Socially responsive classrooms for SEND students

Christoforos Mamas, Alan J. Daly, Giovanna Schaelli

University of California, San Diego

cmamas@ucsd.edu

Abstract

This study examined the social networks of students with special educational needs and disabilities (SEND) in an effort to understand how the degree of a socially responsive classroom may have an impact on the inclusion and participation of these students and their peers. A critical case study design grounded in social capital theory drove the study. In particular, social support was examined as a main function of social capital. Data were collected from two grade 4 classrooms, where 41 students participated in the social network questionnaire and 31 students took part in semi-structured interviews. One of the two classrooms appeared to be more socially responsive and its results have indicated that SEND students were well connected to their classmates, were as popular and had as many friends as their peers without SEND. The differences between the two classrooms became apparent through both the social network and interview data. These findings have important implications for educational practice and research in terms of the inclusion and participation of SEND students in general education settings. The paper concludes by discussing these implications within the wider context of special and inclusive education.

Keywords: peer relationships, social support, critical case study design, grounded theory, social network analysis.

Introduction – Purpose of Study

Students identified as having special educational needs and disabilities (SEND) represent a distinct but heterogeneous group within the educational system. More recently and as a result of international efforts as well as federal and state legislative changes, there has been a growing momentum towards more inclusive educational provision in general education settings, especially within elementary schools. For example, the Salamanca Statement (UNESCO, 1994) recognized the global necessity and urgency for students with special educational needs to be educated within the regular education system. In addition, the UN Convention on the Rights of Persons with a Disability (The United Nations, 2006) adopted a social model of disability emphasizing institutional barriers that inhibit full access and active participation in education and society. In a US context, there has been an attempt to provide education at the least restrictive environment (LRE) which requires that all students in special education be educated with typically developing peers to the greatest extent possible (IDEA, 2004) as well as having access to appropriate accommodations (ESSA, 2015).

It is increasingly argued that students with SEND will particularly gain social benefits (Lindsay, 2007) as well as academic (Frederickson, Dunsmuir, Lang, & Monsen, 2004; Hanushek, Kain, & Rivkin, 2002) by being more included in general education classrooms. Inclusive settings are seen by parents and educators as providing more opportunities for enhanced social outcomes, such as increased friendships, social interactions with peers and active participation in social and play activities (Boer, Pijl, & Minnaert, 2010; Symes & Humphrey, 2011). Parents in particular hope that their child can build positive relationships with typically developing peers (Koster, Pijl, Nakken, & Van Houten, 2010). Additionally, Avramidis and Norwich's (2002) classic review of teachers' attitudes towards inclusion showed evidence of positive attitudes, but found no evidence of acceptance of a total inclusion or 'zero reject' approach to special educational provision. Despite the rhetoric, there is substantial evidence to show that students identified as having SEND predominantly remain socially excluded and are likely to have fewer friends (Bossaert, Colpin, Pijl, & Petry,

2013; Mamas, 2013; Pijl, et al., 2008).

Although attempts to better include students with SEND have been made, all too often they are marginalized in the general education setting and are at substantial risk (Bossaert, et al., 2013; Humphrey, & Symes, 2011; Mamas, 2013; Pijl, Frostad, & Flem, 2008; Rotheram-Fuller, Kasari, Chamberlain, & Locke, 2010; Wainscot, Naylor, Sutcliffe, Tantam, & Williams, 2008). Research studies have primarily reported adverse social outcomes for these students in inclusive schools. Pijl et al. (2008) for example found that pupils with special needs are less popular, have fewer friendships and participate less often as members of a subgroup. Similarly, Bossaert et al.'s (2013) analysis indicated that the social environment of students with special educational needs in secondary education is not a favorable one. These students were found to experience more social difficulties in comparison to their typically developing counterparts. In elementary education, generally students with special needs have also been reported to have a significantly lower number of friends and are members of a cohesive subgroup less often than their typical peers (Koster, et al., 2010; Mamas, & Avramidis, 2013; Wainscot, et al., 2008). In addition, these students have fewer interactions with classmates and are less accepted than students without special needs. As outlined, students identified as having SEND are not a homogenous group. For example, students with autistic spectrum disorders (ASD) and students with behavioral difficulties find it particularly challenging to build relationships with typical peers and are at risk of becoming isolated in the classroom (Chamberlain, Kasari, & Rotheram-Fuller, 2007; Humphrey, & Symes, 2011; Rotheram-Fuller, et al., 2010; Wainscot, et al., 2008).

Studies have also reported 'spillover effects' of inclusion on non-SEND students in general education classrooms. Gottfried (2013) found that students with a greater number of classmates with educational disabilities have higher numbers of problem behaviors and poorer social skills. Similarly, Fletcher (2010) concluded that having a classmate with an identified emotional disability is associated with lower test scores in reading and in math for kindergartners and 1st graders without a disability, especially for African-American and Hispanic students. However, these effects have not been found to be large. Gottfried, Egalite and Kirksey (2016) have also recently found that kindergarten students with classmates with emotional and/or behavioral disabilities were more likely to be absent.

There have also been positive outcomes reported in relation to inclusion of SEND students. A comparison of the findings from the national longitudinal transition study (NLTS) and the national longitudinal transition study-2 (NLTS2) revealed that students with disabilities are experiencing less segregation in separate schools and have gained access to higher-level academic courses, albeit noting persistent differences for youth who are African American and Hispanic (Wagner, Newman, Cameto, & Levine, 2005). Boutot and Bryant (2005) found that students with autism in inclusive settings are as accepted, visible, and members of peer groups, as well as both their peers without disabilities and those with other disabilities. Another recent study showed that the majority of children with ASD perceived themselves to have friends, other children to play with, and children who liked them at school (Zeedyk, Cohen, Eisenhower, & Blacher, 2016). Parents and teachers also note the opportunities for both students with SEND and their typically developing peers for enhanced social interactions, friendships, empathy as well as social and emotional support in inclusive general education settings (Avramidis, & Norwich, 2002; Boer, Pijl, & Minnaert, 2010; Gallagher, et al., 2000).

Our study sought to explore participation and inclusion in-depth by examining the peer relationships and friendship networks of SEND students in two grade 4 elementary classrooms. In doing so, we wanted to understand a) the *social structure* of those relationships and the *social position* of SEND students within the classroom network, as well as b) to learn more about the *quality* of social interactions and friendships and the *meaning* of the process of forming friendships and engaging in social interactions with peers from the perspective of students. Overall, we aimed to understand the degree of the social responsiveness of each of the two classrooms and how this may be impacting the inclusion and participation of SEND students in those classrooms.

Against this background three research questions have been addressed:

- What is the position of SEND students in the classroom social networks?

- What does the structure of the network may reveal about socially responsive classrooms?

- How do students describe the meaning of friendships and importance of engaging in peer relationships?

The first two research questions have primarily been addressed through social network analysis. In particular, a number of network measures and visual network maps have been applied, which are discussed in the method section. The third question has been addressed through the interviews with students. These two data sources complemented each other and enabled for a more detailed and in-depth examination of the inclusion of SEND students in general education classrooms. Using a mixed-methods approach we were able to examine the quantity *and* quality of the construct of friendship and other relational ties.

Theoretical Framework

Socially responsive classrooms

In the context of this study, socially responsive classrooms are defined as student-centered classroom eco-systems that promote inclusion and active participation of all students, including those with identified disabilities and special educational needs. Our tentative hypothesis is that in highly socially responsive classrooms all students can be relatively socially included and no substantial differences will be found between SEND and non-SEND students in terms of their friendships and peer relationships. To measure and understand the social responsiveness of the two classrooms in our study, an innovative methodology has been adopted, combining social network analysis measures with in-depth student interview data.

It is also important to define *participation*, *social inclusion* and *inclusion* in this study, as they may add a layer of understanding to the central concept of socially responsive classrooms. Booth (2003) argues that *participation* in education involves going beyond access to a general education setting and implies learning alongside others, collaborating with them in shared lessons and being actively engaged with what is learnt and taught. *Social inclusion* comprises many aspects, such as acceptance, interaction, relationships, social status, friendships, and bullying (Koster, Nakken, Pijl, & Houten, 2007). Whereas, *inclusion* is being defined as an

endless process of developing the school for all and as a principled approach to education and society (Booth, & Ainscow, 2011). According to Davis and Hill (2006), social inclusion suggests a more passive stance while inclusion and participation are a more active mode. Social inclusion is about being allowed or enabled to take part in social activities and peer relationships within the school or classroom, whereas inclusion and participation entail actively taking part and being recognized and accepted for oneself. Indeed, there is a strong interrelationship between participation, social inclusion and inclusion. Connecting the three concepts as interrelated themes offers the prospect of enhancing our understanding of socially responsive classrooms for SEND students.

Social capital theory

This study drew on the theory of social capital (Putman, 2000) and was conducted in two racially and linguistically diverse classrooms. Driven by a critical case study design (Yin, 2009), social capital represents our well-developed theory, and the two classrooms/cases were chosen on the grounds that they would allow a better understanding of this theory (Bryman, 2012) in terms of students' social interactions and friendships. The term social capital has been used to describe norms and certain resources that emerge from *social networks* (Ferlander, 2007). Putnam (2007, p. 137) defined social capital as 'social networks and the associated norms of reciprocity and trustworthiness'. According to Scott (2013), social networks are a particular form of social capital that individuals/students, can employ to enhance their advantages or opportunities. A notion of social capital is that social relationships provide access to resources that can be exchanged, borrowed and leveraged to facilitate achieving goals (Moolenaar, Sleegers, & Daly, 2012). Therefore, classroom social networks built up through friendship ties or other relational ties may provide access to social capital.

In this sense, one of the important functions of social relationships is the provision of social capital in terms of social support. *Social support* can be defined as a multidimensional concept (Dumont, Provost, 1999, p. 345), which can be distinguished into four broad types of supportive behaviors (House, 1981); (a) *emotional* support involves the provision of caring, trust, love and empathy, (b) *instrumental* support includes the provision of information, suggestions and advice as direct assistance for a person's need, (c) *informational support* can be

seen as a provision of information, suggestions and advice that is used to address problems, and (d) *appraisal* support, a self-evaluative dimension, which includes constructive feedback and affirmation. Beside this differentiated concept of support, these four types cannot be empirically used as separated constructs, because relationships that provide one type often also provide other types (Heaney, & Israel, 2008, p. 190). However, in this study we focus on this multidimensional concept because of its recognition as an important resource for protecting children from the negative effects of life stressors (Sandra, et al., 1989). Literature shows that social support may act as a buffer that compensates the impact of stress on well-being (Dumont, & Provost, 1999). Therefore, it can be seen as a helpful function of social relations in terms of building the resilience in students that they need to cope with negative effects of being exposed to bullying (Humphrey, & Wendy, 2000, p. 79).

In order to understand the flow of social support and overall social capital, we employed social network analysis (SNA) as a central methodological tool. SNA is principally concerned with network *structure* and *position* of an actor/student within a network (Borgatti, Everett, & Johnson, 2013) and it conceptualizes individuals as 'points' and their relations to each other as 'lines' (Scott, 2013). As an approach, SNA describes a set of interconnected concepts, theories and techniques, devoted to the gathering and analysis of relational data (Crossley, et al., 2015). For example, the structure of a classroom network is important as it may enable a better understanding of socially responsive classrooms whereas the individual position of students may equally be revealing of the instruction and learning that is taking place. What is also important is that network structure and position drive the flow of resources or learning opportunities in a classroom through the channel of interpersonal relationships.

Significance

This study is highly significant for the wider field of inclusive and special education. Students with SEND are increasingly being educated in inclusive settings, primarily due to the anticipated social gains for them and their typically developing peers (Koster, et al., 2010; Lindsay, 2007). Despite these expectations, there are considerable barriers to 'full inclusion' due to the reported limited capacity of schools, as learning organizations, to accommodate

the wide range of individual needs (Evans, & Lunt, 2002), including the needs of students with SEND. Therefore, mere locational or physical inclusion is not enough to guarantee successful inclusion and social participation (Bossaert, et al., 2013; Pijl, et al., 2008). As a result, additional research is required to understand the micro-processes of inclusive education within classrooms and schools, particularly with regards to social responsiveness and social support. Our study aimed to partly address this gap. It has been argued that social support can provide a useful index for inclusion of students with ASD (Humphrey, & Symes, 2010) and students with SEND in general.

In order to make inclusion work better for all students and educators, we believe there should be a shift away from a deficit thinking, teaching and practices towards a more inclusive, socially responsive classroom climate. This is not to imply that academic outcomes are less important, but to reiterate that social, emotional and academic aspects of learning are intertwined and are conducive to each other's success. In a recent review of the literature, positive climate was found to mitigate the negative contribution of weak socioeconomic background on academic achievement (Berkowitz, Moore, Astor, & Benbenishty, 2016). Therefore, inclusive socially responsive classrooms can be pivotal in alleviating social isolation and exclusion as well as promoting inclusion and overall well-being and outcomes for all students.

Our study is also methodologically innovative and interdisciplinary as it combines social network analysis and in-depth grounded theory within a critical case study design. This particular methodology in addressing the research questions enabled a detailed examination of the theory of social capital and the concept of social support with regards to students' social networks, particularly those with identified SEND. What is perhaps more important is that the study sought to understand how socially responsive the two classrooms were, which we perceive as essential for wider systemic change and educational improvement. Throughout the paper, we highlight the importance of having socially responsive classrooms with enhanced active participation and student engagement. Socially responsive classrooms are perceived as more inclusive and conducive towards enhanced social outcomes for all students. Another goal of this study was to contribute towards bridging the gap between educational research and pedagogical practice. In doing so, we have been working closely

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with the participating school and wider district in terms of sharing data and pursuing continuous collaborative work in creating the conditions for inclusive education to be promoted further, ranging from a micro-classroom to a systemic level.

Methods

An innovative and interdisciplinary methodology has been employed to address the study's three research questions. In order to achieve an in-depth analysis of the two classrooms' social responsiveness in relation to inclusion and participation of SEND students, we employed a critical case study design and applied a mixed-methods approach in collecting and analyzing the data. A critical case study design (Yin, 2009) entails a well-developed theory, in which cases are chosen on the grounds that they would allow a better understanding of the theory (Bryman, 2012). On that basis, we chose the two grade 4 classrooms in a public school in Southern California. The advantage of a critical case study design is that it enables a detailed and comprehensive analysis of the theory of social capital across the two classrooms and generates valuable knowledge that would have otherwise been impossible without delving deep in the two cases. However, a significant limitation is that the findings from this study cannot be generalized, despite their likely relevance with other similar classrooms/cases.

In particular, two phases of data collection were implemented. First, 41 social network questionnaires were collected, which included ten SEND students, nine of them with identified learning disabilities. One of the students was identified as having ASD. Network data were analyzed by employing social network analysis measures. Children were asked to nominate their friends in the classroom (friendship network), who they want to play with during recess (recess network), who they seek help from on school work if the teacher is not around (help network) and who they talk to if they are having a bad day (talk network). Second, 31 students (19 girls, 12 boys) participated in follow-up semi-structured paired and triadic interviews. Grounded theory analysis was employed to analyze the interviews. Interview participants were grouped based on their nominations in the questionnaire. For example, students with reciprocated friendship nominations were interviewed together so

they could express themselves more freely when talking about friendships.

The cases

Two grade 4 classrooms were selected as the cases for this study. Both classrooms, classroom 1 (C1) and classroom 2 (C2) had 31 students each (C1: 15 girls, 16 boys, C2: 14 girls, 17boys) enrolled at the time of data collection. In C1, 23 students completed the questionnaire resulting in 71.2% response rate and 17 students took part in the interviews. In C2, 18 students completed the questionnaire (58.1%) and 14 participated in the interviews. C1 had five students with identified learning disabilities (2 girls, 3 boys) and one student with ASD (boy), whereas C2 had 4 students with identified learning disabilities (1 girl, 3 boys). This is slightly higher (16%) than the district average of 13.6%. All SEND students received support as part of their individualized educational plan (IEP). Both classrooms were also linguistically and ethnically diverse with a high number of Hispanic students (62.9%). This is typical for this school and the district in general. Based on the latest district dataset, about 60% of the district's student population consists of students with a Hispanic ethnical background and about 27.3% are students who are learning English as a second language. It is also worth noting that three in five students are eligible for free lunch within the district.

Measures

Along with classroom network maps, centralization, reciprocity and in-degree centrality were the three social network analysis measures that have been applied to understand the structure of the classroom networks and the position of SEND students within those networks. Additionally, follow-up semi-structured paired and triadic interviews with students were undertaken. In social network analysis, when we study classroom whole networks, it is useful to distinguish between three levels of analysis: the whole network, the dyad and the node (Borgatti, et al., 2013). In this study, two network level measures (centralization, reciprocity) and one node level measure (in-degree centrality) have been employed.

At the whole network level, we may ask questions like 'do well-connected classroom networks tend to be more socially responsive and inclusive?'. First, we applied the measure of centralization which refers to the extent a whole graph has a centralized structure and thus is organized around particular focal points. This measure is calculated by summing 'the

difference between each node's centrality and the centrality of the most central node' (Borgatti, et al., 2013, p.160). As this is a 'structural' measure, it is important to consider the overall goals of the classroom in terms of what structure will support important outcomes. Second, reciprocity was employed as it is useful with directed data, such as friendship nominations within a classroom. One way of calculating reciprocity is to divide the number of reciprocated dyads by the total possible number of adjacent dyads. In classroom friendship networks, a classroom that has many reciprocated friendships between students may be a more inclusive and socially responsive where students enjoy learning as they feel socially valued and integrated. Hanneman and Riddle (2005) note that a network that has a predominance of reciprocated ties over asymmetric connections may be a more "equal" or "stable" network than one with a predominance of asymmetric connections.

At the node level of analysis, we examine the position of individual students within the classroom network. We may ask questions like 'are students with more friends more likely to do better academically?'. In the context of this study, we were particularly interested in examining the in-degree of students with SEND compared to that of their peers without identified SEND. In-degree centrality falls under node level centrality which is defined as a property of a node's structural position in a network (Borgatti, et al., 2013). In a classroom network, centrality indicates specific aspects of the quantity of the pattern of ties that surround an individual making them more or less socially "active" in a network. For example, within a friendship network centrality may reveal students who are popular or isolated based on the number of incoming ties to the actor. In particular, in-degree centrality reveals the number of ties coming to the node/student. In a classroom network, students who have high in-degree centrality are usually popular within the classroom.

Grounded theory

Grounded theory comprised the qualitative part of the mixed-methods approach in analyzing the interviews with students. All interviews were transcribed verbatim and all transcripts were imported into MAXQDA for coding (MAXQDA, 2016). The data analysis was aimed at the reconstruction of the students' subjective perspective, whereby it was necessary to derive theoretically relevant findings from the empirical material. Taking the specific procedures for data analysis from the grounded theory methodology (Corbin, &

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Strauss 1990, pp. 6-12) into account, the interpretative-analytical process included the three basic types of open, axial and selective coding (Corbin, & Strauss 1990, pp. 12-15) as well as the idea of a constant comparison, which was key to the investigation in order to determine the value of different characteristics and conditions in relation to the third research question. The first stage of the coding process included open coding of all interviews by four trained researchers. In the interpretive open coding process, we broke down the interview data analytically by labelling concepts and grouping them into categories (Corbin, & Strauss, 1990). The second stage involved a process of exploring relationships among categories, which is defined as axial coding. During this stage, social support emerged as a main category in relation to the meaning and importance of friendships, with four subcategories; socio-emotional, informational/learning, instrumental, self-evaluative/appraisal support. These four subcategories characterize the function of social support as deriving from social networks and social capital. The final stage refers to the selective coding, in which we selected social support category and its subcategories as the main focus of the analysis.

Results

The results are being structured under the study's three research questions. Overall, the analysis has shown differences between the two classrooms, particularly with relation to the position of SEND students across the four social networks as well as the social responsiveness of each classroom. Less differences were observed with regards to the structure of the social networks. Results suggest that C1 may be regarded to be more socially responsive than C2. Students with SEND in C1 were found to have as many friends and be socially included in all networks as their typically developing peers whereas the popularity of SEND students in C2 was considerably lower. The qualitative interview analysis was in broad agreement with the social network findings in terms of students' social interaction and peer relationships, particularly when talking about their help and friendship networks.

*RQ1: What is the position of SEND students in the classroom social networks?*

In-degree centrality was calculated across the two classrooms in order to determine the social network position of SEND students and compare it with that of their peers. In-degree

is determined by summing up the friendship nominations received by each student. As shown on table 1, the total average in-degree centrality of all four networks has been computed for all, non-SEND and SEND students.

Table 1

Average in-degree centrality

	C1			C2		
	Total	Non-SEND	SEND	Total	Non-SEND	SEND
N	31	25	6	31	27	4
Friendship	7.55	7.68	**7.00**	6.29	6.74	**3.25**
Recess	5.52	5.72	**4.67**	4.00	4.44	**1.00**
Help	3.68	4.04	**2.17**	2.90	3.26	**0.50**
Talk	3.00	3.28	**1.83**	3.07	3.33	**1.25**

With respect to the in-degree centrality of the two classrooms, it can be seen that students' friendship networks are the largest (see figures 1 and 2), followed by recess. For all four networks, the difference between C1's non-SEND and SEND students' in-degree of the friendship and recess networks is relatively small compared to the difference between C2's non-SEND and SEND students' in-degree in the respective networks. In C2, the average friendship in-degree is less than half for SEND students (3.25), whereas recess in-degree is more than four times lower (1.00) compared to non-SEND (4.44). This could indicate that SEND students are more socially included in C1 than in C2. The in-degree of SEND students in the help and talk networks differs relatively strongly from that of non-SEND students across both classrooms. This indicates that SEND students are less often sought for help with school work or discussing problems, particularly in C2, compared to non-SEND students. As also shown on the visual network maps of the friendship network across the two classrooms (see figures 1 and 2), SEND students (triangular shapes) in C2 tend to be found on the periphery of the network whereas in C1 are relatively more central.
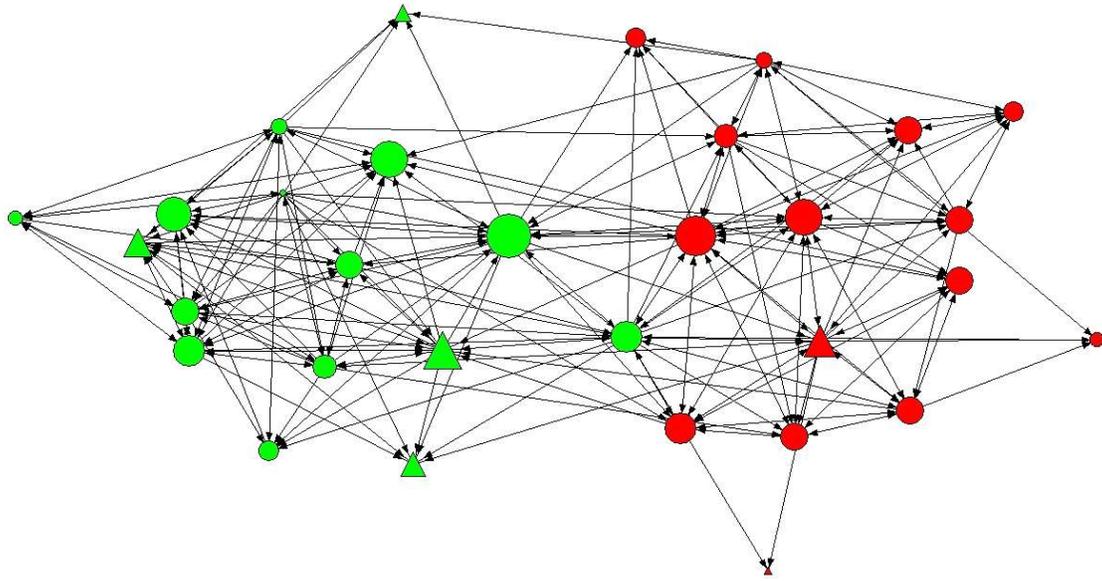
Figure 1. C1 friendship network (triangles: students with SEND, green: boys, red: girls, size of node based on in-degree score, the bigger the higher)
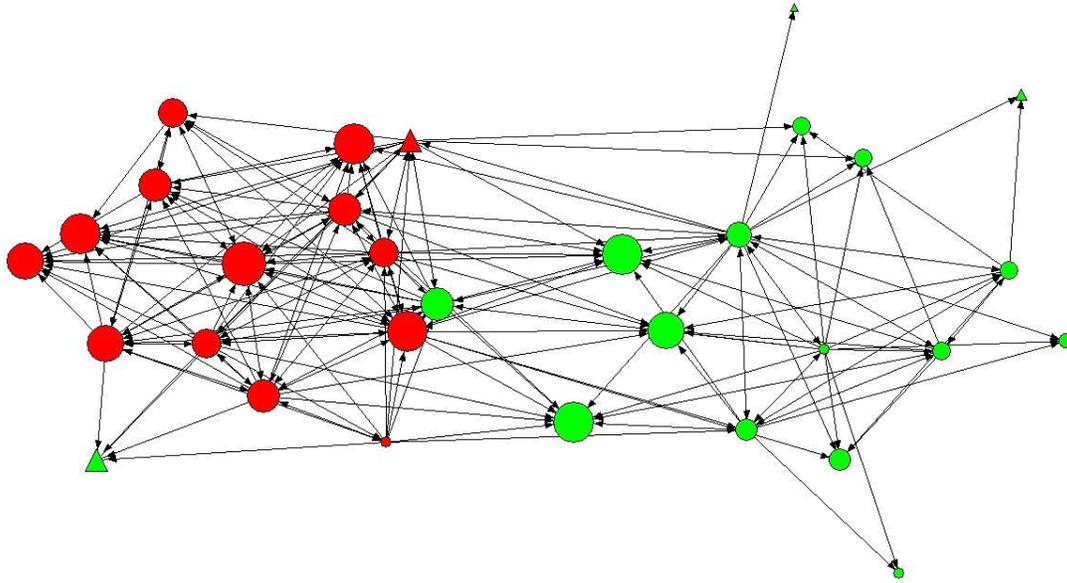
Figure 2. C2 friendship network (triangles: students with SEND, green: boys, red: girls, size of node based on in-degree score, the bigger the higher)

RQ2: What does the structure of the network may reveal about socially responsive classrooms?

In order to examine the structure of the networks and what it may reveal about the social responsiveness and inclusion of the two classrooms, centralization and reciprocity have been calculated. Centralization scores (see table 2) do not show substantial differences between classrooms except for the talk network (C1: 0.103, C2: 0.239). This indicates that discussing problems when students are having a bad day (talk network) is more centralized around one or a few students in C2 compared to C1. This may reveal that, on average, in C1 students have more sources of emotional support readily available to draw on when having a bad day which may be conducive towards a more socially responsive and inclusive classroom.

Table 2
Centralization

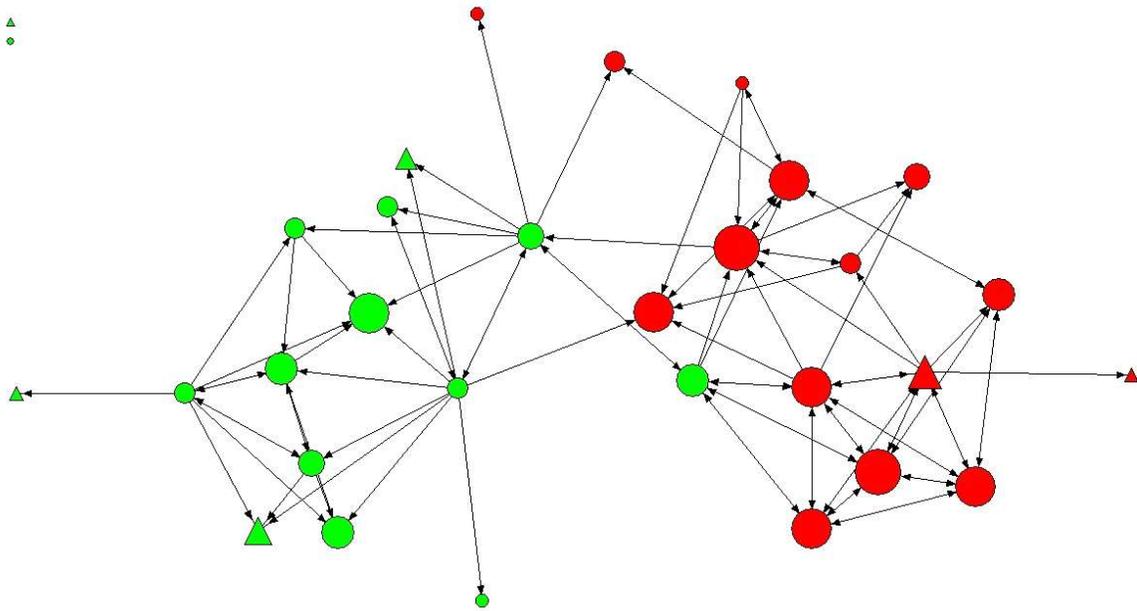|	C1	C2
Friendship	0.188	0.162
Recess	0.120	0.172
Help	0.287	0.244

Talk	0.103	0.239

Figure 3. C1 talk network (triangles: students with SEND, green: boys, red: girls, size of node based on in-degree score, the bigger the higher)
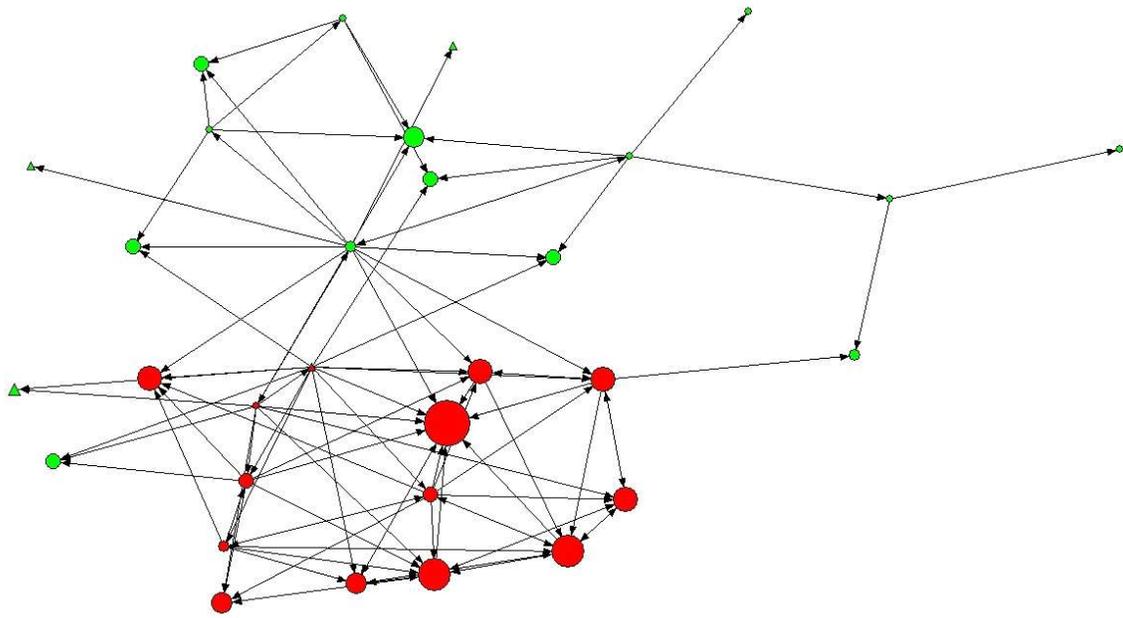
Figure 4. C2 talk network (triangles: students with SEND, green: boys, red: girls, size of node based on in-degree score, the bigger the higher)

In terms of reciprocity scores, C1 had higher reciprocity scores across three of the four networks (see table 3), except in friendship network where the difference was minimal (0.002). However, the most notable difference between the two classrooms was observed in the talk network. This means that talk dyads are more often reciprocated in C1 than in C2. As noted above, this might suggest that C1 has slightly more organic social and inclusive culture where students may feel more encouraged to talk to each other about their problems.

Table 3
Reciprocity

	C1	C2
N	23	18
Friendship	0.253	0.255
Recess	0.177	0.169
Help	0.091	0.078
Talk	0.103	0.072

RQ3: How do students describe the meaning of friendships and importance of engaging in peer relationships?

In addressing the third research question, we have drawn on the follow-up semi-structured interviews with students by using a grounded theory coding framework. Students provided rich descriptions of the meaning of friendships and highlighted the importance of engaging in peer relationships and social interactions. In the quote below, a student defines friendship as follows:

> "I think friendship is like someone who is like always nice to you and stuff like that and loving and they accept you for who you are, you don't have to change to be their friend." (Boy, ASD, C1)

This quote is particularly interesting as it comes from a student who has been identified as having ASD. For him friendship includes kindness from others and being accepted for oneself, without having to change to be someone's friend. It appears that he is as socially accepted and has more than average friends (in-degree: 11) compared to his classmates.

Another quote from the same classroom underlines similar characteristics to the meaning of friendship.

> "Friendship to me means like people that [are] respectful to you and no matter of how you are or how different you are they will still be your friend." (Girl, C1)

These quotes in combination with the social network findings from C1 (see table 1), may be indicative of enhanced respect towards diversity, where all students feel socially included. It is perhaps not surprising that students with SEND in C1 have on average as many friends as their counterparts without SEND.

The importance of friendship and social interaction is also emphasized in C2, as seen in the following quotes by two students:

> "They [friends] cheer you up when you are sad and they are friendly to you if you have no one to play with or no one to talk to at recess or lunch. And it's just nice to have friends because you can trust them usually." (Girl, C2)

> "A special trust bond with someone. Someone who you know will not break a strong bond you have with them and someone who will accept you for who you are and not ask you to change." (Girl, C2)

From the above quotes, we can see that students' narratives refer to functional characteristics, such as trust, companionship, acceptance, and respect, in terms of the meaning and importance of friendships. These various characteristics correspond to aspects of social capital as a way of providing access to different dimensions of social support, including socioemotional, informational/learning, instrumental, and self-evaluative/appraisal support, which in turn may contribute to the well-being of students. These dimensions are explained through the use of interview quotes and are structured under the four corresponding dimensions of social support.

- *Socio-emotional support*

The socio-emotional dimension of support was the most prominent. The majority of students implied this kind of support in their responses. They described socio-emotional support as a source of trust, caring for each other, protection and as a buffer for bullying or social isolation, as shown in the quotes below:

> "They [friends] stand up for you or when you are dealing in a hard time they can listen to you. Or when you need to tell them a secret, they'll keep it." (Girl, C1)

> "(...) you could rely on then and they could rely on you (...)." (Boy, C2)

> "When you have friends they have your back when anyone is bullying you." (Girl, C1)

> "(...) they do like mostly everything for you like if you are sad about something, they ask you what is wrong." (Girl, C1)

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"Cause if you don't have friends you'll be lonely." (Boy, C2)

"(...) when I feel really sad, she cheers me up and whenever we are both feeling sad we just work it out and we don't go into arguments." (Girl, C2)

It seems that students are aware that friendship is an important resource for socio-emotional support as it is explicitly expressed in the interviews. This socio-emotional support is unique as students access resources and support through reciprocated social ties generated from their membership in social networks. This shows the potentially tremendous value of social networks and social capital as sources of social support and how this support 'flows' into the network. For example, having a friend and being connected in a network may alleviate loneliness and enhance the emotional well-being of students. Students seem to also be aware of the consequences of not having friends or being on the periphery of a network, which may make them more vulnerable towards being isolated and excluded. Therefore, relationships may offer a comprehensive framework for support in challenging times, which goes beyond traditional socialization settings, such as family or the school system.

- *Informational/learning support*

Informational/learning support is another important dimension that students referred to which is defined as a provision of information, suggestions and advice that is used to address problems in a learning context. This dimension of social support came up in the interview data, while students were talking about how their friends help them, if they were struggling during a lesson. One student for example outlined this situation by saying: "(...) it was in Math and it was a question that was hard and then she helped me in it" (Boy, C1). His classmate assisted him with a Math question and the way the student explained this helpful attitude sounded as if that was a common practice, getting help from a fellow student while struggling with a problem. A girl from the same classroom explained in a similar way how she handled a problem, which she was not able to solve by herself.

"[My friend] sits in front of me and she helped me [with fractions] and then (...) the next week we kept doing it and I forgot again and I didn't want to waste her time so I went to the teacher." (Girl, C1)

In her explanation she sought learning support and got advice from a friend. When she was

facing the same mathematical problem again, she did not want to strain her friend's patience and time therefore she asked the teacher for help. These quotes reveal a classroom environment that may be described as organic and inclusive as students tend to ask their classmates for help before resorting to the teacher. Another two students from the same classroom reiterated this student-student support culture that seems to exist in C1:

> "Like they would probably know more stuff than you already know that they can teach it to you. So you would know more stuff and if you know something that they don't know you can teach them. So you can learn more stuff." (Boy, C1)

> "They [friends] (...) can lead you into stuff, help you read, and that's pretty much why I usually have friends." (Boy, C1)

This collaborative classroom environment seems to be the result of the teacher's efforts, who organizes teaching in a fun and engaging manner, as described by a student:

> "(...) How my teacher shows us how to do math it's actually fun and when she shows us I actually understand it but when substitutes come I don't that's why I always tell my teacher if she can review the math that we did. So because I actually understand it when she teaches us." (Girl, C1)

In C2, many of the students interviewed reported that they prefer asking their teacher for support rather than their peers.

> "I prefer talking to the teacher." (Boy, C2)

> "I would say talk to my teacher about the questions because it's sometimes, teachers give you like hard packets of work." (Boy, C2)

This may indicate a more structured and hierarchical form of teaching which might not be encouraging of student-student collaboration and exchange of information. In some other cases, students reported eagerness to work with their friends in the classroom but the space to do so was not provided, as outlined in the following quote.

> "Our teachers say that we need to work basically by ourselves when we are doing work cause basically my teacher says that if we are like talking it can distract other people." (Boy, C2)

- *Instrumental support*

This form of support includes the provision of tangible aids and services that directly address a student's need. Instrumental support was evident in the empirical data but not as strongly as the previous two forms of support. For example, students said that they received or offered specific help from and to their friends respectively, including playing with other outside of school. The first quote below presents evidence that this form of social support, or indeed any form of support, may be extended outside the boundaries of the school. This kind of 'service' to help his friend with an injury seemed to be the unquestionable thing to do.

> "In one time, when I was at my friend's house and we were playing soccer
> in his yard and he got hurt and I got to help him up. Then it turned out he
> sprained his foot. Then I helped him around and stuff to get to places."
> (Boy, C1)

Other important 'services' at this age, as seen in the quote below, include being invited to a birthday party or a sleepover. These relational events may represent that students are socially active within their network and connected to each other and they externalize this by inviting their friends to events like these.

> "A friend is like really close to you like a good friend because they like
> invite you to their birthday parties, they invite you to sleepovers (...)."
> (Girl, C1)

An interesting level of instrumental support was observed, as probably expected, in interactions between students and adults, such as the school counsellor. For example, a boy from C1 said: "I usually go, like my family problems I usually go to the counselor." This may also be revealing of a positive climate that is encouraging students to receive tangible aid through a professional service that is being offered at the school.

- *Self-evaluative/appraisal support*

This dimension of social support includes constructive feedback and affirmation. It is useful as it enables students to reflect on their position in the social network and relationships with peers. The first quote shows an example of self-evaluation in terms of friendship

development.

> "(...) you see other people having fun but you are just sitting there. And watching them, and you say to yourself 'I really want to have friends', and then you go find some friends." (Girl, C1)

The student seems to be assertive of her desire to have friends by evaluating the continuum of having (positive attribution) to not having friends (negative attribution) and she reflects on her own circumstances. She then outlines an active response to changing the situation by taking action. It is worth noting the self-evaluative nature of this feedback which means she draws on the situation rather than directly interacting with other classmates.

The following quote is also revealing of appraisal as well as socio-emotional support.

> "I remember when I was sad because my brothers, they had to go back to my mom's house because my dad, my parents are divorced. And I remember just crying and my friends were there for me and they said 'the week's gonna go by fast and you're going to see them again the next week'. And finally, I remember when it was the next week and they were like, and they said 'see, it wasn't so bad. You got to see them at school'. And that when like I really needed friend because." (Girl, C1)

In this case, her friends play a key role in maintaining the resilience levels of their friend who goes through a rather difficult emotional struggle. Friends provide a service in helping the student overcome this intense family situation by offering support and subsequently evaluating this support.

To sum up with the third research question, social interaction and friendships have been found to be pivotal for students' well-being by providing ample social support, particularly socio-emotional and informational/learning support. It should be noted that there is no clear distinction among the four dimensions of social support, as shown in many of the quotes provided.

Conclusion

This study aimed to examine the social networks of students with SEND in two classrooms

in an effort to understand how the classroom social responsiveness may have an impact on the inclusion and participation of these students and their peers. In doing so, we addressed three main research questions, relating to the structure of social networks, social position of students in the network, and the meaning and importance of friendships and social interaction. The findings indicated some differences between the two classrooms/cases in terms of social responsiveness and inclusion. Based on the social network and interview data, C1 appeared to be slightly more socially responsive and this was due to the pedagogical climate and teaching practices that were being implemented in this classroom. In C1, students with SEND had as many friends and occupied an equivalent position in the four classroom social networks, as their peers without SEND. This is in disagreement with studies showing students with SEND remaining socially excluded and having on average less friends than their typically developing peers (Bossaert, et al., 2013; Pijl, et al., 2008). What is perhaps more interesting is the fact that one student with ASD in this classroom, was found to be highly popular within the friendship and recess networks and was also described as such by his peers in the interviews. His identified ASD did not affect his popularity in the peer group and social networks. This is in direct disagreement with many studies on social outcomes as, predominantly, students with ASD have been found to be on the periphery of social networks and are socially isolated within general education settings, primarily due to their identified difficulties with social interaction and communication (Humphrey, & Symes, 2011; Rotheram-Fuller, et al., 2010; Wainscot, et al., 2008). This finding, however, aligns with Boutot and Bryant's (2005) study, who found that students with ASD in inclusive settings are as accepted, visible, and members of peer groups, as well as both their peers without disabilities and those with other disabilities. This further supports our claims made throughout this study that social interaction and social outcomes may be promoted more effectively in a socially responsive classroom, thus reducing the likelihood for students with SEND to be marginalized and excluded.

With regards to C2, the social and academic climate seemed to be relatively less encouraging for social interactions and collaboration to take place, hence leading us to perceive this classroom as less socially responsive than C1. As a result, students with SEND were found to be less socially involved in the networks, with considerably less friends and connections

than their classmates. These findings are in line with other studies in elementary general education settings (Koster, et al., 2010; Mamas, & Avramidis, 2013; Wainscot, et al., 2008). It should be noted here that capturing the social responsiveness of a classroom is not an easy or straightforward task and our methodological approach should not be considered as a tool to do so. Rather, in this critical case study, we adopted a research design aiming to understand in-depth the two seemingly similar classrooms in terms of students' social interactions. Therefore, the results of this study cannot be generalized but could be valuable to researchers and educators when studying similar cases or implementing inclusion in their classrooms respectively.

The qualitative part of this study examined the students' views in terms of the importance and meaning of friendship relationships. In doing so, we managed to capture the quality of those relationships, which can be seen as a strength of our approach because social network analysis focuses primarily on describing and understanding the quantity rather than the quality of social relations. Additionally, all 31 students' interview accounts provided, on an explicit level, a multifaceted description and explanation underlining the importance of friendship and social interaction within a school context. On a more implicit level, the multidimensional explanation of the construct of friendship was investigated by the analytical process of grounded theory which resulted in four theoretical dimensions of social support, as outlined in the study (Dumont, & Provost, 1999). Therefore, the position of a student in a social network and the structure of the network, drive the flow of different dimensions of social support, such as socio-emotional support, which can then be interpreted as a source of social capital. Possession of such social capital and social support was found to act as a buffer that may compensate the impact of stress on well-being (Dumont, & Provost, 1999). Therefore, it can be inferred that social support is a helpful function of social relations in terms of building the resilience in students that they need to cope with negative effects of school life (Humphrey, & Wendy, 2000).

The above findings have significant implications for the wider field of inclusive and special education, both in terms of educational practice and research. First, with regards to practice implications, the results of this study stress that mere locational inclusion is a very basic condition and to be part of a classroom social network does not happen by chance,

especially for students with SEND, as shown in C2. As argued in a recent review, mere enrolment in mainstream classrooms is not enough to support the social participation of students with SEND (Garrote, Rermier-Dessemontet, Moser-Opitz, 2016). These students may require extra and more personalized support to enable their full and active participation in the network, as in C1. Therefore, to achieve meaningful inclusion and participation for all students, educators should be striving towards enhancing the social responsiveness of their classrooms. In terms of research implications, our study showed that undertaking research in a general education setting does not equate with undertaking research in an inclusive setting. A careful examination of the micro-processes in a classroom and contextual factors is vital in determining the degree and quality of inclusive educational provision, which is a highly complex process. Future research is required in examining further ways of determining the inclusivity of a setting.

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