The Creative Classroom Environment

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Abstract

The purpose of this study was to describe the impact of a flexible classroom environment, including the teacher and student relationship, and its role in fostering creativity in middle school students. The case study design included gathering data through interviews and observations. It was determined that democratic, workshop-based classrooms are likely to result in students being empowered to make decisions that drive their learning and lead to creative output. A change to the environment will impact the level of creativity. Implications emphasize the need for positive classroom environments, which foster collaboration, independence, playfulness, and support as well as the minimization of curricular restraints.

Keywords: creativity, middle school, classroom environment, case study

Introduction

Imagine walking into a seventh and eighth grade middle school classroom, and instead of finding rows of student desks with a teacher lecturing, you walk into a large, open-classroom setting with a busy hum of students working. Of the 22 students in the class, seven are busy working at a bank of computers against the back wall – some are searching for information on the Internet, others are creating graphs using a spreadsheet, some are creating slide shows to share information, and others are writing using a word processing program. Another two students working together at a large table in the center of the room are designing a poster display and have an array of materials laid out around them. Three additional students are spread out on the carpet, working on poster displays of their own – each designed to showcase the information students have learned while conducting personal interdisciplinary inquiry projects. Another three students have their books, papers, and art materials arranged around a couch pit – a comfortable place

for students to focus on their work. Three students choose to find a quieter work area to concentrate on their reading and math, and are settled in a small conference room off from the main work space. Four additional students are working as collaborative pairs. Their materials are particularly large and take up space on a few tables as well as the floor. There is movement throughout the room as students get up to find needed materials or to talk to a teacher or classmate. It might take a few moments to find the teacher. She is circulating throughout the room, helping students to focus and answering individual questions. She stops periodically to call a few students over to her for a targeted mini-lesson. Workshops such as these are what I saw when I observed the middle school classrooms at the ABC Charter School in Thermos, Connecticut. The true name of the school and the school's location have been deidentified in this paper. This research was part of a larger case study conducted during the school year 2010 – 2011.

While the larger study examined the interplay among student empowerment, classroom environment, the teacher/student relationship, and academic creativity, this article will focus on how teachers at the case study site provided opportunities for their students to be creative in their academic work, and the importance of the classroom environment and design. Many studies now support the importance of promoting creativity in a child's growth and development. In the Conceptual Age we now live in, creativity, flexibility, and adaptability are crucial to moving forward with the rapid pace of change. Business leaders across fields are demanding employees who are innovative thinkers with creative, open minds (Farquar, 2004). At the same time, standardized reforms have swept across the United States, in many cases bringing an end to creativity, ingenuity, and flexible thought. Hargreaves (2003) states, "Schools bereft of creativity and a profession that has lost its ingenuity are unable to create and maintain a strong knowledge economy and to help young people deal with uncertainty, work flexibly, and develop their own dispositions of creativity and ingenuity. Standardized reform has, in these cases, become the antithesis of an emerging knowledge society" (p. 115). We need to determine how to proceed in a society that is demanding a creative and flexible workforce while simultaneously calling for increasingly standardized education.

As standardized education takes greater prominence, more artistic elements are being eliminated, and teacher and student creativity is being stifled (Adobe, 2012). Numerous researchers have argued for more focus on creativity, problem solving, and higher-level executive functions (Russo, 2004; Gardner, 1993; Ivcevic, 2009; Delis, et al., 2007). Delis, et al (2007) assert that there are a substantial number of students who have relative weaknesses in rote-verbal skills such as vocabulary, reading, spelling, and math in combination with strengths in higher-level executive functions such as abstract thinking, cognitive flexibility, and problem-solving skills. These students may be hindered in their pursuit of higher levels of education due to low scores on IQ scales, standardized testing, and college entrance exams.

These tests may act as barriers to areas of study that could benefit from the creativity these students could offer.

This study focuses on the environmental context needed to encourage creativity in our classrooms. According to Csikzsentmihalyi (1996), creativity does not happen inside people's heads, but in the interaction between a person's thoughts and a sociocultural context. The context then becomes critical to the study of creativity. In fact, certain aspects of creativity – such as originality – only exist in relation to a specified norm (Barron, 1954). Csikzsentmihalyi (1996) believes the environment is so critical that it is easier to enhance creativity through a change in environmental conditions than through encouraging people to think more creatively. Andreasen (2005) asserts that there are five circumstances that must be present to produce a cultural environment that nurtures creativity. The first criterion is one of intellectual freedom where evolving ideas are free to flow, develop, and be shared. The second criterion is having a critical mass of creative people, so that there can be an intellectual exchange and growth of ideas. The third criterion is a free-flowing, fair, but competitive atmosphere where people are driven to do their best. The fourth criterion is the existence of mentors who provide direct nurturance and support to the creative process. The final criterion is having the economic wealth required to acquire the necessary intellectual resources and raw materials.

According to Ivcevic (2009), creativity transpires within a specific space and time. The space includes both the physical and social environment, while the time includes a developmental moment on the individual level and a historical moment on the social level. She maintains that a person's creative potential is influenced by the environment which may change people's perception of freedom on a task. This includes environmental situations as large as one's culture as well as a school district or classroom. Ivcevic (2009) points out how educational systems can differ greatly in how much emphasis is placed on basic skills and standardized testing versus more autonomous, research-oriented work. Many of the best teaching practices described as part of the constructivist or democratic classroom are the same as those which are suggested for encouraging student creativity. Valuing student input, encouraging imaginative thought, looking at situations from various perspectives, as well as encouraging curiosity and questioning as the basis of inquiry are all reported as leading to improved student creativity (Torrance, 1977; Woolfolk & McCune-Nicolich, 1980; Amabile, 1996; Soh, 2000). Collins and Amabile (1999) recommend that teachers allow students to choose what to work on to encourage students to seek out questions that they are highly intrinsically motivated to pursue. For example, students can be allowed to choose their own topics for individual or group projects. Katz, Eilot, and Nevo (2014) assert that this autonomous motivation can also reduce student procrastination and increase learning. Amabile (1996) maintains that children should have the freedom to decide on specific problems to investigate, which materials and methods they will employ and

what their sub-goals will include. Sternberg (2015) asserts that students must take control of the learning process. The author believes that teachers can support this through the creation of a climate which encourages sensible risk-taking and responsibility. Amabile (1996) believes that teachers' acceptance of autonomy in their students positively relates to the students' preference for challenge, curiosity, and desire for independent mastery. Amabile maintains that teachers should encourage independence and self-direction in their students to best enhance their creativity.

Method

This case study was conducted at the state-granted public ABC Charter School located in the small urban setting of Thermos, Connecticut. According to the most recent available United States Census (United States Department of Commerce, 2000) at the time, Thermos was home to 36,177 residents and its median income was $41,215 in that year. ABC operated as its own district run by its own Governing Board. It was funded through a per-pupil allotment from the Connecticut State Department of Education. Students at ABC were chosen by lottery and came from Thermos as well as from many other surrounding towns. Due to classes being comprised of multi-age groupings, students remained with their teacher for two consecutive years. The ABC maintained a rigorous curriculum that adhered to state standards (ABC Charter School Charter Document[1]).

Independent learning was fostered through a developmental approach. The social curriculum, service learning, and student research were all focus areas within the curriculum. Students were represented in a variety of school governance bodies, including student and school councils. Students of all ages conducted long-term research investigations, integrating a variety of curricular areas. Curriculum integration, including the arts, was fostered throughout the day. Instruction was driven by assessment which was ongoing and portfolio-based. Progress was reported to families through narrative report cards and student-led conferences. The integrated, workshop-based model of the middle school at ABC grew out of the open-classroom model. Amabile (1983) cites Horwitz (1979) in his definition of an open classroom as "a style of teaching involving flexibility of space, student choice of activity, richness of learning materials, integration of curriculum areas, and more individual or small-group than large-group instruction" (Amabile, 1983, p. 162). Lippman (2010) and Imms, Cleveland, and Fisher (2016) emphasize how instructional pedagogy must inform the structure of the classroom environment, rather than trying to match instruction to an existing structure.

In the ideal educational setting described by Imms, et al. (2016), teachers utilize mobile walls and furniture to create flexible learning spaces which can be reconfigured to match intentional instructional purposes. In a

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[1]Note: To protect the anonymity of my field site, I am not citing the official reference of this document.

systematic review of the literature, Davies, et al. (2013) conclude that there is reasonable evidence across a variety of studies to support the idea that student creativity can be enhanced through the flexible use of space and time, including a sense of openness and spaciousness. Amabile (1983) describes the open classroom environment as having an atmosphere for developing critical inquiry, curiosity, exploration, and self-directed learning, without grading or authoritative teaching as well as having less structure, fewer teacher-initiated constraints on performance and more individualized effort.

Due to the complexity of the qualitative data which were collected, this study focused on a small group of eleven students and their teachers. Student participants were seventh and eighth graders as these are the grade levels which defined ABC's middle school population. Out of a total of 66 middle school students, 11 were chosen. The student participants were a sample of convenience since they were the students who returned their consent forms signed by their legal guardians. Four of the 11 focus students were female. Three of the 11 focus students were eighth graders, the remaining eight students were seventh graders. Two of the 11 focus students were of minority status according to their guardian's self-report on school records. According to school records, three of the 11students received free or reduced lunch assistance and three of the 11 students received special education services. Interviews were conducted with all four participating seventh and eighth grade teachers. These interviews focused on teachers' perceptions of student empowerment and creativity in their classrooms and how they relate to their teaching and relationships with students. These interviews were approximately 45 minutes each. These qualitative data were coded using a combination of open coding and selective coding methods that were informed through the literature review (including, but not limited to, immediacy behaviors and creativity fostering behaviors).

Interviews were conducted with all 11 of the focus students. These interviews focused on students' perceptions of student empowerment and creativity in their academic work. Students were asked to comment on types of creativity approaches used, levels of comfort with creativity-based activities, any constraining factors, any motivating factors, as well as their relationship with their homeroom teacher and other teachers within the school. Student interviews were approximately 8-15 minutes each. These qualitative data were coded using a combination of open and selective coding methods that were informed through the literature review.

Direct observations have the benefit of being contextual and reality-based. Each of the four middle school teachers was observed two times during a directed lesson. Each of the three homeroom teachers was observed an additional time during a workshop period. These observations focused on examining the student/teacher relationships for elements of student empowerment and evidence of creativity in academic work. Guidelines for the observations were created to allow for categorical coding. Categories needed to maintain fluidity and flexibility to allow for emergent findings

and opportunities for open coding. Verbal and nonverbal immediacy behaviors were observed. Frymier and Shulman (1994) describe immediacy as perceptions of physical and/or psychological closeness. Examples of nonverbal immediacy behaviors include eye contact, smiling, moving close to students, using vocal variety, and using positive gestures. Verbal immediacy behaviors include such actions as calling students by name, using personal examples, using humor, asking for students' opinions, and having conversations with students outside of class. Frymier and Shulman's (1994) study of student empowerment with 470 undergraduate students found verbal and nonverbal immediacy behaviors were significantly and positively associated with student empowerment.

A more recent study by Houser and Frymier (2009), examined the relationship among student characteristics, teacher communication, and student empowerment. The researchers found the primary predictor of student empowerment to be teacher clarity. Mazer (2013) revealed similar findings indicating the importance of teacher clarity in his research relating teacher immediacy behaviors to student engagement. Finn and Schrodt (2012) examined teacher communication, clarity, and student empowerment. The researchers emphasize the importance students' perceptions of teacher clarity in developing student empowerment. Given the importance of teacher communication, the first observation session in this study took place during classroom instruction time and utilized videotaping to ensure accurate data collection. A checklist of verbal and nonverbal immediacy behaviors was used during the categorical coding process. The observation session also included additional note taking allowing for the use of open coding to further enrich the contextual story. The Checklists of Verbal and Nonverbal Immediacy Behaviors used in Observation #1 were quantitatively tallied and displayed. Descriptive statistics were utilized to provide frequencies and measures of central tendency. These data were analyzed for patterns and trends. Relationships among the various constructs were analyzed through the comparison of mean data. Similarities and differences among the various classroom observations were examined through comparative analysis. Anecdotal notes were analyzed and used to help describe and more clearly illustrate the contextual story.

The second observation session took place during classroom instruction time and was audio recorded to increase the accuracy of the data collection. The observation session included anecdotal notes noting exact words and behavioral descriptions in addition to using a checklist based on Soh's (2000) Creativity Fostering Teacher (CFT) Behavior Index Observation Scale. This instrument provided structured behavioral descriptions based on Soh's nine identified creativity fostering behaviors: independence, integration, motivation, judgment, flexibility, evaluation, questioning, opportunities, and frustration. In addition, anecdotal notes also allowed for additional

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[1]Proportions sum greater than 1.00 because several teachers shared multiple influences per answer.

open coding as deemed necessary to further enrich the contextual story. The Creativity Fostering Teacher Behavior Index and Observation Forms used in Observation #2 were quantitatively tallied and displayed. Descriptive statistics were utilized to provide frequencies and measures of central tendency. These data were analyzed for patterns and trends. Relationships among the various constructs were analyzed through the comparison of mean data. Similarities and differences among the various classroom observations were examined through comparative analysis. Anecdotal notes were used to help describe and more clearly illustrate the contextual story.

The third observation session took place during an open workshop activity block, rather than during classroom instruction time. The flexible workshop block at the case study site was a time for students to work in a self-directed manner on a variety of tasks. During this time students could be found working independently, with peers, or with teachers. This third observation was broken down into three actual sessions, each session focusing on three or four of the identified students. This allowed for students to be observed when they were in a self-directed environment, enabling specific focus on the empowerment constructs. Anecdotal notes were taken during these sessions, allowing for holistic open coding and emergent patterns, trends, and findings. Periodic classroom sweeps were conducted at regular intervals to analyze student and teacher's time on task. The anecdotal notes collected during Observation #3 were analyzed and used to help describe and more fully illustrate the contextual story.

Results

Teacher interviews were criterion-coded using the creativity-enhancing criteria of independence, integration, motivation, judgment, flexibility, evaluation, questioning, opportunities, and frustration. Opportunities and motivation incurred the most frequent mention, with each being referred to 40 or more times. All four teachers discussed ways they offered their students opportunities for being creative as well as cited creative opportunities and choices as a prime motivator for students. Teacher #1 stated, "If they're able to put their own spin on it, do something they want to do with it, it's going to keep them engaged, it's going to keep them learning more, it's going to make it more meaningful to them. And I think if something is more meaningful, you're going to remember it more." Teachers also acknowledged that there is some content that all students need to know and some times when learning is not as creative. Teacher #3 stated, "My biggest struggle is . . . getting these kids to do the hard work, the heavy lifting, . . . student empowerment is fun when they're doing things that interest them, they're driven, they're motivated, but when they're doing things that aren't very much fun but need to get done so you can move onto the fun things, that's a lot harder." Again, teachers need to work to find a balance in the learning environments they create for their students.

The interviews were open-coded. Numerous patterns were noted across the teacher interviews. Not surprisingly, coming from a school where student empowerment and creativity lay at its core philosophy, all four of the teachers were overwhelmingly positive in their discussion of student empowerment and creativity. Each teacher discussed ways that he or she nurtured these elements in their classrooms, both in and outside of the arts. All four of the teachers cited the students' personal research projects as the primary avenue of fostering both student empowerment and creativity. Each teacher also mentioned the importance of tapping students' multiple learning styles or intelligences. Learning styles reflect patterns and preferences that can be used to inform teaching and learning (Vaishnav, 2013). Vaishnav (2013) emphasizes the importance of varying instructional activities to reflect the multiple styles. The importance of truly knowing your students and having a positive, trusting relationship with them was also mentioned by each of the teachers. Teacher #2 described the importance of this when stating, "I feel like education is not so much about learning things and figures and facts, it's about a connection that you have with your teacher, a connection that you have with other students in the class. It's all about relationships. That's . . . the fundamental piece of an educational environment." Another pattern that recurred throughout the teacher interviews was the importance of the tumultuous stage of middle school students – at once needing to spread their wings and push for independence and at the same time wanting to be accepted as part of the crowd, still wanting to play like a child but with a newfound embarrassment of not wanting to appear different, and needing to make their own mistakes, but at the same time still needing guidance and support. Teacher #1 stated that at the middle school level, "it is harder for kids to step outside that box. In middle school they're very conscious of the other kids, what the other kids are doing, thinking, and what they're going to say." Teacher #2 also discussed this issue stating, "I think that overall, middle school is a very shaky time in terms of your self-image, you know it's a time of bravado and puffed-up-ness, but their egos, they act like they're on fire, but really their ego is this candle flame that goes out at a puff . . . as a general rule, kids are kind of shaky about who they are and what they're doing in middle school." Teachers discussed helping students make good social as well as academic choices and helping them to navigate peer issues.

Despite the teachers' unanimous support of student empowerment and its critical impact on students' learning, there was also a noted pattern of concern regarding another balancing act – one between student empowerment and students' feelings of entitlement. Teacher #1 stated, "You are empowered, but with that empowerment comes responsibility. (Sometimes) they feel like they're entitled to this without the responsibilities that come along with it." Another area that teachers struggled with was outside constraints to classroom creativity – constraints largely from societal and political restrictions and requirements. Teacher #4 discussed current certification laws

as one stumbling block to teaching middle school in an interdisciplinary fashion, and instead looking at middle school students "as young high schoolers learning discrete chunks of information, math, and science, social studies, without any kind of overlapping or looking at common threads." Teachers also discussed the pressures of standardized testing. Noting the importance of teacher and school accountability, Teacher #1 stated, "I think that testing itself does affect the creativity piece. Do we have failing schools in the United States? Of course we do. Is more testing the way to make that better? I don't think so . . . I think the pressure that is put on testing and the teachers in those schools, it really is not life or death, but open or close. I mean, it's come down to if you don't bring this up; we're going to close down your school. So it makes them focus more on the test . . . and to make them not do what they know is good teaching because they have to pass the test is just perpetuating a bad situation." Teachers also discussed the importance of schools being smaller and more personalized, especially as students enter the turbulent middle school and high school years.

Student interviews were criterion-coded using the creativity-enhancing criteria of independence, integration, motivation, judgment, flexibility, evaluation, questioning, opportunities, and frustration.   Students also frequently discussed many of the creativity criteria throughout their interviews. Coding revealed the following general categories: students view having choice and working at their own pace in a positive manner, students need to feel supported by their teachers to balance the risks they take when making choices, students view a positive relationship with their teacher as important and want their teachers to know them, and students enjoy being creative and feel they are allowed time to be creative in school.

In addition, categories supporting creativity emerged that included a positive environment which fosters collaboration, independence, playfulness, and support as well as the minimization of outside controls and curricular restraints. These categories and patterns led to the following theme: Students recognize their need for a positive school and classroom environment as well as their need for a positive relationship with their teachers. Most students feel empowered in their democratic, flexible learning environment and feel they have the opportunity to be creative. Students want their teachers to know them as individuals and work in a place where their feelings and need for play is valued, where they can work without constraints, and where they will feel supported.

Classroom Observations #1 - #4 focused on verbal and nonverbal immediacy behaviors. Figure 1 displays the results of the first set of observations which were focused on verbal and nonverbal immediacy behaviors. The presence of these behaviors is reflective of positive communication patterns between the teacher and his or her students. Each of the teachers studied demonstrated at least 73% of the verbal immediacy behaviors during the class session. These verbal immediacy behaviors include such actions as using humor, addressing students by name, providing

Figure 1. Student Responsiveness to Intervention and Tier Placement Decision Model
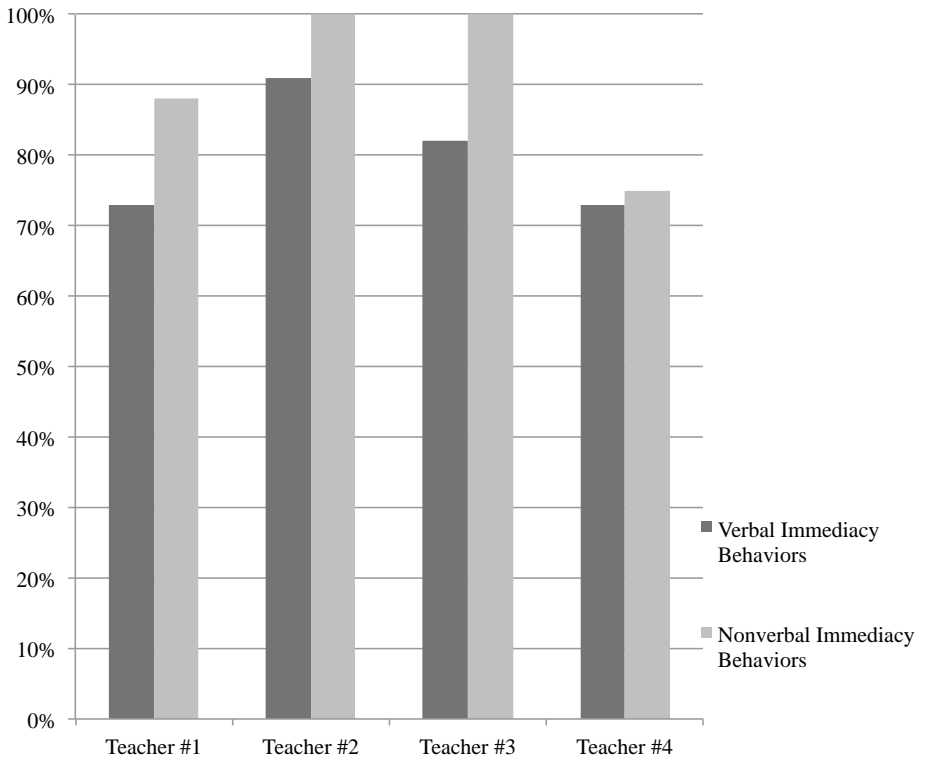

feedback, and praising students. The nonverbal immediacy behaviors were observed even more frequently, with no teacher scoring below 75% of observed behaviors. These nonverbal immediacy behaviors include such actions as smiling at students, moving around the classroom, gesturing, and having a relaxed body posture.

The second set of observations (#5 - #8) focused on documenting teacher behaviors which foster creativity. Those behaviors being observed were categorized as: fostering student independence, integration of student ideas, motivating students, judging student ideas, allowing for flexibility, evaluating student work, questioning, providing opportunities, and supporting students when frustrated. Figure 2 on the next page documents the total incidence of creativity fostering behaviors across the four teacher observations.

As there were five possible behaviors to observe for each of four teachers, the total amount possible for each category is 25 total documented observations. Observations #9 - #11 focused on observing students during workshop time. This was a time during the students' school day when they could make their own decisions and choices about what they would work on and where they would work. The focus students were observed during this

Figure 2. Classroom Observations: Incidence of Creativity Fostering Behaviors
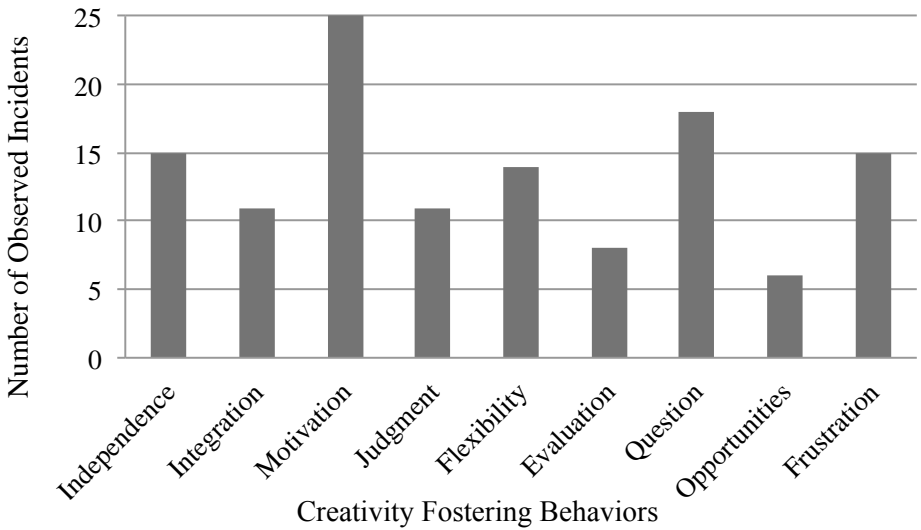
time of the day to determine how effectively they used their time. Sweeps of the classroom were conducted at regular intervals and it was noted how the focus students were using their time. The amount of time the classroom teacher spent interacting with students during the observation was also noted. All three of these observations (#9 - #11) found students busy at work doing a wide variety of activities – interdisciplinary inquiry, writing, technology, art, math, reading, etc. – and engaged in a variety of social contexts – small groupings, with or without a teacher, individual or partner based work, etc. There was movement throughout the room and a hum of busy workers.

Discussion

In hindsight, the design of this study could be strengthened with the addition of a focus group interview with the participating students, and perhaps additional students. A focus group interview could enrich the data gleaned from the individual student interviews by helping to put students in a more relaxed atmosphere with their peers where they would be able to expand and build on one another's responses. This could potentially lead to more detailed information regarding students' perceptions of the democratic classroom, student empowerment, student / teacher relationships, and creativity. In addition, this study could be enriched with further observation of the interactions between teacher and student. It would be interesting to examine the more informal interactions that occur between teacher and student throughout the school day -- not only in the classroom setting, but in-between classes, at lunchtime or recess, or in any sort of "downtime." These

informal interactions would likely be more relaxed, personalized, friendly, and comfortable than those interactions relating specifically to classroom activity. These interactions are also critical to the development of a positive teacher / student relationship.

Despite the limitations of this study, the findings reveal a strong message for educators, policy makers, and researchers. Students at ABC enjoy being creative and feel they are allowed time to be creative during school. The most opportunities for empowering and creative activities seemed to occur during flexible workshop blocks, rather than during content-focused classes. Students participated in a broad range of activities during workshop blocks and approached their work using a wide variety of physical and social arrangements. Most of the focus students were on task and used this time effectively. A positive environment of collaboration, independence, playfulness and support was found to contribute to students' ability to be creative. Keeping outside controls and curricular restraints to a minimum also supported students' creative endeavors. While this case study occurred in only one school environment, it is one which can be considered successful, at least in terms of student empowerment and creativity levels.

The case study site was a democratic, open classroom environment based on constructivist beliefs. This setting included a caring community of educators who took the time to get to know their students on an individual basis. There was time for both collaboration and independence, playfulness and responsibility were both valued, personal feelings were acknowledged and supported; and outside controls and curricular restraints were kept to a minimum. It is in this kind of environment in which all educators, and all those who impact education, must work together to provide for our children. Maintaining a balance with outside controls, such as standardization of curriculum, standardized assessments, and high-stakes accountability practices is desirable. This can be a challenge in today's educational climate, but a challenge which will hopefully inspire creative response rather than a one-size-fits-all educational package. Seelig (2012) notes that despite the many rules and guidelines that are put into place with the goal of improving performance, oftentimes they accomplish the opposite -- lowering morale, creating controlling environments, and stifling creativity. Today's fast-paced world demands a workforce that is driven, internally motivated, and creative. We know that our democratically-based classrooms can teach our students to become that future workforce.

The importance of the environment to the creative process cannot be overstated. Seelig (2012) states that "the spaces in which we live and work are the stages on which we play out our lives" (p. 87). The author goes on to describe how kindergarten classrooms are generally filled with colorful, stimulating materials with an open design; this type of classroom tends to diminish as children get older. Students in middle school, high school, and then college have increasingly barren rooms, often rows of desks, and more lecture format. Students have moved from a stimulating, creative

environment to an environment which may actually crush one's imagination. While creativity can certainly exist in any environment, to foster and cultivate its existence, students must be part of a relaxed atmosphere and be afforded opportunities to play with ideas. Having the opportunity to play and experiment with concepts and materials was discussed at length by Seelig (2012), as well as mentioned by the students and teachers in this study. It appears that students demonstrate more creativity in their inquiry projects because the projects themselves are interdisciplinary and long-term. Students are allowed a chance to play, to pursue their own questions, experiment with various ways of sharing their learning, and examine concepts through a variety of lenses. Students experiment with what they are learning. This is especially observed in how they visually represent their information. Students need opportunities to do this in all subject areas as well as with additional connections across disciplines. This study emphasizes the need for educators, lawmakers, and societal partners to work together in transforming our schools and classrooms into democratic, flexible environments with a supportive, creative culture. Findings should serve as an eye-opening call to lawmakers in their quest for accountability – standardization and high-stakes testing is not the answer – we need to think creatively in our response to the critical need for accountability. ∎

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