher in a closed envelope. Data were collected during the last sessions of the academic year.

Results

Scale validation

Cronbach's alpha for the total scale was high ($\alpha = .82$), and for the subscales sufficiently reliable: *Core Perspectives* ($\alpha = .69$), *Expected Outcomes* ($\alpha = .68$), *Classroom Practice* ($\alpha = .61$). Similar results were obtained in the original MTAI validation (total scale: $\alpha = .91$, *Core perspectives*: $\alpha = .80$, *Expected Outcomes*: $\alpha = .85$, *Classroom Practice*: $\alpha = .69$; Stoiberg *et al.*, 1998). Moderately positive correlations were found between *Core perspective* and *Expected outcomes* ($r = .57, p < .001$), and between *Core perspective* and *Classroom practice* ($r = .55, p < .001$). A small positive correlation was found between *Expected Outcomes* and *Classroom practice* ($r = .29, p < .001$).

Pre-service teachers' beliefs towards inclusive education

Means and standard deviations of participants' beliefs about inclusive education are shown in Table 1. To answer the first research question the pre-service teachers' beliefs were summed into a total score with high scores indicating positive beliefs. We then calculated the beliefs scores for each of the subscales for the whole sample and for students following the minor in SEN. Considering the

Table 1. Means and standard deviations of pre-service teachers' beliefs about core perspectives, expected outcomes, and classroom practices (N = 139)

	<i>Core Perspectives</i>	<i>M</i>	<i>SD</i>
1	Students with SEN have the right to be educated in the same classroom as typically developing students. (R)	3.86	.75
2	Inclusion is <i>not</i> a desirable practice for educating most typically developing students.	3.93	.75
3	It is difficult to maintain order in a classroom that contains a mix of children with SEN and children with average abilities.	3.01	1.10
4	Inclusion can be beneficial for parents of children with SEN. (R)	3.94	.64
5	Parents of children with SEN prefer to have their child placed in an inclusive classroom setting. (R)	3.30	.66
6.	Most special education teachers lack an appropriate knowledge base to educate typically developing students effectively. (R)	2.36	.58
7	The individual needs of children with SEN <i>cannot</i> be addressed adequately by a regular education teacher.	2.94	1.02
8	We must learn more about the effects of inclusive classroom before inclusion classrooms take place on a large scale basis.	1.71	.66
9	The best way to begin educating children in inclusive settings is just to do it. (R)	2.67	.97
10	Most children with SEN are well behaved in integrated education classrooms. (R)	2.86	.71
11	It is feasible to teach children with average abilities and exceptional needs in the same classroom. (R)	3.31	.88
	<i>Expected Outcomes</i>		
12	Inclusion is socially advantageous for children with SEN. (R)	3.66	.86
13	Children with SEN will probably develop academic skills more rapidly in a special, separate classroom than in an integrated classroom.	2.96	.87
14	Children with SEN are likely to be isolated by typically developing students in an inclusive classroom.	3.27	.92
15	The presence of children with SEN promotes acceptance of individual differences on the part of typically developing students. (R)	4.06	.86
16	Inclusion promotes self-esteem among children with SEN. (R)	3.17	.85
17	Children with SEN are likely to exhibit more challenging behaviours in an integrated classroom setting.	2.73	.82
18	Children with SEN in inclusive classrooms develop a better self-concept than in a self-contained-classroom. (R)	3.26	.79
19	The challenge of a regular education classroom promotes academic growth among children with SEN. (R)	3.08	.77
20	Isolation in a special class does not have a negative effect on the social and emotional development of students prior to middle school.	3.58	.68
21	Typically developing students in inclusive classrooms are more likely to exhibit challenging behaviours learned from children with SEN.	3.20	.92

Table 1. Continued

	<i>Core Perspectives</i>	<i>M</i>	<i>SD</i>
	<i>Classroom Practices</i>		
22	Children with SEN monopolize teachers' time.	1.96	.64
23	The behaviours of students with SEN require significantly more teacher-directed attention than those of typically developing children.	2.10	.81
24	Parents of children with SEN require more supportive services from teachers than parents of typically developing children.	2.64	.88
25	Parents of children with SEN present no greater challenge for a classroom teacher than do parents of a regular education student. (R)	2.76	.87
26	A good approach to managing inclusive education is to have a special education teacher be responsible for instructing the children with SEN.	2.44	.97

Note. Score on 1-5 scale where 1 = Strongly agree, and 5 = Strongly disagree. **R** = Reverse scoring.

range of the Likert scale (from 1 to 5) and the direction of the scoring, the mean of the total scale ($M = 3.03$) indicated that participants held neutral beliefs towards inclusive education of children with SEN. Pre-service teachers held neutral beliefs towards the general philosophy of inclusive education ($M = 3.08$ for the *Core Perspectives*) and towards the academic and social results expected ($M = 3.30$ for the *Expected Outcomes*) from the development of this educational practice in the near future. Conversely, there were more negative beliefs in the domain of *Classroom Practice* ($M = 2.38$), suggesting that participants are still sceptical towards the actual experience they have to face in the daily practice of an inclusive setting.

Barriers to and facilitators for inclusion

The answers to the second research question (means and rank orders) are shown in Table 2 and 3. 'Limited time for pupils', 'lack of experience regarding inclusive education' and 'little knowledge in this area' were perceived as the greatest barriers to inclusion, whereas 'limited support from the school', 'limited possibilities of collaborating with individual colleagues or with school team', and 'little support from the collaboration group of schools' were considered the smallest barriers to inclusion.

For the facilitators for inclusive education, the pre-service teachers were most in favour of the methods 'direct teaching experience with children with SEN' and 'observations of other teachers in inclusive settings'. Conversely, the least

Table 2. Rank order and means for barriers to inclusive education (N = 139)

<i>Reason</i>	<i>Rank</i>	<i>M</i>
Limited time for pupils	1	2.50
Lack of experience regarding inclusion	2	4.14
Little knowledge in this area	3	4.25
Teachers' attitudes	4	5.58
Limited opportunities for collaboration	5	5.78
Day-to-day obligation of students inside and outside the class	6	6.18
Parents' attitudes	7	7.00
Little support from the school	8	7.20
Limited possibilities of collaborating with individual colleagues	9	7.32
Limited possibilities of collaborating with school team	10	7.64
Little support from the collaboration group of schools	11	8.27

Note. Rank order from 1 to 11 scale where 1 = does extremely interfere with inclusion, and 11 = does not interfere at all with inclusion.

preferred manners to promote inclusive education were 'collaboration of primary schools with teacher training institution' and 'discussion over inclusive practices'. No significant differences between groups (with or without SEN training) were found for the facilitators about inclusion.

The influence of following the minor in SEN on beliefs

For the third research question, a series of *t* tests was used to determine differences of pre-service teachers' beliefs (special versus regular education qualification), followed by Cohen's *d* effect sizes, on the total scale and subscales. The non-parametric Mann-Whitney test was used to determine whether following the minor in SEN was related to the rank order of the barriers that interfered most to inclusive education and the most preferred facilities for inclusive education.

Table 3. Rank order and means for facilitators for inclusive education (N = 139)

<i>Method</i>	<i>Rank</i>	<i>M</i>
Direct teaching experience with children with disabilities	1	1.74
Observation of other teachers in inclusive settings	2	2.79
In-service training/workshop	3	3.08
Consultation activities with other teachers, specialist and parents	4	4.33
Research involvement with regard to inclusive education	5	5.88
Independent reading	6	5.95
Collaboration of primary schools with teacher training college	7	6.08
Discussion of inclusive practices	8	6.12

Note. Rank order from 1 to 8 scale where 1 = most preferred method, and 8 = least preferred method.

Table 4. Means, t tests, and effect sizes of pre-service teachers' beliefs with and without a minor in SEN for core perspectives, expected outcomes, and classroom practices (N = 139)

	<i>Minor in Special Educational Needs</i>		<i>t</i>	<i>d</i>
	<i>Yes (n = 57)</i>	<i>No (n = 82)</i>		
Beliefs domain	<i>M</i>	<i>M</i>		
<i>Core Perspectives</i>	3.13	3.05	1.18	.21
<i>Expected Outcomes</i>	3.39	3.23	2.17*	.38
<i>Classroom Practices</i>	2.52	2.28	2.98***	.56
Total Scale	3.11	2.97	2.51**	.43

Note. Higher scores indicate more positive beliefs. Effect sizes of .20 or less, about .50, and .80 or more, represented small, moderate, and large differences, respectively (Cohen, 1992).

* $p < .05$, ** $p < .01$, *** $p < .001$

Respondents who followed the minor in SEN held more positive beliefs on the total scale, with regard to *Expected Outcomes*, *Classroom Practice*, but not in *Core Perspectives* (Table 4). Participants following the minor in SEN viewed more as an obstacle the barrier 'limited possibilities of collaborating with individual colleagues' than regular did education programme students ($M = 6.22$ versus $M = 7.84$), $U = 1403.50$, $z = -3.63$, $p < .001$.

Discussion

This study aimed at examining pre-service teachers' beliefs about inclusive education, and the barriers to and facilitators of improving the implementation of recent inclusive practices in the Netherlands. In addition, it examined the extent to which following a minor in SEN is related to beliefs regarding inclusive education.

Participants expressed a neutral position regarding the universal right of special needs children to be educated in inclusive settings (*Core Perspectives*) and towards the academic results and social achievements expected from them (*Expected Results*). However, when the matter of consequences for teaching practice was discussed (*Classroom Practice*), the pre-service teachers held negative beliefs. In other words, when confronted with beliefs that directly encompassed the implications of accepting the full responsibility of implementing inclusive education in their own classroom, pre-service teachers' beliefs reflected concern with this issue. The current results showed inconsistencies with previous research conducted with different questionnaires, though all measured pre-service teachers'

beliefs or attitudes towards inclusive education (Beacham and Rouse, 2012; Forlin *et al.*, 2009; Hoskin *et al.*, 2015; Kraska and Boyle, 2014; Oswald and Swart, 2011; Spandagou *et al.*, 2008; Varcoe and Boyle, 2014). One possible reason for this inconsistency may be due to the relatively recent development of inclusive education in the mainstream Dutch educational system. Moreover, since special schools in the Netherlands function as part of the Dutch educational system, pre-service teachers might still be hesitant to accept full responsibility for pupils with SEN. Previous studies conducted in the Netherlands with in-service teachers showed similar outcomes (de Moor and Bakker, 2009; de Moor *et al.*, 2008).

The present findings should make educational policymakers aware of the need to reconsider neutral or negative beliefs on effective inclusion in teacher education programmes. This argument is based on the main assumptions of this study. First, all educational actors should be positive about the inclusive education of children with SEN in the mainstream school system (Ainscow 2007; Sharma *et al.*, 2008). Second, attitudes towards the inclusive education of children with SEN are likely to be reflected in the day-to-day educational practices of teachers (Beacham and Rouse, 2012). Third, teacher training education is crucial to help prospective teachers alter negative beliefs about inclusive education (Bransford *et al.*, 2005; Lambe and Bones, 2006; Rouse, 2010; Sharma *et al.*, 2006).

For the second research question, pre-service teachers considered limited time for pupils to be the greatest barrier to inclusion, and direct teaching experience with children with SEN as the best way to facilitate inclusive education. Those findings are to a great extent similar to the results of prior studies carried out with both pre- and in-service teachers (Ahsan *et al.*, 2012; Avramidis and Kalyva 2007; Klingner *et al.*, 2003; Stoiberg *et al.*, 1998; Rheams and Bain, 2005; York and Tundidor, 1995). Providing multiple and intensive field experiences with regular and special teachers who are involved in successful inclusion programmes is an effective strategy to modify pre-teachers' beliefs. On the other hand, approaches that focus solely on experience without requiring the acquisition of theoretical knowledge about how to deal with children with SEN might also have limitations (Yellin *et al.*, 2003). Moreover, if a student teaching experience involving children with SEN is not well structured and supported, it runs the risk of confirming rather than defusing negative beliefs towards inclusive education (Sharma *et al.*, 2008).

To answer the third and final research question, respondents who followed the minor held more positive beliefs on the total scale and with regard to *Expected*

Outcomes and Classroom Practice, indicating that a specialised training for SEN was positively related to beliefs towards inclusive education. This finding has been supported by several studies, which showed the benefit of providing a special educational qualification (Avramidis *et al.*, 2000b; Beacham and Rouse, 2012; Spandagou *et al.*, 2008; Varcoe and Boyle, 2014). Although there is not yet consensus about how programmes can best prepare teachers for inclusive education (Kim, 2011; Sharma *et al.*, 2008), it could be argued that in order to promote the recent reforms about inclusive education in the Netherlands, all teacher training institutions across the country should carefully rethink the systemic structure of teacher education, improving the key values and competences that sustain and promote teacher beliefs about inclusive education.

Finally, the outcome that pre-service teachers following the minor differed significantly from those following only the regular education programme with respect to the barrier ‘limited possibilities of collaborating with individual colleagues’, underscores at the importance of the collaborative role that the special educational teacher can play in the inclusive setting.

Limitations and conclusions

There are some limitations in the present study that need to be addressed. Although this study included only student teachers in the last two years of their training, it was not possible to determine changes in beliefs that might have occurred pre and post graduation. This limitation applies to the effects of following a minor in SEN as well. Future studies should examine the long-term effects of teacher training and special education qualifications on beliefs about inclusive education.

Another limitation of the present study was that no qualitative data were collected. To make greater sense of the quantitative data, qualitative data in the form of cognitive maps (i.e., teachers’ beliefs maps) or classroom observations would provide researchers with an in-depth understanding of pre-service teachers’ beliefs. Finally, although participants mirrored teaching student population trends depicted nationwide in terms of gender distribution and mean age (Ministry of Education, Culture, and Science, 2014), the sample was limited to one region of the Netherlands. Therefore, it does not represent the entire range of pre-service teachers’ beliefs towards inclusive education in the whole country.

In conclusion, this study highlights that resistance to the implementation of inclusive education remains a major challenge in the Netherlands. Policymakers and teacher training institutions that prepare new teachers for future inclusive classrooms must consider and respect the beliefs of the new teachers; however, they must seek antidotes for neutral and negative beliefs towards inclusive education. Clearly, teachers' training programmes should provide pre-service teachers with practical strategies and skills to address the learning needs of pupils with SEN. Meanwhile the development and maintenance of positive teachers' beliefs should be viewed as necessary for effective change in teaching practices.

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