FUN AND LANGUAGE INTERACTION: BILINGUAL-BIMODAL EBOOKS

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Abstract: Enjoyable play activities lay a foundation for later academic achievement. Of particular importance to literacy are fun shared-reading activities (SRAs) during preschool years. While SRA research is on hearing children, there is reason to expect an even greater positive effect with deaf children since SRAs are an effective way to promote language development, the lack of which is the primary factor in illiteracy among deaf children. Recently, bilingual-bimodal ebooks targeted at deaf children have been produced with explicit pedagogical goals. While the jury is still out, these ebooks may not be as efficacious as hoped. We describe here new ebooks we have been producing that are not explicitly pedagogical, but implicitly so: the pleasure they give may lead to increased frequency of SRAs and increasingly complex language interactions during SRAs.

INTRODUCTION

We argue that early intervention and preschool activities for deaf[1] children should focus on fun and confidence-building through language-oriented play. We are producing a new kind of bilingual-bimodal ebook for (typically hearing) adults to share with deaf children, ebooks that promote shared reading activities (SRAs) simply by giving pleasure. An important result we hope for is frequent language interaction between adults and children of the type that helps children develop language skills and understanding of the elements of literature, including characterization and narrative. This kind of early pre-literacy experience should also instill a love of literature that will provide motivation for working to learn to read.

THE POWER OF FUN FOR ACADEMIC ACHIEVEMENT

The United Nations Convention on the Rights of the Child, Article 31 (1989), includes as formal human rights during childhood both play and leisure activity:

> 1. States Parties recognize the right of the child to rest and leisure, to engage in play and recreational activities appropriate to the age of the child and to participate freely in cultural life and the arts.
> 2. States Parties shall respect and promote the right of the child to participate fully in cultural and artistic life and shall encourage the provision of appropriate and equal opportunities for cultural, artistic, recreational and leisure activity.

We take *play* here to mean enjoyable activities, and *leisure activity* to mean activities free of pressure to perform in a certain way. We lump them together under "fun".

Children need fun in order to maintain health (Alexander et al. 2014). Through play they develop ethical selves (Edmiston 2007) and happiness that will continue into adulthood (Martin 2006). Most important for our interests, by protecting play and leisure activity, the UN Convention is protecting a major way that children learn (Wood and Attfield 2005; Pramling Samuelsson and Johansson 2006; Kuschner 2008; among many[2]). While play ranges from messing about to concentrated work, its contribution to learning lies largely in characteristics common to all play, including (Meckley 2002, reported on in Wood and Attfield 2005, 4-5):

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[1] The term *deaf* here is all-encompassing, to include hard-of-hearing, as well.

[2] Due to limitations of space, we will hereafter give only one reference for any claim, though multiple exist. Please read "among many" into our citations.

1. Play is child-chosen.
2. Play is child-invented.
3. Play is pretend but done as if the activity were real.
4. Play focuses on the doing (process not product).
5. Play is done by the players (children) not the adults (teachers or parents)
6. Play requires active involvement.
7. Play is fun.

How such characteristics promote learning is a matter of current investigation. Still, some things are transparent. These seven characteristics give children power: the child's involvement is voluntary and under her own control. Such activity cannot help but promote self-confidence (Bunker 1991), fundamental to academic achievement (Chiviacowsky et al. 2012). It also promotes motivation to repeat play, where play of the cognitive sort, in which insights are achieved and connections are made (Brophy 2010, 223), is critical to academic achievement (as in reading, Gambrell 2011; and mathematics, Murayama et al. 2013).

THE POWER OF FUN FOR THE DEAF CHILDREN

That fun is just as powerful in promoting self-confidence and motivation for learning for deaf children as for any other children is the null hypothesis; the burden of proof lies on those who would argue otherwise.

The issue of having fun in the first place, however, is special for deaf children because so much of fun relies on interaction with friends and family, where the richness and range of such interaction is largely language dependent. Deaf children often do not have the necessary language skills to engage in playful interactions fully.

SHARED READING ACTIVITIES

Given the above, a crucial way of protecting deaf children's right to fun and all its benefits is to protect children's right to language (Humphries et al. 2013). One way to pursue that goal is through shared reading activities (SRAs).

SRAs are primary among the activities that positively affect the development of literacy. In 1985 the National Academy of Education Commission on Reading concluded, "The single most important activity for building the knowledge required for eventual success in reading is reading aloud to children" (Anderson et al. 1985, 23). While this statement concerns speech, nothing suggests the advantages of SRAs are limited to speech. At the base of this effectiveness is pleasure; SRAs "work" because adult and child have fun with the picture book, not because anyone is explicitly trying to teach anyone anything (Whitehurst and Zevenbergen 2003).

SRAs support literacy by increasing vocabulary and teaching narrative skills for both L1 and L2 literacy development (Grabe and Stoller 2013). When hearing parents and children engage in SRAs, the children show improved language skills if the parents relate the story to the child's experiences, provide positive feedback through interactions about the story, and utilize open-ended questions and other higher level facilitative language techniques (FLTs), rather than directives and other lower level FLTS (Trivette et al. 2010).

DESIGN OF OUR BILINGUAL-BIMODAL EBOOKS

We take as a given that every deaf child should be taught a sign language starting at the determination of auditory status; sign language skills are the best predictors of reading (Freel et al. 2011) and writing (Basha 2014) skills.

There is a growing literature on SRAs and deaf children, with attention to teaching hearing parents how to share books with their deaf child, often using as a model methods that Deaf parents employ and, recently, using bilingual-bimodal ebooks (English and American Sign Language) that are explicitly pedagogical (with the ability to click on a text word, for example, and see it signed or fingerspelled). Here we are circumspect with respect to preschool children. A recent study has shown that this intervention is effective for increasing open-ended questioning, but has not resulted in language expansions or scaffolding (Bergeron 2013). This is not surprising; scaffolding depends upon the adult's ability to ask questions that use what the child has said but in a more advanced way and to provide routines that allow for predictable language interaction (Cazden 1983), but these parents often have minimal skills in a sign language. We also fear that this pedagogical approach has costs: adults worry at being "taught" how to share a book – and children worry since they sense they should be performing in a specific, desired way. Evidence that SRAs are, probably, rife with anxiety may be the fact that hearing parents of children with cochlear implants often employ "literacy strategies" and "teacher techniques", such as asking closed-ended questions (DesJardin et al. 2014), working hard to do what they hope will help their children. But close-ended questions do not lead to the on-going, unpredictable interaction needed for language development.

We work with our university students to produce bilingual-bimodal ebooks that encourage pleasurable SRAs, in order to provide the motivation for increased frequency of SRAs. We use high quality stories published by others (usually by publishing houses) and professional film technology. The stories have strong appeal to deaf children; senses other than auditory are featured and scenarios welcome deaf children because they can relate them to their life experiences (Dennis et al. 2012) and thus enter the world of the story, an experience critical to understanding and enjoying picture books (Kiefer 1988). The acting style is lively, warm, and inviting to child and adult. Most important, our ebooks are designed to promote language interaction.

Everyone in the family needs help in learning to sign: first language (L1) acquisition for the little ones, and second language (L2) learning for post-adolescent, hearing family members. For L2 learners, the new language is in a second modality (M2) to boot, which increases learning difficulty (Jacobs 1996). The videos in our ebooks offer language models for L1 and L2/M2 learners: our signers are deaf and signing is their primary and preferred mode of communication. Language understanding can be context-driven to a significant degree (Chalhoub-Deville 2003), where the integration of visual and linguistic information is "rapid and nearly seamless" (Tanenhaus et al. 1995, 1633). Plus people constantly check visual and linguistic information against world knowledge as they interpret language (Chambers at al. 2002). In an SRA with our ebooks, deaf children can rely on videos, illustrations, and what they know about the world in acquiring a sign language as L1, while hearing family members can also use the text when learning a sign language as L1 (for preadolescents) or as L2/M2.

Our videos further use sign storytelling techniques (Cook 2006) to support language and literacy development. The technique that most distinguishes our ebooks from pedagogical ones is "setting the stage for the story". We encourage our signing actors to tell the story in a way natural for them. This results in tellings that stray from the text. Typically signers introduce objects (set the stage), then comment on them (give the action). While our signers employ a range of syntactic structures, this simple one is the cognitively most transparent in a visual modality

and is natural for sign languages worldwide (Napoli and Sutton-Spence 2014). Our signers spontaneously did precisely what Deaf parents do with their deaf children: they are not constrained by the text (Swanwick and Watson 2005); they make explicit what is implicit in a text; they provide a positive environment, in which they assume the story is fun.

USE OF OUR EBOOKS

We (faculty and students) observed use of our ebooks in fall 2013 and 2014, and one of our students videotaped their use in 2014. Several characteristics emerged. First, children mimic the videos as they watch them repeatedly. This starts even on the second viewing. Second, after mimicking, they then vary them, with exaggeration that makes obvious how they feel about the narrative, and sometimes with changes related to their own interests. They do this as a "conversation" with themselves, before they slide to the next page. Third, in groups, they tell the child next to them what the story is about, preparing them for it. Fourth, after two children have shared a book, they retell it together, in a game way; one will finish the other's sentence or one will elaborate on it. Those children then might tell the story together to the next child, again taking turns and elaborating. In other words, they use higher level FLTs naturally and joyously.

However, we did not observe interest in the videos by hearing parents. This is unsurprising; the parents we observed wanted their children to be oral. We expect this to change once the journal *Pediatrics* comes out with the recommendation that deaf children be taught a sign language (Napoli et al. forthcoming); that recommendation should affect the way medical professionals advise families.

Teachers, on the other hand, loved the videos and explained them to children, with leading questions and open-ended questions. Most of the children we observed, however, were more active linguistically when they explained the stories to each other. They clearly felt these books "belonged" to them; the teacher was incidental. They "got" the stories immediately without help, and they were delighted by that.

A formal study should be done (and we have applied for funding) to investigate what kinds of interaction these ebooks spawn between parent and preschool child, and whether those interactions are supportive of language development. But our preliminary results are promising in that the children engage in language interaction with each other, make the stories their own by following their own interests, and have fun, all characteristics of the most effective SRAs (Whitehurst and Zevenbergen 2003).

CONCLUSION

We urge educators of small deaf children to turn the focus away from formal pedagogy and toward fun. Rote memorization work, such as letter recognition, can be mastered more quickly when children are older. Time should be spent, instead, on happy dialogic interactions during SRAs to build language skills and enhance the rapid learning so typical of their age. Parents look to teachers for guidance. Please don't give them curricula. Tell them to have fun, hopefully using ebooks as a jumping off point.

Our ebooks are free and more information can be found here: http://www.gallaudet.edu/american_sign_language_and_deaf_studies/bilingual_ebooks.html

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