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Instructional Practices for Pupils with an Intellectual Disability in Mainstream and Special Educational Settings

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ABSTRACT

The inclusion agenda has influenced education systems around the world, resulting in better access to mainstream education for pupils with special educational needs (SEN). While numerous studies have compared outcomes of pupils with SEN in mainstream and special educational settings, research on the specific characteristics of these settings remains scarce. In this study a survey was conducted with teachers of pupils with an intellectual disability in mainstream (N = 254) and special educational settings (N = 392) in Sweden to investigate differences in instructional practices between these settings. The results showed that teachers' in the two settings devoted approximately similar amount of time to learner-centred and teacher-centred activities respectively, which slightly more focus on teacher-centred activities in both settings. The results of a Mann-Whitney U-test revealed that teachers in mainstream educational settings, in comparison with teachers in special educational settings, reported significantly higher expectations of pupils' performance but lower focus on supporting pupils' social participation. Support of pupils' social participation may be an important characteristic of special educational settings, and there is a need to further explore how knowledge of teacher practices in special educational settings may be used to support pupil's social participation in mainstream settings.

KEYWORDS

Inclusion; instruction; intellectual disability; mainstream educational settings; special educational settings

Introduction

During recent decades, inclusion has become an important aspect of educational systems around the world, and access to mainstream education for pupils with special educational needs (SEN) has increased (Ferguson, 2008; Pijl, Meijer, & Hegarty, 2002). The right of pupils with SEN to receive education in mainstream schools together with their peers is important, especially with regard to the right to equal opportunities to participate in society (United Nations [UN], 1989).

Comparative studies have consistently shown that pupils with SEN placed in mainstream educational settings perform as well as or better than pupils with SEN placed in special educational settings (Dessemontet, Bless, & Morin, 2012; Freeman & Alkin, 2000; Ruijs & Peetsma, 2009; Turner, Alborz, & Gayle, 2008). However, few studies have

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investigated the specific characteristics of the two types of settings. Thus, it remains unclear what particular factors in the two types of settings may be important for pupils' outcomes. This study is expected to contribute to previous research by investigating teachers' reported instructional practices in mainstream and special educational settings. The study focuses on teacher instructional practices for a particular group of pupils classified as pupils with an intellectual disability (ID).

The aim of the study was to explore differences in instructional practices in mainstream versus special educational settings for pupils with ID with regard to (a) teachers' reported instructional activities, (b) teachers' reported expectations of pupils' performance, and (c) teachers' support of pupils' social participation.

Pupils' Outcomes in Mainstream and Special Educational Settings

Several studies have compared the outcomes of pupils with SEN in general and pupils with ID in particular in mainstream versus special educational settings. Concerning academic progress, the studies consistently show that there are either no differences in pupils' achievement in mainstream and special educational settings or that pupils in mainstream educational settings perform better (de Graaf, van Hove, & Haveman, 2013; Dessemontet et al., 2012; Freeman & Alkin, 2000; Ruijs & Peetsma, 2009; Szumski & Karwowski, 2012, 2014; Turner et al., 2008). Ruijs and Peetsma (2009) suggest that teachers' higher expectations and the higher focus on academic achievement in mainstream school settings might explain this result.

Regarding the social participation of pupils with SEN and pupils with ID, mixed results have been reported. In a review of studies, Ruijs and Peetsma (2009) found studies reporting both positive and negative results, concluding that no definite conclusions could be drawn concerning social outcomes for pupils with SEN. Other studies reported varying results depending on whether the outcomes were measured in terms of teacher ratings of pupils' behaviour or pupils' own ratings of their social situation.

Concerning teacher ratings of pupils' behaviour, no significant differences in the adaptive behaviour and social competence of pupils with ID were found in the two types of settings (Dessemontet et al., 2012; Hardiman, Guerin, & Fitzsimons, 2009). However, Hardiman et al. (2009) reported that pupils with ID in mainstream schools received higher teacher ratings of hyperactivity. The authors (Hardinam et al., 2009) suggested that larger class sizes and a lack of specialised teacher training in mainstream school settings might explain this result.

Concerning the pupils' ratings of their social participation, Cooney, Jahoda, and Knott (2006) found higher rates of stigma reported by pupils with ID in mainstream schools. Likewise, Szumski and Karwowski (2012) found that pupils with ID in special schools had a more positive psychosocial situation with regard to peer relations and motivation to study. Thus, while researchers generally agree that pupils with SEN in mainstream educational settings perform better or as well as pupils with SEN in special educational settings, the social participation of pupils with SEN in these settings may deserve further attention.

Defining Instructional Practices

Teacher instructional practices encompass not only cognitive but also motivational and social dimensions. Through studies of teacher practices, several dimensions have been identified in previous research; these include the supportive classroom climate, classroom dialogue, and expectations of pupils' performance (Hamre & Pianta, 2005; Perry & Weinstein, 1998). Perry, Donohue, and Weinstein (2007) outline two distinct dimensions in teachers' work in the classroom: the cognitive and the social-emotional dimensions (Perry et al., 2007). The cognitive dimension encompasses guiding children's learning, monitoring progress, and providing help when needed. The social and emotional dimension involves being supportive and positive and supporting social relationships. In investigating teacher instructional practices, both cognitive and social-emotional domains need to be included.

Other categories that have been used to discern different instructional practices include learner-centred and teacher-centred approaches (Alford, Rollins, Padrón, & Waxman, 2016; Stipek et al., 1998). Within learner-centred approaches, the individual needs and experiences of pupils are the driving forces of instruction, and pupils' interests and experiences are taken into account. These practices may be characterised by the use of instructional conversations and multiple opportunities for skills practice in class or group. By contrast, teacher-directed instructional practices set teacher planning and expectations as priorities. In these practices, a teacher takes an active role by providing lectures for pupils. In previous research, teacher use of learner-centred practices was related to higher student achievement and motivation (Meece, Herman, & McCombs, 2003; Stipek et al., 1998). Therefore, it may be relevant to investigate what types of instructional activities teachers report in mainstream and special educational settings.

In order for this study to reflect both cognitive and social-emotional dimensions of teaching, questions focusing on teachers' expectations of pupils' performance and on teachers' support of pupils' social participation were included. Furthermore, the teachers were asked to report the amount of time they typically devote to teacher-centred and learner-centred activities.

Instructional Practices in Mainstream and Special Educational Settings

To our knowledge, research on the comparison of characteristics of mainstream and special educational settings is scarce. Previous research that may shed light on the specific characteristics of the settings falls into three dimensions: (1) studies of teacher support to pupils with SEN in mainstream settings, (2) studies of instructional practices in special educational settings, and (3) comparison studies of mainstream and special educational settings.

First, studies of support to pupils with SEN in mainstream settings report that teachers experience challenges in providing adaptations for pupils with different educational needs (Alhassan & Abosi, 2014; Bruggink, Goei, & Koot, 2016; Cameron, 2014; Webster & Blatchford, 2015). In an observational study of mainstream preschool settings in Greece, the authors conclude that the quality of inclusion in these settings is low (Vlachou & Fyssa, 2016). With regard to education for pupils with ID in mainstream schools, studies show that teachers express concerns about providing adaptations for pupils, especially with

regard to coping with challenging behaviour, and teachers express a lack of professional competence in meeting pupils' needs (Forlin, Keen, & Barrett, 2008).

In addition to these findings, one important aspect of teacher practice is support to pupils' social participation. Pupils with SEN report having fewer friends than their peers and are observed to have fewer opportunities for interaction with peers (Koster, Nakken, Pijl, & van Houten, 2009; Koster, Pijl, Nakken, & van Houten, 2010). General education teachers report a lack of training for meeting the social and emotional needs of pupils with disabilities (de Leeuw, de Boer, & Minnaert, 2018; Dobbins, Higgins, Pierce, Tandy, & Tincani, 2010; Pavri, 2004; Pavri & Hegwer-DiVita, 2006). Special education teachers, on the other hand, report a wide range of strategies to support the social needs of pupils with disabilities (Vlachou, Stavroussi, & Didaskalou, 2016). Taken together, these findings are inconclusive as to whether the teachers have enough competence and training to support pupils' social participation in mainstream settings.

Second, regarding instructional practices in special educational settings, studies from Sweden and the United States raise concerns about the quality of instruction, suggesting that instruction focuses primarily on rote knowledge rather than on more advanced abilities (Berthén, 2007; Göransson, Hellblom-Thibblin, & Axdorph, 2016; Hord & Bouck, 2012; Restorff & Abery, 2013). Teachers' low expectations of pupils' performance is also an issue that is brought up in survey studies of the two settings (Karvonen, Wakeman, Browder, Rogers, & Flowers, 2011). Given the fact that teachers' expectations of pupils' abilities are closely related to teachers' instructional practices and pupils' achievement, it is important to explore teachers' expectations of pupils' performance in the two types of settings.

Third, comparative studies of mainstream and special educational settings bring up the similarities and differences in these settings. Kurth and Mastergeorge (2010) studied formulations of individual education programmes (IEPs) for pupils with autism in mainstream and restrictive settings. The authors revealed that in mainstream school settings the goals were focused on academic outcomes, while in restrictive settings the goals rather focused on core characteristics of pupils' diagnoses. Thus, the results indicated less focus on academic outcomes in special educational settings. Kishida and Kemp (2009) investigated preschool children's interactions in mainstream and segregated settings. The authors concluded that rather than comparing children's opportunities for interaction in these settings, there is a need to take into account the characteristics of both settings. According to the authors, teachers in special educational settings have specialised competence, and pupil-to-teacher ratio allows for providing opportunities for interaction. On the other hand, the authors point out that more opportunities for interaction with peers may arise in mainstream education settings. Thus, comparing mainstream and special educational settings, there is a need for a more nuanced analysis of different characteristics of the settings as regards teacher competence and specialised training, class size, or adult-to-child ratio as well as the possible effects of homogeneous grouping in special educational settings.

Pupils with an Intellectual Disability in Mainstream and Special Educational Settings

Pupils identified with the diagnosis of ID exhibit limitations in mental abilities that influence adaptive behaviour and everyday functioning (American Psychiatric

Association, 2013). Despite rigorous assessment criteria, research shows that practices for identification of pupils with ID vary across schools and over time, especially with regard to mild ID (Norwich, Ylonen, & Gwernan-Jones, 2014; Tideman, 2000). At the national level in Sweden, one percent of all the pupils enrolled in compulsory school are pupils with ID. However, at the municipal level the proportion of pupils with ID varies greatly, ranging from 0.05% to 1.58% in mid-sized cities (National Agency of Education [NAE], 2018). These disparities may indicate that practices of assessment and identification of pupils with ID vary among municipalities. This is also suggested in a recent study of prevalence of intellectual disability worldwide (McKenzie, Milton, Smith, & Ouellette-Kuntz, 2016).

The odds of whether a pupil diagnosed with ID is placed in a mainstream or in a special educational setting may vary. Studies from Europe and the United States report that education for pupils with ID is provided in special as well as in mainstream educational settings (Dessemond et al., 2012; Göransson et al., 2016; Hardiman et al., 2009; Szumski & Firkowska-Mankiewicz, 2010), but it is not clear what influences the decision to place a pupil with ID in one of the settings rather than the other. Some studies contend that pupils' intellectual and adaptive functioning differ in mainstream and special educational settings (Eaves & Ho, 1997; Harris & Handleman, 2000). Others point out that such factors as parents' socioeconomic status and parental engagement may be important (Szumski & Karwowski, 2012, 2014) as well as teachers' beliefs and schools' organisation of support (Idol, 2006).

In line with Swedish law, pupils who do not achieve in accordance with the national curriculum standards due to an intellectual disability are offered an adapted curriculum. The adapted curriculum includes modified content in terms of depth and breadth of knowledge (NAE, 2018). The adapted curriculum for pupils with ID can, however, be taught in both mainstream and special education schools (Wilder & Klang, 2017). As of school year 2017–2018, 4740 pupils with mild or moderate ID, of a total 10,612 pupils with ID, received education in compulsory special schools for pupils with an intellectual disability (CSPIDs). A smaller number of pupils ($N = 1305$) with mild or moderate ID received education in mainstream education settings. This study focuses on instructional practices for these two groups of pupils. Not included in this study are the remaining pupils with ID, those with moderate or severe ID ($N = 4567$) who received education in special educational settings according to separate syllabi, which do not include subjects but rather subject areas.

Materials and Methods

Teachers of pupils with ID in mainstream and special educational settings responded to a questionnaire about their instructional practices. The questionnaire study was conducted with the help of the Swedish statistical agency, Statistics Sweden. The questionnaire was pilot-tested with six teachers prior to distribution. In addition, Statistics Sweden tested the measurement properties of the questionnaire. The questionnaire was sent by post and was followed up by two reminders.

Sample

The participants were 254 teachers of pupils with ID integrated in mainstream schools and 392 teachers of pupils with ID in CSPIDs (total $n = 646$). Table 1 presents

the background data on teachers in both groups. To identify teachers of pupils with ID in special educational settings, Statistics Sweden's register was used. The questionnaire was sent to all teachers of pupils with ID who were employed 100% at CSPIDs during the school year of 2015–2016. Of 2871 questionnaires sent, 1621 were returned to Statistics Sweden (response rate of 57.7%). Only survey results for teachers of pupils with moderate or mild ID in primary schools ($N = 392$) were included in the analysis to ensure the comparability of the settings. To identify teachers of pupils with ID in mainstream educational settings, data from NAE were used. According to NAE, there were 729 schools in 2015–2016 that had pupils with ID in mainstream educational settings, and that number of pupils was 1135. The schools received questionnaires in accordance with the number of pupils with ID registered at the schools. Three hundred eighty-eight (388) questionnaires were returned to Statistics Sweden (a response rate of 43.4%).

As seen in [Table 1](#), there are differences between groups of teachers in special and mainstream educational settings. More teachers in mainstream educational settings possess a primary teacher degree, but fewer teachers in mainstream educational settings report having received training in special needs education. The teacher-to-pupil ratio is also different in the educational settings. While 58.9% of teachers in special educational settings report that they are responsible for 6–12 pupils, 59.8% of teachers for pupils with ID in mainstream schools report that they are responsible for more than 21 pupils.

Table 1. Background information on participants.

Category	Teachers in CSPIDs (N = 392)		Teachers of pupils with ID in mainstream schools (N = 254)	
	n	%	n	%
Sex				
Male	46	11.7	43	16.9
Female	343	87.5	210	82.7
No response	3	0.8	1	0.4
Education				
Recreation teacher	14	3.6	3	1.2
Preschool teacher	64	16.3	4	1.6
Primary school teacher	212	54.1	187	73.6
Secondary school teacher	14	3.6	13	5.1
Other	20	5.1	12	4.7
No response	10	2.6	4	1.6
More than one response	58	14.8	31	12.2
Special education training				
Single courses	88	22.4	90	35.4
Part of teacher training	36	9.2	13	5.1
Master of science	14	3.6	3	1.2
Special needs educator	192	49.0	26	10.2
No training	59	15.1	122	48.0
No response	3	0.8	0	0
Number of pupils per class				
2–5 pupils	136	34.7	14	5.5
6–12 pupils	231	58.9	18	7.1
3–20 pupils	18	4.6	61	24.0
21 pupils or more	6	1.5	152	59.8
No response	1	0.3		

Instrumentation

The questionnaire contained 32 questions with sub questions, which resulted in 63 questions in total. The questionnaire consisted of six parts. Three parts of the questionnaire were chosen for comparison between mainstream and special educational settings: (a) instructional activities with regard to teacher-centred and learner-centred approaches; (b) teachers' expectations of pupils' learning, and (c) teachers' support of pupils' social participation.

Teachers' Reported Instructional Practices

The questions on the structure of instructional activities were based on previous research on quality of teaching, including a learner-centred and a teacher-centred approach (Alford et al., 2016; Perry et al., 2007). Four questions on teacher-centred and four questions on learner-centred approaches were included as well as one question concerning individual activities. An example of a question concerning a learner-centred approach is 'I involve pupils in introductions to my lessons.' An example of a question reflecting a teacher-centred approach is 'I conduct an introduction, and pupils work according to a model.' A question on individual activities was 'Pupils work on individual assignments.' The respondents had to rate the percentage of time they devoted to these activities, with the total amount corresponding to 100%.

Teachers' Reported Expectations of Pupils' Learning

Questions concerning expectations of pupils' learning were developed based on the Depth-Of-Knowledge framework (Webb, 2007). Webb (2007) distinguished four levels of cognitive complexity in tasks: recall (level 1), skill/concept (level 2), strategic thinking (level 3), and extended thinking (level 4). The levels are differentiated in relation to the cognitive effort required for a task. Level 1, recall, requires remembering facts; it describes rote knowledge and is represented in the question 'To what degree do you expect your pupils to remember facts?' Level 2, skill/concept, involves cognitive effort beyond a habitual response and requires pupils to make decisions about how to approach a task; an example question is 'To what degree do you expect your pupils to collect and compare data?' Level 3, strategic thinking, involves planning, making connections between different ideas, and justifying choices; an example question is 'To what degree do you expect your pupils to solve problems?' Level 4, extended thinking, involves complex reasoning and synthesising information; an example question for this level is 'To what degree do you expect your pupils to develop and test ideas?' For the questionnaire, one to three questions were developed for each knowledge level. The scale was from 1 to 4, where 1 was 'to a very low degree' and 4 was 'to a very high degree.'

Teachers' Reported Support of Pupils' Social Participation

A literature review by Koster et al. (2009) revealed that social participation is used synonymously with social inclusion and social integration in the research literature. Social participation, according to the authors, encompasses the domains of friendships and interactions with peers, perception of a pupil with SEN, as well as acceptance by classmates. In this study, questions concerning teachers' support of pupils' social participation concerned teacher support in creating a sense of community in the classroom and

supporting pupils in relations with peers as well as strengthening pupils' self-esteem. This part of the questionnaire also contained a question on teachers' focus on issues of fairness and equality in the classroom. The scale was from 1 to 4, where 1 was 'to a very low degree' and 4 was 'to a very high degree.'

Data Analysis

The teachers' responses were entered into the Statistical Package for the Social Sciences (SPSS) programme. Descriptive statistics were used to summarise teachers' reported percentage of time devoted to instructional activities with regard to teacher-centred and learner-centred approaches. A non-parametric Mann-Whitney U test was used to analyse the differences between teachers in the two groups concerning their expectations of pupils' performance and their reported focus on supporting pupils' social participation. The Mann-Whitney U test was considered suitable for the analysis, as it is recommended for use with ordinal data and does not assume a normal distribution in the two independent samples (Lehmann, 2006).

Results

The results revealed significant differences in teachers' reported instructional practices between mainstream and special educational settings. While teachers in mainstream educational settings reported higher expectations of pupils' learning, teachers in special educational settings reported more focus on pupils' social participation.

Teacher Instructional Activities

In [Figures 1](#) and [2](#), teachers' reported proportion of time devoted to instructional activities is shown. As seen in the figure, the teachers in both settings devote fairly similar proportions of time to activities related to teacher-centred and learner-centred approaches. Taken together, teachers of pupils with ID in mainstream schools appear to devote 43.20% of their time to teacher-centred practices and 37.09% of their time to learner-centred practices. Teachers of pupils with ID in CSPIDs devote 45.48% of their time to teacher-centred practices and 37.55% to learner-centred practices. Teachers of pupils with ID in mainstream schools also devote a relatively larger amount of time to individual tasks. On a more detailed level, teachers of pupils with ID in mainstream schools report doing more lecturing and involving pupils in group work and peer tutoring. Teachers in special educational settings, on the other hand, report providing more structured introductions, followed by pupils' working according to schedule and involving pupils in their introductions to lessons.

Teacher Expectations of Pupils' Learning

The results of the Mann-Whitney U test are reported in [Table 2](#). Distributions of the scores for the two groups were not similar for all the questions, as assessed by visual inspection. Therefore, mean ranks of teachers' ratings of the questions are reported instead of medians. As seen in [Table 2](#), significant differences were found between teachers'

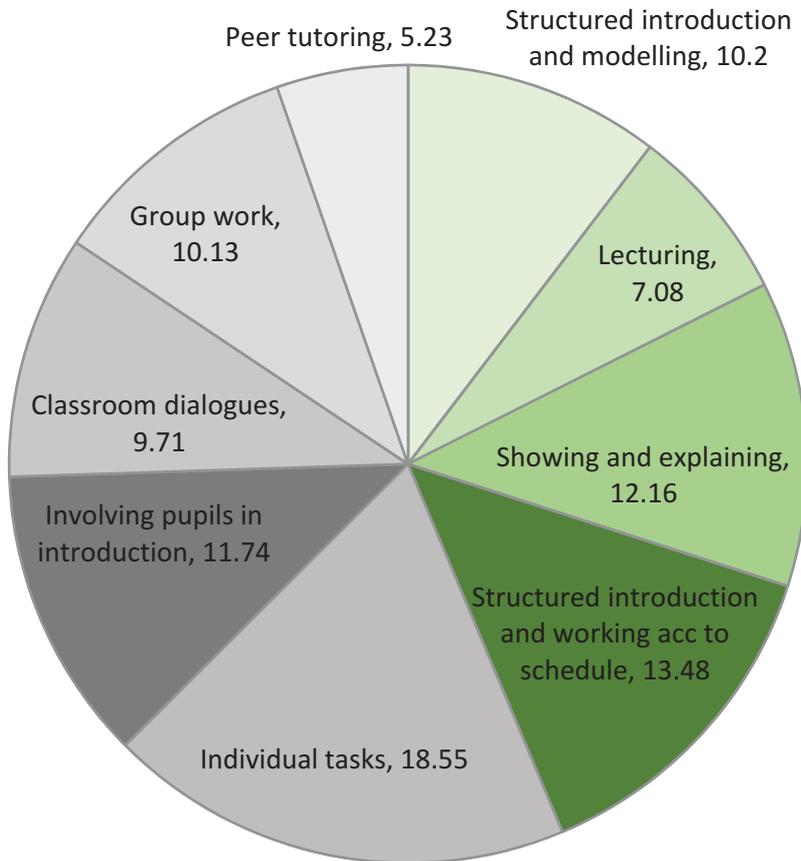


Figure 1. Reported instructional activities for teachers in mainstream educational settings.

reported expectations in mainstream and special educational settings. Teachers of pupils with ID in mainstream schools reported having higher expectations concerning pupils' learning. Fewer significant differences were found on the levels of recall and skill/concept. However, for the levels of knowledge involving more cognitive effort, such as strategic thinking and extended thinking, differences between the two groups of teachers were significant for all questions.

Teacher Support to Pupils' Social Participation

As with questions on teachers' reported expectations of pupils' performance, mean ranks instead of medians are reported due to the fact that the ratings within each group of teachers were not similarly distributed across all the questions. As seen in Table 3, there are significant differences in teachers' reported support to pupils' social participation. Teachers in special educational settings report significantly higher focus on all five of the questions, which relate to creating a sense of community in the classroom, creating opportunities for pupils to interact with each other, supporting peer relations, supporting pupils' self-esteem, and treating questions of justice and equity.

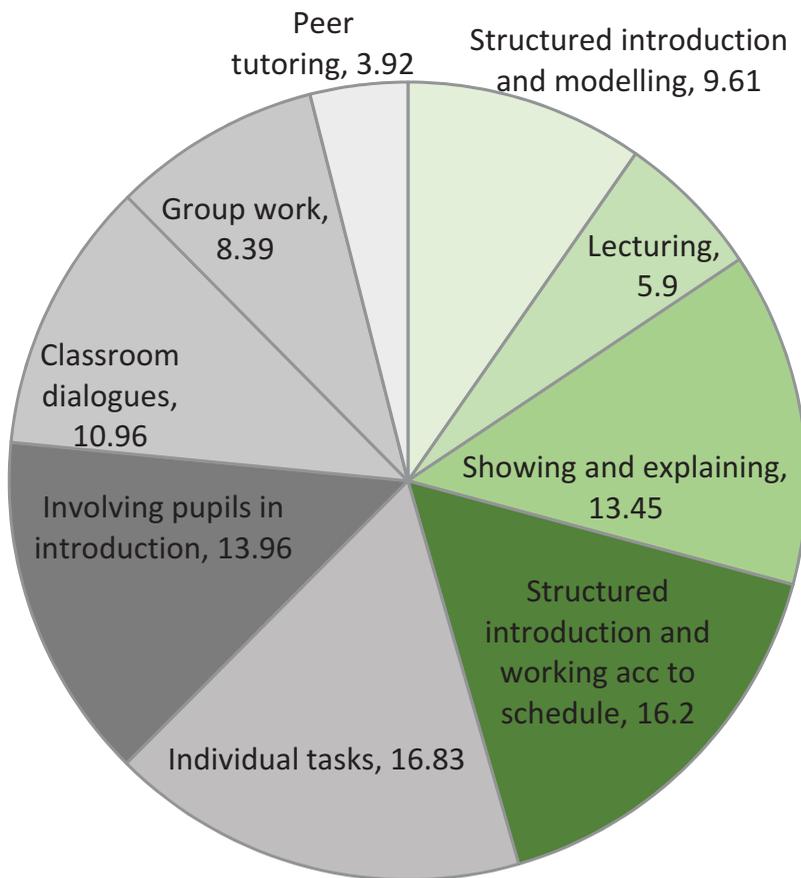


Figure 2. Reported instructional activities for teachers in special educational settings.

Discussion

The aim of the study was to investigate differences in teachers' instructional practices between mainstream and special educational settings for pupils with ID. The results show that teachers of pupils with ID in mainstream education reported higher expectations of pupils' learning, while teachers in special educational settings reported significantly higher focus on supporting pupils' social participation. Furthermore, descriptive analyses indicate that teachers in mainstream education settings report fairly similar amounts of time devoted to teacher-centred and learner-centred practices, with more focus on teacher-centred activities in both settings.

Before considering the implications of these findings, it is important to examine the limitations of the study. In accordance with ethical guidelines, the survey to the teachers was anonymous and therefore no information could be obtained on the schools or the specific characteristics of the pupils with ID enrolled in the schools. Therefore, the teachers in the studies may be reporting instructional practices for pupils with different levels of functioning and different backgrounds. Pupils with ID enrolled in mainstream schools may have higher IQs or higher levels of adaptive functioning (Eaves & Ho, 1997; Harris & Handleman, 2000). However, other research findings indicate that it is not only

Table 2. Results of Mann-Whitney U test on teachers' expectations of pupils' learning.

Teachers expectations	Mean rank	Mann-Whitney U	p
Recall			
Remembering facts		43702.500	0.52
Teachers in mainstream schools (n = 248)	332.28		
Teachers in special schools (n = 384)	306.31		
Skill/concept			
Using knowledge		39904.000*	0.000
Teachers in mainstream schools (n = 247)	348.45		
Teachers in special schools (n = 386)	296.88		
Classifying phenomena		45,206.000	0.415
Teachers in mainstream schools (n = 246)	320.74		
Teachers in special schools (n = 381)	309.65		
Making calculations		41674.500*	0.010
Teachers in mainstream schools (n = 244)	336.70		
Teachers in special schools (n = 385)	301.25		
Collecting and comparing data		42177.000*	0.017
Teachers in mainstream schools (n = 246)	335.05		
Teachers in special schools (n = 383)	302.12		
Strategic thinking			
Solving problems		42369.000*	0.019
Teachers in mainstream schools (n = 245)	334.07		
Teachers in special schools (n = 384)	302.84		
Comparing and reflecting		40299.500*	0.001
Teachers in mainstream schools (n = 246)	342.68		
Teachers in special schools (n = 383)	297.22		
Extended thinking			
Drawing conclusions		35422.000*	0.000
Teachers in mainstream schools (n = 247)	364.59		
Teachers in special schools (n = 384)	284.74		
Discussing and arguing		38874.500*	0.000
Teachers in mainstream schools (n = 247)	351.61		
Teachers in special schools (n = 385)	293.97		
Developing and testing ideas		41467.000*	0.008
Teachers in mainstream schools (n = 245)	336.75		
Teachers in special schools (n = 383)	300.27		

Table 3. Results of Mann-Whitney U test on teachers' support to pupils' social participation.

	Mean rank	Mann Whitney U	p
Creating common feeling in the classroom		42323.000*	0.006
Teachers in mainstream schools (246)	295.54		
Teachers in special schools (n = 389)	332.20		
Creating opportunities for pupils to interact with each other		41243.500*	0.001
Teachers in mainstream schools (n = 247)	290.98		
Teachers in special schools (n = 389)	335.98		
Treating peer relations and peer acceptance		44249.000*	0.046
Teachers in mainstream schools (n = 247)	303.15		
Teachers in special schools (n = 389)	328.25		
Supporting pupils' self-esteem		37001.000*	0.000
Teachers in mainstream schools (n = 247)	273.80		
Teachers in special schools (n = 389)	346.88		
Treating questions concerning equity, equivalency and justice		42363.000*	0.005
Teachers in mainstream schools (n = 247)	295.51		
Teachers in special schools (n = 389)	333.10		

pupils' functioning that determines placement in mainstream or special school; it may also be family background and school organisation (Szumski & Karwowski, 2012), thus indicating that pupils with ID in mainstream and special educational settings may have

similar characteristics. In order to minimise this risk, only teachers employed in CSPIDs for pupils with mild or moderate ID were included. Another limitation concerns the fact that the study is based on teacher reports of their instructional practices rather than on observations of teachers' actual work, which sets limitations on the interpretation of the findings. Taking into consideration these limitations, the study may have a number of contributions to the research field.

One of the purposes of the study was to explore teacher use of instructional activities, especially with regard to learner-centred versus teacher-centred practices. In previous research, teachers' practices have shown to be related to pupils' outcomes (Alford et al., 2016; Perry et al., 2007). In particular, learner-centred practices have been associated with higher pupil achievement and motivation (Meece et al., 2003; Stipek et al., 1998). In the present study, teachers in both settings reported devoting fairly similar amounts of time to both teacher-centred and learner-centred practices, with slightly more focus on teacher-centred activities in both settings. The high degree of similarity in instructional activities between the settings is an interesting finding. However, being a survey study based on teachers' self-reports, the study may not reflect the nuances of teachers' work. Further observational studies of teaching practices in these settings may be needed to reveal the type and structure of instructional practices.

Previous studies reported that academic progress for pupils with ID in mainstream settings is similar to or better than outcomes for pupils with ID in special educational settings (Dessemontet et al., 2012; Hardiman et al., 2009; Turner et al., 2008). However, to our knowledge, few specific studies of particular characteristics of these settings have been done. Ruijs and Peetsma (2009) have suggested that the differences in outcomes may be explained by a greater focus on academic achievement in mainstream educational settings. In the present study, significant differences were found concerning expectations of pupils between teachers in CSPIDs and mainstream educational settings. These findings are consistent with previous research, reporting low expectations of pupils' performance in special educational settings (Berthén, 2007; Göransson et al., & Axdorph, 2016) and differences between teachers' expectations in inclusive versus restrictive settings (Kurth & Mastergeorge, 2010). Given the importance of teacher expectations for pupils' achievement, there is a need to include the concept of teacher expectations in studies of factors influencing pupils' outcomes in mainstream and special educational settings.

Teacher instructional practices include not only the cognitive but also social dimensions (Hamre & Pianta, 2005; Perry et al., 2007). The present study investigates teachers' reported support to pupils' social participation. The results show that the teachers in special educational settings reported a stronger focus on support of pupils' social participation than teachers in mainstream education settings. These findings, when considered alongside data on challenges in pupils' participation in mainstream settings (Cooney, Jahoda, and Knott, 2006; de Leeuw et al., 2018; Koster et al., 2009, 2010; Szumski & Karwowski, 2012), suggest that support to pupils' social participation may be a strength of special educational settings. The question is, however, how knowledge of this strength can be transferred to mainstream educational settings. In previous research, issues of teachers' competence and training to support pupils' social participation and development have been discussed (Pavri, 2004; Pavri & Hegwer-DiVita, 2006; Vlachou et al., 2016). However, the conditions in mainstream and special educational settings may also be

different. For example, as seen in Table 1, teachers in special educational settings report more training in special needs education and lower teacher-to-pupil ratio. These conditions may play a role in teachers' ability to provide support to pupils' social participation.

Conclusions and Implications

Providing opportunities for pupils with SEN to receive education together with their peers is important with regard to pupils' rights (Ferguson, 2008; Pijl et al., 2002; UN, 1989). However, studies of teachers in mainstream educational settings show that teachers express a lack of competence to meet the needs of pupils with SEN, especially pupils with ID (Alhassan & Abosi, 2014; Webster & Blatchford, 2015), and that the quality of inclusion in mainstream settings is low (Vlachou & Fyssa, 2016). Comparison of teacher instructional practices in the present study indicates that the two environments may be characterised by strengths and weaknesses. Therefore, there is a need to include different characteristics of instructional settings in comparative studies of mainstream and special educational settings. By further studying the specific strengths of both types of settings, it is possible to use this knowledge to adapt instruction for pupils with ID in mainstream settings.

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