Mainstream Teachers' Experiences of Communicating with Students with Multiple and Severe Disabilities

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Abstract: The aim of this study was to explore regular teachers' perceptions and experiences of supports and obstacles to communicative interactions for students with multiple and severe disabilities (MSD). Five teachers of students with MSD participated in two in-depth interviews. Interview transcripts were analysed using content analysis. Transcripts were coded into categories, which were then grouped to yield content themes. Participants identified a broad range of themes, including: the complex needs of students with MSD, teachers' training and experience, communication education for teachers, the presence of peers without disabilities, the mainstream classroom, other staff in the school context, resources, infrastructure, the culture, size and geographical location of the school, the home context, support from specialist personnel outside the school, including collaboration with speech-language pathologists, the role of government departments, and broader societal factors. There are complex, systemic influences on access to communicative interactions for students with MSD in mainstream school settings. Inadequate systemic supports restrict communicative interactions between students with MSD and their teachers and peers without disabilities, and limit the involvement of students with MSD in mainstream classroom activities. Further research is required with teachers of students with MSD to substantiate these preliminary findings.

Access to communicative interactions is important for the educational participation and social inclusion of students with multiple and severe disabilities (MSD) (Calculator & Black, 2009; Downing, 2006). For several decades, however, researchers have reported low frequencies of communicative interaction for these students at school (Arthur, 2003; De Bortoli et al., 2010). Until recently, little research has examined potential reasons for the low frequencies of communicative interactions and there is limited understanding about their persistence, particularly between teachers and students with MSD (De Bortoli et al.). Our recently reported research suggests that supports and barriers to communicative interactions for these students in segregated classrooms (i.e., special schools and support units) are complex and systemic (De Bortoli, T., Arthur-Kelly, M., Foreman, P., Balandin, S., & Mathisen, B., 2011).

In the past 20 years, researchers have suggested that the presence of peers without disabilities in mainstream school settings may offer a more favourable context for enhancing the frequency of communicative interactions for students with MSD (Arthur-Kelly, Foreman, Bennett, & Pascoe, 2008; Calculator, 2009; Houghton, Bronicki, & Guess, 1987; Siegel-Causey & Bashinski, 1997). Further, the potential benefits of mainstream settings for students with severe disabilities have been well documented (Carter, Hughes, Guth, & Copeland, 2005; Downing, 2001, 2006; Hunt, Soto, Maier, & Doering, 2003; Kent-Walsh, & Light, 2003; Soto, Muller, Hunt, & Goetz, 2001). Researchers have investigated the level of engagement and frequency of communication for students with severe disability and MSD in

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both primary and high school settings. However, research with primary-aged students with MSD in mainstream classrooms has produced mixed results. Foreman, Arthur-Kelly, Pascoe, and Smyth King (2004) found that students with MSD spent more time involved in communicative interactions in mainstream classrooms than in segregated classrooms. In contrast, Helmstetter, Curry, Brennan, and Sampson-Saul (1998) identified that students were more actively engaged in segregated classrooms, and that in mainstream classrooms, they were most actively engaged when interacting on a one-to-one basis with a teachers' aide (TA). Researchers have claimed also that students with severe disabilities in mainstream high schools continue to have limited engagement in classrooms activities and that the frequency of communicative interactions remains low (Carter & Hughes, 2006; Carter et al.; Downing, 2006; Hughes et al., 2002). Given that school may be an optimal place to acquire and practise communication skills, there is a need to better understand how to support students with MSD to leave the education system having realised their potential as communicators (Downing).

There appears to be a consensus among researchers that, although there may be increased opportunities for communicative interactions in mainstream school settings, physical placement alone is not sufficient to ensure increased access to communicative interactions for students with intellectual or physical disabilities (Calculator, 2009; Cutts & Sigafoos, 2001; Downing, 2006; Hughes et al., 2002; Kent-Walsh & Light, 2003). Indeed, researchers have concluded that there may be a range of complex factors, including contextual factors, influencing the communication of students with MSD in mainstream school settings (Arthur-Kelly et al., 2008; Cutts & Sigafoos; De Bortoli et al., 2010; Helmstetter et al., 1998).

Despite mixed research results regarding frequencies of communication opportunities for students with MSD in mainstream classrooms, to date there has been limited research with teachers exploring the factors potentially influencing such opportunities (Arthur-Kelly et al., 2008; Carter & Hughes, 2006; De Bortoli et al., 2011; McNally, Cole, & Waugh, 2001). Most research investigating the involvement of students with severe disabilities in mainstream classrooms has been conducted in large metropolitan schools (Carter et al., 2005; Cutts & Sigafoos, 2001). This is despite reports from families in rural areas that they wish their child with a significant disability to attend the local school in order to have the opportunity to interact with other children in the community (Calculator, 2009; Downing, 2006). The aim of the present study was to explore teachers' perceptions and experiences of factors that influence the communicative interactions of students with MSD in mainstream school settings in rural areas.

Method

Participants

Participants were recruited through the state education system. The first author contacted disability support services staff within two district/area offices, who forwarded the names of schools including students with MSD in mainstream classrooms. The first author then contacted 11 schools by telephone. Following discussion with executive teachers, six schools were deemed not eligible for the study because they did not have a student with MSD enrolled. No successful contact was made with two schools. Three schools were deemed eligible and five teachers from these schools volunteered to participate in the study. All participants currently taught one student in a mainstream classroom who had MSD. MSD was defined as having a severe intellectual disability, and a range of impairments that may include physical and sensory impairments (Foreman & Arthur, 2002). All five teachers worked in mainstream public schools in rural areas. Teachers ranged in years of teaching experience from 5–30 years. Two of the teachers had not previously encountered students with disabilities, while the other three teachers had some previous experience working with students with a range of disabilities. The pseudonym, school setting, and years of teaching experience of the participants are summarised in Table 1.

Procedure

Each teacher participated in two in-depth interviews lasting 45–120 minutes. In the first

TABLE 1

Characteristics of participants

Participant	Gender	Age (years)	Years of teaching experience	Type of teaching experience	Educational setting	Location	Training background
Betty	F	55+	30	Primary and secondary	Central school	Rural	DipEd
Dora	F	55+	30	Primary and secondary	Central school	Rural	DipEd
Naomi	F	36-45	15	Primary	Small mainstream public	Rural	B.Ed.
Phoebe	F	20-35	6	Primary	Small mainstream public	Rural	B.Ed
Nigel	M	20-35	5	Secondary	Central school	Rural	B.Ed

F=female, M=male, DipEd = Diploma of Education, B.Ed. = Bachelor of Education.

interview, participants were invited to talk about their perceptions and experiences of supports and obstacles to access to communication for the student with MSD. Four open-ended questions, developed from a review of the literature, were used to guide the interview (see Table 2). Each participant was then sent a copy of their transcript including the initial coding for content themes. The second interview was conducted during the following school term (3 to 10 weeks after the first interview). In the second interview, participants were invited to: (a) change and/or elaborate on issues discussed in the first interview, and (b) provide feedback on the researcher's interpretations (Eisenhart & Howe, 1992; Freeman, M., de Marrais, K., Preissle, J., Roulston, K., & St. Pierre, E., 2007). Interviews were audio-taped for later analysis, with the participants' consent.

Transcription and Management of Data

The first author transcribed the interviews as soon as possible after interviews were conducted. All identifying information was removed from transcripts. Pseudonyms replaced participants' names, and general descriptors (e.g., student, teacher, school, place) were used in place of proper nouns to ensure confidentiality.

Analysis and Verification

The transcripts of the first interviews were subjected to an analysis of content themes (Coffey & Atkinson, 1996; Creswell, 2008; Richards, 2005; Tesch, 1990). Text segments were coded for the topic discussed and assigned to categories. Categories were derived partly from previous research (De Bortoli et al., 2011), with some categories not used and new categories added according to the topics discussed by the participants in this study. Categories occurring at the same systemic level (De Bortoli et al), or within the same context (e.g., school setting, government department), were grouped together to yield the content themes. Qualitative data analysis software (NVivo 8, QSR International) was used to assist in data management.

Only two participants attended second interviews due to work commitments at the end of the school year. However, all participants provided verification of their transcripts and interpretations of themes, either by writing on their transcripts ($n=5$) and/or by discussion in the second interview ($n=2$). In addition, an

TABLE 2

Interview outline

The following is the general interview format for the initial interview with teachers. The format of the in-depth interview has been chosen to allow participants to discuss their experiences of communicating with their students with multiple and severe disabilities openly and without interruption. The interviews will be conversational in style and the number of questions kept to a minimum. The following questions will be used as a guide only.

1. Demographic information
   ○ What type of setting do you work in?
   ○ How many years experience have you had working with students with severe and multiple disabilities?

You may find it helpful to think of particular students when answering these questions.

2. Communicating with students with severe, multiple disabilities
   ○ What is it like to communicate with your student(s)?
   ○ What do you think is important about communication for your students?

3. Supports
   ○ Can you tell me what supports or has a positive affect on your communication with your student(s)?
   ○ What do you think could help make communication easier?

4. Training
   ○ Have you had any communication training? If so, how would you evaluate it?
   ○ What sort of communication training do you think would be valuable to you?

5. Obstacles
   ○ What factors have a negative impact on your communication with your student(s)?

Topic areas will be introduced with the natural flow of conversation. It may be unnecessary to introduce a topic or ask a question if the participant has already addressed it. Therefore, these topic areas are merely a guide and not a set interview regime.

independent person, a research assistant with experience in qualitative research, coded randomly-selected transcripts for two of the five participants (40%) into content themes. She was given instructions for coding that included definitions of the coding categories and then independently coded the transcripts without any discussion with the main investigator. Subsequent analysis compared the coding of transcripts into categories by the independent person with those noted by the first author, yielding an inter-coder reliability rating of 92%.

Results

Findings are presented as the six main themes that emerged from the participants' experiences. These are summarised in Table 3, with categories and examples of supports and obstacles discussed by participants.

Teachers' Experiences Communicating with Students with MSD

Two of the participants in this group (Phoebe and Nigel) were in the early stages of their careers and had no previous experience with students with MSD. The other three participants had 15–30 years experience and had previously taught one student with MSD. Participants described communicating with students with MSD as "difficult" (Phoebe, Nigel, Naomi), "overwhelming" (Phoebe), "frustrating" (Betty, Dora), and "daunting" (Dora). Nigel said: "I find it difficult because apart from the greeting you're left a little bit lost as to where to go from there. It's a bit hard to prolong an interaction or a conversation of any manner." Yet the teachers also reported some positive experiences and feelings. Betty said: "[Student] makes my day when he smiles at me, it's wonderful." The supports and obstacles to communication identified by participants are outlined below.

Individuals: Teacher and Student

Participants initially identified obstacles to communicating associated with both the student's characteristics, and their own characteristics. The more experienced teachers also

TABLE 3

Themes, sub-themes and examples of supports and obstacles discussed by participants

Themes	Categories	Supports	Obstacles
Individuals-Teacher and student	Student characteristics		Complex communication needs.
	Teacher characteristics	Existing skills, knowledge and experience.	Limited training, knowledge and experience
Communication education for teachers	Formal education and courses		Limited pre-service and continuing education.
	Mentoring		Limited opportunities.
	Practical experience	Working with students with disability.	
	Internet	Access to information in rural schools.	
	Visiting other schools	Observing communication practises.	
	Support people	Giving teachers skills and knowledge.	
The school context	Peers without disabilities	Communication opportunities. Positive attitudes.	Limited interaction at high school.
	The mainstream classroom		Difficulties programming and communicating in group situation.
	Other staff in the school context	Teachers' aides.	
		Collegiality: meeting with other teachers.	Limited opportunities for collegiality.
		Principal supports teachers.	Principal provides limited support to teacher.
	Resources and the physical environment	Accessible physical environment.	Difficulty accessing resources, assistive technology.
	School culture	Small, rural schools provide supportive atmosphere.	Difficulty meeting learning and communication needs. Difficult for small, rural schools to access support.
Other people outside the school	Home context	Close contact for exchange of information.	Family not capable of supporting the child's communication.
	Visiting specialist teachers	Facilitating communication skills; student, teacher, peers. Programming for activities.	Reduced support. Limited support for students without hearing impairment.
	Speech pathologists and other therapists		Limited collaboration with teacher.
Government department/ agencies	State education system	Integration officer supports school with resources.	Difficulties obtaining funding, specialist staff and support for networking.
	Other departments and agencies		Limited access to speech pathology services. Inconsistent service to schools.
Societal factors		Positive community attitudes. Local school promotes social inclusion.	Social exclusion in mainstream school. Segregated activities outside school.

identified some supports associated with their own characteristics.

Student characteristics. Participants identified the complex communication needs of their student with MSD as an obstacle to establishing communication. They perceived that communication was difficult because of their student's limited responsiveness and spontaneity. Betty said: "With a typical student you are able to get some feedback and therefore know that your message has been understood. Sometimes with [student] we may get no visual signs whatsoever, not even facial movement."

Participants reported difficulty interpreting students' idiosyncratic forms of communication. Nigel said: "He can't communicate verbally so actions and eye contact are the biggest things. I'm only taking a guess or a stab at what it is that he's trying to project." Three participants perceived that their student may be pre-intentional. Phoebe noted: "I don't know if [student] has intent to communicate, that's the hard part. We can put him in situations to foster communication but I don't know if the intent is there, if he actually wants to communicate." Four participants also observed that communicating with their student with MSD required increased effort and time on their part, because of the need for one-to-one interaction. Participants then emphasised their lack of skills and knowledge to interact with students with such complex communication needs.

Teacher characteristics. Participants reported that their lack of training, knowledge and experience was a major obstacle to establishing communication with students with MSD. Phoebe said: "I'm not trained and I don't understand how it [communication] works with a child with severe, multiple disabilities and minimal communication."

Naomi noted, however, that the experience, skills and knowledge she had acquired at a previous school, teaching children with a variety of additional needs, supported her to communicate with her current student with MSD. She had undertaken training in sign language, and said "so I could actually communicate with them that way." Following on from discussion of their own characteristics, participants talked about the importance of communication education.

Communication Education for Teachers

Formal education and courses. The participants reported a general lack of training for teaching and communicating with their student with MSD. They noted limited relevant content in their pre-service teacher education and limited continuing communication education. Nigel said:

> We've very much been told to try and interact with the student as best we can but I haven't had any kind of special education training or any specific professional development regarding how to cope with a student that's at this level. It has been very much on-the-job training, a bit of trial and error.

Participants perceived a need to attend external courses to help them acquire some skills and strategies for communicating with students with MSD.

Mentoring. The early career teachers, in particular, perceived the potential value of regular opportunities for mentoring, for personal support and guidance with programming However, they reported limited opportunities for such experiences. Phoebe said: "As far as mentoring goes, it's quite difficult to find someone that's willing to support you." In the absence of formal education and mentoring, Nigel described some of his experiences of "on-the-job training."

Practical experience. Nigel described the benefits of spending time with another student at the school who had a hearing impairment. He said: "I've found that a very big learning experience in terms of understanding her communication needs. It gave me more insight into working with the more severely disabled student that we have here at the school." Participants noted other ways they could be supported to learn how to communicate with students with MSD. These included using the internet, visiting other schools, and support people coming into the school.

Internet. Naomi reported that access to the internet at her school enabled her to research the communication needs of children with disability. She perceived this as an important resource for teachers in rural areas.

Visiting other schools. Participants also commented that observing practices in other schools, particularly special schools, would be helpful. Phoebe said: "[We] are going to another school to see what they are doing there for these students with multiple disabilities and severe language delays, and how the teachers there communicate with them, to see that we're on the right track."

The role of support people. Finally, participants perceived that support people, from outside the school, had a role in imparting skills and knowledge about how to communicate with students with MSD. Naomi said:

When the children come through they bring their entourage of OTs and speechies. The itinerant support people are making sure that as a beginning teacher you're getting that information. That's basically how I learned. So really those support people are crucial.

Regardless of their level of experience or access to training, however, participants talked about receiving limited support. Naomi noted that while this support is crucial for beginning teachers it had been "dwindling away." She said:

Particularly for a beginning teacher, to be faced with a student with multiple and severe disabilities, it's essential to have support. If I was a beginning teacher I would say that I would be struggling because I wouldn't know where to go with this child.

Participants talked about obstacles, and supports, they encountered in the contexts of the classroom and school. These are presented in the next theme. The role of support people from outside the school will be presented in the following theme.

Classroom and School Contexts

Participants perceived that a number of issues influenced access to communicative interactions for the student with MSD. These included: (a) peers without disability, (b) the mainstream classroom, (c) other staff in the school, (d) resources and the physical environment, and (e) the culture of their school.

Peers without disability. Participants reported that the other students generally held positive attitudes toward their peer with MSD. The two participants in primary classrooms perceived that the student with MSD had opportunities for communication, because of the presence of peers as potential communication partners. Phoebe said:

I think him just being here is a great opportunity for communication because he's getting to interact. The other kids want to hold his hand, they want to speak to him, they want to sit beside him. His being in the mainstream setting just provides him with other students that want to talk to him and that want to be his friend.

Participants at the secondary school level, however, reported minimal interaction between the student with MSD and other students, despite students' positive attitudes. Nigel said:

There's not a lot of interaction between the mainstream students and him [student with MSD]. None of the other students seem to want to even attempt the "high fives," a big communication tool. So, there is that divide in that respect.

Nigel perceived that, like the staff, the other students found it difficult to communicate with the student with MSD. He said: "It is very difficult for other students to even relate with [student]. If teachers find that difficult then what chance does a student have?"

The mainstream classroom. Participants noted a number of barriers to communication associated with the mainstream classroom. Participants reported both awareness that their student with MSD needed more time, and a concern about allocating their time and effort equitably among all their students, to ensure delivery of the curriculum, particularly at the high school level. Participants also reported difficulty communicating with the student with MSD in the group situation and programming to involve him in classroom activities. They perceived that the student with MSD could be "disruptive" (Naomi) for them and the other students. Phoebe said "We encourage him to make noises to communicate but it's awfully difficult to be teaching when

you've got someone yelling in the background."

Other staff in the school context. Participants talked about the perceived role of teacher's aides, the principal, and collegiality in supporting or hindering access to communication for students with MSD. Participants spoke about the importance of having a teachers' aide (TA) in the classroom to facilitate communication, and work one-to-one with the student with MSD on their individual education plan (IEP). Naomi said: "With more severe children we do that more through the teacher's aide and using that aide to set them up with communication skills. You need that space where he's just with his aide working on his own program." However, Phoebe reported limited opportunities during the school day to communicate with her TA about the student's progress and goals.

Participants also spoke about the role of opportunities to meet with other teachers, in supporting them to communicate with their student with MSD. Three participants reported that dialogue between teachers supported positive attitudes and a consistent approach to communicating with the student with MSD. Betty commented that: "It's been a communication for staff actually" to take a consistent approach to using *high fives* with their student. Phoebe, however, reported almost no opportunities for collegiality. She was the only teacher at her school who had a student with MSD in her classroom. She said:

I've found that there's no one else in the same situation as me. There's no one with my lack of training that has a student with multiple and severe disabilities in their classroom that can speak on a de-briefing level.

Participants also reported varying experiences of support from their principal. Phoebe said: "I don't feel that I get support from the principal." Other participants reported that their principal managed the students with disabilities at their school, provided informal problem-solving with them, and arranged a speaker to attend a staff meeting prior to the student with MSD arriving.

Resources and the physical environment. In addition to the role of other people in the

school context, participants talked about the infrastructure of their school, and the need for more resources. Betty, Dora and Nigel described changes made to the physical environment of their school to enable the student with MSD to participate in classes with his peers. These included use of downstairs classrooms, installation of ramps, and acquisition of desks to accommodate wheelchairs. Nigel reported that changes were made to the use of particular rooms and areas in the school, so that the student had dedicated spaces for sleep and mealtimes.

However, participants reported difficulty acquiring, or lack of knowledge about resources to support the student's participation in classroom activities and opportunities for communication. Naomi said: "We haven't really been offered any equipment here and we're making do as we go." Nigel reported that his student with MSD had recently acquired an assistive technology device. However he also said: "I don't know a lot about it, the teacher's aide knows more about it."

The school culture. In addition to these specific issues, participants shared their perceptions of their school culture. They discussed the school's ability to cater for the needs of students with MSD, and the impact of its size and geographical location. Even participants in the same school had different perceptions about their school's ability to cater for the needs of students with MSD. Betty and Dora commented that their school had a history of accommodating students with disabilities, in terms of enabling access in the physical environment. Betty said:

I think it's a culture within our school because I remember twenty years ago, we had students that would have been at [special school] then. We had a fellow in a wheel chair and it was no big deal. We just changed our timetable for him every year so that he never had to go upstairs. So I think we've had it in our community, in our school community for quite some time.

Nigel, however, expressed the view that, while it was "fantastic" to be able to accommodate the student with MSD, staff had fears about how to interact with him. He noted that staff attitudes had become more positive: "I think

change has been the biggest fear for many of us, including myself, but as times gone on I think it's been more accepted." Nevertheless, he expressed uncertainty about the school's ability to cater for the educational and communication needs of the student with MSD, and recommended that more be done "to make it more worthwhile for those children that are coming."

Participants also noted supports and obstacles associated with small, rural schools. Four participants perceived that the emotionally supportive culture of their school was due to it being a small, rural school. Naomi said: "It's really a family environment in a small school. Everyone's accepting of our little person and really nurturing and encouraging." Betty perceived that there was a "sense of community within the school."

The perceived disadvantage of small, rural schools, however, was greater difficulty accessing support from the state system and professionals outside the school. Naomi said: "I think we find it a little bit difficult to access support being in a smaller school rather than being in a larger school where there are more of those sorts of children." Teachers' perceptions and experiences of other people outside the school is the next theme.

Other People outside the School

Participants talked about the role of people outside the school. These included parents of their student with MSD and professionals in their district/region, such as visiting specialist teachers and speech pathologists.

Home context. Participants reported varying experiences of contact with their student's parents. Three participants reported having close contact, via phone and communication book. Dora said: "A lot of the communication is through the parents for the kids. So we work with them. [Communicating with the student] is hard." They reported that the communication book was not being used to communicate with the student with MSD.

Two participants noted that not all families were capable of supporting their child's communication development. Phoebe described limited support from the family for enhancing her student's skills: "I feel that I don't get much support from the home environment. It

isn't particularly an opportune environment. I don't think they are particularly concerned with fostering [student's] development. It frustrates me. That's a big obstacle."

Participants perceived that parents had an important role in accessing support, for example, speech pathologists, both before students start school and throughout their school years. Naomi said: "Some parents are maybe not as diligent in looking for that help before school. If we are trying to access that support later on then it's perhaps a little more limited."

Visiting specialist teacher. The two participants in primary schools spoke about the ways that an itinerant teacher for hearing (ISTH) provided support. These included facilitating the communication skills of the student with MSD, the teacher and the other students in the class. Phoebe said: "With access to their support, we are trying to teach him to communicate using his eyes and using simple Makaton signs. So they are our alternative forms of communication." Naomi added: "The itinerant support people set you up for making sure that you're going to be able to communicate well, that you're able to sign to them to communicate to them." She also said:

> We use the support teacher to work with all of the children so she could sign to the children as well. That way we're all on the same wave length in being able to communicate with each other. That was really important.

Participants also reported that the ISTH supported them with programming to involve the student with MSD in activities and create opportunities for communication. Naomi said: "Every chance I get with my support teacher we're programming."

However, Naomi reported that this support "has just dwindled away. Now we might see our support teacher once every couple of weeks. Those support people are crucial." The participants in a high school noted that an ISTH comes to their school to support a student who has a hearing impairment. However, they noted that their student with MSD was not receiving similar support. Nigel said: "I'm not certain whether there's that kind of facility with the more severely disabled male student that we have. I may be unaware of it."

Speech pathologist and other therapists. In contrast to her supportive experience with an ISTH, Phoebe described her negative experience of visits from a speech pathologist and other therapists that were unhelpful. She said:

The very first day of school, seven people from [Non Government Organisation] knocked on my classroom door and started speaking about Big Mack switches, and augmented communication systems . . . I was just so overwhelmed by these people telling me what I must do. I was actually told: "You need to do more, and this was the very first day of meeting this little person."

She also reported not being involved because the speech pathologist did not arrange appropriate times with her to visit the school. She said: "So since having [student] at school we've had three speech visits that really I felt I got nothing from. These visits happen outside the classroom while I'm teaching." Apart from participants' comments about the individual professionals that they worked with, they also talked about factors associated with government departments. This is the next theme.

Government Departments: State Education System

Teachers talked about supports and obstacles associated with both the state education system and other government departments and agencies responsible for providing speech pathology services.

The integration officer. Participants working at the central school reported receiving weekly visits from an integration officer "because there are quite a few special needs children here" (Dora). Dora said: "She talks to the teachers to see if there are any special resources that the child may need to help with their learning. If we need a laptop she can get that from district office." Participants perceived the integration officer's presence as helpful, even though she had limited time at the school.

Difficulty obtaining support. Having previously also worked in a central school, Naomi perceived, however, that there was less support from the state system for students with MSD in smaller schools. Phoebe reported that her requests for support seemed to "fall on

deaf ears." Despite positive reports about the ISTH and integration officer, participants talked about difficulties obtaining funding, support from specialist staff, and support for networking with other teachers of students with MSD in mainstream classes.

Difficulty obtaining funding. Participants reported difficulty obtaining funding through the state system for resources to support their student's participation in activities and opportunities for communication. Phoebe said: "I pushed and pushed and pushed. It's taken a term and a half to get $400 worth of funding to buy some developmental toys and resources for him." However, she also described resorting to purchasing resources with her personal money, for which she had not been reimbursed. Betty perceived that staff had to "fight," not only to obtain resources, but also for additional staffing in the classroom.

Limited specialist staff. Participants perceived that there were limited avenues for accessing specialist support through the state system, for students with MSD in the mainstream setting. Phoebe said:

When I first filled out the access request form, "hearing" was the only box that [student] fitted into. It was the only box that I could tick for him and I thought "I need some support. I'm just going to try."

Nigel perceived that there was a scarcity of such staff. He said: "If you brought someone in [here], are you taking resources from elsewhere. It's a finite resource pool."

Isolation of mainstream teachers of students with MSD. Participants talked about being on their own, both personally and professionally. Phoebe said: "When you do try to have a personal relationship with some of the people higher up in integration and in special ed, it's like they don't want to talk to you about how you're feeling." Betty commented that the integration officer's visits were not enough support for individual teachers. She noted the need for the state system to provide opportunities for networking with other teachers of students with MSD in mainstream settings:

So that we can look at all the different strategies, share all the resources that are out there. We all do our own thing. There doesn't seem to be on a departmental level

enough co-operation, co-ordination. We could do it a hell of a lot better.

Participants also made comments about lack of support associated with other departments and agencies.

Other Departments and Agencies

Participants spoke about the limited and inconsistent provision of speech pathology services to students with MSD at their schools.

Limited services to schools. Participants perceived that it was difficult to access speech pathology services in the school setting, and that when provided input was brief. Phoebe said: "You have to jump through so many hoops to get it, or it costs extra and the family just can't accommodate that." Phoebe's student had received three school visits over six months. The student was now on a waiting list for further support.

Nigel, Betty and Dora reported that no speech pathologists come to their school, and perceived that this service was not accessible for the high school. Betty said: "I think if we could get it we would have accessed it by now but I know that certainly doesn't come in through high school." Nevertheless, participants unanimously stated that speech pathologists could support them to communicate with the student in the classroom.

Inconsistent provision of services to schools. Naomi compared the provision of speech pathology services to students with MSD at different schools. She reported that at the central school where she had taught kindergarten previously: "We had a lot more support for that student. We had occupational therapy. We had speech pathology that came with him and stayed with him." In contrast, she reported receiving no service at her current small, primary school, and added: "I'm not sure why there would be a difference because that was a rural school as well." However, as previously mentioned, she perceived greater difficulty accessing a speech pathology service at a small school than a larger school. Naomi, Betty and Dora stated that it was up to parents to arrange a speech pathology service. Dora said: "I think that's just something that parents do off their own bat."

Participants' perceptions about the influ-

ences of the broader community on the student's access to communication in the mainstream school setting are presented in the final theme.

Societal Factors: Social Inclusion

Finally, participants expressed different views about the extent to which social inclusion occurred at their school and in the broader community. Four participants perceived that their local communities were accepting of young people with MSD and their attendance at the local school. They believed that it was important for the student with MSD to participate in activities and not be segregated. Betty perceived that the student with MSD was "included in just the same way [as other students]," and noted that: "If they're [students with MSD] set apart and appear that they are very different and you don't get to interact with them" then communicative interactions are much less likely to happen.

One participant had different views, however, about social inclusion. Nigel perceived that the student with MSD was not being socially included. He therefore had doubts about the benefits of the mainstream school setting for this student: "The family want the child to be at the local school which is understandable but whether it's necessarily to his maximum benefit is questionable." Nigel commented that the special school in the area would better cater for the needs of the student with MSD. He said: "We do have a special education school in the area and that's already sort of set up, it's got a program like that." He noted that apart from the lack of interaction between the student with MSD and other students at school, this student attended segregated activities outside school as well.

Discussion

Participants Identified a Broad Range of Factors

The findings of the present study support previous research (De Bortoli et al., 2011; Kent-Walsh & Light, 2003; Soto et al., 2001), and suggest that supports and obstacles influencing the communication of students with
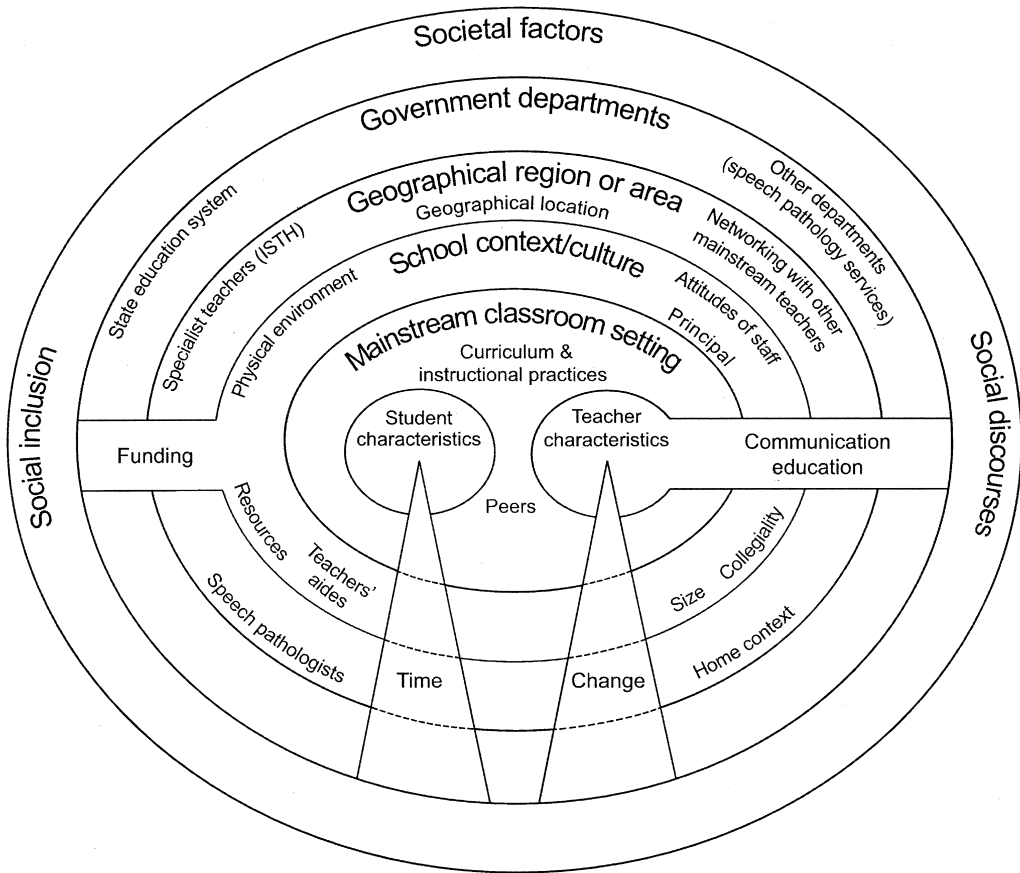
Figure 1. Systemic factors influencing the communicative interactions of students with MSD in mainstream school.

MSD in mainstream schools are complex and systemic. These are represented in Figure 1.

Participants' Difficulties Communicating with Students

Given their limited training and experience, participants had difficulty interacting with students with such complex communication needs. These issues are represented in the innermost circles of Figure 1. These findings are consistent with previous research with mainstream teachers including students with severe disabilities and students who use AAC (Carter & Hughes, 2006; Kent-Walsh & Light, 2003; Smith, 2000; Soto et al., 2001). This factor was compounded by few opportunities for continuing professional development and

limited supports at a number of contextual levels, such as mentoring, networking with other mainstream teachers, specialist support people, and external courses. In Figure 1 *communication education* crosses a number of levels. This situation existed despite claims by researchers that teachers need a high level of professional development support to include students with severe and multiple disabilities (McNally et al., 2001).

Classroom Context

Involvement in classroom activities. Participants' difficulties engaging students with MSD in classroom activities may have been due to an interaction between their limited training and experience teaching these students, and

instructional practices in mainstream class-
rooms, such as whole-group activities. This ap-
peared to be particularly true in high school
classrooms with lecture-style instructional
practices and focus on curricular content.

Reliance on TA. Participants' consequent
reliance on a TA to mediate communication
and work individually with the student with
MSD may have further limited the students'
involvement and communicative interactions
in the mainstream classroom (Carter &
Hughes, 2006; Carter et al., 2005). While the
support of a TA in the classroom was crucial
for these participants, it may nevertheless have
contributed to the social isolation of the stu-
dent with MSD, a phenomenon discussed by
other researchers (Carter & Hughes, 2006;
Downing, 2006; Kent-Walsh & Light, 2003).

Peers without disability. The findings also
suggest that there was limited realisation of
the potential opportunities for communica-
tion offered by the presence of peers without
disabilities. While the primary-aged students
were perceived to be naturally interactive
(also reported by Bentley, 2008), participants
did not report perceived quantity or nature of
communicative interactions between students.
In the high school setting, the presence of
peers as potential communication partners re-
portedly did not translate into interactions,
consistent with previous research (Carter &
Hughes, 2005). The findings suggest that the
presence of peers without disabilities as poten-
tial communication partners may have inter-
acted with other contextual factors. *Instruc-
tional practices* and *peers* are represented in the
next circle in Figure 1. *Teachers' aides* are in-
cluded in the following outer circle represent-
ing the *school context/culture* along with other
influencing factors at this level.

School Context/Culture

Findings suggest that the cultures of schools
varied in terms of support for facilitating com-
municative interactions for their students with
MSD. These varied from lack of support and
isolation, to supportive school environments.
Parents have also reported experiencing dif-
ferences between schools in the support pro-
vided to include their child with a disability
(Kluth, Bliken, English-Sand, & Smukler,
2007).

In the present study, a supportive school
culture enabled participants to meet and de-
velop a school-wide goal for their student with
MSD of using *high fives* for greeting, a goal
documented in the literature as socially valid
and age-appropriate (Calculator & Black,
2009; Downing, 2001, 2006). However, as one
of the teachers commented, this communica-
tion goal was very limited, a view supported by
researchers who have stated that students with
MSD may rely on a limited number of com-
munication modes and therefore be limited in
the messages that they can convey (Calculator,
2009; Downing, 2006). Therefore, the find-
ings suggest that this supportive school cul-
ture, which also reportedly helped partici-
pants transform their initial fears into more
positive perceptions, was not sufficient to en-
sure communicative interactions for the stu-
dent with MSD. The factor of *change*, which
was perceived to occur or need to occur at the
personal level, in the school context and in
organisational service provision, is repre-
sented in Figure 1 by a wedge that crosses
these levels.

Geographical Area

The infrequent communicative interactions
reported may have been influenced by limited
specialist support services in the schools. Par-
ticipants perceived that the rural location of
their schools meant they received minimal
support from specialist teachers and speech
pathologists, as represented in the next circle
in Figure 1. It may also have made access to
professional development more difficult.

Limited specialist support services may have
presented a barrier to communicative interac-
tions for the student with MSD because teach-
ers, TAs and peers without disability appeared
to receive limited support for learning how to
communicate with the student. Researchers
state that teachers and peers without disability
need to be taught how to: (a) recognise and
respond to the idiosyncratic forms of commu-
nication of students with MSD, and (b) use
AAC systems to have communicative interac-
tions with them (Calculator, 2009; Copley &
Ziviani, 2004; Downing, 2006; McMillan,
2008). Further, research suggests that even
minimal teaching of peers facilitates interac-

tion (Carter & Hughes, 2006; Carter, Cushing, Clark & Kennedy, 2005; Downing, 2006).

Limited specialist support services may also have presented a barrier to involving the student with MSD in classroom activities because participants received limited support for programming, a support recommended in the best practice literature (Calculator, 2009; Calculator & Black, 2009; Hunt et al., 2003). While participants in primary school environments relied on visits from a specialist teacher for programming, and teaching students some signs to communicate with the student with MSD, their comments suggest that this support was not sufficient, and that support from speech pathologists was also needed.

The findings also suggest variable co-operation between schools and the families of students with MSD. Even though parents reportedly wanted their child with MSD to attend the local school, it is not known whether their expectations were met. Limited specialist support may also have presented a barrier to the collaboration required to facilitate consistent approaches to communication across contexts (Calculator & Black, 2009; Downing, 2006; Hunt et al., 2003). Teachers at the high school, for example, used a communication book with parents but did not use it with the student to facilitate participation in the classroom and conversations with peers (as discussed by Downing, 2001, 2006).

Government Departments and Other Organisations

Findings suggest there are other issues that have implications for service delivery at a departmental/organisational level, as represented in the next circle in Figure 1. The finding that some teachers were only able to access a specialist teacher because their student with MSD had a hearing impairment suggests limited avenues for teachers to access specialist support services through the state education system. The findings also suggest that speech pathology services operated under a model of few visits during which the student was withdrawn from the classroom, teacher and peers. Conflicts between the time required, and the time available or provided, to meet the communication and learning needs of students with MSD is represented by a

wedge in Figure 1 that crosses a number of levels. Limited to teaching the student with MSD communication skills, this model, therefore, was not supportive of facilitating communicative interactions in the classroom and school contexts. It appears that some participants were not even making service requests, suggesting that organisations providing speech pathology services may need to provide schools with information about accessing this service.

Discourses about Social Inclusion

The existence of different views amongst teachers in the same school about the ability to support communicative interactions for students with MSD in their local, rural school suggests that there are different discourses operating simultaneously. This level of influencing factors is represented in the outermost circle of Figure 1. These discourses may both be influenced by the interactions between factors discussed above, and influence access to communication for students with MSD in mainstream settings. The parents in Kluth et al.'s (2007) study also reported the influences of different districts' and schools' discourses and cultures on the social inclusion of their children with disabilities. The finding that teachers perceived limited philosophical and practical support from the education system for socially including students with MSD may reflect a broader social discourse while at the same time influencing the views of individual teachers.

The findings of this study suggest the existence of the following discourses: (a) students with MSD have the right to attend their local school and not be separated from peers; (b) resources are scarce and it is not cost effective to provide the supports needed for students with MSD in mainstream schools; (c) if students with MSD attend the local school they have to fit in with little additional support to accommodate them (also reported by the parents in Kluth et al.'s (2007) study); and (d) the needs of students with MSD are not always met in the local mainstream school and it is in the best interests of some students to have segregated education. Researchers have speculated that teachers doubt the benefits for students with severe disabilities of attending a

mainstream classroom in the neighbourhood school, because the barriers overshadow the potential benefits, and that there would be greater benefits for such students in segregated settings (Carter & Hughes, 2006; Downing, 2006; Smith, 2000). The perpetuation of some of these discourses may continue to limit opportunities for communicative interaction for students with MSD. Perhaps because of the difficulties establishing communication in the school setting, none of these teachers spoke about preparing the student to communicate in the broader community, as discussed by Calculator and Black (2009). The findings suggest that, without supports, students with MSD can still be segregated, with limited opportunities for interaction at school and more broadly in their local community.

Limitations and Future Research

This was a small study incorporating the views of five teachers in three rural schools. Certainly, the results do not reflect the views of other teachers of students with MSD in mainstream school settings. Further research is needed with other teachers of students with MSD in mainstream schools in a broader geographical area in order to substantiate the claims of the participants of this study. The findings of this study have implications for: (a) how the culture of a school influences the communicative interactions of students with MSD, and (b) speech pathology service delivery. The importance of collaboration and teamwork also suggests that further research involving potential team members, such as speech pathologists, other health professionals, parents, specialist teachers and peers without disability is required. Further observational research is also required to document what actually happens in mainstream classrooms between teachers, students with MSD, and their peers. This research would contribute further insight regarding a model for enhancing the communicative interactions of students with MSD in mainstream school settings.

Conclusion: Supports and Obstacles may be Systemic

The findings of this study offer new insights into the supports and obstacles that impact teachers in rural schools in their communicative interactions with students with MSD in mainstream classes. The participants' perceptions suggest that the supports and obstacles for communicative interactions, and engagement in the classroom are complex and systemic. The findings therefore also suggest that a model for enhancing access to communicative interactions for students with MSD in rural, mainstream schools may also need to be complex and systemic. This may include the following recommendations: (a) support for individual teachers, such as mentoring, opportunities for gaining experience with students with disability at university, regular opportunities for networking with other teachers and visiting other schools, accessing courses using technologies, and collaboration with specialist support staff; (b) specialist support services into schools to support teachers, TAs and peers without disability to learn how to communicate with the student, involve him/her in class activities, set up peer support arrangements, facilitate collaborative teaming involving families, set up AAC systems, and build up the school culture in terms of communication practices and resources; (c) further investigation of service provision for students with MSD in rural areas, (d) government departments and other organisations continue developing policies and practices for building the social inclusion capacities of rural mainstream schools thereby reducing the isolation of teachers and families; and (e) a continuing dialogue about social discourses around mainstream educational settings and students with MSD that may be influencing their access to communicative interactions.

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