The use of self-story as a pedagogical tool in a meta-cognitive exercise to support children in understanding their material choices in the school library

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This paper examines the notion of self-story as a sense-making scaffold to self-knowledge via the Zone of Proximal Development in a school library setting. A teaching strategy is presented utilizing ideas from Vygotsky, Bruner, and Dervin in which children are asked to remember stories about themselves to support language development and movement towards greater self knowledge supporting their choices of material in the school library. Children may lack the vocabulary/language to describe/explain their own behavior. Since language is culturally constructed and children lack experience with culture and, thus, language, not only may they have difficulty communicating with others, but since thinking is informed by language, they may have difficulty understanding their own thoughts and feelings since they do not have the words to name them. They need to access the appropriate language/words to express these things. One strategy that may assist them in this task is the use of self-stories.

Introduction

Our school libraries are full of wonderful stories. They come to us in many ways: through books, movies, pictures. They come to us on discs, chips, and paper. Stories also reside in people. Each child that comes to the library has a myriad of stories within his or herself. These are the stories that make up the experience of that child and shape his or her understanding and perspective of new information encountered. These remembered stories of self, self-stories, can help to give voice for the telling of new events and support growth towards self-understanding. In this paper, self-stories are narratives shared about past events in children's lives for which they have already acquired the necessary words to describe. The language required to articulate new thoughts and feelings may reside in prior experiences of a different nature. Transitioning the language strategies used in old experiences to the new via self-stories may serve as a scaffolding mechanism to bridge the gap in their sense-making of a new situation they have not yet articulated and may help them to understand the why of their own choices and behavior. This paper presents a story, a vignette as it were, about using self-stories to support reflection and metacognition which, in turn, support children's thoughtful choices of material in the school library.

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Overview of Related Literature

Relevance

The topic of relevance has been identified as the fundamental and central concept in information science (Schamber et al, 1990). Mizzaro (1997) did an extensive overview of studies conducted on the topic of relevance by the information science community in which he documented 158 journal articles written about relevance between the years 1959 and 1996. He breaks down these studies into categories which address foundations, kinds, surrogates, criteria, dynamics, expression, and subjectiveness of relevance. Every one of these 158 articles, however, examines relevance in relation to adult information seekers. Since it has been documented that the information needs of children differ from those of adults (Kuhlthau, 1988; Moore & George, 1991), it follows that aspects of relevance relating to children's information needs may differ from those of adults.

The traditional view of relevance focuses on the relation of a subject or topic to the material retrieved by an information system. With the evolution of a more user centered paradigm of information science, this view of relevance was increasingly found to be inadequate and is now largely rejected by the information science community as the sole perspective from which the relevance problem can be addressed. Park (1994) calls for "a new paradigm of inquiry" in order to develop the concept of user focused relevance. She advocates using a qualitative naturalistic methodology with a grounded theory approach constructing theory from data, this being more in keeping with the sense of the issues being studies. Saracevic's (1996) reconsideration of relevance reviews the notion of relevance from a psychological paradigm and presents an overview of the growth of relevance study towards recognition of cites complexity and interaction of elements. Schamber (1994) also gives an excellent overview of research examining relevance in information behavior.

Barry (1994) concludes that the user is best able to judge whether a document is relevant or not. He identifies twenty-three categories of relevance criteria. These are grouped into seven broad classes of criteria as follows: 1. information content, 2. user's previous experience (i.e. ability to understand, content novelty, source novelty), 3. user's beliefs and preferences (i.e. affectiveness), 4. other information and sources, 5. sources of documents, 6. document as a physical entity, 7. user's situation.

Howard (1994) writes about pertinence reflected in personal constructs. She applies Kelly's Personal Construct Theory to the concept of relevance. Kelly's theory (1955) states that people construct mental models of their world based on their understanding of their experiences. Schamber and Bateman (1996) attempt to identify terms and term groups that describe users' concepts of criteria in relevance judgments of: 1. aboutness (i.e. about the topic), 2. currency, 3. availability, 4. clarity (i.e. readable, understandable), 5. credibility.

While early work examining relevance and child users was more scarce, studies began to address children's criteria for relevance judgment. Pejtersen (1986) writes of designing and testing a database for fiction based on an analysis of children's information seeking behavior. Using information gathered in user-librarian interactions in a library setting, Pejtersen attempts to develop a method of classification that supports children's criteria for relevance and could be used in the design of a retrieval system for children. She finds that children express their needs similarly to the way adults do, that is, within the following four dimensions: 1. subject-matter, 2. frame (i.e. time, setting), 3. author's intention (i.e. funny, exciting), 4. accessibility (i.e. easy to read, with pictures, serials). (Pejtersen, 1986).

Solomon (1993) examines children's information seeking behavior on an on-line public access catalog. His examination elicits the 20 most often used search terms for children using OPACs. Eight of these terms involve animals, three concern sports, four are genre forms (mystery, science, fiction, and poetry) (Solomon, 1993). While it is acknowledged that topicality has been shown (see studies addressed above) to be only one aspect of relevance, it is also noted that Howard's (1994) work showed topicality to be more important than informativeness in relevance estimation.

Children's Material Preferences

Research in the area of children's material preferences indicate numerous aspects that might impact on a child's preferences and choices including visual or physical characteristics of the material, gender of user, age of user, subject/topic, author, grade level of user, user experience and/or situation, affective issues, and format/presentation. Reuter's (2007) study in aesthetic relevance looks at 46 factors that influence children's choices and includes numerous references to literature in this area. More recent research investigates children's reading preferences and choices including graphic novels and comic books and material that is delivered electronically rather than in traditional book form (Hughes-Hassell & Rodge, 2007; Johnsson-Smargdi & Jonsson, 2006; Kan, 2013; Maynard, 2010; McKechnie, 2006; Mouly, 2011; Nippold et al, 2005).

The present paper is a reflection on a teachable moment as it relates to theory, and can be said to build on the earlier work of the author. Cooper (2002a) examines children's information behavior in a semi-structured situation in a school library and finds that the 7 year-old participants tended to rely on visual information in their selection of material, if it was available, rather that textual information. She continued her research in children's information behavior, asking children in Kindergarten through Grade 4 what material, both fiction and non-fiction, they felt should be included in a library (Cooper, 2002b, 2004a, 2004b). This was part of a larger study examining the cognitive categories participating children had for library information. She elicited children's material choices directly from them in a 'normal' situation, using their own words, rather than suggesting possible choices. Children's choices of material for inclusion in a library in this study were largely in keeping with Solomon's (1993) findings.

Conceptual Framework

There are numerous studies at this point on what constitutes relevance in the selection of material both for children and adults. Additionally there are many studies regarding the choices that children make in the selection of books and other material in school libraries and elsewhere. This paper expands on previous research to examine how to help children to a heightened self-awareness of their own thinking when they make these selections. If children can be supported to articulate their thoughts via language, their search for material in the library and elsewhere is likely to be more successful. Additionally, children may gain self-knowledge that will support them in other aspects of their lives. The cognitive and emotional growth that is supported through interaction with books and other material in libraries is not limited to knowledge of information and stories but also encompasses growth of self-knowledge. The primary focus of this paper is about supporting children's development of language and self- understanding so that they can proceed with their selections whatever they may be. This paper is not concerned so much with children's choices so that we can stock our shelves or children's choices so that we know how they are thinking. We are interested here in helping the child to understand his or her own thinking so that s/he can be more enlightened and secure in their self-direction and choices.

This paper is presented as 'real life' understood in theoretical terms - a 'normal' situation, a teachable moment, considered after the fact in a theoretical context. It is not a formal research study presenting the collection and analysis of data in a preconceived situation. The teacher-librarian here is reflecting on a session with children in the school library. The story of this session is embedded in theoretical discussion that explains and supports the strategies employed by the teacher-librarian. The term 'teacher-librarian' will be used in this paper to refer to the person who is sometimes called teacher-librarian, school librarian, library media specialist, media specialist, or librarian. Teacher-librarian was selected for use here because of the importance of teaching in this particular situation.

The Language Problem

Vygotsky (1986) tells us that language is the primary tool through which members of a culture communicate with each other. Language is learned from other members of the culture and thus is subjective in the sense that words take on the meaning that the culture has assigned to them. The meaning of a word in one culture or community may be vastly different in another culture or community. In addition to being the means by which we communicate with our fellows, words are the tools with which we think and build concepts.

Since language is culturally constructed and young children lack experience with culture and, thus, language, not only may they have difficulty communicating with others, but since thinking is informed by language (Vygotsky, 1986), they may have difficulty understanding their own thoughts and feelings since they do not have the words to name them. They need to access the appropriate language/words to express these things. Additionally, Vygotsky noted that a child's conscious awareness of his or her own thinking is important to address in classroom activities designed to develop children's thinking (Gredler, 2012).

Part 1 of The Story: The Children are at a Loss for Words

This story takes place some years ago in a school library serving children in Kindergarten - Grade 2. Children in this school attend their regular grade level class every day and visit 'special' classes including art, physical education, technology, music, and library on a weekly basis. The teacher-librarian in the children's library class wanted to raise the children's awareness regarding their book choices in the library. She was also interested in their criteria for relevance. That is, what qualities made a book desirable to a 7 year-old child? As they did in every session, the teacher-librarian and the children sat together on the library carpet and talked. The children had already selected their books to take home and each held their book in their lap. The teacher-librarian said: "I would like to know why you have chosen your book. Why do you choose a book?" Many hands shot up. Children responded: "Because it is cool!" "Because it is good!" "Because I like it!" The teacher-librarian asked: "But what do you mean when you say it is cool?" Responses were generally something like: "That means it's really good." The teacher-librarian felt at an impasse here. She did not want to give an example like: "Did you like the pictures?" That would only put words in the mouths of the children. She wanted to hear their own thoughts, not her suggestions. While the teacher-librarian strongly suspected that children had specific reasons for choosing books, it was clear that they were unable to articulate these reasons.

As noted above in the discussion of language, young children may not have the experience using language to a) consider the implications of the question (posed to them using words/language), b) think about why they might have chosen their book (metacognate), d) put that

reason into the words/language contained in their young repertoire, and e) convey that in spoken language to the teacher-librarian and their classmates. The use of scaffolding to cross the Zone of Proximal Development may support children in this situation.

The Zone of Proximal Development

Vygotsky posited the Zone of Proximal Development as "the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers" (Vygotsky, 1978, p. 86). Kuhlthau describes a variant of this in reference to her Information Search Process. She suggests a Zone of Intervention as "that area in which a user can do with guidance and assistance what he or she could not do alone" (Kuhlthau, 1993, p. 176). The support of self understanding explored here has some commonality with Kuhlthau's Information Search Process in that the Information Search Process, if shared with child information seekers, may help them navigate that particular process. The children in this session, however, were not participating in a formal information search process or study. They were having a semi-structured conversation with their teacher-librarian about their thought processes when selecting material in the library. While the information seeking in this situation/context may be thought of as the children seeking to understand their own motivations regarding their material choices in the library, since the children in this instance were not engaging in an Information Search Process as it is traditionally understood (see the Stages of the Information Search Process as described by Kuhlthau, 1993) and since the crux of the issue under discussion has to do with language rather than information seeking per se, Vygotsky's concept of the Zone of Proximal Development will be used in this discussion.

The problem in the story situation described above which the children had trouble solving is that they were unable to articulate the reasons for their choices using language that made these reasons clear to their teacher-librarian. The teacher-librarian wanted to help the children across the Zone of Proximal Development - that distance that they could not negotiate alone but could possibly negotiate with her support - to access the language necessary to continue the class discussion but she also wanted the children to be able to use words of their own choosing and not rely on her word choices on their behalf. The teacher-librarian needed to construct a scaffold to assist the children in crossing this zone. While Vygotsky did not use the term scaffolding in his writing, his Zone of Proximal Development has been closely associated in the educational community with the concept of scaffolding.

Scaffolding

Sometimes, when the word tools that are required to do a job/construct a concept are lacking or not apparent, it is necessary to rely on a scaffold to support a successful effort. Young children, especially, need support in their efforts to articulate their thoughts and feelings because they lack the background, the life experience and education via culture, that teaches us the language we need in order to think and express our thoughts to others in a clear manner. Thus, scaffolding is often associated with the socio-cultural theory of Vygotsky (van de Pol et al, 2010).

Scaffolding theory was first posited by Jerome Bruner. "Scaffolding" is defined as a "process that enables a child or novice to solve a problem, carry out a task or achieve a goal which would be beyond his unassisted efforts" (Wood, Bruner & Ross, 1976, p. 90). Wood et al further note that:

> While scaffolding consists essentially of the adult "controlling" those elements of the task that are initially beyond the learner's capacity, thus permitting him to concentrate upon and complete only those elements that are within his range of competence. The task thus proceeds to a successful conclusion. We assume, however that the process can potentially achieve much more for the learner than an assisted completion of the task. It may result, eventually, in development of task competence by the learner at a pace that would far outstrip his unassisted efforts (p.90).

Part II of the Story: Bridging to Old Words in Search of New Words

The teacher-librarian thought that perhaps articulating the reasons for their literary choices might be both a new and abstract task - a task possibly too formidable for the 7 year-old children. She wanted them to try using their own words but did not want to set them up to fail. Perhaps if they could relate this task to something in their prior experience for which they had already found words, this new task would be more manageable. One reason this method is particularly appropriate for children is that while they do not have vast experience in other areas and their formal education is still limited, their memories, their self-stories, comprise a large part of their stock of knowledge. Thus the idea of sharing self-stories regarding a particular situation transpired. In this particular group of children, it was extremely likely that each child had visited a shopping mall with a parent to purchase clothing. Children were, therefore, invited to share these self-stories with the group - an invitation to which they responded with relish. Children at this age are still in Piaget's pre-operational stage of development and tend to see things from their own point of view (Piaget and Inhelder, 1969). They were delighted to tell stories about themselves. After a period of self-story sharing, the teacher-librarian then posed "When you are shopping for clothes, what are some reasons why you might pick, for example, one sweater or sweatshirt instead of another one? You are not allowed to use words like cool or good or like. You need to say why something is cool or why it is good or why you like it." Responses were slow starting but within a few minutes came more rapidly. These included responses like: "I liked the way it looked." Teacher-librarian: "What did you like about the way it looked?" Responses: "I liked the color." "I liked the decorations." Teacher-librarian: "What else besides the way it looked would be a reason for getting a particular sweater or sweatshirt?" Responses: "My old one is too small." "My old one is torn." "My friend/everyone has one like this." "My other one is not warm enough."

The children were clearly able to remember and share stories relating to self using language that was fairly specific. The question now was whether they would be able to use that experience to bridge the gap that was preventing them from understanding/making sense of the problem at hand: Why did they choose their books?

Sense Making

According to Dervin (1992), her Sense-Making Methodology was "developed to study the making of sense that people do in their everyday experiences" (p.61). The teacher-librarian's request to the children for an explanation of why they chose their books is really a request for them to make sense of their decision and so it is an example of sense-making. Dervin's sense-making describes our progress from point to point in our attempt to make sense of our world. She sees our progress through the everyday as a series of "step-takings that human beings undertake to construct sense of their worlds" (p. 65). When a person comes to a gap - a situation that they cannot negotiate - their "internal sense has 'run out'...the person must create a new sense" (Dervin, 1986, p. 21). "A

person in a moment defines that moment as a particular kind of gap, constructs a particular strategy for facing the moment, and implements that strategy with a particular tactic" (Dervin, 1992, p.82). The children in the situation described above, however, are unable to construct a strategy for crossing the gap unassisted. The gap is a culture-language gap and they are unable to negotiate it without support. The teacher-librarian provides the help they need by presenting the self-story scaffold. Using this scaffold, children are able to access the language tools they have in their repertoire with a new perspective in order to bridge the gap. "The sense-maker [the child] is seen as potentially making some kind of use of whatever bridge is built across the "gap" [self-story scaffold] the user faces" (Dervin & Nilan, 1986, p.21). The illustration below (Dervin& Frenette, 2001) is Dervin's drawing of a person in a situation who comes to a gap which prevents sense-making progress.

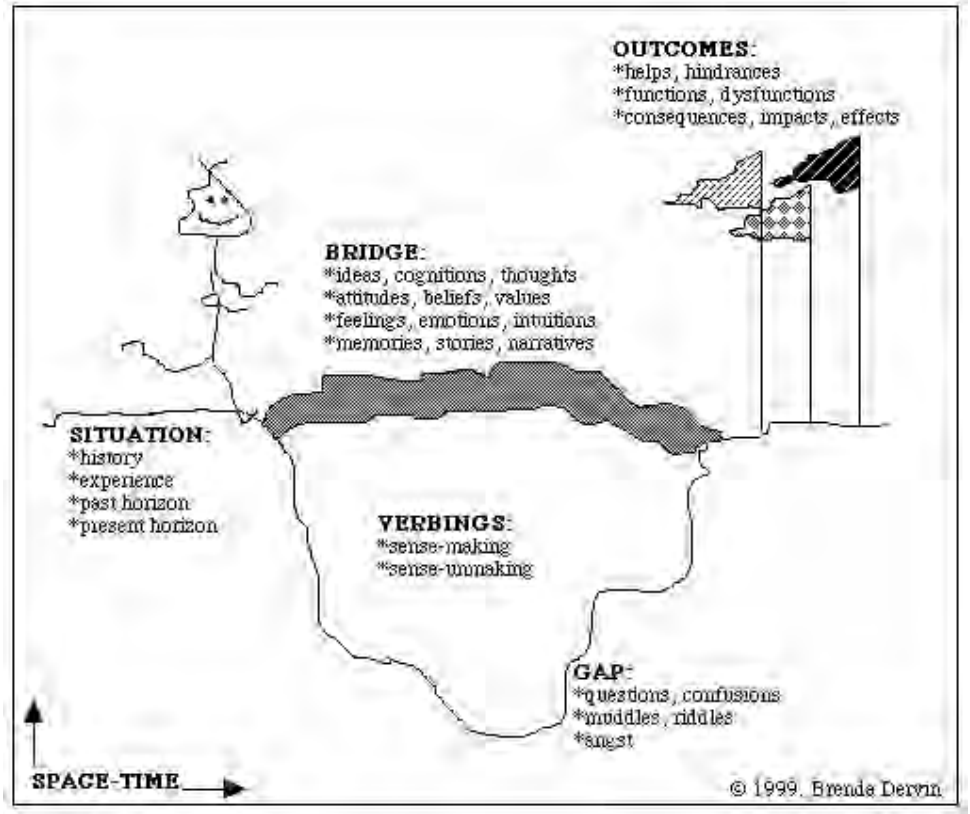

Figure 1: The Sense-Making Metaphor (Dervin& Frenette, 2001).

In our story, thus far, the children are in a situation in which they are posed a question, a present horizon - they can see/understand only so far but not far enough because they do not have the means, the language to progress to a farther horizon - the responses that the teacher-librarian is looking for. The gap in the way of the children is their lack of experience using language. They may have the words they need in their stock of knowledge/their vocabulary, but they are confused regarding how to use them. They initially default to ambiguous responses using words like "cool" - almost like place holders for words they cannot reach - but are unable to specify what "cool" means in the context of the problem. The teacher-librarian offers a scaffold which supports a bridge to sense making - a means for them to cross the gap. The scaffold is the recollection of a self-story of a particular situation. It is something with which they have experience and are familiar and have words for and, most of all, have made sense of already.

Part III of the Story: Using Stories of Prior Experience to Make Sense of New Experience

After the sharing of self-stories, the teacher-librarian asked the children to look at the books in their laps again - the books they had chosen that day. She said: "Can you tell me a reason why you picked that book? You cannot use the words cool or good or like. You need to think of a more specific reason." At first, children were able to respond with reasons such as: "I like the colors," "I like the pictures," "This book is big." "This book has a lot of pages." Soon, however, reasons became less visually concrete and more socially abstract. These reasons included: "All my friends are reading this book," "My other book is too easy/too hard for me," "I want to read a book about dogs/I have a new puppy."

Relating their remembered self-stories enabled the children to understand the present situation in a context similar to the remembered situation. They were able to cross the Zone of Proximal Development from that point at which they could not progress without assistance, over the sense-making gap to the outcome which they can now negotiate through the support of the teacher-librarian and their own self-stories. The following figure depicts their progress based on Dervin's initial illustration but with the added components of Vygotsky's Zone of Proximal Development and the teacher-librarian's supporting scaffold.

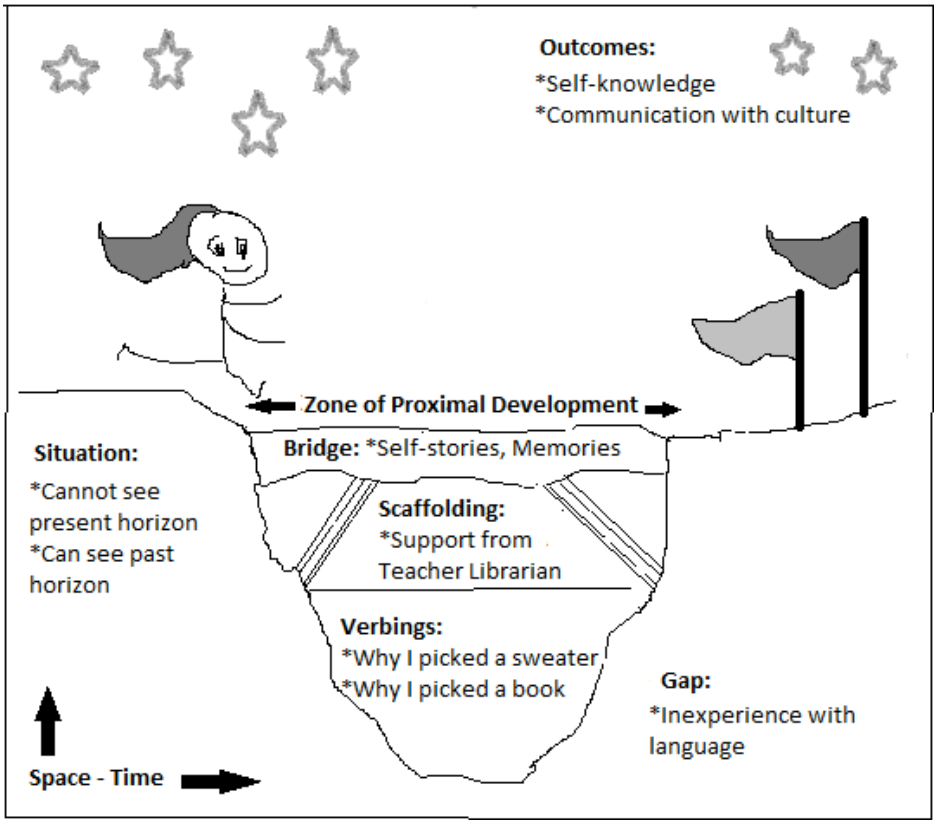

Figure 2: Child's Sense-Making Progress Across Zone of Proximal Development with Scaffolding Support based on Brenda Dervin's Sense-Making Metaphor in Figure 1

Conclusion

This paper has presented a method of using self-stories to support children through a metacognitive exercise with the assistance of Bruner's scaffolding through Vygotsky's Zone of Proximal Development and over Dervin's Sense-Making Gap to greater self knowledge and ability to communicate with one's culture/community/others.

The exercise in which the children in this situation engaged is more difficult than selecting a book. Selecting a book can either be determined or via browsing but the decision to select can be made without deep consideration; that is, the child can choose something which strikes his or her fancy without prior or further consideration. Articulating why a book is chosen is more difficult because it is more amorphous i.e. the child must think about qualities that may not be concrete like the size of a book or its pictures but may be abstract like whether it is funny or scary or difficult to read or popular with friends. To say why books are chosen in general would be even more difficult because it is a reflection, not only on a single decision, but on a multitude of past decisions. It is more difficult because the child is thinking about his or her own thinking over a span of time. It is an act of metacognition. By scaffolding to previously assimilated language to support a new language situation, the cognitive load is lightened for these very young children thus increasing their chances of success (see discussion of cognitive load in Sweller, 1994).

The teacher-librarian in this situation felt the children had taken a very big step in this exercise. Not only were they now able to articulate with greater specificity the reasons they selected a book, but the reasons appeared to have progressed from the visual and concrete to reasons that were socially (i.e. having to do with group membership/ likeness) and intellectually (i.e. having to do with subject or level of difficulty) based. The children had progressed from a point at which they could barely articulate why they had selected a book to a point where they could specify a reason for selection. A further step would be for a child to be able to consider and articulate multiple and more sophisticated criteria for relevance when selecting material in the future i.e. Is this an author that I have enjoyed in the past? Will this book be too difficult for me to read? Do I want or need a book with pictures? Additionally, an exercise of this nature opens to door to conversations in the school library about the use of more culturally sophisticated language which the children will need to acquire if they are to be able to negotiate the corpus of their culture's knowledge both in the library and beyond.

Teacher-librarians and other educators who are interested in using self-stories as a scaffolding mechanism for children may wish to consider the types of experiences that the children with whom they work share so that group discussion is facilitated. All experiences will certainly not be the exactly same, but if they are similar there will be some commonality for the children to share. Certainly self-stories can be used with individual children as well. Possibly the gravest misstep is to put words into children's mouths. It is not easy to elicit comments from children who may not have sophisticated or even sufficient language skills to articulate their thoughts and the temptation to 'help' with suggestions looms large. Children are so used to being directed by adults that any suggestion that comes from the teacher is likely to be picked up by the children who may assume that the particular suggestion is the 'correct' response the teacher is looking for. Any formalized study would need to take these things into consideration. Additionally, research conducted in a manner that children discern as 'not a normal situation' may elicit responses that are not normal as well. Young children are recently coming out of Erikson's (1950) Initiative vs. Guilt stage of psychosocial development and their desire to please may easily sway their responses. With careful and sensitive support from the teacher-librarian, the exercise of 'thinking about

thinking' - metacognition - can support the growth of reflective practice, critical thinking and knowledge of self - all of which contribute to life-long learning and continued growth.

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