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Scaffolding Learning Through Classroom Talk

The Role of Translanguaging

Ruth Swanwick

Abstract

This chapter examines ways in which classroom talk scaffolds language and curriculum learning, drawing on studies of classroom communication in deaf education and research into the pedagogical value of dialogic talk. Against this background, observations are made about what happens when classroom talk is mediated for deaf learners through sign and/or spoken language support for learning and the extent to which this has been addressed in deaf education research. Translanguaging theory is introduced as a way of conceptualizing the purposeful and dynamic use of different languages and modalities in the classroom to provide supportive classroom talk and scaffold learning. Three case studies illustrate the potential dialogical support for learning that translanguaging affords, recognizing the diverse and plural language repertoires of deaf learners and the adults who support them. The conclusion suggests s how practitioners can be critical of their own language use in the classroom and cognizant of their own translanguaging practices and the impact of their language use and interaction style on learning.

Keywords: classroom talk, dialogic talk, scaffolding, translanguaging, bilingual, bimodal

In the deaf education literature we tend to shy away from discussions about how we actually teach deaf children through our classroom talk and interaction. We certainly worry about communication and modality, but these are different issues that do not throw a great deal of direct light on actual learning. A recent shift in the literature and international debate is, however, bringing dialogue about the learning and teaching process to the fore that is

refreshingly free of communication ideologies (see, for example, Hermans, Wauters, De Klerk, & Knoors, 2014; Knoors & Marschark, 2014).

This chapter considers questions about classroom communication and learning and presents some ideas about how these two areas of research and practice can be brought together. An exploration is offered of the ways in which classroom talk and interaction can foster curriculum and language learning. The approach taken in this chapter is to focus on the language and communication practices observed in children and adults in the learning context and not on communication philosophy or approach. Attention to language repertoires enables a focus on how children and adults use their language resources in the classroom and removes unhelpful boundaries between languages and pedagogies that detract from a focus on learning. This discussion of language repertoires in deaf education requires some preliminary explanation of the terminology to be used in the chapter.

The specific languages referred to throughout this chapter are English, British Sign Language (BSL), and American Sign Language (ASL). The use of the generic terms "sign" or "sign language" refers to one of these natural sign languages. Throughout, the term "bimodal bilingual" is used to describe individuals who are using sign and spoken languages in the learning context. The mixed use of sign and spoken language is used in the chapter to describe ways in which children and adults switch (sequentially) between BSL or ASL and English. "Language blending" refers to the simultaneous use of signs from BSL and speech that obtains, for example, in the use of sign-supported speech (Ormel & Giezen, 2014). Both of these behaviors are recognized as a natural part of bilingual language repertoires (Creese & Blackledge, 2010; Garcia, 2009; Hornberger & Link, 2012), including those of deaf children and adults (Chapter 12, this volume).

It is important to make the distinction here between natural languages and language varieties and the use of sign systems that also involve the mixing and blending of sign and

spoken language, usually for pedagogical purposes. Sign-Supported English (SSE) is a particular case in point here as a visual form of language that can be used in both of these contexts. SSE takes the signs from British Sign Language and uses them in the order that the words would be spoken in English (Sutton-Spence & Woll, 1999. SSE is a natural feature of contact between deaf and hearing interlocutors and, as such, is used spontaneously by deaf and hearing children and adults. However, SSE is also used in the educational context to support the comprehension of speech. The other sign system referred to in this chapter, which blends features of sign and spoken language, is Signed English (SE). This is a more systematically codified language system that uses made up signs, as well as signs borrowed from BSL, to convey morpho-syntactic aspects of spoken English. This sign system makes visible the grammatical features of the spoken and written language that are not found in sign language. This is done through the use of invented manual signs for morphemes such as apostrophe "s" or "ing" or "ed" combined with the use of fingerspelling to provide the full graphic form of the word, and initialization (Nielsen, Luetke, & Stryker, 2011; Sutton-Spence & Woll, 1999; see Chapters 1 and 3, this volume).

These different examples of language blending are all a part of interaction in the classroom with bimodal bilingual learners used at different times for different purposes, depending on context and audience. It is not necessary to attach judgement here about what is good or better language use, but it is important to be able to fully describe this dynamic use of sign and spoken language in the learning context that obtains for bimodal bilingual learners. To do this, translanguaging theory is introduced as a way of conceptualizing the ways in which learners and teachers mix and blend languages, using the repertoires available to them, for learning and meaning making (Baker, 2011). This term has its origins in bilingual education research in Wales in the 1980s where it was first used to describe "the planned and systematic use of two languages for teaching and learning inside the same

lesson" (Lewis, Jones, & Baker, 2012, p. 3). Translanguaging (translated from the Welsh "trawsieithu") became a way of a describing a pedagogical approach which involved the deliberate and purposeful switching between languages of English and Welsh in order to support learning. The use of this term has further evolved as a means of describing the ways in which pupils also mix and blend their languages to develop and extend language and curriculum knowledge and understanding (Garcia & Li Wei , 2014; Hornberger & Link, 2012).

The term "translanguaging" focuses on language repertoire and the language practices of bilinguals. This is not to be confused with Total Communication, which essentially refers to a communication philosophy and approach. This distinction is one of perspective and is important. Total Communication (TC) is a term which originally evolved to describe an educational philosophy and approach that involved the flexible use of sign and spoken language to meet individual communication needs (Evans, 1982). TC essentially describes an inclusive approach that encompasses all aspects of visual and oral communication, including speech, fingerspelling, text, gesture, and sign language (Moores, 2010).

Translanguaging, on the other hand, is not an educational philosophy or a language approach. Translanguaging refers to the actual language behaviors of bilingual children and adults that support learning. While we are, of course, much more likely to see examples of translanguaging in TC environments, translanguaging is not TC operationalized, nor is it a "multimodal comprehensive" approach (Chapter 3, this volume). Translanguaging is concerned not just with what language repertoires are in play but with *how* individuals creatively draw on their language repertoires to scaffold learning.

Classroom Talk in Deaf Education

The chapter builds on the seminal study of teaching and talking with deaf children by Wood, Wood, Griffiths, and Howarth (1986), which focused on spoken language interaction between

deaf children and their hearing teachers. This study made a very significant contribution to our understanding of classroom communication in deaf education, and it is unfortunate that this work and the methodological approach was never extended to include bimodal bilingual interaction. While this chapter cannot replicate this study, the observations and questions posed in the Wood et al. study are revisited here and considered for bimodal bilingual learners.

At the heart of the work by Woods et al. (1986) is the role of the adult in helping children learn. This work has a theoretical basis that is very familiar to us derived from the theories of Vygotsky (1978) and Bruner (1966, 1983) that place the role of adult–child interaction as central to the development of language and understanding. This study raises issues that we have slightly lost sight of in the modality discussions over the last 20 years about how teachers actually teach and communicate with children. The two main concepts around adult "talk" taken from this study to re-examine in the current context are those of "contingency" and "control." Contingency describes adult talk that helps learning by being finely tuned to the individual's interest, and developing competencies (this can mean knowledge and /or skills). Typical examples of this can be drawn from early interaction where parents imbue their child's communication with intention and respond in such a way to suggest that they have achieved the intention such as "you want a drink, don't you . . . here you are."

Control is concerned with reciprocal roles in a conversation and the adults' ability to manage conversation but to relinquish control when needed to enable pupils to initiate and develop conversation. Adults' style of conversation with deaf children in the Wood et al. (1986) study tended to be on the more controlling side, often characterized by repair strategies, such as asking for repetitions and asking closed or yes/no questions. These communication behaviors were observed to be used more frequently than strategies offering

open responses (such as phatics) that indicate interest and encourage loquacity and engagement without overdirecting the conversation.

Despite the fact that some of these findings seemed quite critical of teachers of the deaf at that time, the Wood et al. (1986) thesis is an optimistic one. It suggests that interaction in the classroom can make a difference to deaf children's learning and that there are ways in which we can adjust our classroom talk to address, what they refer to as a "disrupted teaching and learning process" (p. 166). Such strategies include the physical management of divided attention allowing space for the visual demands of learning, which is a crucial consideration for deaf learners in mainstream classes with communication support. In terms of interaction, making communication contingent on the pace and focus of the learners' attention and managing the conversation control will both support learning and facilitate children's language development.

At the end of their study Wood et al. (1986) suggest that their findings regarding the quality of adult talk to children can be applied to any communication context, even though their data focused solely on spoken language interaction. At that time we were just beginning to use natural sign languages and other sign systems in the classroom and recognize the potential of these interventions to offer some deaf children more accessible communication. We would expect this to facilitate more reciprocal interaction for some children, but the Wood et al. (1986) study was not replicated in these classrooms. Nonetheless, the authors do provide us with areas of focus for evaluating the quality of communication in a bimodal bilingual context. One such area would be the reciprocal nature of the adult–child interaction and the involvement and engagement of the deaf learner in terms of their attempts to initiate conversation and their general loquacity. We would also be looking for evidence of fluent communication between the learner and teacher that is not hampered by communication breakdown and dominated by teacher repair strategies such as "Can you repeat that?". In a

successful conversation we would expect to see the use of complex linguistic structures without comprehension issues and the communication of complex ideas (p. 174). All of these areas of focus center on the manner of the communication rather than the mode and help us to probe the interactional processes at the heart of teaching and learning.

The Wider Research Context

Although the Wood et al. (1986) study is the only one of its kind in deaf education, the way in which teachers structure learning through talk in the classroom has been a key area of focus in general educational research and curriculum development in the United Kingdom (Alexander, 2001, 2003; Mercer, 2003). This work emerged from the same concern about the tendency of teachers to dominate talk in the classroom with hearing children and inhibit pupil contributions. This issue in UK classrooms prompted research into classroom dialogue and in particular the role of the expert peer or adult to structure a communication process that supports learning. Echoing the work of Wood et al. (1986), this body of research identifies classroom talk, which provides space for different points of view and assumes shared engagement as central to learning. The notion of classroom dialogue as a goal in itself and a way of moving thinking forward is developed in this research to emphasize that teaching is not just the one-off transmission of knowledge but a cumulative, shared, reciprocal process (Alexander, 2008).

The term “dialogic teaching” emerged from this work and is now in common use in the UK curriculum. This term describes classroom talk that extends pupils’ thinking and scaffolds learning by providing linguistic and conceptual support to bridge the gap between what the learner knows and needs to know. The research in this area has been expanded in depth in the field of science education, in particular, where collaborative inquiry and problem solving are a central part of the curriculum (Kelly & Brown, 2002 Mortimor & Scott, 2003; Scott, Mortimer, & Aguiar, 2006).

We who are engaged in teaching deaf learners have much to learn from this work about the balance of teacher and pupil talk in the classroom. It can help us think about how we can ensure the contribution of all pupils and expose learners to complex language and the actual discourse of the discipline in question (which in the case of science concerns the language of argument and problem solving). Of particular relevance is the framework developed by Scott and Mortimor (2003) for analyzing the way in which teachers work with pupils to develop understanding in the classroom. This framework provides a way of identifying the extent to which interactions in the classroom are "dialogic" or "nondialogic" and "interactive" or "noninteractive" and how different patterns of interaction achieve different learning outcomes. This framework extends the notion of "control" identified by Wood et al. (1986) to a deeper analysis of the quality of talk and how this can expand the conversation space. This attention to talk in the classroom has the potential to address many of the issues identified in the research about deaf learners with regard to their engagement in and expectations of learning and their understanding of the thinking processes of others (e.g., Marschark & Hauser, 2008). Active engagement in classroom dialogue allows learners to become "authors and producers of knowledge with ownership of it rather than mere consumers of it" (Engle & Conant, p. 404). In particular, this framework helps to identify ways in which talk in the classroom facilitates the participation of multiple voices (whole-class dialogue, group and pair work) and scaffolds learning, acknowledging that we need both dialogic and authoritative talk for meaningful learning to take place.

This is a useful framework for analysis of classroom interaction across the curriculum that is research informed and that attends to *manner* rather than *mode* of communication. However, in deaf education we have some additional layers of complexity to add to this framework. One question for deaf education is what happens when the classroom discourse, for example problem-solving group work or whole-class dialogue, is mediated by another

adult for a deaf child. Depending on the type of language support needed for learning, this could involve interpretation in sign language or rephrasing, paraphrasing, or clarifying classroom dialogue in spoken language. There is a risk here that this mediated talk flattens out the dynamic and the nuances of the interaction unless the supporting adult is able to recreate this dynamic as part of the support process. The discursive practices, for example, that are so much part of scientific learning (such as the analysis of an incorrect statement) are a part of learners' developing new understandings and skills for themselves. Kelman and Branco (2009) argue that deaf learners can miss out not only on direct classroom communication but also metacommunication such as nonverbal messages and the physical use of space in the classroom, both of which enhance the spoken message. This is one of the few recent studies in deaf education that considers what makes for successful dialogue in the learning context and how the use of nonverbal communication can support mutuality, coconstruction, and negotiations of meanings in the classroom.

Group discussion, which in many curriculum areas is designed to enable the co-production of knowledge, may also present particular difficulties for deaf pupils. Molander, Hallden, and Lindahl (2010) attribute the difficulty that some deaf learners experience in engaging in fluid group dialogue largely to vocabulary issues. It is not just that deaf children's vocabulary is more restricted but also that they have to understand shifts and ambiguity in vocabulary meanings in different areas of curriculum discourse. Science and math, for example often require an understanding that already familiar words can have new meanings (such as "the difference between") or an understanding of the metaphorical use of vocabulary that is pervasive in many areas of scientific learning (heat flow, sound waves, time passing, negative and positive energy). This use of metaphor is first of all culturally embedded and so may inhibit learners from working in their second language and,

specifically for deaf learners, such metaphors may not translate easily or meaningfully into sign language.

A further dynamic is that in deaf education we are often dealing with interactional situations that entail the mixed and blended use of sign, spoken, and written language depending on the communication and language profiles of the learners. This adds a further layer of complexity to the interaction. We need to know more about the potential of bimodal bilingual communication for improving contingent, reciprocal, and extended classroom talk so that we can more effectively harness the bimodal bilingual language repertoires of adults and children.

Bimodal Bilingual Classroom Talk

In the work to date on bimodal instructional practices, questions that arise often concern the distribution of sign, spoken and written language in the classroom, and specifically the role of BSL and SSE (or the natural sign language versus simultaneous speech-sign productions in whatever country is being discussed). The discussion tends to be policy and not practice oriented and provides only limited insights into classroom language practices and dialogic teaching. There are some discussions of practitioner use of sign and spoken languages that center on text-based activities where the roles of sign language and sign systems are explored as a bridge to facilitate learner's access to and understanding and use of written language (for example, Akamatsu, Stewart, & Becker, 2000). Other studies have tried to evaluate the specific role of the simultaneous use of spoken and sign language in improving deaf children's English learning (such as Power, Hyde, & Leigh, 2008). Some studies demonstrate the impact of bimodal bilingual pedagogical approaches, but few of them focus in detail on the classroom talk (Akamatsu et al., 2000; Andrews & Rusher, 2010; DeLana, Gentry, & Andrews, 2007; Hermans et al., 2014; Wauters, Knoors, Vervloed & Aarnoutse, 2001).

What we learn from the studies that have looked at classroom talk is first that teachers have developed a number of ways to use sign and spoken languages together to provide lexical, semantic, and conceptual support for learners. This includes switching between sign and spoken languages but keeping the two languages separate wherever possible (Andrews & Rusher, 2010; Delana, 2007; Humphries & MacDougall, 2000) and also using a blend of the two languages such as for signed English (Mayer & Akamatsu, 2000). Secondly, these strategies tend to be described as necessary to give the learners the language that they need to "survive" (p. 420) rather than creative use of the linguistic potential of the teachers and learners. Finally, these studies do not tell us a great deal about the about the efficacy of any particular bimodal bilingual strategy other than to say that they do not "hurt" language development (Akamatsu, Stewart & Becker 2000, p. 462).

To take this work on the surface issues of delivery further, we need to investigate the quality of bimodal and bilingual interaction and examine the actual learning taking place. Work by Marschark and colleagues (2006, 2008) tackles this this in part by comparing the accessibility of information given to students in ASL and through simultaneous speech and signs (SimCom) and exploring the effects on comprehension when real-time text is added into the delivery. The sobering message from this work with young deaf adults (16-plus years old) is that that simply adding sign language interpreting to spoken language lesson delivery does not ensure deaf students' learning or comprehension to a level equivalent with their hearing classmates (Marschark, Sapere, Convertino, & Pelz, 2008; Marschark et al., 2006). Although, some combinations certainly enhance access to the information, such as the addition of text, deaf students still learned less than hearing peers during the same lesson.

These findings stress the need to find ways to look beneath the surface level of the mode of communication to focus the nature of talk in the classroom and its impact on the actual learning taking place. We need to know more about how sign, spoken, and written

languages can be used together and distributed in the classroom and across the curriculum to support learning. This will enable us to explore the intricacies of interaction around learning in the classroom in terms of learning and teaching styles and classroom dialogue.

A Multicompetency Perspective

These questions have been explored in the wider field of bilingual research and pedagogy in contexts where two or more spoken languages are used on a daily basis in the learning context. In this discussion, the dynamic interplay between languages is recognized as supportive of the learning process (Garcia, 2009; Li Wei 2011). The interest in the mixed language repertoires that adults and children draw on in the learning context signals a move away from thinking about languages as separate entities to seeing bilingual language skills as an integrated set of competencies (Cummins, 2007). For bimodal bilingual deaf children, this multicompetency includes the mixed and blended use of sign and spoken language, as a crucial component of their repertoire. Indeed, Petitto et al. (2001) describe the alternate (sequential) and blended (simultaneous) use of Langues des Signes Quebecoise and French as the "stable other native language" (p. 483) in their observations of children's semantically meaningful, systematic and principled mixed utterances. Mixed utterances can enable the expression of new meanings in one (sign) modality that are not known in the other (spoken) modality (Rinaldi & Caselli, 2009). Bimodal bilingual learners also demonstrate the use of more linguistically complex language in their mixed utterances than in their separate use of either sign or spoken language (Klatter-Folmer, van Hout, Kolen, & Verhoeven, 2006).

The Role of Translanguaging

Translanguaging theory has a great deal to offer to deaf education. Not least because of the focus that it places on the actual language practices of learners but also because of the emphasis of dialogue in pedagogy. As awareness of the potential of teachers' and pupils' pragmatic use of translanguaging in the learning context has increased, pedagogical theories

have developed exploring the extent to which translanguaging can scaffold learning in the classroom by mediating content and language that pupils do not (yet) know through the language that they do know. Students' learning can thus be at once challenged and supported through the purposeful switching of languages in the classroom (Cummins, 2007). Examples of this in deaf education can be given where natural sign language is used to mediate students' reading of an English text or to prepare the new curriculum vocabulary and concepts, or where sign and spoken/written languages are explicitly compared through translation activities or juxtaposed to show equivalence of meaning through chaining (Humphries & MacDougall, 2000). The simultaneous or blended use of sign and spoken language (such as through the use of SSE) is also used to support learning and in particular to mediate students' experience and understanding of spoken and written language. These examples from deaf education resonate with some of the translanguaging scaffolding strategies suggested by Garcia (2009, p. 31):

- the use of set routines which use the different languages consistently and predictably such as use of sign language for talk *about* text but spoken English for reading text aloud and SSE for providing a sign equivalent for new context words;
- the use of one language to contextualize and prepare new language and concepts in another;
- the use of modeling strategies for new English language structures, often done through the use of SSE;
- extending understanding by building on existing understanding and structures of meaning in one language;

- the use of thematic planning such as the collection and preparation of new English vocabulary and phrases around a topic discussed and prepared in sign language;
- the provision of multiple entry points into learning for different pupils such as delivery and response in preferred modality; and
- the maintained explicit teaching of language structures and vocabulary and development of awareness of language differences in terms of meaning and form.

Translanguaging in Practice

Translanguaging is a way of looking at the language practices of bilinguals and, in doing so, recognizing the mixed and blended use of sign and spoken languages as normal bilingual and bimodal behavior. This opens up a different way of looking at classroom talk in deaf education by thinking about the way in which this bimodal bilingual language use scaffolds learning. In particular, we can begin to examine the extent to which the use of two languages in the classroom provides opportunities for the type of talk that supports learning described by Wood et al. (1986) and others.

To demonstrate this, three extracts of teachers' description and analysis of their language use in the classroom are presented next. This was a self-critical exercise (part of their teacher of the deaf training) based on a short session involving teaching a new concept to individual or a small group of deaf children. The reflections illustrate the flexible ways in which teachers use sign and spoken language in the classroom to support different learning activities and different learners' abilities. They throw light on the complex and nuanced decisions about language use that teachers make in their interactions with deaf children and the language skills and awareness needed to do this. In each case the context is explained and a précis provided of the teacher's description and analysis of language use, which each

approached in a different way. In these extracts the teachers refer to SSE to describe the way in which they blend their spoken English utterances with contextually correct individual signs (usually content words) from BSL. They make a distinction between their use of SSE and SE when they use the latter sign system to indicate English morphemes such as tense markers and pronoun agreement. The excerpts illustrate how translanguaging is manifested in the deaf education context. The commentary suggests the potential of translanguaging for facilitating classroom talk, which supports learning and highlights challenges for the teacher.

Scenario 1

Teacher of the deaf, Erin, reflects on her use of sign and spoken language in a math session, where she is working with two 10-year-old deaf children to teach math vocabulary and concepts of "doubling." The two children that Erin is working with have different communication preferences and trajectories. Child A uses BSL as her main language for learning in school. Child B has a unilateral cochlear implant and his spoken language skills are accelerating. He currently prefers to communicate combining sign language and speech.

Erin's Analysis of Her Language Choices and Practice

For most of the session I used SSE to communicate with the children. Generally my SSE was quite accurate in that I was able to use spoken English word order and include contextually correct content signs and nonmanual features. Occasionally, however, I used an incorrect or "sloppy" BSL sign or a truncated spoken English structure. I think that these errors were due to the pace of my spoken English. There were also some occasions where I used SSE in a 1:1 interaction when BSL would have been more appropriate to meet the language strengths of the child. Despite these few errors, I feel that using SSE was appropriate for working with the children together providing equal access to learning. For some aspects of the session, I used spoken English (without sign) to provide enhanced opportunities for Child B to develop his speech perception skills. This was generally successful, but where I followed this with

repetition in BSL (so as not exclude Child A) I cannot be sure that I was adequately challenging his listening skills. Where I did not repeat the information in BSL, Child A could not "overhear" our conversation. The background noise from other teaching groups also made this difficult. I used written English in the session to provide additional visual support for learning. Written text, such as the lesson objective, was repeated in sign and speech and the children used Signed English to read for themselves. This enabled them to learn some mathematical vocabulary, provided extra information to secure their learning, and extended their reading skills. However, I think that more time should have been given to allow the children to process the written information before re-presenting it in SSE because they cannot attend to both.

Erin's Concluding Reflections

A variety of language choices were made during this session. I feel that SSE was the most appropriate language of instruction when working with the children together and that the adjustments made throughout the session (using written and spoken English) further supported individual learning. Issues to be considered for developing my practice are the pace of the instruction and how this is matched to individual language and learning needs; the provision of the same information in different language modalities to ensure equal access to the direct teaching and incidental learning and the need to secure optimum acoustic conditions for spoken language learning. I need to continue to reflect on and adapt my language use as appropriate.

Scenario 2

Teacher of the deaf, Helen, reflects on her language in a numeracy session, where she is working with four 6-year-old deaf children to teach them to tell the time on an analogue clock. The four children that Helen is working with all predominantly use BSL for communication and learning at school, and their spoken English is not as well developed as

their BSL. Two of the children have cochlear implants but continue to rely on sign language support. Three of the children have a spoken home language other than English.

Helen's Analysis of Her Language Choices and Practices

I use a combination of languages in my teaching. In this session I used predominantly Sign Supported English to provide access to spoken English with sign support to meet the range of needs of the pupils and ensure a fully inclusive teaching session. Generally I combined the two languages modes well but there were a couple of instances where my spoken language word order was inaccurate and also where I used the wrong sign for the English word. I also used BSL at some points to support the conceptual understanding of individual learners. I used written English throughout the session to support the children's learning and give them access to the specific mathematical vocabulary. I used Signed English once in my teaching to support the written English and feel that I could develop this more. For visual support of the teaching concept, I used a clock to support my teaching and this involved managing the children's attention to the clock and to my explanations and judging the timing for this.

Helen's Concluding reflections

The decisions that I have to make about language use in my teaching are driven by a number of issues. The first is the learning objective in terms of conceptual understanding and /or language development. The second consideration is the language need and preferences of the learners, as a group and as individuals. These issues inform decisions about the target language for a teaching session or part of the session, for example the use of more or less spoken English, the emphasis on text or the use of SSE. I need to continue to analyze how efficiently I use these various combinations. In particular, I need to focus on my spoken language fluency when I am using SSE, pay attention to the pace and timing of visual input in a session, and keep the visual "noise" to a minimum.

Scenario 3

Teacher of the deaf, Charlotte, reflects on a science session where she is working with seven 9-year-old deaf children on investigating true and false statements about living tissues and bone growth. All seven children predominantly use BSL for communicating and learning at school, but among the group they differently use and blend sign and spoken language in learning activities and also have different preferences regarding language input from the teacher.

Charlotte's Analysis of Her Language Choices and Practices

In my introduction to the session to the whole group, I use Sign Supported English to facilitate learning for those who use BSL and those who rely on speech-reading. I combine BSL signs with my spoken language delivery of new vocabulary for the children using BSL. I also say new terms more slowly and accompany this with fingerspelling. I use eye gaze to indicate that that I am referring to one of the new terms. I simultaneously correct two of the children who have misunderstood, using a visual strategy with one and spoken with the other. One child repeats the new terms, saying them out loud. As the session progresses, I continue in SSE but switch to BSL to manage the behavior and attention of one child. I read the scientific "statement" aloud using Signed English and then check the pupils' own signs for each word. In the discussion the pupils contribute their ideas in their preferred communication style, and I switch my own language use in my response (BSL, spoken English, SSE) modeling the correct use of spoken English for one individual. I encourage the learners to respond to each other's ideas directly rather than via me, which requires them to attend to each other and adapt their own language use. During the whole class discussion one pupil makes an aside which is correct but slightly out of context. I switch to BSL to respond to her and lead her back to the point using the visual resources and the written vocabulary to scaffold her learning. I then switch back to using SSE with the whole group.

Charlotte's Concluding Reflections

One area for consideration and action that I identify from this analysis is the need for time to be allowed for pupils to assimilate new terms properly that I am introducing using fingerspelling and for opportunities to be given for children to "hear" and "see" new terms a number of times. Related to this the children's receptive skills (BSL and speech reading) could be challenged further. The second point relates to the use of spoken language in the classroom. There is scope here for providing more exposure to the correct grammatical forms of English (modeling this) and for creating opportunities for expanding children's listening and speaking skills. Finally, in terms of group interaction, sessions need to be designed to enable all the children to fully participate.

Translanguaging and Classroom Talk

These excerpts illustrate how translanguaging in the deaf education classroom has the potential to enable the features of classroom talk that we have established as supportive of learning. First, it is evident in all three examples that translanguaging enables the teacher to provide equal access to classroom talk for all children, accommodating individual sign and spoken language skills of a mixed group. In these three cases this refers to the blended use of sign and spoken English (SSE) to work with the group as a whole. Particularly pertinent to the whole group access is the point made by Erin regarding the importance of enabling children to overhear other conversations to facilitate incidental learning, which she was able to achieve by blending, and switching between, sign and spoken language.

These instances of translanguaging also illustrate the extent to which teachers can move control in conversation to the learners and encourage their loquacity. Pupils can contribute in any language and modality, including for reading aloud, depending on their communication preferences and abilities. This is also seen where Charlotte explains how she encourages the learners to respond to each others' ideas directly rather than through her as the

mediator, and she notes how this "requires them to attend to each other and adapt their own language use."

The exact nature of the classroom talk is not further analyzed by the teachers here. They were asked to analyze and critique their own language choices in the first instance. However, Charlotte describes how she tries to introduce the learners to the actual scientific discourse of the session about "statements" using Signed English followed up with discussion in the pupils' preferred communication style and her differentiated response. This provides some insight into how thoughtful translanguaging can establish a communicative situation in the classroom that is sufficiently flexible and dynamic to enable the right kind of classroom talk.

Translanguaging and Individual Contingency

All of the examples also demonstrate that flexible translanguaging (moving between the use of SSE and either spoken English or BSL) provides opportunities for the teacher to enable and challenge individual learning and language development. The teachers are drawing on all of the language resources in the classroom in their efforts to provide dialogic teaching that engages the whole group. Their decisions about language use are contingent on individual understanding, abilities and interest. During a whole class discussion, Charlotte, for example, describes how she switches languages to respond to a pupil interest and help her relate this to the learning context "and lead her back to the point using the visual resources and the written vocabulary to scaffold her learning." A number of other examples show how language is used flexibly to support the acquisition of new curriculum vocabulary to develop conceptual understanding and challenge pupils' literacy skills. Erin speaks of adding the use of written English to provide additional visual support for learning mathematical vocabulary. Charlotte describes the way in which she sandwiches the use of BSL signs with the spoken word and accompanies this with fingerspelling. Helen describes how she switches into BSL to support

individual understanding of time concepts. At different points in the session all of the teachers also shift their language use to consciously model either the correct use of spoken English or BSL, depending on the learner and the context. Interestingly, they do not assume that the learners' language development skills are being supported or challenged simply by dint of being in a bimodal bilingual learning context. They recognize that language has also to be taught, and all of them comment on the need to be cognizant of this in their classroom interaction.

Working in this mindful way with two languages need not impinge on the provision of coherent models of sign and spoken language; it can instead improve the quality of interaction. Indeed, the rigid separation of two languages in the classroom has been roundly challenged in the bilingual literature as a "squandering of bilingual resources" (Cummins, 2005, p. 585). Language mixing and blending is recognized as having pedagogic value in bilingual classrooms (Creese & Blackledge, 2010; Garcia, 2009; Li Wei, 2011), where children benefit from the flexible combined and separate use of languages according to learning task and context.

English and BSL can thus still be used as separate languages in the classroom where the alternate and blended use of these languages is purposeful and responsible. This is essentially a critical approach to the use of language in the classroom that requires nuanced moves by teachers to achieve contingency of communication. As we see from the earlier examples, knowledge of the pupils and clarity of the learning objectives provide the guiding principles for language choices and practices.

Translanguaging as Scaffold for Learning

These examples illustrate the various ways that translanguaging can provide the linguistic and conceptual support needed to bridge the gap between what the pupils know and need to know. The brief reflective excerpts highlight many opportunities that translanguaging

provides but also illustrate some of the challenges for teachers. All of the teachers themselves identify the difficulties that they experience when they blend spoken and sign language (SSE), and they worry in particular about maintaining the integrity of the spoken and/or signed message. This gives them cause to think about the pace and fluency of their spoken English delivery and the sign language choices they make to support this.

The use of bimodal bilingual input in the classroom also requires teachers to think about how the learners will process information from multiple sources (text, voice, and sign) and how to manage the visual communication space and the learners' attention. Helen, for example, describes the difficulties she has juggling with the clock and her own use of sign language. Her concerns about the amount of "visual noise" in the classroom is echoed by other comments about allowing the pupils time to hear, see, and assimilate the different types of information. Challenging and developing individual sign or spoken language skills is a predominant concern for each of the teachers as they try to varying their language and change from blending sign and spoken language through SSE to provide input in just spoken or sign language. They each reflect that although the use of SSE provides an inclusive environment and a lot of support for language and learning, the planned use of spoken English and BSL needs to be incorporated into teaching for individual language and curriculum objectives

Conclusions

This chapter proposes a way to consider interaction in the classroom that brings together what we know about classroom talk and the use of two or more languages for interactive meaning making. This discussion extends questions of modality in deaf education to consider the nature and quality of classroom talk. Two axes are proposed from which we can begin to analyze classroom interaction. One is the extent to which classroom talk is dialogic, interactive, and contingent, and the other is extent to which the mixed and blended use of sign and spoken language facilitate this type of talk. This chapter has introduced the concept of

translanguaging as a way of analyzing classroom talk. The focus has been largely on the adult talk in this instance and there is potential for much more work to be done looking at children's translanguaging in this context. Thus far, these insights underline the need for flexibility in language policy in deaf education (e.g., Chapter 11, this volume).

To take this further and develop translanguaging as pedagogy in deaf education will require that we prepare teachers to understand its potential as a sense- and meaning-making tool and practically extend teachers' language repertoires and insight into their own classroom talk. As discussed, there are frameworks for looking at classroom talk per se, and these could be helpfully combined with a consideration of language use and distribution in the classroom. Translanguaging describes what children and adults already do in deaf education classrooms. Recognizing this to develop the critical and responsible use of two languages offers a powerful and dynamic tool for learning and teaching.

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