
Reconceptualizing the Role of Creativity in Art Education Theory and Practice

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Reconceptualizing contemporary notions about creativity in visual arts education should be an important issue in art education today. Currently, creativity may not be a primary focus at National Art Education Association conferences or in its publications. There are recent indications that art education is a site where creativity can be developed and nurtured for all students with emphasis on both individual processes and cultural practices. It is advocated that through critical analysis of concepts related to art education and creativity that research and practice can be developed to cultivate creative education for all art students. Topics discussed in this article, related to reconsidering creativity, include the history of creativity in art education, definitions of creativity, assessment of creative processes, dispositional factors and creative individuals, cultural variability and creativity, and educational interventions that promote student creativity.

Often when I tell people I am an art educator an immediate response is, "Oh, you deal with the creative part of schooling." I expect that in the minds of the general public, and in the field of general education, studying the visual arts is synonymous with creativity and is the place where creativity should be located in public schools. What is also conjured up is a vision of students having a grand time creatively expressing themselves by playing with a variety of media.

It appears that the general public places value on the role of creativity in contemporary education. In the April 2008 issue of the *NAEA News*, a headline, "National Poll Reveals Need for Creativity, Imagination in Public School Curriculum," caught my attention. Results from a national poll conducted by Lake Research Partners, supported by Arts Education Partnership research, demonstrated that:

Americans are concerned that we are falling behind as a nation and that imagination, innovation, and creativity have been the foundation that moved the United States into a world leadership role ... To maintain our competitive edge, we need to balance instruction, encouraging our children to be creative and develop their imaginations. (p. 7)

In this survey, those polled felt that the United States devotes less time than other nations to developing creative and innovative skills and parents thought that creative skills could be taught with an outcome of helping students lead successful lives.¹ How do art educators and those closely associated with art education value the place of creativity in present-day visual arts education?

¹ See <http://www.theimagination.net> for more information about this poll.

NAEA Convention and Publications

The 2008 National Art Education Association (NAEA) annual convention is a good place to begin exploring how creativity is viewed in the field of art education today. The theme of this convention was "Innovations in Teaching,

Learning, and Leading.” A dozen of the 117 exhibitors’ booths, where art materials and resources were sold and distributed at this convention, advertised creativity as being an integral part of their programs, resources, or media. Emphasis in the main, but not exclusively, was on inherent creative possibilities of media and programs and developing student creativity. Examples ranged from topics such as “renewing the creative spirit” by having art teachers participate in media workshops; using high quality art supplies for achieving “a world of imagination,” “celebrating creativity” by building student self-esteem through promoting student artwork for parents to purchase; “creativity express” where making animated movies and games help “develop creative kids;” and books promoting “visual literacy” by developing students’ skills of “observation, reflection, and creation.”

In the 1023 sessions at the NAEA convention, there were 16 sessions in which the concept of creativity in art education was mentioned in either the title of a presentation or its description in the convention program book.² These sessions could be found across many divisions, workshops, and affiliates with a notable exception of creativity not being mentioned in any of the titles or program descriptions of the 58 research sessions. The 16 sessions focused on creativity from many different perspectives. Of these, three sessions (Curriculum and Instruction, Middle Level, and a Secondary divisions) sessions included integrating creativity with other subjects to produce “creative results.” Creativity and its role in healing and teaching special populations was the topic of three sessions (one in the Museum division and two in Issues Group: Special Needs). In a fourth session (Curriculum and Instruction), going “beyond creativity and empathy” to teaching art disciplines to special student populations was advocated. Creative strategies were presented in two sessions (both in the Museum division) as a means for experimentation, producing best practices, and developing leadership in museum settings. In one session (Secondary), participants in the 2007 NAEA Academy for Creative Educators shared how this program impacted their teaching practices. Creativity was used to promote art education standards in one session (Higher Education) and as a form of resistance through art making and writing in another (Issues Group: Women’s Caucus). In two sessions (Higher Education and Curriculum and Instruction), “creative learning” and art making processes for professional development were highlighted. Creativity was described in two other sessions (Curriculum and Instruction and Higher Education) as a specific mode of thinking and behaving including fostering innovative art learning through creative thinking and creative problem-solving exercises.

Due to the small number of presentations at the 2008 NAEA convention about the topic of creativity, I decided to search NAEA’s book list for 2007-2008³ and the two NAEA sponsored journals, *Art Education* and *Studies in Art Education*, to see if creativity was included in any of these publications. Of the 100 books on NAEA’s list, there are three that make direct reference to teaching about creativity. Published in 1968, one book, edited by Brittain, is a retrospective compilation of Viktor Lowenfeld’s speeches from 1946-1968 that evidences his concern about the importance of creative self-expression in

² Note that sessions that referred only to creating as making artwork were not counted as directly related to the topic of creativity.

³ NAEA Books 2007-2008 publication listing in *Art Education* (November, 2007), 6 (6) 1-15.

education. A second book, authored by Karnes, was published in 1979 and contains 45 art lessons designed to develop preschool students' "desirable" social, emotional, and intellectual "behaviors" for later school success. The most recently published book is Szekely's (2006) in which he advocates "creative" art teachers use creative ideas from home and play that encourage children to bring their own ideas about artmaking without allowing adult art lesson plans or teaching about adult artists to dominate their art learning. Ideas such as Szekely's were popular during the Progressive Education era and persist to some extent in art education practices today. These three books contain notions about creativity that represent thinking about this topic that needs to be reassessed and revalued in light of current art education theory and practice.

One article, published in 2007 in *Studies in Art Education*, was related to creativity. In this article, Freedman referenced Florida's (2002) ideas about the rise of a creative class and the growing number of jobs in the United States that now depend on creative responses to political, economic, and cultural demands. In our post-industrial society and information age, Florida explained that creativity is multidimensional in fields in which artists, entertainers, and cultural producers are involved. Three kinds of creativity that Florida cited were technological though innovation, new products and ideas, and economic entrepreneurship creativities. Freedman posited:

In the past, student artistic production has been characterized by student self-expression. In contemporary contexts, creative production may need to be thought of less as creative self-expression and more as the development of cultural and personal identity. (p. 211)

She called for a reconceptualization of creativity "as an act of leadership as well as the expression of an individual" (p. 205).

As evidenced by books published by NAEA and at the NAEA 2008 convention sessions as well as by exhibitors' wares, creativity mainly has been associated with notions of self-expression not necessarily related to the cultural contexts in which art is produced. Past and postmodern notions about creativity need to be revisited to explain how they have potential to become an important part of contemporary art education theory and practice. I will present five topics that view creativity through a new art education lens. Through discussion of such topics, I hope that a critical dialogue can begin that addresses current concerns about creativity and art education for all students.

Creativity and Its History in the Field of Art Education

Creative self-expression in art education was a child-centered approach that had its roots in psychology that was dominant in the field as early as the late 1930s and lasted for over 50 years. The core of the creative self-expression movement was to develop each student's inherent creative and expressive abilities. Creativity was regarded as being innate and developing naturally without imposition of adult interventions. A teacher's role in a visual arts program was to provide motivation, support, resources, and supplies, but not to interfere directly in students' artmaking activities. There was an intense interest in

creativity, both nationally and internationally, evidenced by art education books first published in the late 1930s and 1940s⁴. The early 1980s witnessed establishment of the Getty Center for Education in the Arts with its emphasis on a subject-matter-centered approach that fostered excellence in art education through attainment of skills and understandings in art disciplines (Clark, Day, & Greer, 1987; Dobbs, 1988; Smith, 1989).

Whereas creativity in the middle of the last century was viewed as a comparable ability particular to individuals no matter what their origins or where they resided, more recent conceptions acknowledge creativity as a social construct. In art education in the late 1980s and early 1990s, there was a focus on community-based art education that emphasized local settings in which art was produced individually as well as collectively around concerns for society as a whole (Ladson-Billings, 1995; Okiakor & Ford, 1995). At this same time, society-centered education and multicultural art education, which also addressed general needs of students from a wide variety of ethnic, cultural, and racial backgrounds, became popular (Berube, 1994; Cotter, 2001; Diaz, Massialas, & Xanthropoulos, 1999). In the late 1990s, in an expanding technological world, global art education and intercultural art education approaches to teaching came to the fore. In this art education orientation, understandings about a variety of peoples and their beliefs and values worldwide were underlined (Davenport, 2000).

Today, when artworks are made and displayed publicly, they have potential to supply opportunities for thinking and learning about the visual arts as part of individual processes, cultural practices, and technological systems for communication. There now is a groundswell in art education of a society-centered approach to art education that focuses on visual culture. Emphasis in this approach focuses on how pervasive images and objects can play major roles in providing students with knowledge about the world outside and beyond their own personal experiences (Duncum, 2002a, 2002b). In this sense, visual culture implies that processes and products of culture are studied in relationship to a variety of contexts that are socially, politically, economically, culturally, sexually, age-based, and racially oriented (Bolin & Blandy, 2003; Freedman, 2003a, 2003b; Wilson, 2003).

Another contemporary art education movement, arts-based practice, considers sites for inquiry that have as a foundation studio-like theories, practices, and contexts used by individual artists in particular social settings (Barone & Eisner, 1997; Brown, 2000; Sullivan, 2004, 2005). Sullivan (2005) presented a model for arts-based research in which an artist readily adopts roles of both practitioner and theorist engaged in creative inquiry that not only results in an individual product, but also is mediated by both community settings and what currently exists globally within similar genres. Project Zero at Harvard⁵ grounds its Studio Thinking Framework in praxis based on case studies through observation and analysis of teaching in the visual arts. This project includes eight Studio Habits of the Mind that are dispositions, inclinations, or sets of

⁴ D'Amico's *Creative Teaching in Art* (1942), Cole's *Arts in the Classroom* (1940), Viola's *Child Art* (1942), Lowenfeld's *The Nature of Creative Activity* (1939), and *Creative and Mental Growth* (1947) to name a few. The 8th edition of *Creative and Mental Growth* (Lowenfeld & Brittain, 1987) continued to be published into the late 1980s.

⁵ See <http://www.pz.harvard.edu/Research/StudioThink.htm>

behaviors applied to life tasks that extend beyond teaching about techniques and support development of "serious thinking dispositions that are valued both within and beyond the arts" (Hetland, Winner, Veema & Sheridan, 2007, p. vii). These artist-based and visual culture approaches to art education have potential for developing conceptions of creativity and creative processes as bases for research and construction of new pedagogical paradigms and practices in art education.

Definitions of Creativity

Lack of agreement about a common definition of creativity may undermine consideration of the concept being included in school curricula by practically minded school administrators (Coleman & Cross, 2001). Many contemporary psychologists and educators agree that creativity is a complex process that can be viewed as an interactive system in which relationships among persons, processes, products, and social and cultural contexts are of paramount importance (Csikszentmihalyi, 1996; Feldman, 1999; Gruber, 1989; Sternberg, 1999). All creative work, according to Sternberg (1999), happens in one or more domains. People are not creative in a general sense; they are creative in particular domains such as the visual arts. Talented individuals fit well in certain domains of knowledge within their own cultures and are recognized as highly competent by members in their fields of expertise (Csikszentmihalyi, 1996; Feldman, 1982; Gardner, 1999; Winner & Martino, 1993). Creative persons, however, often do not fit easily within a domain of knowledge, and it is only after much time and effort that they may be able to establish a body of work that comes to be valued. Creativity from this point of view is an individual characteristic as a person reacts with one or more systems within a particular social context.

Different conceptions about the relationship between intelligence and creativity, however, make it difficult for agreement to be reached about a common definition of creativity. Some researchers assert that to be creative, a person needs intelligence, but not all intelligent people have high creative potential (Davis & Rimm, 1998; Renzulli & Reiss, 1985). MacKinnon (1965) argued that a basic level of IQ of about 120 is necessary for creative productivity, although some researchers posit there is no direct relationship between creativity and intelligence. Sternberg (2001), however, differentiated between intelligence and creativity and viewed intelligence as advancing societal norms and creativity as opposing societal norms and proposing new norms. As a result of case studies of adults who achieved success in the arts and sciences, Feist (1999) concluded that giftedness, measured by high IQ scores, might not be a good indicator of adult creative achievement, and that the relationship between creativity and intelligence was small as most creative people do not conform to conventional ways of knowing.

Many scholars concur that creative achievement is reflected in production of useful, new ideas or products that result from defining a problem and solving it in a novel way within a particular cultural context (Hunsaker & Callahan, 1995; McPherson, 1997; Mumford, Connelly, Baughman, & Marks, 1994; Wakefield,

1992). There is, however, another source of difficulty about defining creativity in that a number of scholars distinguish between expert, adult creative acts and those of children. Some think that children can demonstrate talent in a number of areas, but cannot be creative because creativity involves changing a domain and ways of thinking within that domain (Csikszentmihalyi, 1996; Feldman, 1999; Winner and Martino, 1993). A case can be made, on the other hand, for differentiating creativity at an individual level as a person solves problems in daily life at a societal level that can lead to new findings, programs, movements, and inventions (Csikszentmihalyi, 1996; Sternberg, 1999).

It would not be productive in art education to adopt the point of view that children and students cannot be viewed as being creative. Then, there would be no reason to include any concepts related to creativity and creative behaviors in art education theory or practice. Some researchers hold a position that nearly everyone has some creative ability and this potential should be supported in educational settings (Parkhurst, 1999). From such a point of view, creativity can then be viewed as what is creative for an individual locally rather than emphasizing changing the society in which he or she resides.

Assessment of Creative Processes

In educational contexts, interest in practical applications of creative processes have resulted in development of means to measure creativity even though consensus about a theoretical basis for defining creativity has not been reached. Although techniques for measuring creativity are plentiful, each process presents an incomplete or diverse picture of creative processes (Coleman & Cross, 2001). Standardized tests, rating scales, checklists, and work-samples have been used for studying student creativity and creative processes (usually without consideration of their educational or cultural backgrounds). It is suggested, however, that multiple measures be used to make decisions for assessing creative processes (Clark & Zimmerman, 2001a, 2004).

During the 1960s and 1970s, Torrance (1963, 1972), Guilford (1975), Wallach-Kogan (1965), Rimm and Davis (1976), and others developed what became known as creativity tests. When originally designed, creativity tests were used to measure general problem-solving skills and divergent thinking abilities applicable to various situations and subjects. It was found that some divergent thinking scores on tests and creative behaviors could be increased with education. It is debatable if these tests could predict creative behaviors and if behaviors on creativity tests can be directly linked to how creativity is manifest in the real world of adults in a variety of social settings (Coleman & Cross, 2001; Runco, 1993a, 1993b). Torrance (1963) found that creative achievements in writing, science, medicine, and leadership were more easily predicted than creative achievements in music, the visual arts, business, or industry.

During the 1980s, several researchers developed instruments to measure creativity in the arts. Kulp and Tartar (1986) developed instruments to identify highly able, creative visual arts students and a number of educational researchers endorsed using creativity tests to identify talented students for visual arts programs (Khatena, 1982, 1989; Greenlaw & Macintosh, 1988; Hurwitz, 1983;

⁶ Clark's Drawing Abilities Test (CDAT) consists of four drawing tasks and a scoring guide. The tasks are to draw a house as if you were looking at it from across the street, draw a person running very fast, make a drawing of you and your friends playing, and make fantasy drawing from your imagination. On the basis of history and research, the CDAT has been shown to be valid and reliable and effective as a standardized instrument for identifying student art ability in a variety of countries and school contexts.

⁷ The Torrance Tests of Creative Thinking (TTCT) is a standardized creativity test. An adapted version of the TTCT was used here as evidence of fluency, flexibility, and elaboration. The test consisted of three tasks: list as many uses of a junked automobile as you can, draw pictures with titles in four pre-printed rectangles, and see how many objects you can make on one page using 12 preprinted rectangles.

Parker 1989); others such as Khatena (1982) claimed visual and performing arts abilities were closely linked with creativity as a measurable construct. When Clark (Clark & Zimmerman, 2001b, 2004) tested over 1200 third graders in four ethnically diverse communities in the United States, he found a strong correlation between drawing ability as measured by Clark's Drawing Abilities Test (CDAT)⁶, creativity as determined on adapted Torrance Tests of Creative Thinking (TTCT)⁷, and state-wide achievement tests. The TTCT and the CDAT, however, appear to measure different sets of abilities. Clark concluded correlation among the CDAT, TTCT, and achievement test scores indicated performance on these measures may be affected by another factor, or set of factors, which may include intelligence and /or general problem solving skills as well as specific skills acquired through visual arts education. It should be noted that TTCT, developed in the 1970s, is easy to administer to large groups and there is debate about the relevance of this measure of creativity for diverse populations especially when different cultural contexts are considered (Sternberg & Lubart, 1999).

In policy statements, many visual art programs today claim to emphasize creativity as an outcome but do not have valid means for identifying creativity, constructs for developing curricula that include creativity, or a research basis upon which to assess creative outcomes. Creativity tests, such as those developed in the 1960s and 1970s by Guilford and Torrance, are still common measures used to identify art abilities or potential in programs for developing art talent. There does however appear to be a renewed interest in general creativity testing in the area of gifted and talented education as evidenced by a recently published creativity test, *Profile of Creative Abilities* (Ryser, 2007). It is advertised as a new measure for identifying exceptional creative ability in students ages 5–14. It contains two sub-tests; one is a task where students draw details to complete incomplete figures and another is a task where students sort images into categories. Tests, such as this, relate to general creativity rather than creativity and creative processes specific to art education or to the students' backgrounds and social contexts. Of interest to art educators is a recent practice of using a work sample, done under supervised conditions, to assess processes that creative people undergo when producing products and having local experts, rather than non-experts, make judgments about their creative performance (Feldman, 2000).

Dispositional Factors Associated with Creative Persons

There have been a number of traits that have been associated with creative individuals in general, yet there are many different opinions as what these traits might be and how they are activated in real-life situations. Some of these traits, viewed as positive characteristics, are being curious, open-minded, energetic, artistic, and having a keen sense of humor. Other dispositional factors that challenge teachers' tolerance levels such as questioning rules, disorganization, absentmindedness, and a tendency to be emotional often are not valued in school settings (Davis, 1992).

As a subset of creativity, artistic creativity has been defined as a range of multi-dimensional processes that includes knowledge of art concepts and traditions in a culture, highly developed visual thinking skills, and intrinsic motivation (Amabile, 1983). In addition, James (1999-2000) defined artistic creativity as a series of "decisions and actions that are both purposeful and not predictable ... It is an individual and a social process during which materials, forms, and cultural conventions are fused with the artist's personal history and emotions. Something is created that has never before existed in exactly that form" (p. 115). Dispositional factors also have been found that differentiate creative art students from those who are less creative. Those considered less creative produce drawings that are realistic without much inventiveness, whereas more creative students find problems and attempt to solve them by producing novel solutions (Getzels & Csikszentmihayli, 1976). Problem-finding and problem-solving, being emotionally involved, and focusing on personal visions were identified by Dudek and Cote (1994) as relevant to creative students' successful engagement when making art projects. In a study about art students at the college level, Stalker (1981) found cognitive complexity (manifesting many solutions to problems), executive drawing abilities (superior skills in drawing), and affective intensity (strength of emotional responses and judgments) as skills and dispositions that define creative visual arts ability. Other individual creative characteristics, cited by Pariser (1997), include intensity of application and early mastery of cultural forms, production of a large volume of works over a sustained period of time, nurturance from family and teachers, and thematically specialized work.

At Project Zero, the eight Habits of the Mind include many traits that can be aligned with nurturing creativity in school settings such as developing craft, engaging and persisting at art tasks, envisioning what cannot be observed directly and imagining next steps, producing works that convey personal meaning, observing visual contexts closely, reflecting by communicating about personal and others' art works, and understanding the world of art locally and in the broader society (Hetland, et. al., 2007). Costa and Kallick identified 16 Habits of the Mind including one category: creativity, imagining, and innovating. Others Habits they associated with creative thinking included taking risks, being empathetic, posing problems, thinking flexibly and interdependently, persisting at a task, and thinking metacognitively.

Feist (1999) conducted an extensive longitudinal literature review to determine whether personality has an influence on creative achievement in art and science. He found that personality meaningfully co-varies with artistic and scientific creativity. Both creative artists and scientists tended to be more open to new experiences, self-confident, self-accepting, driven, ambitious, hostile, impulsive, and less conventional and conscientious than others in the general population. Artists, however, were found to be more affective, emotionally unstable, as well as less social and accepting of group norms than were scientists who were found to be more conscientious. It also was determined that traits that distinguish creative children and adolescents tend to be ones that also distinguish creative adults. Traits associated with adult creativity, therefore,

might be ones that are relevant for identifying, creating curricula, and assessing products produced by creative art students.

Creative adult traits described by Gardner (1999) are tendencies to have high energy, be extremely demanding and self-promoting, deprecate others, possess child-like traits, ignore convention, and fascination with their own childhood experiences. He characterized five kinds of creative activity: (1) solving a well defined problem; (2) devising an all-encompassing theory; (3) generating work that is distant in time from when it was produced to a time when it is evaluated; (4) performing a ritualized work; and (5) performing a series of actions that bring about some kind of political or social change. Category numbers 3 and 4 are concerned directly, according to Gardner, with artistic creativity.

Getzels and Csikszentmihalyi (1976) and Stokes (2001) challenged the notion that successful problem-finding and problem-solving are always a means for producing a body of work that can be considered creative. Getzels and Csikszentmihalyi (1976) studied young college art students and the relationship between their problem-finding behaviors and the originality of their artworks. They concluded that the students' methods of discovery, visualization techniques, and ways they sought productive questions were often far better indicators of creative abilities than were their solutions to art problems. Stokes (2001) maintained that many creative individuals, Monet as an example, rather than adopting problem-finding strategies imposed restrictive task limitations on his own work, such as the constraining motifs he employed, with outcomes being high levels of variability.

Csikszentmihalyi and his colleagues (1996) interviewed over 90 exceptional, creative men and women from around the world, including artists, who were at least 60 years old and had made contributions in a major domain in their own culture. Traits they found associated with creativity were often dichotomous and included: displaying a great amount of physical energy and a need for quiet times, being wise and childish, being playful and disciplined, using imagination rooted in reality, being extroverted and introverted, being humble and proud, displaying a tendency toward being androgynous, being traditional and rebellious, being passionate yet objective about work, and displaying ability to suffer and enjoy creation for its own sake (Zimmerman, 1999, 2005, 2006).

As evident, there are many different views of about what sets of dispositional factors mark a creative person. The arts today, Gardner (1999) conjectured, are ripe for creative change due to the lack of attention and agreement as to what constitutes creative dispositions, acts, or products in the arts. This therefore may be an opportune time to research connections between creativity and theory and practice in art education.

Cultural Variability and Expression of Creativity

According to Sternberg and Lubart (1999), "Cross-cultural comparisons have demonstrated cultural variability in the expression of creativity. In cultures that are traditional, it may take time to achieve new ways of thinking;" moreover, they have shown "cultures differ simply in the amount they value creative enterprise" (p. 9). Culture is learned and passed on from one generation to the next

and cultures are dynamic and changing (Lubart, (1999), although the rate of change may differ from one context to the next. Children and adults alike only can be recognized as creative in areas that are valued within their own cultures (Feldman & Goldsmith, 1986; Gallagher, 1985; Greenlaw & McIntosh, 1988; Sternberg & Lubart, 1999; Zimmerman, 2005). In contemporary, industrialized societies, change and creativity are encouraged with emphasis on producing a product that is both novel and appropriate within a particular cultural context. Cognitive problem-finding and problem-solving initiatives are strategies that fit a product-oriented conception of creativity that has as an emphasis individuality, a strong work ethic, and belief that progress is always for the betterment of society. Creativity from this viewpoint, according to Csikszentmihalyi (1996), is more likely to occur in settings where new ideas take less time to enact and be accepted. In industrialized societies today, the notion of cultural and artistic creativity involves new ways of thinking, new art forms, new designs, and new concepts that focus on groups of individuals who play roles as interdependent members of a creative class (Florida, 2002).

In some cultures, collaboration, cooperation, conformity, and traditions may be valued more than completely novel solutions to problems. Such views about creativity, as contrasted to product-oriented ones, often are focused less on final products than on creative processes (Lubart, 1999). In China, for example, technical skill in art is viewed as fundamental for development of art ability and expression (Gardner, 1989). Most Chinese art teachers stress developing skills that are necessary before students are encouraged to demonstrate creativity. Peat (2000) suggested that renewing and revitalizing something that already exists should also be viewed as creative. In traditional societies, creativity also should be viewed as dynamic and changing. In these societies, focus often is not on novelty alone, rather, creative acts may be seen as acts of transformation that arise out of respect for a particular art form. Both industrialized and traditional societies adapt styles from the past and employ them in contemporary contexts. For example, traditional Navajo weavers have changed both the kinds of materials used and the content of their weavings in response to local and world events. In respect to intercultural and global perspectives, contemporary notions about creativity and art talent development in a variety of contexts needs to be reconsidered to acknowledge a more inclusive paradigm than the pervasive notion of creative acts only as generation of original ideas and products made by a few individuals who change cultural domains.

Educational Interventions That Help Foster Creativity

It has been suggested that creativity can be enhanced and teaching strategies can be developed to stimulate creativity. If it is accepted that creativity becomes increasingly specialized within a particular domain such as art (Csikszentmihalyi, 1996; Feldman, 1982; Gardner, 1999), teaching for creativity could focus on general creativity processes when students are young and then domain-specific activities can be introduced as students mature and commit themselves to a particular field of interest that involves real-world adult activities.

Problem-finding, problem-solving, divergent and convergent thinking, self-expression, and adaptability in new situations are all traits commonly associated with general creativity (Csikszentmihalyi 1996; Mumford, et al., 1994; Runco, 1993a, 1993b; Runco & Nemiro, 1993; Starko, 2001; Sternberg 1988, 1997, 1999). There is research that demonstrates that problem-finding and problem-solving skills can be taught and students' abilities to be productive thinkers and creative problem-solvers can be nurtured (Treffinger, Sortore, & Cross, 1993; Hetland, et al., 2007). According to Feldhusen (1992) and Treffinger, et al. (1993), students can be taught to find problems, clarify problems, master productive thinking and creative problem solving tasks, monitor their own learning activities, and seek and test alternative solutions to problems.

Some educators have suggested a number of strategies for developing curricula in different subjects that support creativity. Some of these suggestions include having students practice problem finding as well as problem solving techniques; use unfamiliar materials that elicit novel thinking and lead to new ideas; experience convergent (structured) tasks for skill building and open-ended, divergent (unstructured) tasks for self-expression; rely on both visual and verbal materials; be exposed to curricula with open-ended outcomes that allow for unforeseen results; follow their own interests and work in groups as well as independently; choose environments that support their talents and creativity; and encounter a wide range of tasks intended to encourage, reinforce, and enhance emerging talents (Clark & Zimmerman, 2001a, 2004; Feldhusen, 1995; Mumford et al, 1994; Runco, 1993; Runco & Nemiro 1993; Sternberg & Williams, 1996; Zimmerman, 1999, 2005, 2006).

Educators also might consider factors that hamper creativity and look at ways to avoid or ameliorate these obstacles. James (1999-2000) focused on students in an art class described as having blocks to creativity and found that these obstructions included: cultural blocks in which students were not willing or able to understand art concepts and processes or the meaning and worth of art in contemporary contexts; cognitive blocks manifested in having difficulty interpreting meanings and metaphors in artworks; personal blocks that resulted in discomfort with expressing their emotions in public and confronting ambiguity; social blocks about how their products would be viewed in public arenas; and instructional blocks about unclear teacher expectations for students' processes and products. She suggested that supportive climates be created where students can learn to recognize their blocks to creativity and find personal meaning. Such an environment would encourage risk-taking and instructors could focus on differentiating curricula to meet individual student needs and direct teaching of a repertoire of strategies for working creatively.

Driven by current U.S. federal art education and state curriculum standards, emphasis often is placed on academic achievement on standardized tests where the arts often have not been included. In order for creative autonomy to be fostered, teachers and students need to be able to identify when creativity emerges and know how it should be nurtured and supported. In an environment where art achievement is tested nationally, Brown and Thomas (1999) studied high school art students in Australia and found that when they were becoming

ready to make a creative leap to individual self-expression due to developed skills and maturation, they were expected by their teachers to produce conventional outcomes as determined by examination expectations. Individual creative responses, as evidenced in either process or products, were not encouraged. They found that supporting creativity in art classrooms involved having art teachers encourage groups of students to share processes they experienced when creating their artworks and allowing them to make meaningful choices so that art could become cognitively stimulating and important in their lives. Art teachers, therefore, can be powerful influences in developing students' creative art abilities by being knowledgeable about subject matter, communicating effectively, using directive teaching methods, making classes interesting and challenging, and helping students become aware of contexts in which art is created and why they and others have needs to create art.

Conclusions and Recommendations

There are many ways to describe and categorize characteristics of creative visual arts students and no single set of characteristics has been developed to comprehensively describe such abilities, yet there are some common understandings among researchers from various fields about relationships between creativity and art development. Although the term 'artistic creativity' does not have an agreed upon meaning in art education literature, its usage in schools should be reconceptualized and evidence of creativity or potential for creativity should be taken into consideration when conducting research and developing teaching strategies and qualitative educational assessments.

In the *International Handbook on Creativity*, Sternberg (2006) describes creativity as a topic that recently has received attention in countries around the world. For example, in China, creativity studies are closely related to research about giftedness and intelligence; whereas, in Taiwan, a wide variety of methodologies are used to study creativity with a goal of making its population more creative. In Hong Kong, emphasis is on social influences that contribute to the betterment of society. In French-speaking countries, research on creativity emphasizes cognition and imagination, and in German-speaking countries, creative processes have been a research emphasis. In Israel, focus is on the relationship of creativity to real worlds problems, and in South Korea research about creativity has addressed creative processes and constructs related to culture, education, and roles of teachers and family. In Latin America, creativity is viewed from a multifaceted perspective with emphasis on practice rather than research, and in Spain topics related to creativity include study of creative individuals, developing tools for measuring creativity, and researching characteristics of high ability students.

What are some ways that inquiry about creativity and visual arts education might be reconsidered in the United States and what emphases should be the focus? In the past, creativity sometimes has been considered as pertaining only to a few individuals within a specific cultural context. A model of creativity for the visual arts that is inclusive, rather than exclusive, and views creativity as possessed by all people, not just an elite, is one that should be encouraged.

This view would infer that all students have ability to be creative. Inquiry in art education that accepts a normal distribution of creativity could lead to new and substantially different identification procedures through which all students' creativity could be recognized and developed.

In the 21st century, it is apparent that students need to be prepared for a new information age and that educational interventions in art education for all students that foster creative thinking, imagination, and innovation are important for generating solutions to real life problems both now and in the future. Creativity in the visual arts can no longer be aligned only with conceptions about creative self-expression. Researchers and practitioners need to conceive of creativity as multidimensional with consideration of how cognitive complexity, affective intensity, technical skills, and interest and motivation all play major roles.

In the past, validity and reliability of current creativity tests in the visual arts have been questioned. Conceptual and operational definitions of creativity, as manifest in the visual arts, need to be reconsidered and inquiry should focus on how new tasks can be developed to help discover art students who may not be identified as having high creative abilities through current procedures. Also, in researching and developing identification procedures, socio-cultural factors including contemporary art practices, visual and popular culture, and students' personalities, ages, values, learning styles, motivations, work habits, ethnicity, gender orientations, and local communities in which they reside all need to be considered if new means of identification and program development are augmented.

In the past, creativity and art talent often were viewed as being synonymous. Recent studies have demonstrated that traits associated with creativity are not necessarily those associated with art talent. More research is needed to determine if and how exceptionally creative art students differ from those who are considered talented in art and what implications this may have for art teaching and learning.

Artist-based and visual culture approaches to art education present new avenues for developing conceptions of creativity and creative processes as bases for inquiry and curriculum development in art education. Creativity in the visual arts often is difficult to describe with predictable outcomes that are sensitive to students' needs, processes they experience, or the products they create. In this era of testing and standards, assessment of students' progress and accomplishments tends to be concentrated on final products and rubrics that emphasize predictable, pre-determined outcomes. A new conception of creativity and the visual arts should foster research and development that supports art learning in which novel responses are nurtured and students are encouraged and rewarded to find and solve problems in unique ways that take into account their creative abilities.

The present Net-generation of students also needs to be prepared for participation in an intercultural community that uses cyberspace for discourse and emphasizes collaboration with groups of individuals to produce creative

outcomes (Brown & Duguid, 2000). The notion of play, that incorporates participants being willing to fail and try again as a means of solving problems, can result in their minds being freed through play to function creatively (Salen & Zimmerman, 2004).

In a democratic society, all students should be educated to their highest possible achievement levels so their abilities are recognized and rewarded. Students who will later become practicing artists should be prepared to think creatively and develop appropriate skills and abilities in a rapidly changing world in which technological innovation and novel products and ideas are valued world wide. Differentiated teaching and learning should be researched and developed for these students so their creative abilities are recognized and supported.

Peat (2000) suggested that artists need long apprenticeships to practice their crafts, but everyone can learn techniques to "disrupt persistent habits of thought and free us for new ways of thinking" (p. 24). That means that each art student has potential and "psychic energy ... to lead a creative life" (Csikszentmihalyi, 1996, p. 344). By reconsidering research and practice in respect to creativity and visual art teaching and learning, art education can play a major role in our increasingly visually oriented world by helping all students use their creative skills and developing their imaginations.

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