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Multiple Conversations: How Modalities of Thinking Shape the Content

by

Jenifer B. Stoesz and Margaret H. Cooney

Introduction

Two researchers, both working with children but on independent and topically different qualitative research projects, discovered some striking similarities in their experiences of data collection and data analysis. It appeared that multiple languages of thought facilitated the researcher-participant interaction and the researcher's understanding and processing of the data. Visual and kinesthetic thought seemed to be preferred modes of expression by children in interview sessions, and the visual modality was again helpful in the researchers' data analysis processes.

According to John-Steiner (1985), the beginnings of creative endeavor are linked to one of the modalities or "languages of thought" (p. 8). The transformation of what is heard, seen, or touched is dependent upon the skills of the human mind in being able to represent events as images, inner speech, and kinesthetic symbols. An interaction between art and dance, for example, would be the contrast between thinking in visual images versus thinking in kinesthetic patterns of movement and gesture. One language can enhance, explain, or illustrate the other. There is evidence for this type of thinking in the notebooks and sketchbooks of many artists, composers, and choreographers (John-Steiner, 1985).

The kinesthetic modality, movement, is a basic human experience. Vallance (1991) says that children's knowing is shown in their movement. Gardner (1993) refers to this phenomenon as bodily-kinesthetic intelligence which he defines as "the ability to solve problems or to fashion products using one's whole body ..." (p. 9). Among adults, thoughts linked to movement usually escape understanding. Adults tend toward visual and verbal explanations of reality (Shahn, 1957).

The Russian psychologist, Vygotsky, saw the entire picture of child development as a complex dialectical process. Culturally, this dialectical approach admits the influence of nature on man, and asserts that man affects nature and creates through his changes in nature new natural conditions for his own existence (Vygotsky, 1978). In this process, conceptual learning is a collaboration between an adult or more skilled peer whose "loan of consciousness" (Bruner, 1986, p. 76) guides a child via modeling, hints, and skills to a new level of understanding and performance. Thus, the child is able to move through successive zones of proximal development (zpd).

Berk (1994), in discussing children's imaginative play, has suggested that Vygotsky's use of the term "language" be interpreted broadly, embracing visual, kinesthetic, verbal, and auditory modalities. If the child's preferred modalities of thinking can be accessed by the researcher, the zpd is higher and the data is more informative because it contains greater depth of understanding.

Methodology

Data Collection and Analysis Procedures

The purpose of Stoesz' (1995) case study was to examine the perceptions and experiences of children, 5-16 years, as they engage in the creative process, to generate a definition from the children's phenomenological point of view. As Gardner (1994) suggests, the creator can only communicate what he intends if he exerts control over his work. According to Stoesz' research, children experience and define creative process in terms of the amount of control they have over their ideas, processes, and products. The various modalities demonstrate the children's abilities to control ideas, processes, and products, and also indicate that the researcher is obtaining meaningful data.

Stoesz did the workshop activities with the children, drawing as they drew, building theatre sets, joining in the group music improvisations. As a participant, she struggled with the same artistic and technical problems confronting the children and freely shared in the give and take of advice with those working nearby. She had an insider's or emic experience.

Cooney's ethnographic study (1995) addressed two research questions: How is play interpreted in an all day kindergarten program for at-risk children? What, if any, barriers exist within the school setting to a curriculum focused on learning through play?

Cooney gathered data in an elementary school setting over a period of one year. The full day kindergarten had 20 children enrolled, 6 girls and 14 boys ranging in age from 5 years 0 months to 6 years 9 months. The children qualified for the full day kindergarten program based on their print concept scores on the Early School Inventory instrument and were identified as being at-risk for literacy. Chapter 1, a federally funded education program for low achieving students, was the funding source used by the district to pay for the program.

Findings

More meaningful data for the purpose of the research is the result of the "fit" between the methods of data collection and the persons from whom the information is being solicited. It also refers to the researcher's self-knowledge and richer understanding of the data collected.

Both researchers brought to their respective studies a background in the field of their investigations. Dr. Cooney is a former teacher and administrator of early childhood education programs, currently teaching at the university level in early childhood education. Dr. Stoesz is a dancer, actress, and musician and has taught children and adults in these areas for over 30 years. She is currently a freelance curriculum writer and project director for interdisciplinary arts/sciences programs.

In this section, Stoesz and Cooney present two shared findings which are spontaneous outgrowths of their research processes. The first finding concerns children's preferred kinesthetic and visual modalities of expression and how each of the researchers accessed these modalities. The second finding, the interaction among process-content-product, demonstrates the subjective and individualized nature of experience.

Pattern of Visual and Kinesthetic Language Preferences by Children

To say that the visual and kinesthetic are preferred modalities of learning and expressing for the children in Stoesz' research was indicated by their actions. When thinking in the visual modality, children would be concerned about such aspects as the shape, form, texture, and color of their work. In the kinesthetic modality, their focus was on muscular tension and relaxation, balance, timing, spatial planes, degrees, and directions.

In this situation, taken from interviews, two 6- and 7-year-old girls are trying to define creativity. Their frustration mounts and suddenly both of them begin moving around the room as they talk. One girl is a competitive figure skater and the other has performed with an adult modern dance company. What they are able to experience and express is a product of their cultivated abilities in the kinesthetic modality.

"when you're REALLY, REALLY creative is when you don't walk ... like normal people are." Mill and Josey are moving in erratic orbits around the room.

"Some people just walk like v-e-r-y s-l-o-w-l-y."

"Some people are lazy walking," Josey adds as she limps, arms dangling, head drooping.

"Sometimes ... you do twirls and that's being creative."

Mill's nylon soccer shorts whip and slice the air as she spins past the chalkboard.

A normal walk, heel-ball-toe, quickly resembled a bird as Josey boldly stretches her arms to fill the room with her presence. [She] breaks loose again with full pirouettes, clapping her hands, jumping wildly, singing. (Stoesz, 1995, p. 99)

From this interview it seemed apparent that decisions appeared to be made while the maker was engaged in the making process. In other words, deciding what kinds of walking are more creative than others was done WHILE walking. The physical/kinesthetic activity itself suggests possibilities with the messages contained in the movements themselves.

In the second example, a 10-year-old describes how she decorated her plaster mask (see Figure 1), indicating that both visual and kinesthetic modalities of thought guided her decisions.

"What were you thinking about when you made your mask? Can you recall?"

"Yeah. I was thinking how a dragon might look and move. Moving has to do with its looks."

"Can you tell me more about that? ..."

"Personality. The way you move sometimes tells your personality. See, my mask is a dragon, a lady dragon."

"Oh, and what's the lady dragon's personality?"

"Nice and friendly and perky. Those colors look like dragon friendly colors. The feathers on the mask look sorta perky too—up and straight. If the feathers were drooped it wouldn't be. The way the sequins glisten show a happy dragon. See, sparkly colors mean [sit up and pay attention]. You know about street signs? ... Street signs with flashy [neon] colors are supposed to attract your attention." (Stoesz, 1995, p. 103)

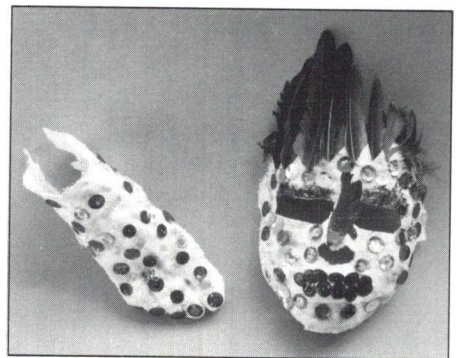
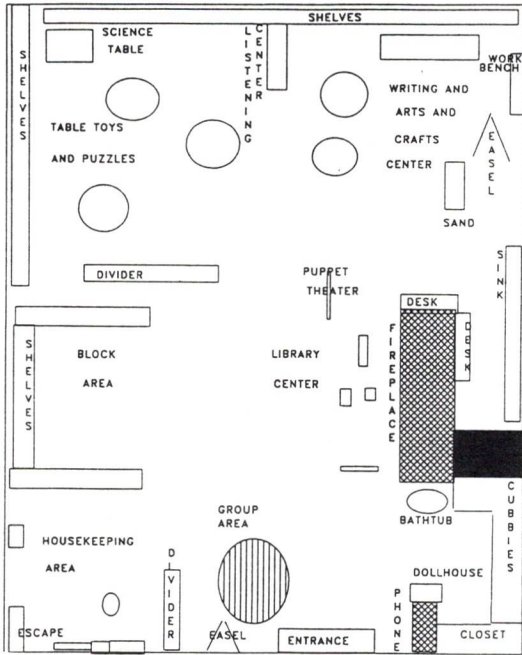


Figure 1

The kindergarten children in Cooney's study were more responsive to interviews conducted in their classroom where concrete visual cues were present and when the opportunity to draw accompanied the interview question, "What do you do in school all day?" Figure 2 shows a layout of the classroom interest centers. The following edited interview with James and Carlos reveals that James relied on classroom visual cues and drawing to show how he perceived his school experiences.



"Tell Carlos and me what you do at school."
 "I play in the block area." [James looks at the block area.] "And we play in the house area." [James looks at the housekeeping center.]
 "Can you think of anything else you do at school?" [James points to flannel board.]
 "What's that called?"
 "Flannel board."
 "The flannel board? Do you tell stories at the flannel board? What else do you do at school, James?"
 "Puzzles. And play with cars."
 "And what do you like best at school, James?"
 "Playing in the bathtub." [James looks at the reading center with ceramic bathtub.]
 "What do you do in the bathtub, James?"
 "I turn the steering wheel."
 "What do you pretend that you're doing in there?"
 "Driving a tractor." (10/22/92)

Figure 2. Kindergarten classroom layout with interest centers.

Figure 3 is James' drawing of the bathtub turned into a tractor with himself as driver.

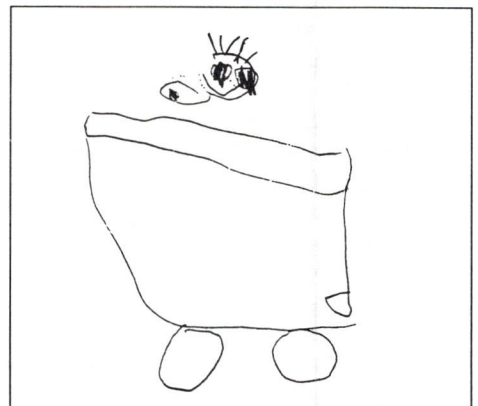


Figure 3. Drawing by James: It's a tractor. James likes playing in the bathtub with the steering wheel best. From 10/22/92 Interview with James.

One kindergarten child, Michael, and his second grade brother, David, engaged in outdoor imaginative play and simultaneously interpreted their play as Cooney watched. The event took place outside in an empty field near their house. The following is a portion of Cooney's field notes.

David and Michael climb up the dirt hill and begin their "play." First, however, David went to Ken's house on the corner to get him. He (Ken) would come out later, apparently. David puts up the three "flags" which are, indeed, very long branches of trees and he says, "I don't know of a country that has three flags!" Michael climbs up the dirt hill using a chain link that is secured somehow to the hillside. He demonstrates how he can climb down at an angle depending entirely on the chain. Michael finds a beer bottle and carries it around. He plays in the ice and water around the bottom of the hill. David uses a green plastic rake to collect mud and places it in the hole where one of the flags is. He says that the mud will harden to hold the flag there. "At night," I say, "when it freezes." David, and Michael who follows David's lead, translate their play for me. David says that the hill is a ship and they call it the "mud hill ship." The "trash" around the hill is their food and drinks. "For example," he says, "that little squeeze thing would be ketchup." He points to a caulking container. (2/04/92)

Interaction Between Process, Content, and Product

The second finding concerned the interaction between the process, the content, and the product. Two examples of this interaction figured prominently into Stoesz' research.

Children were asked to make a plaster cast of their own face and decorate it to reveal something about themselves. This was the last week of data collection and Stoesz was struggling with the dual role of participant-observer and her impending "exit" from the research site. She worked alongside the children and made a mask and accompanying poem which showed how clearly she preferred the non-objective [participant] aspects of her work to the more objective observer aspects.

You look at me, but you do not see yourself.
I am not you.
I am alone, independent, a reflection,
an illumination of all the unknowns,
without clear boundaries.
I rest myself on an inner eye that is the seed of
ideas in the mirror of my mind.
The other half of me is not a mask. (Stoesz, 1995, p. 66)

During Stoesz' data analysis stage, she experienced this interactive transformation very intimately in a second way by translating the research results (the "product") to a sculptural model made of pewter and resin. Three months of persistent and puzzling dreams containing images of mountain terrain seemed symbolic of the research processes and stimulated her to stop coding the data by the more traditional means of analysis. Instead, she drew in sketchbooks, danced, and modeled with clay and paper to design a symbolic representation (see Figure 4) of what appeared to be the most essential research results. The model symbolizes her major finding: children defined creative process as ownership in ideas, processes, and products facilitated by manipulating variables in four dialectical situations. At the time, she was unaware that she was

working through her own understandings in preferred modalities, just as the children had in the examples given previously. The process of thinking and expressing in her “native media,” so to speak, was a most enlightening aspect of her research. Stoesz wrote, “I, too, was transformed.”

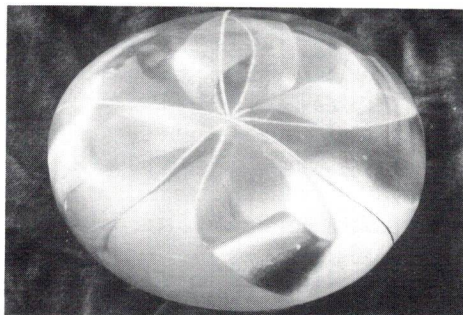


Figure 4

The children’s responses and methods led Stoesz to phenomenologically be a participant in her own research. This self-knowledge was empowering. She noted, “I *lived* Eisner’s (1991) thesis, that qualitative research *is* a creative process.”

In the process of analyzing her data, Cooney struggled with the task of interpreting what the data meant and how to communicate the findings in the dissertation. Her most effective modality of thought was the written memo, a free form of expression in which she could “play around with ideas.” In one memo, after an especially successful interview session with three young children, she used a mountain climbing metaphor to image the qualitative research process.

I have been climbing a mountain and just got above timberline this week. It feels great to see the view, as I was becoming more and more anxious that it would be overcast up here with a hidden vista. I plan to walk the divide and climb some more peaks before I begin the hike back down. Good weather is important in order to complete this trek. (2/07/93)

The memo continued with an explanation of what the mountain, the climb, the divide, the view, and the weather symbolized in the study.

I am still in the data gathering stage of my study and must be careful to watch my step and monitor the weather. This is not time to get careless about my data collection and the relationships I’ve built in the school. I must be alert to the possibility that new data may not be consistent with my insight on the ethnography of play. Or that data will emerge that bolsters this framework. Perhaps I have reached a “false summit!” ... (2/07/93)

Summary

Findings from these studies show that there are preferred modalities of expression for both participants and researchers. When data is conceived, collected, and analyzed via modalities the potential for greater understanding is enhanced.

Recommendations

The phrase "we are able to experience" is a critical one. ... What we are able to see or hear is a product of our cultivated abilities. ... All experience is the product of both the features of the world and the biography of the individual. (Eisner, 1985, p. 25)

The use of multiple modalities of thought can and should be actively encouraged in educational research, both for the participants and for the researcher(s). An educational model available to us now is the Reggio Emilia approach to early childhood education (Malaguzzi, 1993). The educational philosophy is that children must have the support to express their experiences in multiple modalities. For example, the "lion project" permitted the children to observe and investigate a sculpture of a lion, located in the central square of their Italian community. Then they represented the lion through a chosen modality. Some children sculpted, painted, or made a mask of it; they play-acted the experience and documented the entire process in many media.

The qualitative inquiry process allows, and in fact demands, that the researcher pay attention to the qualities of life experience. We experience these qualities of life through our senses (Eisner, 1993). By allowing access to the various modalities of thought, directly tied to our senses, we are expanding the opportunities for communication between the researcher and her data and between the researcher and her participants. Our consciousness comes into being and our relationships are enhanced with deeper understanding as the result of our shared perceptions of these qualities (Eisner, 1991).

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