Social Influences on the Creative Process:
An Examination of Children's Creativity and Learning in Dance

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Abstract

The purpose of this paper is to look at the influences of social interaction and learning environment on children's creativity in dance. Data from two separate studies are examined in which a total of thirty-seven fifth grade students created nine dances. This examination aims to (1) identify crucial elements of the classroom environment, which aided the students' productivity and cognitive activity; and (2) look at how working as a peer group affected the participants' creative process.

Theoretical Framework

The designs of the two studies under examination are inspired by the philosophy of phenomenological hermeneutics. This tradition relies on a close textual analysis of study participants' experiences as expressed through their interviews and reflective writing. In using this approach to research children's experiences in dance, I rely on the example of Bond and Deans (1997), Bond (2001), Bond and Richard (2005), and Cone (2005).

My particular interest in representing the child's point of view also links my work with the philosophical underpinnings of feminist, inclusionary research in dance such as Stinson (1998) or Shapiro (1998). These authors conduct research that acknowledges the child's perceptions of her own actions as valid data for analysis. Rather than viewing the creative process exclusively from the perspective of the outside investigator, this style of research accepts the viewpoint of the children who are subjects of the research. Methodologically, my studies relate closely to the work of Ference Marton (1984). Marton's work examines phenomena from educational practice, an offshoot of the parent methodology phenomenology he has termed phenomenography. Research in this tradition looks at learning in a task set by the researcher under a naturalistic situation.

Methodology

The settings for these phenomenographic studies were two elementary schools outside of Philadelphia where the author was conducting Artist in Residence projects in the schools. Artist in Residence programs allow professional artists in a variety of artistic disciplines in the visual and performing arts to integrate with school curriculum. The purpose of such programs is two-fold. Firstly, they give students an opportunity to interact with a working professional artist. Secondly, most artist in residence programs are strategically planned to augment a particular area of curriculum of interest to a cooperating teacher from a host school. For example, in my personal experience, I have numerous times been brought to a school to enhance the language arts curriculum with dance and poetry projects. These residency programs have been popular tools for curriculum integration since the mid-1960s.

Data was collected from the "core group" of each residency, sixteen fifth graders at one school and twenty-one at another. These students attended a choreographic session with the researcher once daily for the ten days of the Artist in Residence project. Students self-selected to participate in the study, providing they returned the appropriate Institutional Review Board assent forms with parent signature. Group make-up was surprisingly diverse, considering the serendipity involved in assembling its members. In school one, twelve girls and four boys participated. Twelve of the students were Caucasian and four were African American. Two

were receiving resource room support for poor academic performance and three were enrolled in the gifted education program. Five students reported that they had dance studio experience, one had participated in ethnic dance lessons, and another in musical theater. In school two, thirteen girls and eight boys participated. Of these students one was Asian, one Hispanic, and nineteen Caucasian. No information was available in school two for academic placements of the participating children. Over half self reported that they had dance experience, although the qualifications for this experience varied from formal dance training to creating dances on the playground. No patterns in the findings of the study correlate specifically to gender or ethnicity.

The students in the core group were instructed by the researcher, who was also the teaching Artist in Residence, to create a dance based on a theme. There were no examples or modeling of the process given. This was a deliberate omission to ensure that the creative process of the study participants was as authentic as possible and to eliminate the potential that the students would adopt the creative process suggested by the teacher and thereby contaminate the findings of the study. The only assistance given the children was to provide them with a large sheet of paper and markers to record their brainstorming process as they searched for a topic or theme for their dance. Core group members created dances in small groups for performances at their respective schools. Four dances were created at school one, five dances were created at school two. Subjects (or themes) created by the children include Seasons, Mystery, Dragons, Music, Growth, Stars, Basketball, Fire and Monsters.

Data collected came from four sources:

1. Videotapes of the choreographic sessions
2. Interviews with study participants
3. Children's daily journal entries
4. Brainstorming sheets created on days one and two of each study.

After transcription, the data were examined for "moments of meaning," or phenomenological instances that illuminated the phenomenon of dance creation. General categories were defined from the specific moments of meaning collected. A category is defined as a core attribute or essential quality of the phenomenon that emerges through hermeneutic interpretation (McNamara, 1999). The process of looking for moments of meaning and categories was repeated three times, bracketing previous analysis each recursion. As a result of this process, several subcategories were discovered as well. A profile developed through this analysis, which describes the detailed process of choreography for each of the nine study groups. Once the children's process was detailed, a final level of analysis focused on the interaction of learning and dance creation by searching for evidence of cognitive activity during dance

creation. This final stage resulted in a detailed enumeration of specific cognitive strategies used by the children. In total, 391 moments of meaning were identified from study one alone. These condensed down initially into 85 subcategories, which emerged as 7 major categories. These numbers are presented here to show the rich amount of data that was gathered from the children's experiences. Recurrence of a moment of meaning, or the frequency of a subcategory, however, in this qualitative research study is not an indication of importance. The fact that a behavior was present during the activity, rather than it's relative prevalence, was the focus of this study. I was interested in discovering what behaviors occur through this activity, not which were the most popular. It might be valuable, through further research, to determine what behaviors are most commonly exhibited during creative dance activity, especially when age, gender, experience and pedagogical factors are taken into consideration.

Data and Findings

Seven categories of meaning were identified from the data, each describing a part of the creative process as experienced by the children in these studies. In keeping with the phenomenographic tradition, each category is titled by language used by the study participants. These seven categories are:

1. Making Movement
2. Organizing the Movement
3. Knowing It's Good
4. The Group
5. How It Feels
6. Awareness of Audience
7. New Experiences

Each of these seven categories contains several subcategories. The categories, briefly described are as follows:

Making Movement describes the details of how the students created the vocabulary of steps and movements that were used in their dances. Some of the subcategories include *improvisation, imitation, play* and *the use of props or imagery*. The subcategory, *imagery*, for example, can be seen in the following where the children used the image of an alarm clock being put on "doze" as an example of how to alternate freezing and moving:

> MG: The part where you tapped each other and one person went, and then another person went - how did that come about?

G5: Oh - we figured it would kind of look weird if we just un-froze, so maybe we could like, you know like an alarm, you can like turn it on and it goes and then you turn it off and it stops, we kind of like thought of that. (G5-p2)

The category *Organizing the Movement* shows how the children structured the movement material they had created for their dances. Subcategories included *outside opinion, revision* and *attention to structure*, and several others. *Attention to structure* (of the formations and sequences of the dances), which took place through out the choreographic process, can be seen in the example below. The children decided who would dance and where they would go before they decided on the actual movements:

MG: Go ahead. Tell me about your dance. What have you figured out so far?

G5: We are all going to start together and then we are going to roll off- everybody but

G7. She's fall- she's like the first. And she'll roll off and then G8 will go next and do her thing. And then me, I'll do my thing and roll and then G4. And then we do a part with everyone together. (2.0)

Category three, *knowing it's good*, describes the aesthetic preferences of the dancer/ choreographers in each group. Frequently occurring subcategories include *comparison to an ideal, novelty* or *connection to music*. One common aesthetic preference was for *novelty*. For example:

G10: We were going to do something like cool and jazzy, and we came up with mystery and no one else was doing it. (Mystery-p1)

Another frequently occurring subcategory was comparison to an ideal. Students judged their dances in *comparison to an ideal* absorbed from the wider culture. This was a strong motivator, especially for the Music group, who very much wanted their dance to look like hip-hop. Mystery and Seasons wanted their dances to look "cool" or in other ways fit in with the aesthetic values of the wider socio-cultural context. Some of the preference for fitting in with the wider culture may have had to do with wanting to create a dance that would be popular with the audience. G1 noted:

>   G1: Most of the people that said they liked our dance because they liked hip-hop.
>   (Music-p1)

Sometimes the ideal students were pursuing was not that of society at large, but a personal ideal shared by the individual choreographic group. All but the Music group noted that movement was good if it was approved or agreed upon by the entire group.

The fourth category, *The Group*, details group dynamics. Four roles, *Facilitator/organizer, Critic, Loner, Compliant Follower* emerged repeatedly. These were fluid roles that a dancer would take on for a portion of time. Several students who wanted to push forward a specific idea for the dance frequently assumed the role of Facilitator/Organizer. This area will be examined in more depth in the discussion section that appears later in this paper.

Category five titled *How it Feels*, represents the students' emotional responses to the choreographic experience. Emotional responses fell into four subcategories: *Enjoyment (fun, satisfaction, pride), Fear, Embarrassment, Being challenged.*

An *Awareness of Audience* emerged as the sixth category of meaning. Students were conscious of the audience's reaction to what they were planning to perform. Responses fell into two subcategories: *Wanting the audience to remember the dance*, and *Audience is the judge of what is good.*

The final category, *new experiences,* illuminated contrasts with the students' previous experiences of choreography. *New experiences* includes six sub-categories: *Creating publicly*, *More than one choreographer*, *Self-selected group*, *Variety of dance styles*, *Movement before music*, *No teacher interference.* Several students commented that they had never before been in a dance that had *more than one choreographer*. This new experience highlighted two phenomena: the need to compromise and the individual dancer's sense of agency in their piece. As G10 explains:

>   G10: Um, I have been dancing for a long time now, but, um, this was not exactly
>   anything like what I did before now because, um, I was with my friends, number
>   one. And, um we made up the dance ourselves. So that was very different and
>   very cool. I enjoyed it very, very much and I would like to do it again. (G10-p2)

While the seven categories uncovered in the data analysis create a detailed picture of the dance creation process for the children involved in these studies, further analysis gives us even more information on how this process relates to learning in the arts, and specifically the role of cognition in the creative process. It is the author's hope that highlighting cognition will

illuminate connections between art creation and other kinds of learning. With this aim, the author re-examined the seven categories, and the sixty six sub categories associated with them, for presence of cognitive activity, defined by Howard Gardner (1983) to be "thinking and learning that involves perception and conceptualization, especially that which involves symbolic knowledge and the use of notational systems" (p. *x*).

When evaluated by this criterion, four of the categories of meaning bring to light the phenomenon of cognition during the creative process in dance. These four categories include *Making Movement, Organizing the Movement, Knowing It's Good* and *The Group.* The subcategories within these four categories that involve cognition are included in the chart found under results below.

Results

Complete data analysis of school two is still underway at the time of submission of this paper, but preliminary results indicate three primary conclusions from the studies:

1. Twenty seven of the subcategories found in the larger categories *Making Movement, Organizing the Movement and Knowing It's Good* include evidence of cognition during the creative process in dance, and a detailed description of the characteristics of that cognitive activity.

2. Some of the cognitive strategies involved in the creative process in dance, as seen in these studies, needed a group to execute, and could not be done only by an individual, as exhibited by the chart below.

3. Students engaged in not only verbal and nonverbal communication, but also a hybridized verbal and non-verbal form of communication termed in the study "active discussion." This appeared as a subcategory in multiple categories.

Chart 1.

Group and Solo Cognitive Strategies

Play	solo or group
Props	solo or group
Text	solo or group
Skills	solo or group
Altering movement by facing or timing	solo or group
Imagery	solo or group
Improvisation	solo or group
Repetition	solo or group
Attention to structure	solo or group
Responding to stimuli (external & internal)	solo or group
Dancers' abilities	solo or group
Attention to meaning	solo or group
Revision	solo or group
Comparison to a cultural ideal (wider culture & group)	solo or group
Convey Meaning	solo or group
Imagery	solo or group
Spontaneous Idea	solo
Dozing off thinking	solo
Concentration	solo
Viewing	solo
Difference between ideas and execution	solo
Previous Experience	solo
Imitation	group
Dividing	group
Active discussion	group
Contributions from many individuals	group
Outside opinion	group

Discussion

The most significant implication of these results is that to make maximal use of cognition during dance creation–that is, to make available to the children all of the above listed strategies–dance creation should take place in a small group environment. The very fact that the children were working in a group setting, as opposed to working alone, as with many creative projects assigned in a school setting, enhanced the cognitive value of the activity. All

nine groups in the study employed cognitive strategizing that would have been impossible working alone. The social nature of the study task was a significant influence on its effectiveness for cognitive development.

This social aspect of dance creation may provide opportunities for cognitive development because it is collaborative. According to creativity researchers Moran and John-Steiner (2003) collaboration is "shared creation and discovery of two or more individuals with complementary skills interacting to create a shared understanding that none had previously possessed or could have known on their own" (p 82).

Admittedly not all group projects are collaborative. According to Moran and John-Steiner (2003) the hallmarks of collaboration are long-term engagement, voluntary connection, trust, negotiation, and a jointly chosen project. This has implication for curriculum design; not all group projects in dance would fit the above requirements. Students placed into groups by the instructor and given specific required assignments may not become collaborative. For maximum cognitive benefit, the learning environment should include an open-ended creative assignment, which allows for the elements of true collaboration to develop. Open-ended group dance projects can provide opportunities within the school curriculum for cognitive development through collaboration.

The benefits of working collaboratively have also been evidenced in the literature on cooperative learning. According to Robert Slavin (1996) cooperative learning refers to teaching methods in which students work together in small groups to help one another learn academic content. While the assignment for this study did not require the students to learn content, it did contain many of the elements of cooperative learning, such as positive interdependence, individual accountability, face-to-face promotive interaction (including relying on a group for feedback, challenges and support), appropriate use of group skills and group processing (Johnson, Johnson & Smith, 1991). These activities have shown positive correlation to student achievement and attitudes about learning, particularly when compared to competitive or individualistic efforts (Johnson, Johnson & Roseth, 2010; Tsay & Brady, 2010).

Perhaps a stronger relationship can be drawn between the study assignment given here and active learning pedagogies, which include both cooperative learning and team-based paradigms. This broader category includes activities which can be described as a social and informal process where ideas are casually exchanged through student involvement and intellectual and interpersonal activities (Menges & Weimer, 1996). Most importantly, these activities require the participants to not only do things, but also analyze what they are doing (Bonwell & Eison. 1991). If the only benefit to the students participating in this study were

those gleaned from group work, then it might be possible to conclude that dance creation is another arena in which cooperative learning promotes academic success. While it seems the group effect is powerful here, it is not the only benefit seen from dance creation. Enhanced communication skills, social skills and the ability to problem solve in a group—as opposed to mastering content in a group—were also in evidence, as will be explained in the succeeding discussion points.

A second discussion point, and an area for further investigation, is the discovery of the phenomenon of "active discussion." While both verbal and non-verbal communication would be expected in a group setting in which dance is being created, all nine groups in the studies engaged in a hybridized form of communication that involved moving and speaking to illustrate points of discussion. While it could be argued that most verbal communication includes non-verbal cuing and body language, the instances that fell under this category did not use pedestrian movement or gesture. Examples of active discussion included times when students were dancing and moving in abstracted ways as illustration of their verbal argument. Students demonstrated ideas that they wanted to include in the dance, suggested formation changes and experimented with concepts while both verbalizing and moving. This phenomenon suggests that embodied creative assignments have the potential for expanding a students' expressive capacity. Students synthesized multiple forms of communication in an effort to create meaning and communicate to a peer group. It can be extrapolated that this heightened form of communication is a social phenomenon. In all instances in these studies the use of *active discussion* was facilitated by the necessity to communicate to a group.

A third discussion point centers on looking closely at the category *The Group*, and the social roles contained there. Four distinct personalities emerged from the study data: *Facilitator/organizer, Critic, Loner, Compliant Follower.* What is significant about this discovery in terms of social interactions and their effect on learning, is that all four of these roles were necessary for the process to be productive. The idealized image of children working harmoniously in small groups, would not be maximally productive, from the examples in these studies. Much cognitively stimulating activity took place around the children's discussions of aesthetic preferences and the ability of movement to convey meaning. The role of *critic* was necessary to bring about this articulation in many instances. The presence of a "nay sayer" forced *facilitator /organizers,* and sometimes *compliant followers*, to defend and analyze their choices.

Another key social role—that of the *loner—*could have brought about a significant opportunity for teaching children about learning styles. A few children in each school setting preferred to improvise alone and the come back to their small group with movement material to contribute. The most productive groups (in terms of student satisfaction with the outcome)

tolerated this activity, giving the *loners* leeway to separate from the group. The least productive groups saw the *loner's* desire to think, observe or create privately as a defection from the group and made repeated efforts to bring the "offender" back to the fold. In most cases this meant that the *loner's* process was aborted and his/her contribution to the group was lost. Because of the nature of the methodology in this study, the author's role as observer did not allow for intrusion into the process. A skilled teacher in this instance, however, would have had a clear teachable moment to point out to the participating children the differences in individuals' thinking strategies and creative styles, thereby developing tolerance and perhaps some meta-cognitive awareness.

Significance of Work

The results and conclusions from this study can be significant for educators by illuminating crucial elements of the classroom environment related to group activity, which aid students' productivity and cognition. Specifically, the fact that students were working in small groups, instead of by themselves, enhanced the variety of cognitive strategizing that the children used. This implies that embodied group creative work, if it is truly collaborative, can be of value in developing cognitive skills in children. Secondly, heightened communication skills were also in evidence through the phenomenon of active discussion, which was also only possible by virtue of the collaborative group nature of the learning task. Lastly, the continual role shifting that took place during the creative process maximized not only cognitive ability but also the opportunity for demonstrating the value of differing thinking styles to children.

Deeper understanding of the cognitive phenomena utilized by children during dance creation could aid our understanding of how dance and other embodied learning paradigms can be used to enhance teaching and learning. Our further understanding of the group creative process and its collaborative nature has implications for curriculum design. The more we look closely at children's embodied group creative process, the more we are able to craft assignments that enhance the learning environments for the participants, particularly with respect to the value of group projects.

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