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THE CHALLENGE OF UNDERSTANDING YOUNG LEARNERS' EXPERIENCES IN INFORMAL SETTINGS/CONTEXTS

A New Approach

Over the past several years, we have struggled to find strategies that examine young children's understanding of science experiences in informal settings, such as our most recent involvement in a summer science camp. Our own teaching and research experiences in classrooms meant we had a collection of strategies we used with children. We interact, engage in discussions, and assess their learning, but found we had limited success in gathering rich data about their experience using school-based methods. Since the early 1900s, educational researchers such as Jean Piaget and John Dewey have been researching the lives of young children, recording their words and actions and asking them questions in attempts to better understand the culture and processes involved in children's learning. Many different research approaches have been designed and practiced in an attempt to delve more deeply into the understanding and meaning these children make of experiences. If we are to provide an education that is appropriate to children's developmental levels and interests, we must find ways of gaining better insight into their perceptions of formal and informal learning experiences.

A number of definitions of informal learning exist, in particular in relationship to the learning of science. For the purposes of this paper, we use the following definition: "Informal learning refers to activities that occur outside the school setting, are not developed primarily for school use, are not developed to be part of an ongoing school curriculum, and are characterized by voluntary as opposed to mandatory participation" (Crane, Nicholson, & Chen, 1994). Wellington (1990) describes informal learning as learning that occurs outside the classroom in an unstructured environment, and noted that there is no assessment and few expected outcomes. Normally, informal learning is learner-centred, and somewhat open-ended. It most often engages the participants in relevant and hands-on learning. The learning that takes place during summer science camp activities may best be described as "structured informal" (Vadeboncoeur, 2006) and led by camp instructors, guiding and designing science exploration.

This paper describes new strategies we developed to gain insight from young children, aged six and seven years old, during a summer science camp program in an attempt to better understand the meanings that this experience held for them in this setting, considered more informal than traditional schooling. We focus on

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strategies developed to collect evidence of scientific language and understanding based on their experiences in the camp in an attempt to better understand what the experience of camp means to the children. We share what we know/discovered about children and their learning, about informal learning contexts, and about interviewing to create new approaches to understanding children's experiences in informal science settings. Solving the challenge of interviewing children in their own world will help us gain information about the culture of summer science camps, children as competent narrators of their own experiences, what kinds of things children can understand about science, and grapple with this nontraditional approach to summer science camps and studying informal learning contexts.

CONCEPTIONS OF CHILDHOOD

The way in which we conceive childhood shapes the way we approach research involving children and their experiences. Indeed, the extent to which researchers embrace or reject the idea of children as "different" shapes the nature of their research. Childhood is primarily a relational term, grounded in its relationship of difference with adulthood (Jenks, 1982). Socio-cultural research (Lewis, Encisco, & Birr Moje, 2007) is, of course, not exempt from these pressures.

A great deal of research exists from a psychological perspective where children have been examined in experimental settings. Fewer studies exist from a socio-cultural perspective (Lewis, Encisco, & Birr Moje, 2007) where attempts are made to a) create a more natural setting in which to research the children; b) find alternate ways for children to provide information; c) prompt children for additional information without altering or directing their narrative; d) seek a variety of ways for children to provide information; and e) allow researchers to access information children have that they are unable to share due to a lack of vocabulary, for example.

An increased interest in the search for understanding of children's sociological and cultural worlds has resulted in research processes that focus on children as objects of the sociological gaze. New sociological and cultural approaches to understanding childhood suggest that rather than viewing children as future adults-in-the-making, we should focus upon children's lives, perceptions, and activities. This entails a shift away from the idea of a child as "becoming" an adult to the "being child," conceptualized as an active social agent (Qvortrup, 1994).

James, Jenks, and Prout (1998) argue that children should be understood not as beings lesser than adults, but as having different competencies that the researcher must address. The recognition that children can actively participate and communicate their ideas in research challenges the belief that children are somehow less competent than adults. A socio-cultural approach can encompass this perspective about childhood.

Socio-cultural studies focus on seeking to enable communities of practice that are legitimate in the sense that they are meaningful and familiar to the participants (Wenger, 1998). Rogers and Fuller (2007) describe socio-cultural research with participants. In their study, they ensured that the setting of the research was not

only familiar but that consideration of the participants' previous experience should be included in the research design. In our study, we sought to design the interview process so that it would be linked with the children's experiences during the science camp as well as their everyday experiences as children.

A great deal of the research that involves children is psychologically based and focuses on an experimental design using structured formats. Few examples of interviews with children that are open-ended and not psychologically based exist. Children can provide real insight for researchers about their experiences if the interviews are conducted in a risk-free environment of trust and allowing children to participate in ways that are culturally relevant to them. The summer science camp is a challenging context in which to explore the experiences of young learners. The camp provided the young scientists with a natural setting for engaging their curiosity and their interest in the way that scientific rules and procedures work. By allowing the children to imagine themselves in stories and situations as young scientists participating in a science camp, and by inviting them to extend these narratives, we have been able to gather rich data about the meaning they attach to their experiences during the science camp.

In this section we have made the critical argument that how we conceive childhood is crucial to how we think about understanding children. A psychological approach that does not consider the social nature of learning in these early years is not an appropriate model for this research. A socio-cultural model is important to consider and reminds us that using an open-ended approach in a culturally relevant, risk-free environment is important, especially if we want children to talk openly and for extended periods of time. Trust is crucial and, because language is such a challenge in researching young children, we need to find other ways of interacting than those offered by traditional interviews.

A NEW APPROACH TO INTERVIEWING/INTERACTING WITH YOUNG CHILDREN

Traditionally, interviews range from open-ended to structured and are heavily dependent on interrogatory language that is often or can be overwhelming/ confusing to young children. The new approach we propose mimics conversations young learners have during play or firsthand learning experiences with others. As such, it offers an opportunity to create a trusting context in which children are willing to share their thinking about their experiences for extended periods of time.

Interviews are frequently used in a variety of methodological approaches and offer the researcher many benefits (Marshall & Rossman, 1999). Benefits can include the ability to collect a large amount of data quickly, to provide clarification, and to allow for immediate follow up. The most important aspect of the interviewer's approach is to convey the idea that the participants' information is acceptable and valuable. This is particularly important when the research participants are children (Sherman, 1995). Corsaro (1981) warns about the fragility of the child's world and the possible instability of peer interaction in the classroom, warning the researcher to use caution when entering the world of the young child as a participant-observer or as an interviewer, lest they disrupt the balance young

children exhibit between self-absorption and a natural curiosity of the world around them.

Interviewing children takes special consideration and planning for several reasons. Children are a vulnerable population and anyone wanting to research them must be prepared to consider carefully the power differential that exists in the interview context. Children often demonstrate a certain transparency that we lose as adults and it is this transparency and honesty that interviewers of children must learn to tap into without taking advantage of the children's naiveté (Grumet, 1988). Interviews allow the researchers to "qualify" what they hear through the eyes of the participants, rather than "quantify" through the screen of the observer as is the case with other traditional psychological systems where behaviours are coded and recorded. This is particularly important when the informants are children. "Upon entering the children's world, researchers focus on how they as adults understood the experiences that children receive and exchange. From this perspective the child is the experienced member of the child's culture and the adult is the stranger" (Spindler, 1963, p. 211). If we are to understand the children's experiences and perceptions of those experiences, we must attempt to interview them with a perspective that is open to making sense of the world of the child (Sherman, 1995).

It is essential that interviewers of young children develop a trusting relationship based on honesty. Children can quickly identify a lack of sincerity in an adult and will not engage to the same level of conversation if trust is lacking. Questions that are neutral can also be used to establish a comfort level with children at the beginning of interviews (Bear, Manning, & Shiomi, 2006). Spending time with the participants prior to the interview can also establish a level of rapport that will facilitate discussion during the interview (Baer, 2005). In this study, the interviewers worked with the children as camp leaders throughout the camp, assisting them in the activities and developing rapport with them.

At the same time, it is important to work with a degree of informality (Buldu, 2006). Informality can allow the children to feel comfortable with the interviewer allowing the interviewer to go beyond introductory questions to gain clarity of the children's thinking. Using prompts that extend children's answers is also important when interviewing young participants. As is the case with many adults, children also respond well to semi-structured, open-ended questions (Phan, 2005). This allows the children to respond in ways that are not directed by the interviewer, leaving open a greater range of possible answers. By simply asking a second time with an extension question such as "Why *else* should we do that?" children can add to their original response (Bear, Manning, & Shiomi, 2006).

Interviewers of children have begun to use prompts in the form of scenarios (Bear, Manning, & Shiomi, 2006) where an activity is depicted and then questions are asked about what the children hear in a story. Cohen, Manion, and Morrison (2007, p. 375) argue that there is promise in using what they refer to as "projection techniques" such as pictures to elicit a verbal response from children. Such approaches have shown promise in that they have helped to elicit detailed descriptions without inadvertently giving the child verbal cues that may bias their response. In another study (Baer, 2005), figures were presented to children and

they were asked to suspend reality and place themselves within the scene. Lewis (2005, p. 222) has reported a similar approach in which she explored the use of stylized cards to prompt uninterrupted narratives from children with moderate learning difficulties. However, little evidence exists of situations where children are asked to complete a story or add to it beyond what is given to them in the interview. Our study seeks to extend these described approaches by involving children in adding narrative complexity to situations that are closely connected to recent situations from their science camp experiences (e.g., picture of a child looking through a microscope and showing surprise).

Some researchers prefer to combine the interviewing of young children with observation periods (Plowman & Stephen, 2005) as this can allow for some triangulation of what the children are describing. However, observation of children needs to be done carefully. Participant observation is often accepted as a strong research approach to use with children; however, Harden et al. (2000) suggest that participant observation is problematic in a culture where children are used to seeing adults as different and are, therefore, unlikely to be prepared to accept them as one of themselves or to ignore their presence. In the case of our study, camp leaders worked together with the children in the days prior to the interviews and recorded observation data.

During the interviews, when possible, the camp leaders were encouraged to help a child talk through a misconception. This style of talking with a child is based on research (Myhil & Warren, 2005) that demonstrates that a careful guide can help children talk through their thinking about a particular subject. Because the focus of the interviews described here was to, in part, examine children's understanding of science, this process was included in the interview strategies. Interviewers of young children have also developed questioning strategies that prompted the children to describe their thinking, in essence, to develop a metacognitive awareness of what they are describing (Jacobs, 2004). In this paper, the research was conducted by asking children to advance their descriptions in ways that explained why they had used particular examples in their responses.

SUMMER SCIENCE CAMP

At a local university, the Science faculty members offer children in the area the opportunity to attend a week-long science camp in either July or August. Provided at a relatively low cost, these camps are well attended. Seven week-long camps are offered each year to children of a variety of ages. Two camps are offered to six and seven year olds and approximately 50 participants attend the camps.

During the summer camp, children participate in informal science activities presented by a group of leaders who are university students. The children participate throughout the day in a series of science-related activities that include laboratory experiments and other activities that take place outdoors. The students work with lab partners and always wear goggles and lab aprons as they are encouraged to work like "little scientists." The children write in journals and also participate in large group discussions. The culture promotes engagement,

participation in activities, risk taking, and the asking of questions. Children are encouraged to talk about what they are doing with each other and with the camp leaders.

The science camps are part of a larger project funded by a CRYSTAL (Centre for Research on Youth Science Teaching and Learning) grant sponsored by NSERC (Natural Sciences and Engineering Research Council of Canada) and intended to examine perspectives about the learning of science through informal outreach projects which support school science curricula but take place outside of regular school hours. These projects support student learning and the science curriculum in out-of-school locations, and during out-of-school times.

At the end of each camp week, the students were interviewed individually by one of the camp leaders. The camp leaders were used intentionally as interviewers because of the level of familiarity they had established with the camp participants. The camp leaders had worked during the week with students one-on-one and had also worked with small groups of children. The camp leaders worked hard to establish a friendly relationship with each participant, ensuring they knew each camper's name.

This study occurred during the second year of the camp. During the preceding summer, (the pilot year of this research) four week-long camps were held and six- and seven-year-old students were asked to fill in a written survey and participated in focus group interviews. Several problems arose with these research approaches. Although the questions were simple and used large primary print, most of the children's answers were what we considered to be stifled and very short. The children's lack of reading comprehension, spelling and writing skills hindered the use of surveys. Alternately, in the focus groups, one or two children dominated each discussion so it was decided that we should change the interview approach as well. Our change in research approach was meant to help overcome and compensate for the length of time children needed to read and interpret questions, then compose and write out answers. We believed that by allowing children to freely speak their answers, the quality of the data would be improved greatly. Children would not have to interrupt their thought process to think about spelling or letter formation.

HOW CAN RESEARCHERS EFFECTIVELY ENGAGE CHILDREN IN BOTH SCIENCE CAMP AND INTERVIEW SETTINGS?

We entered this research study with the perspective that children's own understandings of their life experiences are as valid as any other. This is consistent with the view of Cohen, Manion, and Morrison (2007) who argue that it is important to understand children's worlds from their own perspectives rather than from the perspective of an adult. With this in mind we sought to build connections with children through incidental interactions with them in the context of the science camp activities and then again in the context of informal conversations (i.e., interviews) that followed the science camp activities and sought to allow children to give us insights about their perspective of the science camp experience.

Morrow and Richards (1996) have identified power relationships as the greatest challenge that researchers face when interviewing children. Mauthner (1997, p. 20) argues that researchers can address the intrinsic problem of power imbalances by focusing on children's subjective experiences. For instance, encouraging children to take the lead in interviews, by offering them opportunities to engage in storytelling and drawing pictures about their science camp experiences, allows them to take more control during the interview then might otherwise be the case in a question and answer approach seeking pure information transfer (Cohen, Manion, & Morrison, 2007, p. 349).

A science camp for children is a messy and chaotic place to conduct research that seeks to understand how children are thinking about their experiences in a high activity setting. The culture of the camp is one of exploration, interaction, examination of ideas and activity. During interviews in this setting, the researcher is faced with the challenge of engaging children who are primarily focused on experiencing phenomena from the science camp activities rather than on responding to a researcher's invitation to talk about the meaning those experiences have for the child. However, subsequently engaging a child in a structured interview can be equally complex in that the validity of the child's comments may be compromised by removing the child from the setting and asking questions that do not fully connect with the socio-cultural experience being examined. We have sought to address these challenges by engaging the interviewers in a meaningful way (i.e., as camp leaders) with the participants in the days leading up to the interview. In addition, we sought to structure the interview experience in such a way that it would be a natural extension of the culture of the science camp activities for the children. The children were asked to participate in ways that mimicked the camp. Osborne and Dillon (2007) warn of the challenges in examining informal learning environments, given the intrinsic nature of research. They suggest that the formal structure of the research process creates a disjuncture with the informal context that impedes the collection of data. However, Lom and Sullenger (2010) suggest that the research process can provide an alternate context that retains the main influences of the informal learning context. In our study, the daily activities of the children are within an informal setting, and although the interviews might be considered semi-structured, we attempted to create each stage of the interviews with a purposeful informality that enabled the children to engage with the interviewer in an extended conversation in a way that was comfortable and mimicked their interactions in the camp. We intentionally worked to elicit data without leading the children, within a culture and context that was familiar to them. The familiar context fits within a socio-cultural approach that is contextually specific rather than a psychological approach with an artificial context. We designed interview strategies that prompted the children's thinking by sometimes creating a problem for the children to solve or by initiating a narrative. Extending the narrative was intentional and we believed it would help us gain greater insights into the thinking of the children.

The child-centred interview strategy took place over a period of two days so that all children whose parents had provided written consent could be interviewed.

Each interview took between 20 and 30 minutes and was videotaped. The interviews included a set of four activities each child was asked to complete. The children had already been invited to participate in individual activities at times throughout the camp and so being asked to do this was not out of the ordinary. The four-protocol interview strategy was developed after assessing the level of success during the previous year's surveys and interviews. The camp offered explorations in different topics in science including chemistry, physics, biology, and geology, so it was also important to consider this when devising the strategies for eliciting responses from the children.

The four protocols of the interviews included an activity where children were asked to examine three photos of a familiar experiment. One step of the experiment was missing and the children were asked to describe and/or draw the missing step and then describe it fully to the interviewer. The children were then asked to look at drawings of a four-step scientific process, that they were introduced to during the camp. The four steps were presented out of order and the children were asked to shuffle the photos and place the steps in the correct order describing what happened during the actual experiment as they sorted the photos.

The children were also asked to complete a series of story starters. Short paragraphs, each describing a scenario, were read to the children. In some cases, the children asked if they could read the scenario aloud by themselves and they were encouraged to do so. The children were asked to complete the story by talking about the things that might happen next. In each story, science played a significant role. Children used this opportunity to use some of the vocabulary they had been introduced to during the science camp. They also used their imaginations to describe possible conclusions to the start of the story. Finally, children were asked to complete a drawing of a creature who had only a few beginning lines drawn. After completing their version of the creature, the students were asked to describe what they drew and justify different aspects of the creature they created. They were asked why the creature was covered with fur, feathers, or whatever the children have chosen to use. They were asked how the creatures transported themselves and what they ate. The children also had the opportunity during the interview to draw molecules they had learned about in the science camp.

The interview protocols were not presented so that one protocol led to the next; however, it was intentional that photographs were used in the first two protocols and not in the last protocols. The four protocols flowed in a manner that was meant to increase the opportunity for the children to use scientific vocabulary and share new knowledge they had gained. The visuals were used as a way to prompt discussion and allow the children to talk about something that had recently become familiar to them, as in the example of the photographs of the experiments the children were asked to re-order or add steps to. The photographs were used in the first two protocols as a jumping off point for conversation, but the order of the two protocols utilizing photographs did not matter. It was the fact that the photographs were used as a prompt in the initial parts of the overall interview that we believed to be important. This was done because the photographs gave the children a talking prompt and provided something that was recognizable. Also, during these

protocols the children didn't need to use a great deal of imagination. It was successful in getting them to use scientific language and helped the flow of conversation get started. The latter two protocols, with the story starters, provided more opportunity for imagination to play a role in what the children described for us. These were the protocols where a real extension of the narrative occurred and where the locus of control in the discussion shifted more toward the children. This shift in control enables children to draw on their own learning to a greater extent than when the control remains with the adult. When the adult remains in control of the conversation with children we often see children attempting to please the adult or give an answer they believe the adult is looking for. When the children control the conversation, they make more decisions about what is included in the conversation.

CHILDREN'S INSIGHTS INTO THE SUMMER SCIENCE CAMP EXPERIENCE

At the outset we argued understanding young children's experiences learning science in informal contexts required strategies that were open-ended, risk free, and examined what they did each day in camp. The child-centred interview strategy developed was successful in extending conversations and developing trust. This approach provided extensive data compared to the previous year's approach. Moreover, using the child-centred interview strategy, we gained better insights into their experiences and the understandings of scientists and their thinking than any other strategy we have tried.

Studying Young Children's Experiences Using Child-centred Interview Strategy

In reviewing the video recordings and reading the transcripts of the interviews with the six and seven year olds it is apparent the children were comfortable with the interviewers and they were willing to reveal information they were asked about. Because the children were familiar with the interviewers, they appeared relaxed and were, generally, quite talkative in the interviews. Each child was seated at a table with his/her interviewer and the photographs used in the interview were placed on the table in front of the child.

The children laughed and talked as they moved the photos into the order they believed to be the correct one. The photographs were large, 8 ½ by 11 inches, and easy for the children to manipulate. The photos gave the children something to focus on during the interview and provided a task they could engage with while discussing their thinking about science. Each of the activities provided a focus to the discussion the children were involved in. While we sought to focus each child's discussion on science, the activities were intentionally designed to be open-ended.

Comparison of Child-centred Interview Strategy to Previous Year's Approach

As the research was completed, we analyzed our approaches to the interviews with deliberation. We have been able to ascertain a great deal more information about

each child by using this four-step interview process. We compared the results from the previous year's interviews with the kind of data we were able to collect during this study and noted several distinct improvements. By removing the written component and focusing on the children's verbal ability, the interviews lasted longer, not only because we had more questions to ask, but largely because each child appeared much more relaxed and was more verbose during the process, providing lengthy, detailed responses. We learned that when children are given the opportunity to use their imagination and create their own narrative portrayals of their experiences, they can provide real insight into their understanding, demonstrating their competence. It has been a challenge to find ways to engage the children for any length of time. Because of the way we presented the activities within the interview protocol, the children were more engaged in this set of interviews and able to demonstrate their abilities with regard to describing their experiences. In the pilot study, the children would sometimes ask when they could return to the camp. No one asked to leave during the interviews in this study and they were more engaged in the interview process, appearing eager to participate.

The interview activities were presented in such a way that children were prompted to share more information with the interviewers than in the previous year. The camp participants were better able to demonstrate their scientific vocabulary and build on the prompts provided with obvious elaboration and enthusiasm.

Young Children's Descriptions of Scientists' Ideas and Thinking

Using the story starters created some of the most creative answers from the children. They used the story starters to describe scientific processes, to describe the role of scientists, to place themselves within the context of the story, and to develop the story through to a positive end. The story starters were specifically designed to create opportunities to make contextual connections for the children with the science experiences of the camp. The following examples are intended to illustrate the rich nature of the talk that occurred during the interviews.

The children wove their scientific knowledge throughout the stories they built from the story starters. One story starter used began with a young girl "flipping a switch and finding herself starting to shrink." One participant continued the story by saying:

> She knew they were made of atoms, but wondered what they looked like. She flipped the switch and suddenly felt herself shrinking. She imagined herself as a little atom walking around connecting to other atoms trying to form something else.

While the notion of atoms connecting with something else to form a new substance is rudimentary, it is a complicated concept for a six year old and this student was able to weave this idea into a story that was not directly focused on atoms. The student was able to do this because the story starter was open-ended and allowed the child to take the story in any direction she wanted, adding scientific knowledge

she had as she told the story. This relates to the locus of control shifting to the child, allowing the child to control what is included in the narrative.

It was also evident from the children's stories that they were able to introduce some of the science-related vocabulary used during the camp.

> Donnie: I think she's, as you can see, she's looking in a microscope so I think she's looking at, it's her first time looking at an atom or something.
>
> Researcher: Can you tell me a bit more?
>
> Donnie: I'm gonna try. She runs over to tell people what an atom looks like but then maybe it was a photon she might have seen because nobody ever saw a photon before. Photon is like light so she didn't have to tell them she saw an atom, because people have seen atoms but if she saw a photon she would be amazed.

Again, this student added his knowledge of atoms and photons to the story without the prompting of the interviewer. This seven year old introduced his own scientific knowledge and the language used at the camp into his explanation. The power in this is providing children with the kinds of opportunity where they can weave their own knowledge into a larger narrative. In this case, the story starter has allowed a child to share with us an important feature of his understanding of the culture of scientific inquiry and the nature of the feelings that a scientist might experience in the moment of discovery. Providing children with a creative opening to extend a story embedded in a scientific context to which they feel they have developed a connection (in this case, through science camp experiences) seems to better enable them to effectively share their understandings with researchers.

In the final portion of the interview, the children were asked to complete a drawing of an imaginary creature. Before drawing the creature they were told that they would be asked a great deal of information about the creature after the drawing was completed. They were told they would need to tell us where the creature lived, what they ate, how they moved, etc. The children, for the most part, drew creatures that might be described as "typical"; however, the children were able to describe, with some accuracy, how the creature might move across a variety of terrains, how it took in its food, and why it ate the various foods they described.

> Researcher: What can you tell me about your creature?
>
> Marie: She lives on another planet called Zortex and she eats the rocks. That's why her teeth are flat. The rocks keep breaking them off.

The children were able to build narrative extensions that were logical and exhibited scientific thinking. They described the characteristics of their creatures with confidence and with elaborate descriptions at times that related to the kinds of things they had learned about animals during the science camp.

DISCUSSION

Socio-cultural approaches to exploring young children's experiences are the most effective way to gain insight into their understandings as attested by this research. Such a research approach extended talk between the researcher and the interviewed children and allowed us to shift the focus of the talk from a one-way dialogue from adult to child to a focus on a discussion that is more like the conversation between children.

Both the child-centred interview strategy and socio-cultural research approach can encourage and enable the children to explore and explain science phenomena in ways that draw on their natural curiosity and on their natural playfulness. An informal learning context such as presented through the science camps reveals much about how children engage with science when researched in a manner that allows researchers to connect with the children's understanding of their experiences. By using a socio-cultural approach to the interview process, we provided a flexible template in which children's narrative could be explored and extended.

The child-centred interview strategy shows considerable promise as a socio-cultural approach in that an essential feature of this open-ended approach shifted the locus of control in the research discussion more toward the child. We will continue to modify these interviews as we seek to increase future success, filling the gap identified earlier by Lewis et al. (2007). Additional and extended strategies may enable us to find ways to engage even further with the young children.

It is essential that we continue to examine socio-cultural approaches to interacting with young children in ways that are meaningful to the children and are generative of rich data. Children have important ideas to offer researchers about the way they experience learning and how they understand those experiences. These ideas from children can help enable educators to continually assess and improve the learning contexts they provide for children. In order to gather this type of information from children in a meaningful way, we must continue to examine and develop interview processes that are open to better understanding the socio-cultural world of the child.

The research described here just scratches the surface and we need to continue to do more to understand the culture of the camp and the way it affects the children's understanding of their experience. We have shown that children are capable of contributing to the conversation about their learning in these informal settings and can provide detailed and thoughtful responses when approached in a manner that is relevant and familiar to them. Further research can help to expand what we can learn about the children, from the children.

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