

TEACHER EDUCATORS' SELF-REPORTED PREPAREDNESS TO TEACH STUDENTS WITH SPECIAL EDUCATIONAL NEEDS IN HIGHER EDUCATION

Mona Holmqvist, Lotta Anderson, Lisa Hellström
Malmö University, Sweden

E-mail: mona.holmqvist@mau.se, lotta.anderson@mau.se, lisa.hellstrom@mau.se

Abstract

This research explores teacher educators' self-reported preparedness to teach students with special educational needs. Teacher educators are concerned with preparing the next generation of teachers who will, in turn, be addressing the needs of students with special educational needs within schools. Being able to address this important task also in their own teaching at the teacher education program is important for their own credibility. In total, 104 teacher educators at two university faculties completed an online questionnaire with questions about teaching students with special education needs. The results showed a significant difference between the educators' self-reported professional development needs. At University B, educators rated their own competence as well as the organizational ability to meet students with special educational needs higher than educators at University A, regardless of disability. One explanation for the differences in self-rated competence might be due to the mandatory courses about how to teach students with special educational needs, shaping a community of practice with a shared knowledge among the teacher educators at University B. However, the experienced challenge lies in difficulties to transform the knowledge of what is required and expected into practical solutions for teaching students with special educational needs.

Keywords: *disability research, inclusive teaching, professional development, special educational needs, teacher education.*

Introduction

The United Nations Convention on the Rights of Persons with Disabilities (Committee on the Rights of Persons with Disabilities, 2011) states that people with disabilities should be given the necessary support within the public education system to facilitate their education, which also applies to higher education. An inclusive approach in higher education, as well as in primary and secondary education, demonstrated by teacher educators means a greater credibility for the teaching in the teacher program. As disability reduces the likelihood of completing secondary education and increases the likelihood of experiencing harassment and discrimination during education (Pijl, Frostad, & Mjaavatt, 2014), to study the preparedness of the teachers teaching future teachers are important for change to be possible. The research presented here is framed by situated learning (Lave, 1991), and the approach of communities of practice (Wenger, 2011): "Communities of practice are groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly" (p. 1). This practice has to be enhanced, to better interact with the instruction for student teachers regarding inclusive teaching for all. All teacher educators are familiar with, teaches about and follows the discourse of inclusive teaching for all. However, they teach a limited group

of students, and their practice does not offer interaction with special education needs (SEN) students regularly. Pre-service teachers are legitimate peripheral participants in communities of practice, meaning they are becoming experienced members (Lave & Wenger, 2001). If the community of practice consists of teacher educators teaching about inclusive education for all, who themselves are peripheral participants, this affects the teacher students' possibilities to develop. McGarr, O'Grady, and Guilfoyle (2017) have studied the theory-practice division in teacher education. They found that theories introduced for teacher students were decided by the teacher educators, and the students valued them depending on the teacher educators' trustworthiness based on experience of teaching at school.

It has also been found that students with different kinds of disabilities are treated differently; i.e. there is a more positive attitude towards inclusive approach for students with visible disabilities, while students with invisible disabilities are treated less inclusively (Moriña Díez, López, & Molina, 2015). This demonstrates a lack of understanding of inclusion for all students with SEN, and results in the unequal educational opportunities for students with invisible disabilities. The results of Moriña Díez, López, and Molina (2015) also revealed the lack of basic training for educators to support their students with SEN (Naik, 2017). Students with autism spectrum disorders (ASD) are one of the SEN groups with invisible disabilities. The challenges of higher education are prominent for this group; e.g. more than 50% of young adults with ASD are not employed or included in higher education and the educators' knowledge of ASD is limited (Cai & Richdale, 2016). The voices of students with SEN are seldom heard and educators feel unsupported in teaching these students (Supple & Abgenyega, 2011). Although there are examples of how to meet the needs of students with SEN, major planning efforts are generally required. Naik (2017) studied how students with atypical language development manage note-taking. A dual PowerPoint presentation approach was developed to facilitate educational opportunities for these students. The results showed how this approach improved the learning of not only the students with SEN, but of all the students. For example, the overall pass rate increased by 29.5% (Naik, 2017). Previous research has shown educators' expressed lack of readiness to teach students with SEN in higher education; thus, this study investigates whether educators' self-reported preparedness to include students with SEN is higher at universities where professional development courses are offered.

Previous Research

Teacher educators are expected to have knowledge of disabilities due to their duty to educate future teachers for inclusive learning environments. However, even if it is illegal to treat a student with disability less favourable than their typically developing peers, this does not necessarily result in an inclusive practice in higher education (Hopkins, 2009). In Finland, Tuomi and Jauhojärvi-Koskelo (2015) found that 3.4% of university students have a diagnosed or observed illness or disability that affects their learning in teacher education. A survey of language centre educators showed that all educators had taught students with disabilities during their university careers. The results also showed that educators expressed a need for more information about disabilities; for example, how to recognise disabilities if students have not been diagnosed or if the students did not provide information about their disabilities. While these difficulties may be due to the limited knowledge about how to teach students with SEN in higher education, the inclusiveness in higher education for all is not always achieved. Morgado, Cortés-Vega, López-Gavira, Álvarez, and Moriña (2016, p. 639) acknowledged that:

“It has been concluded that universities are among the most discriminating institutions, both in terms of access for certain students – as in the case of students with disabilities – and in facilitating their continuity in higher education so that they do not abandon their educational career prior to earning a degree”.

Moola (2015) also presented results indicating that more efforts are needed to enable students with disabilities to have equivalent opportunities to their peers in higher education. The problem is not necessarily the educators' negative attitudes towards students with SEN, but the finding of non-inclusive environments may be due to a lack of readiness in how to handle the challenges experienced by students with SEN at the individual and organisational level. Murray, Flannery, and Wren (2008) examined university staff members' attitudes towards students at higher education with learning disabilities. Data from a survey of 70 university educators were analysed and the findings indicate that staff generally had positive attitudes towards students with learning disabilities and were willing to provide accommodations. However, a substantial number of respondents indicated a need for more training and professional development in learning strategies to support students with learning disabilities, both at a general level as well as in individual cases.

Despite the difficulties shown by the research results, examples of well-functioning inclusive settings can also be found in higher education. Smith and Bell (2015) carried out a promising project for identifying inclusive settings in vocational education and workplace settings. Smith and Bell (2015) described the objectives and indicators to support inclusive educational cultures for meeting different needs used by professionals to self-report their educational environment in four different countries. They have implemented a website inclusion tool to support teachers and students in vocational education. Chatzara, Karagiannidis, and Stamatis (2016) described how a variety of techniques could be used to improve communication between learners with learning and attention difficulties in e-learning environments. Artificial intelligence was used to imitate human behaviour in their study. The results show how behavioural communication as a cognitive support improves communication between students with SEN. Getzel and Thoma (2008) studied college students in higher education and found that the students thought it was very important to meet their educators face to face. The aim of these meetings was to get the educators to understand their participation needs: e.g. "The participants came to understand that not all faculty or staff members understood their disability and the accommodations they were eligible to receive" (Getzel & Thoma, 2008, p. 81). The key to supporting students with SEN seems to be the educators' readiness to teach these students, which is addressed in this study.

Studies on educators' readiness for and competence in teaching students with SEN in higher education indicate their lack of awareness of their students' challenges. Padden and Ellis (2015) found that ensuring opportunities for students to complete their qualifications to the best of their ability requires that all university staff (i.e. teaching, administrative, and support staff) are aware of the difficulties experienced by students with SEN. To improve the quality of education for students with SEN, educators need professional development in how to support these students is needed. Padden and Ellis (2015) noticed that university staff developed a communication and training strategy to improve the inclusion of students with SEN. In another study, the results of an intensive 4-day training course focused on understanding and supporting university students with SEN showed that the educators expanded their perspectives on teaching these students (Murray, Lombardi, & Seely, 2014). Educator participation in in-service training had a strongly positive effect on self-efficacy in the understanding of how to support students with disabilities expressed by both educators and the faculty as measured before and after training (Murray et al., 2014). In the current project, we studied teacher educators' self-reported preparedness to teach students with SEN. The overall aim of this research was to find relations between the educators' preparedness, their need for further professional development, and courses they have been offered. The research questions were: 1. How do teacher educators consider their own and their university's competence and ability to educate students with SEN? 2. What experience do teacher educators have with working with students with SEN? and 3. What level of self-reported competence is necessary for teacher educators to teach students with SEN?

Research Methodology

Research Design

The research was based on a mixed method design (Creswell, 2014) using a questionnaire with both open-ended and close-ended questions. The empirical data were analysed both quantitatively and qualitatively. Two different universities in Sweden that had faculties with teacher education programs were used to strengthen and get a deeper understanding of the research results. These universities were chosen because they have several similarities and few differences. The faculties at the two universities were chosen because they both provide special education programs for their teacher students in addition to a postgraduate education program in the educational sciences department. Universities A and B have 24 000 and 32 000 students, respectively. Both universities are young. University A was established in 1998 and received postgraduate education rights in 2010, which is the same year in which University B transitioned from university college status to full university status. However, important differences can be observed in the contents of the mandatory introductory courses for educators at these universities. One of the important differences of concern for this study is the content of the professional development courses offered at the universities. University A provides brief information about universal design (Burgstahler, 2015) in two of the mandatory courses for higher education educators, but no other specific courses or course contents about how to facilitate education for students with disabilities. At University B, the book *Teach available! Educational tools for equal treatment of students with disabilities* (original title, *Undervisa tillgängligt!: Pedagogiska verktyg för likabehandling av studenter med funktionshinder*) (Henriksson, 2003) is used by higher education educators in their mandatory courses. The contents of this 91-page book focus on pedagogical tools for equal treatment of students with eight different kinds of disabilities. University B also hosts seminars led by educators specialised in teaching students with SEN.

Policies considering students' rights at University A state that the work environment should support students' learning and promote their physical and mental health. In the University A student health survey, "How are our students?", the results indicate that having one or more disabilities could be a risk factor for exclusion from higher education. The universities offered lessons containing information about student support during their mandatory courses. All University B educators participate in a mandatory course 'teaching at higher education', which includes seminars on how to teach students with disabilities. The course literature includes *Teach available!* (Henriksson, 2003). University B educators were offered more opportunities to improve their knowledge about students with SEN than were University A educators.

Instrument

A questionnaire was constructed for the purpose of this research, i.e. teacher educators' experiences with teaching students with SEN. The questions were developed in Swedish specifically for this research, i.e. in the language used in the country where the research was conducted. The unit of analysis consist of six questions (6 out of 24) about teacher educators' readiness to teach students with SEN. The instrument included six background variables (sex, age, faculty department, highest education, years of employment and task assignment). The questions included both open-ended and closed-ended questions using a 6-point Likert scale, with a field provided for comments. The response categories on a 6-point Likert scale included: "very low" (1) to "very high" (6) (How do you rate your competence in working with students with SEN?); "absent" (1) to "excellent" (6) (How do you rate the faculty/department's ability to accommodate students with SEN?); "very small" (1) to "very big" (6) (How do you rate your need for professional development considering students with SEN?); and "very problematic" (1) to "unproblematic" (6) (Do you consider creating learning environments for students with SEN as being problematic or unproblematic?).

Implementation and Participants

In the spring semester of 2017, an online questionnaire was distributed via e-mail to all employees to capture all educators teaching in the teacher education program, ($N = 405$) from two faculties at two different universities in Sweden. As the educators change between different programs and courses at different points in time, only those who were teaching at the pre-service teacher program were asked to answer the questionnaire. This was as a prerequisite to answer the questionnaire, included in form of a question at the beginning of the questionnaire. The respondents were given information about their voluntariness to participate as well as information regarding confidentiality and the option to drop out of the project at any point. The respondents were informed that the purpose of the research was to explore the competence and preparedness of teacher educators to meet students with SEN. The questionnaire took approximately 20–30 minutes to complete. One participation reminder was sent out. The frequency of responses at University A and University B were 65 (24% response rate) and 39 (30% response rate), respectively. The background variables of the respondents at the two universities are presented in Table 1. The overall response rate was 26%. An acceptable response rate for web questionnaires where respondents do not know or have personal contact with the researchers usually has a response rate about 30% (Nulty, 2008).

Even so, another explanation for the low response rate is that all employees at the two faculties received an invitation to participate, but several of them did not belong to the target group. I.e. they were not active teacher educators teaching at the teacher education during the term for the research, which became clear after the questionnaire was send out. Ethical aspects were considered. The value of receiving a well-grounded understanding of the universities' ability to accommodate students with SEN and the importance of contributing research in this area was highlighted.

Table 1. Background details for respondents at the two universities.

	University A <i>N</i> (%)	University B <i>N</i> (%)
Sex		
Female	42 (64.6)	23 (59.0)
Male	23 (35.4)	16 (41.0)
Age		
31–40	7 (14.3)	5 (12.8)
41–50	22 (44.9)	11 (28.2)
51–60	20 (40.8)	18 (46.2)
>60	0	5 (12.8)
Highest education		
High school	3 (4.7)	1 (2.6)
Bachelor degree	9 (14.1)	1 (2.6)
Master degree	8 (12.5)	12 (31.6)
Licentiate degree	5 (7.8)	3 (7.9)
Doctoral degree	39 (60.9)	21 (55.3)
Years of employment		
<1 year	3 (4.8)	2 (5.3)
1–5 years	22 (34.9)	9 (23.7)
6–10 years	9 (14.3)	7 (18.4)
11–15 years	13 (20.6)	6 (15.8)
16–20 years	9 (14.3)	12 (31.6)
21–25 years	4 (6.3)	2 (5.3)
>25 years	3 (4.8)	0
Task assignment		
Administration	1 (1.5)	0
Teaching	46 (70.8)	23 (59.0)
Research	9 (13.8)	8 (20.5)
Doctoral studies	3 (4.6)	2 (5.1)
Student counselling	1 (1.5)	0
Other	5 (7.7)	5 (12.8)

Analysis

The questionnaire responses were analysed using both qualitative and quantitative methods. Cross tabulation and chi-square analyses were performed using the IBM SPSS Statistics statistical software package (v. 24; IBM SPSS, Armonk, NY, USA). The level of statistical significance was set at $p < .05$. To explore the first research question, analyses of the following items were performed: how do you rate your competence in working with students with SEN? How do you rate the faculty/department's ability to accommodate students with SEN? What knowledge do you have about students' rights regarding their SEN support? And what disabilities do you have competence in working with? To explore the second research question, analyses of the following items were performed: what types of disabilities have you encountered among your students? In what way have you been informed about your students' disabilities? Do you consider creating learning environments for students with SEN as being problematic or unproblematic? Furthermore, the differences in perceiving creating learning environments for students with SEN as being problematic or unproblematic among teacher educators with high and low self-reported competence were tested using chi-square statistics. In addition, differences in the self-reported need for competence training and experiences with competence training among teacher educators with high and low self-reported competence were tested using chi-square statistics. Finally, to explore the third research question, analyses of the following items were performed: how do you rate your need for professional development considering students with SEN? What type of professional development considering students with SEN have you participated in? And what type of professional development do you think would improve your competence in working with students with SEN? To get more robust analyses, the response categories 1–3 were combined to represent a low/small rating, while categories 4–6 were combined to represent a high/big rating. Qualitative analysis, i.e. deductive content analysis (Elo et al., 2014), was used to answer the third research question. Deductive content analysis is often used in cases where the researcher wishes to retest existing data in a new context; in this case, quantitative data were retested by mirroring them in the qualitative data. Inferences were made between the results of the quantitative analysis, which constitute a matrix for the qualitative analysis to obtain a deeper understanding of the results from the quantitative data.

Research Results

The results showed a tendency for University B educators to rate their own competence and the organisational ability to meet students with SEN higher than did higher education educators at University A (see Table 2).

Table 2. Self-reported competence and ability to work with students with SEN.

	University A <i>N</i> (%)	University B <i>N</i> (%)	Total <i>N</i> (%)
Self- rated competence			
Low	30 (46.2)	13 (33.3)	43 (41.3)
High	34 (52.3)	24 (61.5)	58 (55.8)
Missing values	1 (1.5)	2 (5.1)	3 (2.9)
Faculty's rated competence			
Low	22 (34.4)	6 (15.8)	28 (27.5)
High	29 (45.3)	23 (60.5)	52 (51.0)
Do not know	13 (20.3)	9 (23.7)	22 (21.6)
Department's rated competence			
Low	26 (40.6)	5 (12.8)	31 (30.1)
High	29 (45.3)	31 (79.5)	60 (58.3)
Do not know	9 (14.1)	3 (7.7)	12 (11.7)

A larger proportion of University B teacher educators indicated a higher self-rated competence than did University A teacher educators. The differences were non-significant. In addition, 23 (60.5%) and 31 (79.5%) of the teacher educators at University B rated their faculty's and department's ability to accommodate students with SEN as high, while that for University A were low, 29 respectively (45.3%) and 29 (45.3%). The differences were non-significant. The teacher educators at University A rated their own competence higher than their faculty and department's ability to accommodate students with SEN. At University B, teacher educators rated their department's ability the highest. Educators at both universities stated good knowledge of the governing documents. At University A and University B, 60.3% and 73.7% reported good knowledge about students' rights concerning their SEN support. The differences were non-significant ($p = .171$) but showed a tendency for reporting a better knowledge at University B.

Table 3. Experiences with and competence about different disabilities.

	University A <i>N</i> (%)		University B <i>N</i> (%)	
	Competence	Experience	Competence	Experience
Physical disabilities	17 (26.2)	25 (38.5)	13 (33.3)	11 (28.2)
Visual impairment: blindness	11 (16.9)	22 (33.8)	14 (35.9)	12 (30.8)
Hearing impairment: deafness	16 (24.6)	24 (36.9)	18 (46.2)	22 (56.4)
Neurodevelopmental disorders (autism, Asperger, attention deficit/hyperactivity disorder)	27 (41.5)	32 (49.2)	25 (64.1)	26 (66.7)
Dyslexia	40 (61.5)	61 (93.8)	26 (66.7)	35 (89.7)
Mental illness	18 (27.7)	38 (58.5)	15 (38.5)	26 (66.7)
Other	5 (7.7)	2 (3.1)	3 (7.7)	2 (5.1)

When it comes to their skills in working with different disabilities, University B teacher educators rated higher competence regardless of the type of disability. Tendencies show that University B teacher educators reported more competence in working with visual impairment χ^2 , ($N = 104$) = 4.921, $p = .085$), hearing impairment χ^2 (2, $N = 104$) = 5.165, $p = .076$) and neurodevelopmental disorders (NDD) χ^2 (2, $N = 104$) = 5.005, $p = .082$) compared with University A teacher educators. When it comes to experience, a higher proportion of University A teacher educators reported having met students with physical disabilities (non-significant), visual impairment (non-significant) and dyslexia χ^2 (2, $N = 104$) = 5.698, $p = .058$) compared with University B teacher educators. The greatest differences between experience, skills and needs were reported for competence in working with students with dyslexia, as well as hearing and visual impairments. Dyslexia, together with other NDD (e.g. attention deficit/hyperactivity disorder and ASD) and mental illnesses, were disabilities most often encountered by educators at both universities. The educators were also asked to report where they got information about the students' disabilities. At University A, 33 out of 54 (61%), and at University B 25 out of 31 (80%) have been informed by the students.

The deductive content analyses provided examples of how the educators work to facilitate their students' learning through their flexibility in using auditory, visual, kinaesthetic and tactile tools, or by clarifying contents:

My tasks are to clarify study guides, syllabi, information for exams and during the course of the exam or essay writing with the student that s/he is on the right track in relation to the learning objectives of the course. It is about helping the student to postpone her/his studies and to support them when they get "stuck" and because of their social and/or neurological barriers, they feel that they cannot do it on their own. (Female educator, 31–40 years old, University A)

However, other educators found it difficult to transform their knowledge of what is required and expected into practical solutions for teaching students with SEN:

I believe I know all the rules around this and have always solved this issue. But the concept of competence includes knowing as well as being able, i.e. it is a practical ability to adapt. (Male educator, 51–60 years, University B)

In the third research question, what level of competence is necessary for teacher education educators to teach students with SEN?, the teacher educators were asked to rate their need for professional development and if they had participated in professional development to develop their skills in working with students with SEN. At University A and University B, 18.5% and 28.2%, respectively, reported having participated in professional development to learn to work with students with SEN. A significantly higher proportion of University A teacher educators (69.8%) experienced a high need for professional development compared with University B teacher educators (44.7%) $\chi^2(1, N = 101) = 6.245, p = .012$ (Table 4).

Table 4. Teacher educators rated need for professional development on working with students with SEN.

	University A <i>N</i> (%)	University B <i>N</i> (%)	Total <i>N</i> (%)
Small	19 (30.2)	21 (55.3)	40 (39.6)
High	44 (69.8)	17 (44.7)	61 (60.4)

Note: $p = .012$.

Furthermore, 72.7% of University A teacher educators who rated their competence in meeting students with SEN as high, also rated a high need for professional development. Among those, 66.7% reported a low competence and a high need for professional development (Table 5). Thus, teacher educators who rate their own competence rather high might still feel a need for professional development. The opposite were shown for University B teacher educators; i.e. 39.1% among those reporting a high competence also indicated a high need for professional development, while 53.8% among those reporting a low competence also indicated a high need for professional development.

Table 5. Self-rated competence and need for professional development.

			Self-rated competence	
			Low N (%)	High N (%)
University A	Need for professional development	Low N (%)	10 (33.3)	9 (27.3)
		High N (%)	20 (66.7)	24 (72.7)
University B	Need for professional development	Low N (%)	6 (46.2)	14 (60.9)
		High N (%)	7 (53.8)	9 (39.1)

Overall, University A teacher educators tended to indicate a greater requirement for competence development in students who need adjustments to their study situation. One of the teacher educators said:

I am quite satisfied. The most important thing is to listen and know how to help them further to get the right help. I have learned that as a non-expert, you can mess up more than do good by acting like a happy amateur. (Male, <60 years, University A)

At University B, teacher educators referred to courses in higher education when indicating the type of professional development that they had participated in, but none of the respondents at University A referred to similar courses. Some of the teacher educators are in the field of special education, which they acknowledged. The type of professional development that teacher educators believe would improve their competence in working with students with SEN include greater knowledge about what is possible to do to enable learning in students with SEN with different disabilities. The educators also asked for information from students or teachers with disabilities:

One in which students' voices are included. They are usually experts on their own needs. They have good and bad experiences to share. I think I need more information about possible educational support and facilitation. (Female educator, >60 years, University A)

Active teachers who have these disabilities inform us what they think we should do as teacher educators. Seminars about mental illness, different disabilities. (Female educator, 41–50 years, University A)

Further training about education in higher education, which deals with supporting different students, aids and adjustments in the study situation is often something that can be helpful for all students, so I think it would be good if further training is both "general" for higher education and more "specific" in relation to different functional variations. (Female educator, 41–50 years, University B)

The answers from the open-ended questions show a need for more specialised training that focuses on one disability at a time and preferably problematising actual situations or led by teachers or students who also have a disability.

Discussion

This research aimed to analyse teacher educators' self-reported preparedness to teach students with special educational needs. Even if the Convention on the rights of Persons with Disabilities (Committee on the Rights of Persons with Disabilities, 2011) states students should receive the same opportunities in education regardless of disabilities, the results show limited competence among teacher in higher education. The main part of the teachers met students with any kind of disability, rating dyslexia as the most frequent met disability (UA 93.8% and UB 89.7%). This is in accordance with Tuomi and Jauhojärvi-Koskelo (2015) who found that all teachers in their research have taught students with disabilities. The results also showed a difference between the two universities, which indicated a different understanding and confidence in how to teach students with SEN. At University B, where they also have a mandatory course on teaching in higher education with learning contents about teaching students with SEN, the teacher educators expressed more confidence. There were no other significant differences between University A and University B in the two cohorts of respondents. More than half of the respondents have a doctoral degree, and more than two-thirds work with teaching or research. At University B, the respondents rated their own and the department's ability to accommodate students with SEN as high, which applies to all kinds of disabilities listed. In accordance with the findings by Cai and Richdale (2016), teacher educators frequently meet students with neurodevelopmental conditions in addition to students with dyslexia or mental illness. In the research reported on here, the findings also show the greatest negative gap between experienced competence and the rate of students they meet as teachers. This means, the teachers have the highest need of professional development in the fields of disabilities where they meet the largest number of students. On the one hand, at University B, a higher number of teacher educators rated their competence as high compared with teacher educators at University A. On the other hand, the University A teacher educators indicating high competence still reported a high need for professional development compared with teacher educators at University B. The results showed a significant difference between the educators' needs for professional development at the two universities. Professional development courses and seminars are offered at University B and the results show that University B teacher educators are more satisfied with their professional development than University A teacher educators, where no such training is offered. This might be one important aspect for creating a community of practice and enhance the teacher educators' situated learning (Lave & Wenger, 2001). Murrey, Flannery, and Wren (2008) found in their research a need for more professional development for higher education teachers to support students with disabilities, in line with the findings of the research presented in this article. Their findings showed that a four-day training course strongly expanded the teachers' positive effect on self-efficacy regarding how to support students with disabilities. The difference in received professional training between University A and B, could tentatively explain the differences found between the teachers' reported need of professional development at the two universities. In accordance with Supple and Abgenyega (2011), the respondents in this study felt that their students' voices were lacking in professional development courses and they suggested training in collaboration with educators and students with disabilities. Finding out more about the effects of professional development for teaching students with disabilities requires a design involving the students' perspectives, which is also the next step for this research project reported here.

Theoretical and Educational Significance of the Research

Researchers in the educational field often study the conditions for compulsory school students and their legal right to public education and equality in education. Our research protects students' rights and aims to facilitate equal, public education for all. This appears to

be fine if we do not study our own educational institutes. The study results show that students with disabilities may experience discrimination, which is really discouraging. The results can contribute to improving the quality of higher education for students with disabilities by contributing knowledge about university educators' need for professional development.

Limitations, Implications and Future Directions

It can be recognised that this study has its limitations. First, the low response rate affects the generalisability of the results. To get robust analyses, response categories were combined, which resulted in the reduction of data and loss of detail. In addition, the study focused on teacher educators from two faculties providing teacher education in Sweden. Given larger samples, the analyses could be made at a finer level by including all response categories and by including other faculties cultural contexts for a more comprehensive understanding of the relationship between competence and professional development courses among higher education educators in general. Second, the use of self-reported questionnaires may emphasise subjective experiences and may not illustrate the true level of competence among teacher educators concerning their ability to work with students with SEN. However, the validity of the results was improved by using quantitative data with both open-ended and closed-ended questions. Third, the questions in the questionnaire were constructed for the purpose of this study. Hence, the items are not psychometrically tested. Lastly, this study used a cross-sectional design as it is not possible to draw any conclusions regarding the direction of causality between the factors under study. Future studies could use a longitudinal design with pre- and post-tests in higher education courses about SEN to analyse their impact on creating inclusive learning environments.

Conclusions

The results of this research show that there is a difference in self-reported competence and knowledge of how to teach these students with SEN among teacher educators who have completed a mandatory course on teaching students with SEN and those who have not. Teacher educators who completed the mandatory course also rated their own competence as well as the organisational ability to meet students with SEN higher than did teacher educators who had not completed such a course. The teacher educators' credibility regarding teaching that supports inclusive education can be questioned if they themselves do not have an inclusive perspective when teaching teacher students. Suggestions for further research is to capture how students with different disabilities experience higher education and support given to facilitate their learning possibilities.

Acknowledgements

The authors would like to thank all of the participating teacher educators who participate in the research, and research platform RePESE at Malmö University, Sweden, for supporting this research. The authors would also like to thank Peter Fogarty, MA English 1st Class, from Edanz Group (www.edanzediting.com/ac), for editing a draft of this manuscript.

References

- Burgstahler, S. E. (2015). *Universal design in higher education: From principles to practice*. Cambridge, MA: Harvard Education Press.
- Cai, R. Y., & Richdale, A. L. (2016). Educational experiences and needs of higher education students with autism spectrum disorder. *Journal of Autism and Developmental Disorders*, 46(1), 31–41. doi: 10.1007/s10803-015-2535-1.
- Chatzara, K., Karagiannidis, C., & Stamatis, D. (2016). Cognitive support embedded in self-regulated e-learning systems for students with special learning needs. *Education and Information Technologies*, 21(2), 283–299. doi:10.1007/s10639-014-9320-1.
- Committee on the Rights of Persons with Disabilities. (2011). *Concluding observations of the Committee on the Rights of Persons with Disabilities: Spain*. New York, NY: United Nations.
- Creswell, J. W. (2014). *A concise introduction to mixed methods research*. Thousand Oaks, CA: Sage Publications.
- Elo, S., Kääriäinen, M., Kanste, O., Pölkki, T., Utriainen, K., & Kyngäs, H. (2014). Qualitative content analysis: A focus on trustworthiness. *Sage Open*, 4(1), 1–10. https://doi.org/10.1177/2158244014522633
- Getzel, E. E., & Thoma, C. A. (2008). Experiences of college students with disabilities and the importance of self-determination in higher education settings. *Career Development for Exceptional Individuals*, 31(2), 77–84. https://doi.org/10.1177/0885728808317658.
- Henriksson, A. S. (2003). *Undervisa tillgängligt!: Pedagogiska verktyg för likabehandling av studenter med funktionshinder*. [Teach available! Educational tools for equal treatment of students with disabilities]. Uppsala, Sweden: Enheten för utveckling av pedagogik och interaktivt lärande, Uppsala Universitet.
- Hopkins, L. (2011). The path of least resistance: A voice-relational analysis of disabled students' experiences of discrimination in English universities. *International Journal of Inclusive Education*, 15(7), 711–727. https://doi.org/10.1080/13603110903317684.
- Lave, J. (1991). Situating learning in communities of practice. *Perspectives on Socially Shared*, 2, 63–82. http://dx.doi.org/10.1037/10096-003.
- Lave, J., & Wenger, E. (2001). Legitimate peripheral participation in communities of practice. In *Supporting Lifelong Learning*, 1, 121–136. New York: Routledge. doi:10.1016/B978-0-7506-7223-8.50010-1.
- McGarr, O., O'Grady, E., & Guilfoyle, L. (2017). Exploring the theory-practice gap in initial teacher education: Moving beyond questions of relevance to issues of power and authority. *Journal of Education for Teaching*, 43(1), 48–60. https://doi.org/10.1080/02607476.2017.1256040.
- Moola, F. J. (2015). The road to the ivory tower: The learning experiences of students with disabilities. *Research in Education*, 4(1), 45–70.
- Morgado, B., Cortés-Vega, M., López-Gavira, R., Álvarez, E., & Moriña, A. (2016). Inclusive education in higher education? *Journal of Research in Special Educational Needs*, 16(S1), 639–642. https://doi.org/10.1111/1471-3802.12323.
- Moriña Díez, A., López, R. G., & Molina, V. M. (2015). Students with disabilities in higher education: A biographical-narrative approach to the role of educators. *Higher Education Research & Development*, 34(1), 147–159. https://doi.org/10.1080/07294360.2014.934329.
- Murray, C., Lombardi, A., & Seely, J. R. (2014). Effects of an intensive disability-focused training experience on university faculty self-efficacy. *Journal of Postsecondary Education and Disability*, 27(2), 179–193.
- Murray, C., Flannery, B., K., & Wren, C. (2008). University staff members' attitudes and knowledge about learning disabilities and disability support services. *Journal of Postsecondary Education and Disability*, 21(2), 73–90.
- Naik, N. (2017). Dual PowerPoint presentation approach for students with special educational needs and note-takers. *European Journal of Special Needs Education*, 32(1), 146–152. https://doi.org/10.1080/08856257.2016.1254970
- Nulty, D. D. (2008). The adequacy of response rates to online and paper surveys: What can be done? *Assessment & Evaluation in Higher Education*, 33(3), 301–314. https://doi.org/10.1080/02602930701293231.

- Padden, L., & Ellis, C. (2015). Disability awareness and university staff training in Ireland (Practice Brief). *Journal of Postsecondary Education and Disability*, 28(4), 433–445.
- Pijl, S. J., Frostad, P., & Mjaavatn, P. E. (2014). Students with special educational needs in secondary education: Are they intending to learn or to leave? *European Journal of Special Needs Education*, 29(1), 16–28. <https://doi.org/10.1080/08856257.2013.830442>.
- Smith, A., & Bell, S. (2015). Towards Inclusive Learning Environments (TILE): Developing the 'Roadmap for the Inclusion of students with Special Educational Needs in Vocational Education and Workplace Settings'. *Support for Learning*, 30(2), 150–160.
- Supple, B., & Abgenyega, J. (2011). Developing the understanding and practice of inclusion in higher education for international students with disabilities/additional needs: A whole schooling approach. *International Journal of Whole Schooling*, 7(2), 92–108.
- Tuomi, M. T., & Jauhojärvi-Koskelo, C. (2015). Enabling the full participation of university students with disabilities: Seeking best practices for a barrier-free language centre. In J. Jalkanen, E. Jokinen, & P. Taalas (Eds.), *Voices of pedagogical development – Expanding, enhancing and exploring higher education language learning* (pp. 159–170). Dublin: Research-publishing.net. doi:10.14705/rpnet.2015.000291.
- Wenger, E. (2011). Communities of practice: A brief introduction. Retrieved from <https://scholarsbank.uoregon.edu/xmlui/handle/1794/11736>.

Received: August 13, 2019

Accepted: October 08, 2019

Mona Holmqvist	Dr, Professor, Malmö University, SE-205 06 Malmö, Sweden. E-mail: mona.holmqvist@mau.se Website: http://forskning.mah.se/id/af5982 ORCID: orcid.org/0000-0002-8734-1224
Lotta Anderson	Dr, Lecturer, Malmö University, SE-205 06 Malmö, Sweden. E-mail: lotta.anderson@mau.se ORCID: orcid.org/0000-0002-5632-8908
Lisa Hellström	Dr, Lecturer, Malmö University, SE-205 06 Malmö, Sweden. E-mail: lisa.hellstrom@mau.se Website: http://forskning.mah.se/id/af3678 ORCID: orcid.org/0000-0002-4364-6966