Disentangling the social threads within a communicative environment: a cacophonous tale of alternative and augmentative communication (AAC)

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Alternative and augmentative communication (AAC) technology is being increasingly recognised as an important means of fostering the literacy of students with significant disabilities. However, the coordinated use of AAC technology continues to challenge professionals, families and users leading to dissonant meanings and fragmented use. This paper is an attempt to inquire into, and disentangle some of, the social threads that made up the communicative environment of one first-grade student with significant disabilities – Trevor – for whom augmentative communication technology was procured. The ethnographic study reported in this paper documents the conflicting meanings of access and participation that surfaced among the multiple participants under whose guidance Trevor was required to use AAC. The paper discloses the assumptions implicit in these practices and in the conceptions of literacy enacted by different professionals. The paper notes the significance of these issues for Trevor’s narrative construction of himself and concludes with implications for practitioners.

Keywords: AAC; literacy; inclusive education; disability studies; qualitative research; significant disability

Framing alternative and augmentative communication research: literacy and the narrative construction of selves

Rapid advances in technology in recent decades have increasingly expanded its potential to deliver access to mainstream educational experiences for students with disabilities. Still, despite the increased capacity of schools to procure such technology, the complexities of implementing it remain the focus of struggles for practitioners within schools. In particular, the coordinated use of alternative and augmentative communication (AAC) within multiple contexts continues to challenge families, professionals and users alike as competing perceptions of the purposes of such technology result in dissonant meanings and fragmented use (Todis 2000; Goldbart and Marshall 2004; Hodge 2007). AAC may be perceived as compensating for the loss of voice through artificial means in order to enable individuals to interact and participate in multiple settings, to learn their language, to maintain social roles and to meet personal needs (Beukelman and Mirenda 2005). This also carries an implicit claim to restoring the metaphorical voice of the individual – the expression of self – that may
remain obscured by the inadequacy of traditional tools such as speech and writing. These dual aims of AAC technology – to compensate for loss of speech and to enable self-expression – have coalesced in the increasing interest in its capacity to foster the literacy of students with significant disabilities (Sturm and Clendon 2004; Clendon and Erickson 2008; Erickson and Koppenhaver 1997; Myers 2007). More importantly, Koppenhaver (2000) has argued that the issue of literacy is not separable from AAC technology. He notes:

We must make significantly greater attempts in our research to explore both the impact of literacy events on the learning and use of AAC systems and the impact of AAC systems on literacy development. We must act on a new belief that AAC programs without literacy are not AAC. (Koppenhaver 2000, 271; emphasis in original)

The relation between literacy and AAC technology is particularly germane, given the restrictive meanings of disability that have historically framed the experiences of individuals with significant disabilities. Kliwer and Biklen (2007) explain that the predominant discourse of failure that informs popular and professional response to significant disability perpetuates an assumption of incompetence that precludes these students from experiences and expectations that can foster literate activity. Such discourse is no doubt fueled by national and regional policies that reflect a narrow conception of literacy that is ‘limited to a range of decontextualised performances and tests for the sake of measurability’ (van Oers 2007, 301). Calling for an approach that presumes competence rather than equates disability with deficit, Kliwer and Biklen (2007) argue for a ‘responsive literate context’ that will support and nurture the literate potential of all students in ways that are not proscribed by rigid norms. However, access to multiple sign systems to enact literacy remains starkly limited within traditional practice that is focused on reading and writing. For some users of AAC this means that their use of symbols remains largely an exercise in communicating functional needs instead of also serving as a means of developing their own language.

The research of Kliwer and Biklen (2007) indexes the liberatory potential of AAC as residing in its capacity to serve as a tool for self-expression; to enable the expression of symbolic thought that can then be captured within narratives (Kliwer 2008). Narrative and the telling of stories have been offered as the very definition of identity itself (Sfard and Prusak 2005). In other words, stories are the means by which we engage in the identification of ourselves within contexts of practice (Bruner 1990). Literacy itself may well be perceived as constituting such story-telling, identity-making practice. While there has been some research that has studied the development of the narrative potential of AAC users (Liboiron and Soto 2006; Soto, Yu, and Henneberry 2007), it reflects a conception of narrative that has greater congruency with notions of literacy as a predetermined trajectory of skills. In a ‘responsive literate context’ however, the significance of narrative is premised on establishing ‘social connectedness’ within the community of learners, creating the means by which membership is available to all participants (Kliwer and Biklen 2007). Indeed, Ferguson suggests that it is through ‘our created explanation of their contributions to the social context’ (Ferguson 1994, 12) that we come to know students with significant disabilities. Identity-making as such communicational practice (Sfard and Prusak 2005), invests AAC technology with a profound, if challenging, purpose as a potential means to evoke the agency of students with significant disabilities while simultaneously serving to alter cultural narratives of significant disability (Ferguson 2003).
Informed by the construct of literacy as such a socially and culturally situated practice—a ‘generalized ability to use signs/symbols for intrapersonal and interpersonal purposes within specific cultural practices’ (van Oers 2007, 303)—and its potential for the narrative construction of selves, I sought to understand how AAC delivered access for a student with significant disabilities—Trevor—who utilised AAC technology. Focussing on the narratives of multiple participants within the social contexts in which it was used, I explored two key questions in this paper: (1) in what ways did AAC technology contribute to Trevor’s narrative construction of himself?, and (2) What resources did it offer others in the group who participated in his social identification?

**Method**

Case studies are usually organised around some important issue (Stake 1995). An initial process of ‘casing the joint’ (Dyson and Genishi 2005) unearthed the theme of AAC not only as a key element in the particular developmental trajectory of the student with significant disabilities (Trevor), but also within the social dynamics of this classroom community. Trevor’s intermittent use of technology, his families’ resignation to this reaction, student responses to it, teachers’ bare tolerance of it interspersed by sporadic studious utilisation, therapists’ passionate avowal of its potential—clearly, there was an issue here that needed to be investigated. The research site was a first-grade elementary classroom (based on student ages, this would be equivalent to Year 2 of primary/first school in the UK) in a large urban school district in the northeastern corridor of the USA. As part of a larger inquiry into the production of inclusive classroom communities, the selection of the classroom as the research site reflected purposeful sampling (Maxwell 1996). There would be at least one student with significant disabilities who was identified in school records as a member of that general education classroom. In this building Trevor’s was one of the few that included several students with significant disabilities.

**Participants**

The selected first-grade classroom was one of several collaboratively taught classrooms in the building that included students with disabilities. In keeping with the district-wide model of inclusion, about 40% of the classroom comprised students who had some form of disability. Trevor was one of two students who used wheelchairs, while another student, Kevin, used a specially designed shoe supplemented by a walking aid. Several students in the classroom had individualised education programmes (IEPs), receiving intermittent special education or therapeutic services.

The classroom was led by one general educator, Jeanine, and one dually certified educator, Stephanie. In accordance with traditional co-teaching models, Stephanie was responsible for planning the individualised supports required for students with disabilities documented in their IEPs. For three months during the study, Jeanine went on maternity leave. During her absence, her position was filled by another dually certified teacher, though Stephanie assumed the lead role in the classroom. This paper draws heavily on observations of Stephanie’s practice. As multiple interviews with Stephanie revealed, this period of change kindled a recognition (in both Jeanine and Stephanie) of deep divisions within their teaching practice that would result eventually in a dissolution of their partnership for the following school year.
Among the students in his class, Trevor was the only one with significant multiple disabilities. A wheelchair user, he was also diagnosed as having a vision impairment and difficulty with verbal communication. There were three paraprofessionals in the room, who were primarily assigned to three of the students with disabilities, though some assumed class-wide responsibilities as well. Felipe, Trevor’s paraprofessional, remained with him throughout the day wheeling him within the building and usually seated close to him in the classroom. During the school day, Trevor received services from several therapists including a speech pathologist, Kathy, who worked with him a few times each week in her office which she shared with another professional. His speech pathologist from the previous year, Samantha, who had selected his AAC device, tried to keep up with his progress, though she did not work directly with him anymore. Families were usually welcomed into this classroom community, though involvement seemed framed along traditional lines – e.g., organising classroom parties, signing up for snack, chaperoning students on field trips, etc. Trevor’s family did not appear to be frequent visitors to the classroom (his mother worked in a different state) though I did see his father, Richard, a few times in the building during the course of the study.

Data collection and analysis
Situated within a larger ethnographic study, data for this paper were collected primarily through participant observation and in-depth interviews. The two classroom teachers, the speech therapists, Trevor’s paraprofessional and his father were interviewed at least once, with each interview lasting anywhere from 40 minutes to two hours. Participant observation occurred from March 2008 to June 2009 within the classroom as well as in other relevant locations in the building such as the playground, gym, and therapy rooms. For the first three months, visits were made twice weekly, each visit lasting about two hours. These gradually tapered down to once a week and eventually once in two weeks. All visits, informal meetings and conversations were documented and described in detailed field notes. All interviews were transcribed verbatim. Data from field notes and interviews were subject to coding and categorising procedures (Bogdan and Biklen 2007). Member-checking occurred during final separate interviews with each teacher to review themes and findings from the study.

Trevor: a researcher’s introduction
As indicated earlier, it was Trevor’s presence in this classroom that had determined its selection as the research site. Consequently, I remained vigilant to instances of his social identification in this classroom from the very beginning of the study, even as I sought to understand the particular workings of this inclusive community. I sought to interact directly with him, using the generous support of his facilitators, whether it was Felipe, his paraprofessional or Linda, his at-home nurse who dropped him off at school. By the second month of the study, Trevor would respond spontaneously to my greeting, especially during out-of-classroom moments. Within the classroom, interactive sequences were fewer in number, limited by the structures of classroom schedules and rules of classroom community behaviour.

Any description of Trevor would be inseparable from his relationships with others within his community – adults and peers. Observing him in the context of his relations with Felipe, his paraprofessional, I noted that Trevor, who was usually silent and
almost disengaged in the classroom, emerged both as voluble in speech and as strongly assertive in personality. He did not hesitate to engage with Felipe to clarify what he might have heard in the context of a group lesson, calling out to him when he sensed that he was not in his immediate vicinity. Felipe, in turn, offered immediate understanding of his words that often remained indistinct and unclear to me, as observer. Trevor used two AAC devices – the Step by Step switch and the Mercury. The Step by Step is a simple augmentative communication device which can hold pre-recorded messages (for a duration of about 75 seconds) that can be activated by touch. The Mercury is a computer-based communication device that generates voice output. It has Internet capability and can be mounted on a wheelchair. Whenever Trevor used the Step by Step switch (with Felipe’s encouragement), it was not readily clear to me that he had done so purposefully. Still, it certainly created the impression that he was participating in the activity. He did not appear to seek this tool spontaneously but would dutifully oblige when asked to use it. Such acquiescence rather than spontaneity also marked his sessions with school personnel who provided speech therapy or vision-related service.

It was undoubtedly in the presence of his father when Trevor was quite transformed. During my visit to their home, he maintained a steady flow of conversation with his father and babysitter drawing on their shared experiences to express freely his wants, his comments and even frustration. In the middle of our three-way conversation during this visit, he barked an epithet at his sitter, ‘loka’ (this means ‘crazy’ in Spanish) much to her feigned indignation and to his father’s amusement. Trevor declined when his father asked him if he would like to use the Mercury, preferring to keep talking instead. Describing his out-of-school experiences, his father reported that he travelled almost every weekend to a nearby state where his mother worked, he loved to go to Lowe’s (a home improvement store), he had visited the White House, and had had dinner with a sitting vice-president. Furthermore, he was a seasoned traveler, having visited Europe many times.

In the classroom, Stephanie, the special educator, might use the Mercury with Trevor, as she worked on reading goals with him. She confessed, however, that she did not find it very helpful, adding that Trevor himself remained unexcited about using it. Trevor participated in most curricular activities in the classroom (except when he was removed from class for therapy sessions), including the ‘intensives’ that were provided at the end of the school day for all students deemed to require additional academic support. During the day, Trevor’s name had to be deliberately invoked in some way by teachers or peers; otherwise he remained quiet, punctuating his silence with deep breaths. He rarely engaged in verbal interactions with his peers (even when initiated by others), but other more subtle forms of interactions were observed in the classroom. For instance, when the group was gathered on the rug, it was not uncommon to find a student sitting next to his wheelchair play gently with Trevor’s fingers as his hand rested lightly on its side. Trevor might even initiate such physical exploration by moving his fingers lightly over the hair of the student seated next to him. Some students like Bernie and Natalie competed to sit next to his wheelchair and to have opportunities to engage with him. Natalie had even attended a speech therapy session with him. Within the boundaries of classroom routines several students appeared to want to get to know Trevor, the most readily available site of such practice being physical contact with, and proximity to him.

As Trevor participated in his social identification within the classroom, the use of AAC technology in that process remained a conflicted ideal among the many adults
who served as its facilitators. Even as the therapists advocated it strongly, it emerged less as a priority for others, with Trevor’s own reluctance providing little incentive to do otherwise. Scrutinising the narratives of these multiple participants, I discerned several themes that appeared to have served as important sources of variance in practice.

**Beyond a surrogate voice: unearthing beliefs**

**Gauging access and structuring participation**

As we waited together for students to finish lunch, Marianna picked up the Step by Step switch that lay on the table and begin to speak into it. Natalie, who was standing across from her, looked interested and joined in her attempt to record their voices into the switch. It dawned on them that the switch had to be turned on before they could actually record anything. They turned expectantly towards me. As I moved towards them, I asked casually, ‘Does that belong to Trevor?’ Natalie looked steadily at me appearing to consider her words thoughtfully, and then responded, ‘He uses it’.

Morning meeting a few weeks earlier: As Jeanine strummed the guitar, the group sang ‘Where is [name of student]?’ followed by ‘How are you this morning?’ Each student responded in song, a task which some students accepted unhesitatingly, while others clearly found uncomfortable. Trevor’s responses were recorded on the Step by Step and he dutifully pressed it during his turn. When it was her turn, Natalie, who was seated next to him, did not sing but instead used the Step by Step to deliver her response as well. The group then moved on to other students, arriving eventually to Erik, who was sitting in the corner, his head bent, his hat pulled over his head and his eyes barely visible. Jeanine kept strumming the guitar, as the group awaited his response. Several hands passed along the Step by Step to him. Accepting it readily, he activated it to submit his response. The switch was then returned to Trevor.

Clearly, Trevor’s connection to the Step by Step switch was configured around pragmatic issues of participation for all students in the group. So, how did the adults within this classroom community conceive of access for Trevor? Jeanine, the general educator, struggled with balancing his therapeutic goals for speech, building proficiency in his use of technology and his social relations within the group. The Mercury’s requirements for adequate visual and/or hearing capacity posed a challenge for its potential to guarantee access in the context of a noisy classroom. Trevor’s visual scanning ability was uncertain and successful auditory scanning required a quiet environment. Still, for her, if implementing technology use resulted in some form of ‘output’ from Trevor, even if he ‘might sing one word’, then the dual aims of access and participation would have been realised. Consequently, in evaluating the (in)effectiveness of Trevor’s AAC technology, she focused on the ‘logistical’ machinations required for its use. Speaking of the Step by Step, she noted:

I think in some ways, if it is pre-planned and you’ve gotten his words ahead of time, we’ve asked him if it is something he would like to use, and then he’s pressing the button,...it can be beneficial, yeah.

However, she still remained uncertain about determining the occasions that were most appropriate for Trevor’s use of the Mercury and those that were most suitable for his speech development.
Stephanie, the special educator, worried less about such logistical matters, strongly resisting instead the uncritical premise that technology could substitute for the real person. She noted:

All this access should not be confused, because we don’t know technically what Trevor’s voice is, except when vocalizes, but it’s hard to hear that. …For them [other students] to see technology as something that would replace the person and the inside voice would be a detriment because then it becomes too easy to understand.

For Stephanie, it was access to Trevor that was the crucial significance of any intervention. In the absence of achieving such access through technology, she focused on building relations with him that could enable her to gauge his growth and manage his participation more effectively. It was not surprising, then, that she made the switch available to all students in the classroom, or that she remained unexcited about the Mercury.

Felipe, Trevor’s paraprofessional, also focused on his relationship with Trevor to generate the clues that could facilitate his participation. Not unlike Stephanie, he saw his responsibility as connected with enabling the emergence of Trevor’s identity. ‘I just see him as, you know, this happy kid who likes to enjoy life. I mean he wants to laugh and I try to help him out with that as much as I can’. He sensed that Trevor attached little significance to the either the Step by Step or Mercury. So, he relied on the strength of his knowledge of Trevor to gauge his communicative needs and to tweak his own responses to him accordingly. Access for Trevor, then, might well have been the capacity of Felipe to interpret his speech and body language and subsequently take the necessary supportive steps that could enable him (Trevor) to establish a social and academic presence in the classroom.

The therapists’ model of practice in this building distinguished between social and academic participation, which coincidentally reflected the instrumental nature of the devices that were made available to Trevor. The Mercury would foster academic participation, while social participation was to be accomplished via the Step by Step and his own speech. The therapists, therefore, envisioned a multi-modal system of communication (Beukleman and Mirenda 2005) for Trevor that would draw on both technology and speech, with each dominating in different spheres of classroom life. For Samantha, his former therapist, Trevor’s speech development was ‘really a matter of practice, and of repetition and carryover’, while learning to use the device was premised on ‘patience’ and ‘time’. Like Jeanine, the therapists conceived of participation for Trevor as entailing the consistent, systematic and coordinated use of the devices within the appropriate domains in the classroom, in combination with provision of opportunities for purposeful speech.

But, according to them, Trevor’s participation was also determined to a significant degree by his perceived innate abilities. Kathy reminded me: ‘I mean, you’re dealing with a kid who can’t really see much and can’t really move much’, while Samantha strongly asserted the ‘cognitive component’ that influenced his motivation to use his communication system.

Furthermore, they also implicated his family in the Mercury’s inability to promote greater participation for him. Samantha reacted to the families’ concern that Trevor saw the Mercury as a toy with some outrage:

As a therapist, I don’t let him use it as a toy! That’s the first thing, that’s not how it’s supposed to be used and if you don’t want him to use it that way then it’s the job of the parent to say something about that.
Such outrage may have been fuelled in part, by her resentment at being ‘quizzed’ by Trevor’s family about recent advancements in technology and their apparent lack of enthusiasm about his progress in speech. His father clearly viewed the Mercury in terms of its overall potential as a communication device without necessarily bifurcating his needs as social and academic. Even as he was aware that there might not be many other options for Trevor, he also acknowledged that they had not been offered any other choices. Engaged in an animated conversation with him, he could not help but sympathise with Trevor’s reaction to the device, ‘How can you *communicate* with that thing?’

**Speech and self-expression**

Multi-modal as his system of communication was intended to be, Trevor offered unmistakable evidence that speech was his preferred mode of communication. According to his father, he could be ‘a big talker’. The persona that surfaced at home mirrored Felipe’s descriptions of Trevor during certain times in the school day. He characterised these as instances when Trevor was ‘being himself’. Noting the capacity for speech that emerged during these moments, Felipe stated ‘He could fill up a room when he’s happy’. Such spontaneous volubility contrasted sharply with Trevor’s muted performance for much of the school day, when his voice was barely heard or was ‘dragged out of him’. Felipe understood these times as not reflecting his true self. Trevor was playing a role that required careful management, which naturally inhibited his spontaneity and his capacity to use his voice as a tool. The moment that he could ‘be himself’ according to Felipe, he was transformed. Occurring every day during dismissal period, Felipe explained: ‘When he knows that he’s about to go home and, you know the day’s done, and he’s done everything that’s expected of him, he lets go. He is not a student anymore, he’s being Trevor!’. The issue of self-expression was ironically, an important component of Stephanie’s practice in this classroom. Explaining her commitment to creating a transparent practice in this classroom, she mused:

> I think a lot of our kids have expressive difficulties and you know that being a part of it, makes me want to explain and think out loud a lot for a lot of our children. I think because sometimes they have a difficulty with that, they are even less willing to open up and then they share less of themselves with their peers.

So whether Trevor remained quiet during the school day or whether he sang the goodbye song from beginning to end, as he did one day, she seemed to derive greater satisfaction in the ways he revealed himself to her during one-on-one interactions with her when she might have felt that she had greater access to him. She continued to provide opportunities for him to speak during the day, but seemed not to rely on this as indicative of the full breadth of his capacity.

The perspective brought by the speech therapists reflected a markedly different valuation of his speech. Samantha acknowledged that he had a voice, but was more preoccupied that it was not a ‘hundred percent intelligible’ and that, his phonemic awareness was faulty. She also worried that he was demonstrating delays in reading and writing. She seemed to suggest that his innate abilities forestalled an unproblematic prediction of success in achieving the goals of AAC technology:
Sometimes there’s a child who has amazing language, who gets this device and then, you know, the speech comes in. But many, many times, they need to be trained on how to use it and it builds their language development.

It was less clear that Trevor’s language development was an obstacle to his self-expression at home. The range of emotions he displayed – pleasure, curiosity, exasperation, playfulness, impatience, displeasure – during a brief home visit, emerged in the context of the capability of his communicative partners, his father and babysitter, to render his speech intelligible. Both of them picked up his communicative bids, clarifying meanings and requesting more information from him. The absence of growth in his language that concerned Samantha may well reflect, in part, the inadequacy of the sign system for Trevor that was made available through the impenetrable device of the Mercury.

A ‘responsive literate context’

The American Speech-Language Hearing Association considers literacy as an important component of the work of speech-language pathologists (http://www.asha.org/publications/literacy/), emphasising language development. Not surprisingly, within this building the speech therapists expected that, enabled by his AAC technology, Trevor would be able to progress along the reading curriculum, identifying letters, sounds, engaging with a book, etc. His learning would be measurable (either he was at grade level or not) and his successes/failures easily explained (he was getting adequate practice with the technology and/or his disabilities compromised achievement of proficiency).

Samantha did not presume that he would be able to attain reading proficiency commensurate with his grade level. In fact, she explained earnestly: ‘I am trained to assess kids’ reading, kids who have severe disability. I am trained to assess their comprehension. …And I see this disconnect between what people think Trevor does and what Trevor really can do!’ Her professionalism dictated that she first recognise and acknowledge Trevor’s limitations and then determine his goals. Consequently, she remained baffled when teachers and families appeared to recognise only his motor disabilities, but seemed to assume that he did not have any intellectual disabilities. She protested: ‘You can’t make a person with huge disabilities look like anybody else’.

It was not surprising that the therapists questioned the inquiry-based learning philosophy that was practiced within this building. Both wondered whether this approach was actually beneficial for students with significant disabilities like Trevor who might show greater progress in a more ‘structured’ environment. While neither used the word ‘self-contained’ the implication to this was obvious. Inclusion was a condition of their work context, it was not necessarily fundamental to their approach to working with students with disabilities. Speaking about inclusion, Kathy observed that for students who have ‘average cognition and who can learn through asking questions and this very liberal approach’ the current inclusive context worked well, but others who had learning disabilities might benefit more from a ‘structured setting’.

On the other hand, committed to the creation of an inclusive community, Stephanie focused on creating an academic ‘model of identity’ (Wortham 2006) for Trevor in the classroom:

My expectation for him by the end of the year is that he can experience text in a deep way, meaning he can do some inferencing and that he would be able to have fun with the text, and know that he can be flexible with the text.
Unlike the speech therapists’ perspective on reading that situated the text as the final arbiter of comprehension, Stephanie focused more on the meaning-making process entailed in the act of reading. Reading was an interactive process where the text intersected with self-narrative to create unique meanings. She reported with great delight a moment when Trevor had shared his thoughts about the text he was reading with her during a one-on-one session. Her memorable moment centred on Trevor’s spontaneous connection between the protagonist in the story and himself.

Reluctant to label children in terms of their intellectual capacity, and preferring to leave open and undetermined a student’s learning capacity, she too protested the expectation that students labelled as having physical disabilities are necessarily assumed to be ‘intellectually average’, but for other reasons. Her argument rested on the unfairness of this requirement of intellectual competence for any child. She believed instead that documenting their learning and growth was more important. This was congruent with her preference to leave open and undetermined a student’s learning capacity. It was not surprising that she advocated an educational context for students with significant disabilities that supported their ‘academic life’ rather than ‘activities of daily living’. She used her evolving relationship with Trevor to raise her expectations of him, even holding him accountable to complete his work at home if he was unable to do so in school.

Literacy work in Stephanie’s classroom was not restricted to lessons on reading and writing. It encompassed the painstaking mediational work undertaken by her to build relations between students and create an inclusive community. These included holding critical conversations to resolve peer conflict as well as interpreting student actions in ways that established their roles as valued members in the group, whether it was Trevor bursting inexplicably into tears (‘sometimes our emotions can be too much for us’) or when a student remained reticent during morning meeting (this was never made to seem unusual or inappropriate). Establishing Trevor’s connectedness within the classroom community involved such intentional representation of all students. Stephanie might be described as trying to create a ‘responsive literate context’ (Kliewer and Biklen 2007) in which students could more readily bring their self-narratives into the process of making sense of texts.

Felipe offered an important rationale for Stephanie’s attempts to support Trevor’s ‘literate citizenship’ (Kliewer 2008) in this classroom. He certainly suggested that Trevor might be too young to understand consciously the relevance of speech for his own social identification. However, he was also cognisant of the unique nature of Trevor’s learning requirements:

> Just from seeing, touching, perception, all your senses give you an understanding of life that he hasn’t grown into yet. So he has to find his own route to go there and he doesn’t have others telling him what to do sometimes, you know. …Social interactions kind of guide you and your perception of what’s going on. And Trevor doesn’t have a peer that can literally tell him, you know…‘this is what you should be feeling’.

Not only was Trevor’s communicative competence dependent on the nature of the context, but his very development remained contingent on the contributions of others. In the absence of the tools that might enable him to regulate his own perceptions, he required the interpretations of others to facilitate that process and thereby ‘grow into the situation’.
Discussion and implications

In the period since the initial legal mandate to include students with disabilities within the educational systems, the focus in the USA has shifted from merely ensuring access to establishing criteria for an appropriate education that would best meet the needs of students with disabilities, i.e., equality of outcomes (Yell 2006). This is clearly reflected in the extensive literature on achieving access to the curriculum for all students, including those with the most significant disabilities (Browder and Spooner 2006; Ryndak and Billingsley 2004), that has emerged over the last decade. Dymond et al. (2007) equally note that ‘access’ has acquired an array of meanings ranging from access to academics, access to the core curriculum, to access to all experiences in the general education curriculum (Dymond et al. 2007). Such diversity in meanings notwithstanding, these efforts are premised on the assumption that improved access will lead to increased participation which will stimulate the acquisition of skills, thereby improving student outcomes.

As the multiple narratives of the participants in this study suggest, it was the discrepancy in assessment of the potential of AAC to deliver access, and concomitantly, different views on the nature of his participation that significantly influenced the outcomes for Trevor. For instance, Jeanine’s orientation to his communication technology was focused on developing and refining the mechanics and procedures for appropriate use, while Stephanie’s approach was premised on evaluating its potential for self-expression. The result of these two different orientations was that in working with imperfect technological aids, Jeanine focused more intently on its concrete features which, when enabled through coordination of teacher planning and careful prompting of Trevor, would increase his involvement in classroom activity, while Stephanie rejected its utility for the purpose of teaching-learning and searched for identity-generating processes elsewhere.

A concerted focus on the mechanics of use with insufficient regard to user perspectives carries an implicit endorsement of attributes such as ability/disability as being innate. Respondents in studies frequently list the severity of a student’s disability as a barrier to achieving access (Dymond et al. 2007). In other words, mechanistic views on access and participation leave continuously open and available the option to explain programmatic lack of success as residing in student characteristics of severe disabilities, a recurring phenomenon at multiple levels that Ferguson (2002) has described as ‘chronicity of failure’. Within this building, the origins of failure for some professionals, most notably the speech therapists, could be unproblematically situated within Trevor’s intellectual capacity, in parental failure to exercise control over their child, and/or in their refusal to understand the limitations posed by his perceived impairments.

Stephanie’s emphasis on identity, on the other hand, compensated for the inability of Trevor’s technology to serve as an effective medium of self-expression and as a tool for promoting literacy. Her search for access to Trevor bore a conscious recognition of his agency that could not be supported by his AAC technology. She (and Felipe) identified this in many instances, perceiving him as a student who was capable of completing his work, who might choose to disobey classroom rules, required support in communicating his thoughts, who was deeply emotional, and who could respond purposefully to his peers. The perception of actors as agentive is a pivotal component of narrative (Bruner 1990). Trevor’s narrative construction of himself, i.e., the development of his literate potential, required such social efforts to support his
agency (Rossetti et al. 2008). In attending to various elements of his social environment as mediating the emergence of his self, Stephanie and Felipe acknowledged that his abilities were neither fixed nor determined by his disability labels. Given the variety of ‘selves’ that he generated through his relations with Stephanie, Felipe and his family without the use of technology, it is doubtful whether he perceived either the Step by Step or the Mercury as affording him the same possibility.

Notwithstanding Stephanie’s concern to enable Trevor’s self-expression, the combined classroom practice of Jeanine and Stephanie left him with few tools by which he could develop his language and demonstrate growth in literacy. Trevor’s disconnect from the Step by Step bespoke his preference for his own voice as a tool for communication. Samantha, his former speech therapist, remained convinced that the Mercury was the most suitable and versatile technological device available for him, and that Trevor and his adult facilitators (teachers and parents) simply needed to implement their prescribed roles with greater consistency to actualise its potential. It was not evident during the course of the study that any member of this team intended to challenge her judgment. Not surprisingly, the only narrative that Trevor could adopt in school was muted engagement or even disengagement from its offerings, while reserving spontaneity for experiences at home.

Implications for practitioners

The collaborative endeavour to enhance Trevor’s communication and learning somehow became fraught with conflicting visions so that even as each individual remained committed to this project, it didn’t, in the words of Felipe ‘form a pie’. It could not all come together in any meaningful way for Trevor – or for the adults engaged in this process. What can we learn from this story? Some important lessons might include the following:

- *The promise of technology to deliver access to mainstream educational experience and to enable self-expression is not separable from the individuals who use, administer or moderate it.* A technology device is not merely a neutral means to provide increased access – it becomes a site of multiple, even competing perspectives and beliefs. So, the successful use of technology is premised on a meaningful collaborative partnership between school personnel and families to reflect on important questions, such as: How is the technology serving the teaching-learning requirements within multiple contexts? How is the technology serving the needs of team members in supporting their relationships with Trevor? How does the technology support Trevor’s connectedness within the classroom community? Furthermore, acquiring the perspective of the user is essential to understanding the benefits of the technology. What does Trevor think about the technology procured for him? How can such information be obtained?

- *Supporting literacy for students who use AAC technology requires an approach to learning that presumes ability rather than delineates limitations.* Professional responses that are driven by diagnoses lead to the enumeration of deficits and narrowed conceptions of literacy. In the absence of tools that can record with certainty the specific intentions and capacities of individuals with significant disabilities, such a clinical approach can be dangerous. Instead, an approach to literacy that can presume the competence of the student may produce the least deleterious effects for him/her (Biklen and Burke 2006). Within this view, the
emphasis shifts from identifying limitations to the procurement of supports that can permit the unfolding of multiple forms of participation. Family responses to disability may then be understood less as a refusal to recognise disability and more as a stance that leaves open and undetermined a student’s capacity.

- **Engaging families in the implementation of AAC requires a careful appraisal of their goals and beliefs.** The speech-language pathologist has primary responsibility for AAC implementation, including selection of communication goals and training others (Calculator 2009). Even as the sharing of information is an important dimension within family perceptions of competence in professionals (Prezant and Marshak 2006), synthesising the usefulness of such information in relation to family goals and purposes may be a critical ingredient in the successful use of technology (Saito and Turnbull 2007). In Trevor’s case, the Mercury could not support shared family routines and was incompatible with family understandings of disability.

- **The search for appropriate technology is premised on multiple ‘expert’ knowledges and epistemic positions.** The clinical model adopted by speech therapists is premised on data acquired through objective and measurable means. In Trevor’s case, even as family knowledges were discounted, other ways of measuring Trevor’s capacity (i.e., premised on relationships rather than measurable normative scores) did not appear to be valued by all. Consequently, technology remained peripheral to the work of some of the team members. As speech-language pathologists assume the lead role in selecting AAC technology, evaluating its appropriateness may require the active solicitation of multiple lenses on a student’s learning and development accessed through a variety of social partners.

Undoubtedly, the prevailing culture of standardisation in schools that requires individual students to demonstrate independent markers of competence runs counter to beliefs in participation as identity-making process. Teachers who strive to create and sustain inclusive communities remain vulnerable to such expectations as they attempt to reconcile unrelenting mandates with visions of just and equitable classroom communities. Trevor’s use of AAC technology was inseparable from these teaching-learning dilemmas, even as it was deeply compromised by the deficit notions of disability that undergirded the practice of some staff personnel. More than 15 years ago, Ferguson (1994) reminded us that the underlying purpose of communication intervention for students with disabilities, indeed all intervention, is the pursuit of membership. Trevor’s experience suggests that such a mission is contingent on a reflective and supportive social context that can act in concert with their unique self-narratives.

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**Note**
1. In the USA, paraprofessionals are assistants assigned to individual students who may require support in managing daily school routines including mobility within the school building, eating, toileting, etc. While some teachers utilise paraprofessionals for structuring
whole-classroom activities, in many instances, paraprofessionals remain ‘velcroed’ to the students to whom they are assigned.

References


Calculator, N. 2009. Augmentative and alternative communication (AAC) and inclusive education for students with the most severe disabilities. International Journal of Inclusive Education 13, no. 1: 93–113.


