Social Consideration in the Creativity: Resource Orientation

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Abstract: *This article explores the interaction between the creativity and environment. Resource orientation characteristics that help in influencing creativity are discussed. Resource orientation refers to making use of persons or things that means achieving person-environment fitness. Resource orientation includes environmental factors, home atmosphere and educational environmental. Environmental factors are related to climate, synergy, political environment, social influences and culture. Home atmosphere also comprises parent-child relationships and birth order. Educational environment contains classroom environment and teacher influence. It seems that factors as climate, political characteristics, culture, home atmosphere, parent-child relationships and birth order prepare an environment to creativity development.*

Keywords: creativity, culture, education, environment, family, sibling, society, synergy, Teacher

Introduction

Resource orientation refers to making use of persons or things to achieve person-environment fitness. In general, creativity is related to family, educational, ecological, cultural, and socio-economic conditions (MacKinnon, 1975; Khire, 1979; Amabile & Gryskiewicz, 1988; Amabile, 1988, 1997; Dacey, 1989; Runco & Albert, 1990; Meyer, 1991; Bull et al., 1995; Kazemi, 1994, 1996; Powers, 1998; Dunbar, 1999; Cramond, 2001; Fonseca, 2002; Md-Yunus, 2007). As self-determination theory describes, the relatedness of needs and desires has been identified as being essential for social development and personal well-being (Ryan & Deci, 2000).

Woodman & Schoenfeldt (1990) proposed a model that provides a comprehensive view of individual differences in creativity that incorporates important elements of the personality, cognitive, and social psychological explanations of creativity. The model provides an integrating framework of sufficient complexity to incorporate diverse streams of research. Combining personality, cognitive, and social psychological explanations of creative behavior could serve to improve our ability to understand creative persons, processes, and products.

Isaksen et al. (1993) describe a conducted research at Center for Studies in Creativity (CSC) based on an ecological (interactionist) approach to creativity. This approach attempts to investigate creativity collectively, rather than separating it into isolated topics of person, process, product and environment.

However, Bachtold & Werner (1973) found that creative female authors and artists were more aloof than the general population. Creative work often involves detachment (Oxman-Michelli, 1991).Feist (1999) also discusses related personality traits to creativity such as non-conformity, associability, and anti-sociability. In addition, Sheldon (1999) discusses how external constraints and interpersonal climate can promote conformity, thus influencing creativity in a negative way. Sheldon (1995) also found those personal goals could create a poor working environment and promote feelings of conflict within the group. In addition, James (1995) investigated the effect that a conflict has on an individual's creativity. He found that goal conflict had a positive effect on

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creativity when task orientation matched up with individual orientation. Besides, Kilmann & Thomas (1975) investigated the relationships between Jung's personality dimensions and an individual's choice of conflict handling modes: accommodating, compromising, competing, avoiding, or collaborating. The judging function (thinking vs. feeling scale) and the type of enactment (extroversion vs. introversion scale) from the Myers-Briggs Type Indicator (MBTI) are significantly related to three comparative instruments measuring conflict-handling behavior. Thus, the teachers define a creative personality as undesirable (Dettmer, 1981). Above all, Hinton (1971) showed the relationship between certain personality variables and resistance to the effects of frustration on creativity; and there are the combined effects of personality and emotional stress on creative productivity. He collected initially under neutral circumstances and again with a high amount of environmental frustration. Certain personality factors, which are not of primary importance in the determination of creative potential, are definitely important in their interaction with environmental variables, and that these have a significant effect on the determination of creative productivity.

Creative Ss are highly flexible, original, and reject outside influence. They had identified primarily with their fathers, and that their interest in mathematics had arisen from sublimation or search for autonomy in fantasy rather than from reaction formation or withdrawal. (Helson, 1971).

Moreover, Walker et al (1995) compared neurotic and depressive personality characteristics in autobiographies of creative achievers (n=30) versus eminent but noncreative achievers (n=18). California Q-Set ratings assessed the five personality factors of neuroticism, extroversion, openness to experience, agreeableness, and conscientiousness. Creative achievers were rated significantly higher on neuroticism, depressive style, and impulsivity.

Kazemi (2008) also studies relationship between "Emotion of Thought" and creativity among gifted and talented male and female adolescents. Emotion of Thought Test (E.T.T.) (kazemi, 2007) and the Abedi Creativity Test were administered to 144 gifted and talented students (72 male and 72 female, in grades 6-8). Significant differences were found between males and females in two scales of E.T.T. (Dynamism and Restlessness).The results indicated that female creativity was negatively correlated with "Restlessness." Data indicated no significant relationship between creativity and "Restlessness" was found for males.

" Restlessness " involves agitation, captivity, somatic expressions of thinking, misgiving, twirling of thought and feeling of pressure for activity.

Agitation refers to erosive agitation, continuous worrisome, body tremor, and less activity. *Captivity* refers to continuous mental involvement, to be worried about problem solving, and inner rigorous speech. *Somatic expressions of thinking* mean thirst and hunger sense, headache, heartthrob, and thirsty sense in mouth. *Misgiving* means forgetfulness, amazement, and exhaustion.

Table 1 Correlation between Restlessness and Creativity

	Total	Female	Male
Restlessness scale	-0.18	-0.31	-
Agitation	-0.17	-0.28	-
Captivity	-0.19	-0.35	-
Misgiving	-0.34	-0.47	-
feeling of pressure for activity	-0.27	-0.46	-

On the other hand, Howarth (1962) assessed individual scores on both the Maudsley Personality Inventory (MPI) and the Myers-Briggs Type Indicator (MBTI) in relation to certain dream characteristics. The study focuses specifically on the dream symbolism manifested by both extroverts and introverts. No significant correlations were found. Likewise, Van Hook & Tegano (2002) studied the relationship between creativity and conformity among 45 preschool children. The study used the Multidimensional Stimulus Fluency Measure to assess creativity while the Starkweather's Social Conformity Test and the Starkweather Form Boards Test were used to assess conformity. This study suggests that highly conforming and highly nonconforming children do not score as high on creativity measures as their freedom of expression counterparts. In conclusion, they suggest that freedom of expression may be seen as an important personality trait in the identification and nurturance of creative potential and problem solving in young children. Besides, Tavalin (1995) suggests that storytelling might allow people to be human and express themselves personally without the fear of criticism, thus allowing

creativity to surface. In addition, Kazemi (2008) examined relationship between "Emotion of Thought" and creativity among male and female gifted and talented. Results indicated that male and female creativity was positively correlated with "Dynamism." "Dynamism" means feeling of extra ordinary power for curious and active experience of a new discovery and emotional thought.

Table 2 Correlation between the Dynamism and Creativity

	Total	Female	Male
Dynamism scale	0.51	0.56	0.44
Motion and movement desire	0.38	0.46	0.3
Rigorous feeling of extra ordinary power	0.47	0.52	0.4
Humor and easily expression of emotions	0.25	0.25	0.27

Environmental Factors

Jurcovç & Zelina (1993) explored climate, which may act as a barrier to become more creative. More to the point, Alamshah (1972) describes a descriptive inventory of common blocks to creativity to provide a basis for their recognition and removal. Socioeconomic, psychological and character logical blocks are discussed in detail as both overt and subtle barriers to creative behavior. The author concludes that awareness of creativity blocks in persons and society is the first step to deal with them rationally.

Besides, Christie (1970) discusses environmental factors that influence creativity, the concept of having to choose criteria to judge the creativity that a person demonstrates and the lack of encouragement our society gives to support creative behavior. Environmental factors in the home and in educational settings that affect creativity are mentioned in detail.

Scientific creativity in students can be enhanced through climate and techniques. The ideal college climate would include a variety in materials and methods, training in divergent thinking techniques, awareness of life's many complex and often unsolvable problems and a staff sensitive to the needs of others. (Hughes, 1969)

In addition, John-Steiner (1992) structured upon a person-centered approach for delineating a social dynamic focus for discovering creativity based on Vygollky's work. In examining the way in which creative individuals are identified, the author found that social factors, from childhood on, account for one's developing creativity. A working collaboration and collective thinking, with a mentor/student alliance, seemed to reflect a paradigm shift in creativity research (from individual to societal) bringing the author to perceive that social bonds are crucial, and an interdisciplinary orientation is warranted.

Moreover, Zhou & Oldham (2001) present an empirical study of contextual conditions that may influence creative performance. Results indicate that individual creativity can be enhanced when subjects are given the opportunity for developmental self-assessment of creative abilities.

Synergy

Some evidences focus on the synergy for creativity development. (Parnes, 1971; Kurtzberg & Amabile, 2001)

Synergy is a combined action of two or more agents which produce a result stronger than their individual efforts; cooperation between two or more groups, and combined action.

Abromitis (1995) agrees that "The Habits of Highly Effective People" by Stephen R. Covey is an excellent source of inspiration and practical suggestions for those who wish to make an impact in their role as resource specialist. In it, Covey details seven habits that bridge the private and public domains and focuses on changes that an individual can make within his or her areas of control. One of these habits is synergy (appreciating the combined energies and talents of other people).

In addition, Mudd (1986) reviewed the KAI literature produced between 1976 and 1986. He emphasizes on the environment-styles fitness. Moreover, extraverts scored higher on tests measuring verbal flexibility, fluency, and originality (White, 1968).

Political environment

A research study using archival sources over a period of time to support hypotheses stating a person's creativity is determined by developmental and productive periods occurring in their life. A variety of tools for analyses were applied to a historic time series in European history. Results indicate that creativity's development is affected by such factors as unstable or fragmented political environment, and the availability of role models. Both extrinsic and intrinsic causes appear to account for fluctuation in creativity throughout European civilization, extrinsic being political instability, fragmentation, and war and intrinsic being the appearance of

creative role models in the previous two generations. (Simonton, 1975, 1981)

Likewise, Aviel (1996) presents a historical perspective related to individuals' general resistance to new technology and innovation. The author offers personal observations concerning the staggering costs of research and increased dependence on government funding for science and technology, and traces more recent causes of resistance to anti-government sentiment. The author asserts that such resistance and other political and economic forces have contributed to the decline of the scientific effort in the U.S., and that unless the government begins to prioritize the importance of science and technology, the U.S. will continue to lag behind in the global market.

Besides, Mars (1981) discusses the need for more creativity, the sharpest focus needing to be in urban organizations. The author states we are more in the dark about the environmental conditions which facilitate creativity more than we are about any other aspect of the problem. He stresses leaders' role in developing climate for creativity. Mars also provides steps suggested for leaders of public urban organizations interested in encouraging more creative behavior on the part of their organization. He discusses a need for a systematic attempt to discover which organizational factors are important to creative persons.

Social influences

Puccio & Chimento (2001) suggest a social bias wherein attributing creativity to personality traits and innovation is a valued cultural status; further, that innovators successfully promote themselves as highly creative. Nemiro (1997) also investigated the creative process of actors by examining different aspects of an actor's life. He found social influences that affected an actor's creativity. Results indicated that certain social influences (trust, freedom, respect) enhanced an actor's creativity while other influences (distrust, poor direction) inhibited performance.

Abinun (1981) concludes necessary preconditions of creativity as attachment to tradition and resources. Besides, Gedo (1996) discusses the influence of opportunities within the environment. In addition, Taylor (1976) examines a variety of possible sources of creativity, grouping them into three categories. l) Nativism, romanticism, vitalism, the unconscious, culture, and serendipity all imply that creativity stems from sources outside of the person's control and are classified as having 'reaction' origins. 2) Those theories that propose the person has partial control over a complex person-environment system include proponents of empirical, interpersonal, and personal origins are termed 'interaction' sources. 3) A third category that emphasizes transactional motivation and environmental stimulation operating through intricate natural bio-experiential-environmental processes comes under the heading of 'transaction' sources. Developmental stages, implications and facilitation of the creative trans-actualization theory are discussed.

A study in which twelve middle school teachers taught one section of science in a Science-Technology-Society (STS) context and another in a more traditional textbook manner organized around typical concepts of science. STS links creative problem solving (CPS) to science and includes meeting personal needs, resolving current societal issues, assisting with career choices and preparing for further study as goals of science. To compare and evaluate the two programs, students were given a description of an unusual event and five minutes for each section of the testing. Results consistently showed greater growth in the STS classes in terms of the overall number and total number of uniqueness for the following areas; questions generated, suggested, and possible consequences. (Yager, 1989)

Creative potential becomes behavior only under favorable circumstances. (Hinton, 1970)

Besides, the author discusses the influences of economic advantages on creativity (Kazemi, 1996)

On the other hand, Bashaw &White (1971) indicate the presence of some figural creativity skills that were not adversely affected by poverty conditions.

Likewise, Therivel (1993) introduce the concept of challenged personality, which includes personal misfortunes and transformation via outside assistance as the prerequisites for creativity in adulthood. The variances in levels of misfortunes and subsequent levels of nurturing to deal with the past negativity will determine whether an individual becomes a burden, an anchor, or a gift to society. Having parental death occurred during one's childhood followed by extraordinary support has created most of the world's eminent people.

Culture

Cultural development is the development of knowledge, values, and attitudes bringing about the fulfillment of personalities and their creative capabilities. School in general stresses cognitive development and uses authoritarian methods to impose its view, thereby promoting imitation over initiative and critical thinking. School counterbalances the economic and technical tendencies of the dominant ideology and can promote international understanding and promote peace. Cultural development requires understanding of the past and present. Individuals should be aware of cultural contributions to their nations from other cultures. Such awareness can come through the study of all disciplines: literature, history, the arts, and so on. An

interdisciplinary approach is necessary not only because it corresponds to the global character of modern life, but because the rapid pace of change requires teaching that brings about attitudes which are ready to adapt to change. Education should make students aware of the planetary interrelationships (economic, political, etc.). School should leave room for imagination and emotion to foster the development of artistic and literary sensitivity and creativity. Only by moving away from an intellectualist approach will education give children the means to understand their society and epoch and to find their proper balance and create their own lives (Khoi, 1992).

Besides, Schwarz-Gescha (1994) discusses personal observations relate cultural creativity in Japan to factors such as religion (predominantly Shintoism), socio-cultural group orientation, structure of language, education style, and personal characteristics. Corporate culture, including group oriented communication and decision making, and the flexibility of the individual are suggested to have a positive effect on creativity. Japanese creativity is observed to be adaptive, cultivated, intuitive, and to result in successful production.

Continuous improvement programs play a large role in which creativity has a vital role. Studies show how continuous improvement can be put into a framework involving the four facets of creativity: product, person, place, and press. DeCock (1993) states that we need definitions in order for creativity to thrive. The author identifies four levels to the model of creativity; the fourth level is the ultimate in creativity such as changing a culture. The author emphasizes how we can acquire new perspectives on how to structure improvement efforts.

Likewise, education and therapeutic efforts to develop, correct or improve personality must take into account the uniqueness of the individual and the cultural context if they are to be successful. Our society is a technological one. People are expected to perform efficiently. Personal growth is seldom encouraged. Re-establishment of contact with creative energies is needed to survive in a technicized society as a distinctive personality is an existential imperative. Creative Helping interfuses the discipline of helping with the disciplines of the arts. Creative Helping becomes more necessary with the growth of technicized social orders which are inimical to personal development. (Peavy, 1974)

In addition, the individualistic advertising cultures differ in creative personalities, creative process, and use and type of agency philosophy compared to collective cultures (Ewing et al., 2001).

Moreover, a series of hypotheses regarding the creative person, product, and process are discussed, with an emphasis on the relationships between them and culture. The creative person is said to be sensitive to both external and internal environments, and that a culture which provides opportunities or experiences to an individual, is said to be a creative environment. It is suggested that the creative person desires to communicate with others, especially critics, patrons, and the population at large. (Stein, 1953)

Furthermore, Mooney (1967) presents a personal observation of our cultural logos from a historical to future projection perspective. The author takes a psychological look at western man's past to point a picture of his present psychic state, the logos underlying, the disintegrations to which it leads, and a picture of a new logos. Mooney sees the future need as an integration of universe, nature, and man within a system of creative-under-way toward the new renaissance that western man is seeking.

Home Atmosphere

A qualitative research study using multiple case studies to determine a specific set of personal and environmental characteristics is associated with students who demonstrate creative/ productive behavior by pursuing and completing investigations based on their own interests. The study found that students could be 'producers of information' and that clear patterns emerged around several themes including student perceptions and home and school environment. (Delcourt, 1993)

Parent-child Relationships

Khire (1979) explores the role of family atmosphere in India. Using Raven's Advanced Progressive Matrices (APM) as a test of intelligence and a Battery of seven Creativity Tests after Guilford, Getzels, and Wallach, the top 5 boys on each dimension were chosen for deeper explorations. Their performance on 11 personality measures was studied. Three representative cases on each from HH, HL, and LH group are presented. Their intellectual potentialities, personality characteristics, family atmosphere, etc. are discussed. These narrations imply differences in characteristics of intellectual atmosphere at home; mother-child relationship, socio-economic conditions, values and philosophies practiced at home, and give two distinct pictures - creative and non-creative.

Two samples of female college seniors tested six hypotheses based on the personality syndrome (IA) associated with childhood patterns of imaginative and artistic needs. Results from multiple instruments verified IA women continued their imaginative and artistic activity were their fathers who valued 'moral integrity. (Helson, 1966)

Besides, Albert & Runco (1985) explore the influence of the family upon the early development and

implementation of a gifted child's talent. Researchers examined two samples of exceptionally gifted boys and their families. One sample had cognitive scores within the 99th percentile in the mathematics-science domain; the other had IQ's over 150. The study was based on the following set of postulates: (1) creativity and intelligence share a number of attributes and perform in similar ways within a person's interactions with his environment; (2) the gifted person must undergo several developmental transformations that change their early giftedness into appropriate dispositions; (3) these transformations begin within the family but become refined by formal and informal education; (4) the family directs a child's early giftedness into progressively more suitable interests; (5) giftedness has a developmental history of its own. Results demonstrated statistical support for the association between the measures of creative potential and creative performance; moreover, the high IQ sample had creativity scored more closely tied to family variables that the math-science group. Researchers concluded that different types of cognitive exceptionality relate to different patterns of family experiences as conveyed by means of their parents' personality traits.

Likewise, Siegelman (1973) is concerned with the association of basic dimensions of parent-child relationships and the creative potential of the child. Male and female college students, with personality traits frequently associated with creativity, tended to describe both parents as more rejecting than loving while they were growing up.

Further, Kirschenbaum & Reis (1997) used a qualitative perspective to examine the perceptions of 10 female artists through interviews, which identified obstacles and/or contributing factors directly related to their personal development of creative expression, productivity and the nurturing of their artistic talents. Issues related to external influences such as raising children, spousal and parental expectations are examined, as well as internal influences of self-image, motivation, and perseverance.

In addition, Helson (1973, 1999) studied the literary works and personalities of women authors. She found non-neurotic relationships with parents. Then in a longitudinal study of these women (over the course of 25 years), she obtained family satisfaction and self esteem effect motivation.

Birth Order

Sulloway (1997) inquiries into the structure and function of families in relation to birth order. He examines to identify the personality development of siblings and family dynamics according to the children's quest for parental favor. The author discusses issues such as birth order, the family as a whole, and social and political thought. In addition, Sulloway (1999) defines differences in personality, according to birth order, that lead to differences in creative achievement. To do this, he first reviews research on birth order and personality, which uses the environment as the defining factor. Sulloway notes that birth order does not affect the level of creativity, but rather the ways in which siblings gain creative distinction. Birth order findings are related to creativity; however, it often conflicts due to lack of distinction between different types of creativity.

Besides, Farley (1978) studied on creative performance and ordinal position in females from two and three sibling family households, comparing the scholastic achievement and creativity of first-borns and later-borns. The results, based on the Unusual Questions Test, Grade Point Average, and personal histories for the two-sibling family contend that there is greater creativity in the later-borns than the first-borns. No conclusive is evidence found for three-sibling families.

In addition, seventy-five Anglo college students were studied to distinguish personality characteristics. The 75 included 25 only-born women, 25 first born women with a younger sister and 25 first born women with a younger brother. They were given Gough's Adjective Checklist, the Myers-Briggs Type Indicator (MBTI) and the Parent Perception Index. The only-born women were found to be confident, resourceful, and assertive. The women with brothers were found to be responsible, confident and thoughtful. They also were the most interested in the opposite sex. The women with sisters were the most conventional and dependent. They could be both enthusiastic and insightful or impatient and withdrawn. (Feldman, 1978)

Educational Environment
Classroom environment

Eisner (1985) explores the definition of creative education. The author goes into depth on the following points: (a) creative education extending beyond the arts, (b) the curriculum needed to develop a creative environment, and (c) the need to balance creative education with the rules of society. The author concludes that the starting point is in building support with teachers, parents and the community.

Halpin et al (1973) discuss high school experiences related to the creative personality of young adults in college.

Besides, Kazemi (1994) discusses disadvantages of the formal education for creativity and taking advantage

of the creative peer environment.

Christensen & Martin (1992) also discuss creative problem-solving and interpersonal skills as possible goals of technology education as well as important to the individual. They describe cooperative learning as an educational structure which may facilitate the learning of creative problem-solving and interpersonal skills. They compare competitive and individual educational structures to cooperative learning.

Moreover, Goodale (1970) examines a creativity research to yield several ways in which teachers may encourage creativity in the classroom. An encouraging creative environment is more important than types of materials to promote creativity.

In addition, Soriano de Alencar (1993) explores the conditions necessary to facilitate the growth of creativity. These conditions include cultivation of such use of classroom exercises to produce new idea combinations such as brainstorming, synectics, and attribute listing.

Timberlake (1982) also recommends a complying of suggestions to nurture creativity in the primary classroom. Some of the recommendations include allowance for errors, freedom for independent work, the encouragement of questioning, allowing for play time, giving idea support, and sharing of creative products.

Besides, Ohanian (1989) describes techniques that utilize literature to help students develop a number sense and to enliven math classes. Techniques incorporate open-ended discussions that leave room for emotion, intuition, creativity, and humor.

Teacher Influence

Williams (1970) presents about 400 ideas which teachers can use to teach creative thinking. He classifies according to teacher behavior (strategies or modes of teaching) and by types of pupil behavior. He links the ideas to the language arts, social studies, science, arithmetic, art and music subject areas of the curriculum. He organizes the ideas for their appropriateness by grade level (early grades, middle grades, and upper grades).

In addition, Shively et al (1971) discuss the effects of creativity training programs and teacher influence on the development of creativity. An attempt was made to answer the following questions: (1) are two programs equally effective in developing divergent thinking and in fostering positive attitudes about creativity and a self-concept as a creative thinker? (2) Does active participation of the teacher facilitate or inhibit the effectiveness of instruction? (3) Does the teacher's divergent thinking ability influence the effectiveness of instruction? And (4) are there differential effects due to the interaction of the above three factors? Fifth grade teachers (20) and 473 pupils participated in the investigation. The teachers were identified as high or low on divergent thinking and teachers in each of these categories were assigned randomly to one of the four treatment conditions. Although the results are complex, they suggest that the Productive Thinking Program seemed somewhat more productive than the Purdue Creative Thinking Program, particularly in the absence of teacher involvement in the former program. Researchers also suggest that the teacher's level of divergent thinking ability may have little bearing on the effects of the general.

Moreover, teachers can model the creative process themselves in addition to encouraging it in students. Professional development activities may be useful in helping teachers to develop creative thinking in themselves and insight into the creative process. (Oxman-Michelli,1991)

Likewise, Zener (1995) discusses specific teaching strategies to nurture creativity in young children that guide choice, highlight human potential, and distinguish those activities that help children from those that are more impulsive and less developmental. The author suggests that teachers need to encourage a love of work, concentration, self-discipline, and sociability.

Additionally, Wallace (1986) describes the four dimensions of the creative personality--thinking, sensing, intuition, and feeling--, as are the creative process (including preparation, incubation, illumination, and verification) and ways in which teachers can assess and promote creativity. Creative classroom environments and teaching methods are detailed

Besides, Halpin et al (1973) tested a hypothesis: the more creative teacher would be the more she is humanistic in her pupil control orientation. The TTCT (Verbal), 'What kind of person are you?', and the Pupil Control Ideology Form were administered to 99 college students in an educational psychology class. Results showed support for the hypothesis although the correlations were not great. Less creative future teachers tended to be more authoritarian and were mistrustful. They tended to stereotype students by appearance, parents' social status, and behavior. Creative future teachers tended to view learning and behavior in a more socio-psychological way and felt that communication between teacher and student should be open.

Equally, Andrews (1983) describes a need for furthering art education for elementary teachers and a course designed for this purpose. The course would enable the teachers to engage in discovering meaning and direction through experiential and developmental learning thus allowing them to augment their students' education. He

suggests art education should be a process of personal commitment, trusting perceptions, and self-fulfillment as a means to help the teacher/learner achieve self-actualization.

In addition, Raina & Vats (1979) investigated the relationship between creative personality, style of teaching and pupil control of educators and to test if there is any correlation between creative teachers who favor creativity and their orientation to pupil control. As a result of the What Kind of a Person Are You? Test, Style of Teaching Inventory and Pupil Control Ideology Form, it was found that high creative teachers having teaching styles favoring creativity are humanistic in their pupil control orientation compared to teachers with lower levels of creativity.

Moreover, Gallagher et al (1967) identified and classified productive thought processes expressed by 176 intellectually gifted secondary students from 12 classrooms and their teachers, and examined the relationships between these thought processes and other variables. Data was collected through: five consecutive one hour tape recorded class sessions in each of the classrooms and two observers in each classroom took additional notes; student completed measures of cognitive processes, personality and attitude variables; and family questionnaires. The authors concluded that almost all classroom discussions, regardless of individual teacher style, had a substantial proportion of cognitive memory and convergent thinking as necessary components.

Conclusion

In spite of aloofness, detachment, associability, goal conflict and autonomy as related personality traits to creativity, environmental conditions influence creative performance. Seemingly, there are two differential environments for creativity: 1) "Preparation" means environmental qualifications help to structure background for creativity development; such as: home atmosphere, educational environmental, political environment, parent-child relationships and birth order; 2) "Impartation" refers to environmental conditions share to creative production; such as: synergy, classroom environment and teacher influence. As obvious, both environments are considered as necessary for creativity performance.

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