Abstract
The aim is to analyze what characterizes the work of special needs teachers and what collaborations they engage in in schools for students with intellectual disability. Special needs teachers with degrees from three different universities in southern Sweden participated in the survey. The results show that a majority of the respondents had long experience before they started the special needs training program and they describe the direct encounters with students in the classroom as an important part of their work. Supervision and subject-development also exist, but not to the same extent as classroom teaching.

Key words: collaboration, intellectual disability, special needs teacher, school assignment

Introduction
This research started as an interest in gathering information about what conditions and assignments special needs teachers (SNT) in compulsory schools for students with intellectual disability (CSSID) and upper secondary school for students with intellectual disability (USSID) have after postgraduate education. The research intends to contribute with knowledge and understanding of the main tasks SNTs use after acquiring their education.
The Research Problem

Sweden has a parallel school form for students with intellectual disability (ID) who are not expected to achieve the knowledge requirements set by the curricula for the compulsory school or upper secondary school. This school form, CSSID and USSID is adapted for students with ID, which teaches more or less the same subjects as in general education, but with its own curriculum. Sweden has a 150-year-old tradition of providing a parallel school form for students with ID as an independent special education program parallel to general education. After ten years in CSSID, the students can pursue further education by choosing a four-year education program in the USSID, which prepares the students for adult life, to be independent and get employment. Changes made in the curriculum (National Agency of Education, 2011) set new demands for the professional development of SNT´s with a stronger focus on increasing the academic performance of students with ID.

Research Focus

The new requirements have led to an increased focus on assessing student skills. This trend is also evident in international research, where several researchers (Kearns, Towles-Reeves, Kleinert & Kleinert, 2009; Causton-Theoharis, Theoharis, Orsati, & Cosier, 2011) note that there is an increased focus on academic skills in ID education. Collins, Karl, Riggs, Galloway and Hager (2010) point out the challenges in embedding core content into functional activities when teaching students with moderate to severe ID. This is a dilemma that Anderson and Östlund (2017) also spot, a dilemma that became the starting point for a two year project on professional development for SNTs and paraprofessionals. Andersson and Östlund (2017) point to the need for more research on how SNTs and paraprofessionals can develop joint work, their professionalism in teaching and formative assessment. Two meta-analyses by Shurr and Bouck (2013) and Moljord (2018) show that there is a lack of research on SNTs professional work in relation to students with ID. With this background, the overall aim of this paper is to gain new knowledge and a better understanding of SNT´s, their beliefs about their professional role and their collaboration with other professions.

The aim of this research is to analyze the characteristics of SNT´s assignments in CSSID and USSID and the collaborations they engage in. The following research questions are formulated:

1. What competences and kind of employment do SNTs describe that they have had before and after receiving a SNT degree?
2. What assignments do the SNTs perceive characterize their professional role?
3. Which professions do SNTs collaborate with in their work?
Methodology of Research

General Background to the Research
In order to highlight the SNTs work in CSSID and USSID and answer the research questions, data was collected through a digital questionnaire. The design of the research is based on a mixed method design (Creswell, 2014) using a questionnaire with both open and closed response options.

Research Sample
Criterion for the selection of respondents was an SNT degree from one of the three universities in southern Sweden, called A, B and C in this research. The universities are unidentified for reasons of confidentiality. The questionnaires were answered by 88 respondents and the response rate from University A was n = 48 (~ 80%), from University B n = 25 (~ 25%) and from University C n = 15 (~ 26%).

Instrument and Procedures
During the spring semester of 2017, the questionnaire was constructed and sent out by e-mail or by letter to all SNTs who graduated from the three universities. The explanation for this approach was that e-mail addresses were available at university A, but were missing at universities B and C. The letters to SNTs from university B and C contained a link to the digital questionnaire. The respondents got information about participation being voluntary as well as information regarding confidentiality. Initially the respondents got information about the aim and overall purpose of the study. The questionnaire took approximately 30 minutes to complete. General reminders of participation were sent out twice to SNT graduates from university A (via e-mail), which may explain the higher response rate (80%) from this university. No reminder to SNTs from University B and C was distributed. Totally 219 questionnaires were distributed and the number of respondents was 88 SNTs (response rate ~40%). The respondent loss and the difference in response rates between universities affect the reliability and conclusions of research. The questionnaire consisted of 24 questions, including both closed options (on 6-point or 7-point Likert scales) and open options with a field for comments. The instrument included questions concerning undergraduate education, the university where SNT education was completed, the year of graduation, whether a regular SNT program or SNT program for credentials was followed, school development, professional competence development, teaching development, collaboration with paraprofessionals and other professions, as well as with primary or secondary schools, and leadership in special schools. The proportion
of missing variables ranged between 1 and 5 percent, which can be attributed to the answers “do not know” on four questions. In addition, to some questions, open responses were an option.

**Data Analysis**

To get a robust analysis, response options 1, 2, and 3 (1 = very low; 1 = very problematic; 1 = very low extent) were combined to represent “low”/“problematic”/“low extent” ratings, while categories 4, 5, and 6 (6 = very high; 6 = unproblematic; 6 = very high extent) were combined to represent “high”/“unproblematic”/“high extent” ratings. Descriptive analysis was performed using the statistical software package IBM SPSS Statistics 24. The statistical significance level was set at $p < 0.05$. Deductive content analysis works in cases where the researcher wishes to retest existing data in a new context, in this case retest the quantitative data by mirroring them in the qualitative data. The qualitative data were analyzed using content analysis (Bryman, 2012). Some questions in the questionnaire concerned the assignments of SNT, involvement in subject- or school development, skills of other teachers, the SNTs’ need for competence development, students learning environments and collaboration with other professionals. Some of the questions were answered by open response options.

**Ethical considerations**

The respondents received information about participation being voluntary as well as information regarding confidentiality. They were given the option to drop out of the research at any point. Furthermore, the respondents were informed that the purpose of the research was to study the competence and assignments of SNTs and their collaboration with other professionals. All data was stored in accordance with ethical rules (Bryman, 2012).

**Results of Research**

The results of this research derive from both quantitative and qualitative data analyses. The presentation of the results switches between data analyzed with the SPSS Statistical Package and quotes that reinforce the quantitative results. Among the respondents, 20 (24%) reported that they had a degree from two different special education programs. A high proportion of respondents (87%) had worked in CSSID/USSID, without formal qualifications, prior to their degree as SNTs.
**Education and employment before and after SNT graduation**

Almost half of the respondents were educated primary school teachers (46%) before they started SNT training. Educated preschool teachers were the second largest group (28%). Other respondents were educated subject teachers, vocational teachers, or afternoon center teachers. According to National statistics, ~90% of teachers in CSSID and ~78% in USSID are women (Swedish National Agency for Education, 2018). The female dominance is also reflected in the special needs education program and generally within the CSSID (Swedish National Agency for Education, 2018). For reasons of confidentiality, the questionnaire did not include questions regarding the respondent’s gender or age.

The SNTs graduated between 2013 and 2017, and most of the respondents were trained at University A. Of the respondents, 77% are employed as SNTs after their graduation, while 25% either have employment in primary schools, or continue to work as special education teachers. The analysis shows that employment as an SNT is higher for those who have completed education according to eligibility requirement, although the difference is not significant (p=0.057). The results show that a larger proportion of respondents work as SNTs if they have been examined according to the credential in the program that was formed to meet the eligibility requirement, compared to the regular SNT education program, 51 respondents (76%) have stated this answer. A large proportion of the respondents (89%) were employed in the CSSID/USSID before they began SNT education, while 11% had different employment—for example, as an afternoon center teacher or paraprofessional. Most of the respondents have worked between 6–10 (26 respondents) years, 20 respondents have worked between 11–16 years and 16 respondents have worked more than 16 years in either CSSID or USSID. Preschool and primary school teachers are the group that have been employed for the longest time in either CSSID or USSID before they started SNT education (36.8% respectively 21.8% employed > 6 years). The majority (55 out of 88) currently work in CSSID, 34 respondents work in USSID or adult education; and a smaller proportion (16 respondents) work with students with ID in general education. The discrepancy in numbers is because some respondents stated that they work in several types of school.

**Qualifications and competence**

Respondents estimated teacher qualifications with regard to the new demands on having a SNT credential, with 62 respondents (72%) giving a high rating. The remaining 26 respondents considered that the number of teachers with a SNT credential are low (28%). The motivations for the latter included the following:
Few of my colleagues are qualified to teach in a special school.

Respondents estimated that their own skills needs were moderate. 47 (36%) considered this and argued as follows:

It would be good to have practice in education, especially to exchange experiences with educated special teachers.

Table 1 shows the school assignments that the respondents indicated they usually work with as SNT or special education teachers. The table does not show which assignments each individual SNT has, but it appears that they have several assignments. The respondents were given the opportunity to indicate the total amount and the percentage. The results showed that a SNT can work exclusively with classroom teaching (71 to 80.7%), but their work can also include supervision (30 to 34.1%), school development (33 to 37.3%), and student health work (25 to 28.4%). We can assume that school development links to a employment as special educator. Another answer could be, for example, a counselor in another authority, working as a SNT in a child and youth rehabilitation center and as a lecturer at a university. Respondents described in which areas they carry out school- or subject development (if any). The answers were categorized as follows: The subject- and school development undertaken is multifaceted and includes areas such as implementation of curricula; educational plans and assessment for learning; creating an accessible learning environment; health promotion; subject development in Swedish, sports, mathematics and organization and collaboration with the principal.

School development involved implementing curricula, creating clarity in education through educational plans and assessments, using ICT in learning, and establishing routines for systematic quality work and student health work.

<table>
<thead>
<tr>
<th>Assignment</th>
<th>N (%)</th>
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<tbody>
<tr>
<td>Classroom teaching</td>
<td>71/87 (80.7%)</td>
</tr>
<tr>
<td>Supervision</td>
<td>30/87 (34.1%)</td>
</tr>
<tr>
<td>School development</td>
<td>33/87 (37.5%)</td>
</tr>
<tr>
<td>Student health work</td>
<td>25/87 (28.4%)</td>
</tr>
<tr>
<td>Subject development</td>
<td>16/87 (18.2%)</td>
</tr>
</tbody>
</table>

**Table 1.** SNT’s school assignments (N=87)
Collaboration with professionals inside and outside CSSID/USSID

The respondents stated that paraprofessionals are important for daily work, but 70% of them also argue that paraprofessional training is low and indicate this with comments such as:

They often lack education, but I think their work should be considered very important. They need to get more education and be valued higher.

The education is low with the paraprofessionals I work with, but they have a solid experience and a strong career. We have a very good team around the student group.

Regardless of the level of paraprofessional education, the school form requires that SNTs and paraprofessionals collaborate, and there was no significant difference between paraprofessional education levels and to what extent SNT and paraprofessionals collaborated (p=0.274). Respondents, regardless of their employment, estimate the paraprofessionals’ education to be low, while their contribution to the education of the students was rated highly. More than 60% of the respondents indicate that there is a time for planning with the paraprofessionals, but that the scheduled time may vary from 2 hours a week to 20 minutes a week. Of the respondents, 74% appreciate the value of collaboration with paraprofessionals, while 8% have no opinion, which may be because they work in a school where paraprofessionals are not available. One respondent wrote:

Collaboration with paraprofessionals is one of the most important factors in special schools for students with intellectual disability; they follow the class during all hours. It is important that we are two occupational categories that will work together around the students. We collaborate, but we never have time to talk; therefore, it will be difficult to get proper collaboration.

There is no significant difference between paraprofessional education and SNT’s appreciation in their creating learning environments for the children (p = 0.048). Creating learning environments is assessed by the SNTs both as unproblematic and
as problematic when the level of education is low in paraprofessionals, but considered somewhat less problematic when their educational level is high. There is no significant difference between the level of paraprofessionals' education and the leadership of the CSSID and USSID is shared with a regular school, or if the principal only is responsible for a school or students with ID (p=0.310). 58 of the 88 respondents (67%) indicate that they interact with other professionals outside the school. In particular, they collaborate with different professional categories within child and youth rehabilitation centers and with the resource team, as well as with municipal representatives and agencies (such as employment agencies and insurance funds).

**Discussion**

From a professional development perspective, professional development as a SNT tends to stagnate instead of the teacher continuing to develop in skills and competence. In this context, it becomes very important for the graduate SNTs to create both local and regional professional networks for professional development outside their own workplace.

**SNTs experiences before and after obtaining an SNT degree**

Based on the results of the study, SNTs appear as a group whose profession is characterized by a discrepancy between what they are educated for in the university and what they do in education for students with ID. They work primarily in teaching and, to a lesser extent, in supervision or school development, which are two important components in SNT education. In practice, their role focuses strongly on classroom teaching, which is contrary to the multidimensional terms used in the policy document for education that states that SNTs are supposed to work in supervision, school development, subject development, leadership, and student-health issues to varying degrees. SNT’s state that they are not given the space to design their professional roles so that they can utilize their full skills, for example by working in supervision and school development after finishing the SNT education. Thus, a discussion on the boundaries of the work of the SNT is needed, since along with supporting paraprofessionals the SNTs need to spend more time on working in supervision and school development.

**SNT’s school assignments and professional role**

With regard to the gap between governmental policy and practice in implementation of regulations for SNTs to have a formal teacher credential, we see
that there is a shortage of SNTs with credentials, which creates the scope for SNTs to design the pedagogical work themselves. At the same time, they are forced to adapt to their colleagues’ expectations, in a situation where these colleagues are not accredited to teach. In terms of competence, the study points to the fact that respondents’ colleagues are usually not qualified SNTs and that the principals of schools where they work may lack experience in working with students with ID.

**Collaboration with other professionals**

Collaboration between paraprofessionals and SNTs is dependent on good communication, but sometimes their different forms of employment becomes a barrier. The paraprofessionals often follow the students to the schools afternoon center, which is a barrier to finding joint time for meetings. The respondents highlight the importance of their collaboration with the paraprofessionals and pin point the importance of co-planning to make teaching work. Therefore, it is remarkable that around 40% of the respondents indicate that they lack sufficient planning time with paraprofessionals. It is also notable that even though 60% have a scheduled time for co-planning with the paraprofessionals, they could have as little as 20 minutes a week and no more than 2 hours a week. The total lack of time to co-plan among 40% of the respondents and the large variation in co-planning time for the other 60% is a potential risk to the professional development of both the SNTs and the paraprofessionals. Everyday interaction with other professionals, for example, paraprofessionals, occurs without having the time to co-plan strategies for co-teaching and co-assessing. This constitutes a threat to the SNTs’ professional development and to the quality of education for students with ID.

**Limitations**

The low response rate in total (~40 %), and the difference in response rates between universities affect the generalizability of the results. With larger samples, the analyses could be made at a finer level that includes all response categories and includes other universities educating SNTs for a more comprehensive understanding of the correlation between competence, assignments, and collaboration.
Conclusions

The SNT role has a strong focus on teaching. However, the SNTs are also educated to work in supervision, school development, subject development, leadership, and student-health issues to varying degrees. Continued qualitative research about and with SNTs and principals can deepen the understanding of collaboration and educational practices for students with ID. A future research question could be about the education that a university offers SNT students in relation to the gap between policy and practice. For example, the SNT has many qualified collaborations with parents, colleagues, paraprofessional and other professions. What skills do SNTs develop during their education? This area could be deepened by comparing syllabi and by interviews with university teachers and SNTs. Another conclusion that can be drawn, is that the SNTs have many areas of collaboration. Teaching students with ID assumes that teachers have many different skills, but requires most of them to continue as class teachers after obtaining a SNT degree. Even though it is common for SNTs to collaborate with other professionals such as staff in the child and youth rehabilitation center, or Social Insurance and Employment Services these perspectives are not explicit in the SNT’s education. An implication of the results of this research into SNT education is to highlight content that in a better way prepares the SNT’s for collaboration with external actors.

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References


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1 In the text, we use the abbreviation CSSID and USSID, regardless of whether they study subjects or training fields. Training fields is related to students with moderate to severe intellectual disability. Subjects in CSSID include, for example, Swedish language, Math, Image, Sport, natural science subjects, social science subjects; training fields include Communication, Aesthetic activities, Perception of reality, Everyday activities and Motor skills.

ii This is an initiative from the Swedish National Agency for Education and aims to increase the qualifications of teachers in CSSID and USSID by initiating a program with increased study rate. The Swedish National Agency for Education contributes to the funding.

iii In Sweden, there are two similar professions working with special educational needs. Special educators working with school development, SEN investigations and supervision, whereas the main mission for special needs teachers is to support individual students, and subject development, but also SEN investigations and supervision.