ACADEMIC ACHIEVEMENT AND CREATIVITY AMONG

CHILDREN STUDYING IN PRIVATE AND GOVERNEMENT

SCHOOLS

By

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2006

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A research report submitted to the

Dr. Muhammad Ajmal
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Centre of Excellence
Quaid-i-Azam University, Islamabad

In partial fulfillment of the requirements for the

DEGREE OF MASTERS

IN

PSYCHOLOGY

2006

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Certified that M.Sc. Research Report titled *"Academic Achievement and Creativity among Children Studying in Private and Government Schools"* prepared by Ms **Hira Mehwish** has been approved for submission to Quaid-i-Azam University, Islamabad.

(Ms. Momna Anwar)
Supervisor

Dedicated to

MY MAMA, PAPA, TO MY FAMILY.

AND

TO ALL MY LOVED ONES.

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ACKNOWLEDGEMENTS

At the completion of this thesis, first of all I thank Almighty Allah, who bestowed his blessings on me for the completion of this research work.

In my thesis there are lots of people who have helped me to carry on the work till the end. Because of the efforts of all these people I have been able to finish my thesis in a comprehensive way. I want to thank a number of people.

First of all I am grateful to my supervisor Ms Momna Anwar, who helped me throughout my thesis, her guidance; encouragement was always with me she was a great source of help, she was always there guiding me in such a nice way that without her support it would not have been possible to carry out the work in such a comprehensive way.

I would like to express my deepest gratitude to the Principal of Beaconhouse School System (primary section), Mrs. Ayesha Shabbir who allowed me to collect data from her school. I would like to thank Miss Ayesha Riaz Khan, who helped administer test in her class as she was very cooperative. I am thankful to the principal of F.G Model Girls Middle Model School Mrs.Zahida Zaheer and Mrs. Mussarat Jabeen who helped me administer the test in her class as well.

In the end I must acknowledge my mother's support, and especially father who is always there to boost up my energy whenever I felt low. He has always been there to support me and encourage me to move further along with my work. I thank you all once again.
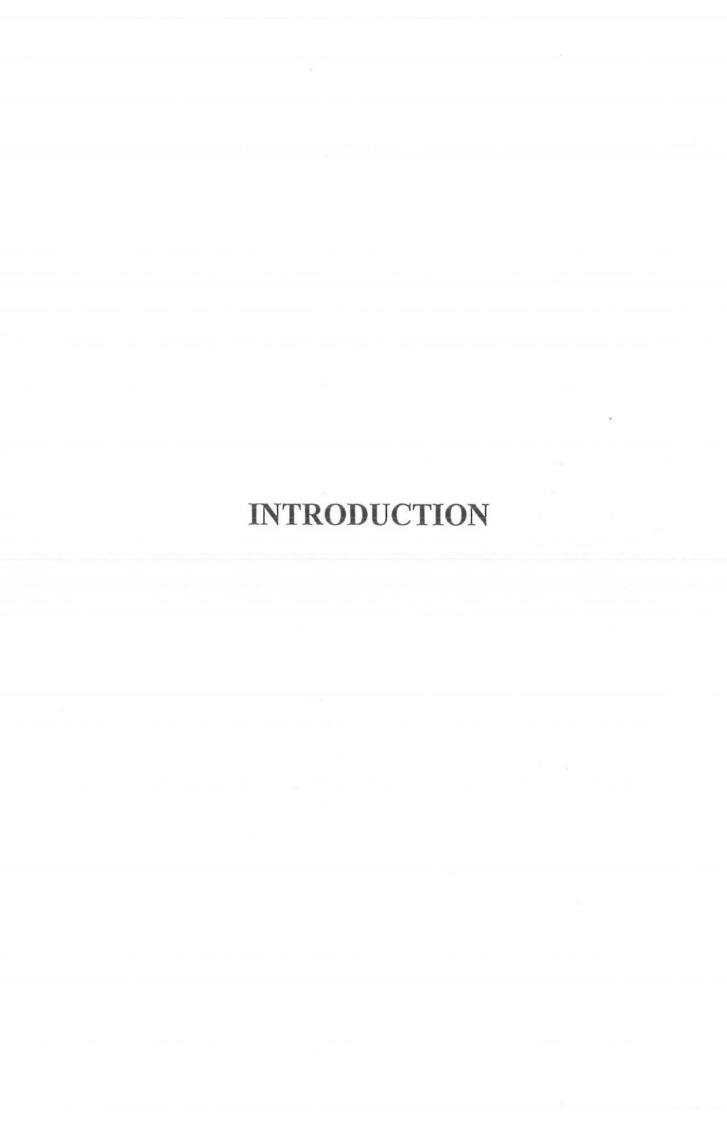
Hira

ABSTRACT

This study was aimed at investigating academic achievement and creativity in school children. The abbreviated version of Wallah and Kogan Creativity Test (1965, as cited in Riaz, 1979) was used to measure creativity. A sample of 152 students was taken, from Private and Government schools. The findings of the study revealed firstly, girl s (M=31.76, SD=15.53) are more creative than boys. (M=26.64, SD=14.04) at p<.05. Secondly, girls have higher academic achievement Girls (M=411.21, SD=81.20) as compared to boys. (M=391.75, SD=76.21) at p>.05. Thirdly, children studying in private schools (M=37.42, SD=16.70) are more creative as compared to children in government schools. (M=20.98, SD=6.00) at p<. 01. Fourthly, academic achievement of children studying in private schools (M=451.75, SD=74.04) is higher as compared to children studying in government schools, (M=351.21, SD=44.62) at p<. 01. And lastly the high achievers (M=34.50, SD=15.97) are more creative as compared to the low achievers. (M=27.77, SD=9.75) at p<. 01. This study suggests that further studies must be conducted to understand the academic achievement and creativity of private and government schools.

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INTRODUCTION

INTRODUCTION

The aim of education and formal training received by human beings since their birth is to polish their talents and make them successful in their lives. Human beings are blessed with a number of inborn traits, talents etc. whereas environment, resources, interest etc. shape the manifestations and develoment of these. Throughout their lives humans strive to achieve the their object of love sometimes they succeed and sometimes they meet disappointments. Achievement motivation is a also very important in helping a person to perform well in any particular aspect be it studies or any other field of life, he can use his/her abilities in a best possible way to gain success in his work.

Academic Achievement

Academic achievement is task oriented behavior that allows the individual's performance to be evaluated according to some internally or externally imposed criterion, that envolves the individuals in competing with others, or that otherwise involves some standard of excellence (Spence, 1983).

According to Crandall (1963) and Rosen (1961), a number of elements contribute to the complex process that leads to successful achievement. The person must have training under the guidance of an experienced person to know how to make the best possible use of the abilities. He must also have experience, which comes with age and opportunities to enjoy wide and varied activities (as cited in Shafaq, 2002).

To achieve success in any activity at any age, the person must be flexible willing to adjust to new roles and undertake new activities even if they are not necessarily to his liking. A boy must adjust to the approved male role even though he might prefer to play the feminine role. In work, the person must learn to adjust

to the demands of his job even though it may not be exactly what he wanted or hoped for.

The person must also be independent of others to the extend that he can make his own decisions and carry them out successfully without having relied upon the advice, guidance, or help of others (Ellis & Lane, as cited in Shafaq, 2002).

Striving for success and to achieve, whether achievement is academic or professional in nature motivation would serve as basis for the behavior. Psychological literature mostly explains the motivation of individuals to achieve as 'achievement motivation'. Theories of achievement motivation thus provide a sufficient theoretical explanation for academic achievement as it has common roots. Following paragraphs provide a brief description of theories of achievement motivation.

Theories of Achievement Motivation

Murray's theory. According to Murray (1938) achievement motivation is, "the desire or tendency to do things as rapidly and/or as well as possible to accomplish something difficult. To master, manipulate and organize physical objects, human beings or ideas, to overcome obstacles and attain a high standard, to excel one, to rival and surpass others. The non-physiological needs play a very important role in determining human behavior. Influenced by psychoanalytic thought, Murray postulated that needs are largely unconscious which are manifested as various motives.

McClelland's theory. McClelland et al., (1955) offered a hedonistic interpretation of need for achievement (nAch). They proposed that cues previously associated with hedonically positive events produce a partial re-arousal of the positive affect originally experienced. The individual experiences as well as anticipates a pleasurable outcome. If prior achievement situations have led to positive affect, the individual would be more likely to engage in achievement

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behaviors. Conversely, if a person was punished for foiling, a fear of failure could develop and these would be a motive to avoid failure.

So under appropriate conditions, people will do what they have been rewarded for doing. If a competitive situation is a cue for rewarded achievement striving, then in competitive situations the individual will work harder. They conceived achievement motive as having both activating and an affective properties and directive or goal-directed properties. Achievement motivation was also characterized by learned standards of excellence, competition with or attempts to meet these standards and positive or negative affect depending on success or failure of such efforts. Certain interlocking variables as individual's interests, abilities, educational levels and long-term goals determine the achievement related tasks. So, need for achievement was treated as a drive, triggered by environmental cues, leading to need fulfilling behavior.

Trait approach. Achievement motivation is conceived as a series of more or less independent motives, each reflecting general dispositional tendencies or traits that are relatively enduring over time and that remain latent until engaged or aroused by particular tasks or situations. Since individuals differ not only in the strengths of their motives but also in the tasks or roles that elicit them, achievement behavior cannot necessarily predicted either cross-sectionaly or longitudinally, only from information bout individual's motives (as cited in Schmalt & Schneider, 1979).

Attribution theory. According to Weiner (1986), the attributions one make about one's success or failures also influence level of achievement. Weiner and Kukla (1970) proposed that success and failure motivated subjects used causal factors in clearly distinct ways. People high in achievement motivation usually attribute their performance to internal factors. They attribute their success to greater ability and effort and their failures to lack of ability and effort. So success reflects their competence and they find it very satisfying experience. People low in

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achievement motivation were more likely to attribute success to external factors (ease of task, good luck) and failure to an internal factor (the lack of ability).

The theories explained above give the theoretical orientation about achievement motivation. There are some distinguishing traits associated with individuals who have high need to achieve and attain high standards of success.

Characteristics of People with Strong Need to Achieve

1. *Personal responsibility for performance.* On theoretical grounds, it has always been assumed that subjects high in nAch would prefer being personally responsible for a performance result because only under such conditions, they could feel satisfaction from doing something better. Horowitz (1961) confirmed this theoretical assumption.

Feedback is a way of knowing that how well the subjects are doing in their particular work. Studies have confirmed the importance of performance feedback to them. Kagan and Mess (1962) conducted a study, which shows that boys with high nAch were more interested at mechanical activities such as carpentry or constructing model vehicles than those low in nAch.

2. *Preference for moderate risks.* The reason for choosing moderately difficult task is that such task is more diagnostic of how well they are doing. If the task is easy, they will not know whether success was due to their efforts because everyone can do it and if the task is very difficult, they will also not be able to tell what their efforts produced because they will fail. Thus they seek moderately difficult tasks to get information on the impact of their efforts on performance.

3. *Innovativeness.* Doing something better often implies doing it differently from before. It may involve finding a different, shorter or more efficient path to a goal. High achievers avoid routine behaviors.

These were the traits of people with strong need to achieve and now I will describe the obstacles to achievement, for any sort of achievement there are always some problems and hindrance underneath it, these problems or obstacles which effect achievement are described below.

Obstacles to Achievement

Many people who are willing and able to work are kept from achieving what they are capable of by obstacles over which they have not control. For the most part, these obstacles are environmental primarily unfavorable social attitudes based on sex, race, religion, or age. Women, for example, rarely achieve the success they are capable of in areas outside of home making. Prejudice against women exists in many occupations and in executive positions in the occupation in which they have been accepted. If a man succeeded at some tasks, it is assumed that he worked hard or that he possesses a high level of ability. If a female attains the same level of performance, however, it is assumed that she "lucked out" or that the task was not very difficult.

Academic achievement is often adversely affected by lack of social acceptance. Those who are well accepted perform better that those who are neglected and much better that those who are actually rejected. Poor academic work is common among those who are resentful because they do not receive the social acceptance they crave (Mumam, 1966).

Successful achievement is likewise hampered by subjective or personal factors. Subjective factors are so often the result of pressures from significant people pressure to aspire unrealistically high that the person is unable to control them.

Self, from poor health, from lack of motivation, and from many other subjective factors. Many people, for example, accept the belief that, with age, they will reach a plateau in their achievements from which they will inevitably go to lower levels as advancing age makes them less and less capable. This attitude

deprives them of the motivation to work up to their capacities. In conclusion, may factors, both objective and subjective, obstruct achievement. When the person knows or suspects that he is capable of achieving more than he actually has, he feels guilty, ashamed and embarrassed if he believes that the fault lies within him. If he believes that his lack of success stems from obstacles put in his path by members of the social group, he feels resentful and martyred. In either case, his personality will be damaged.

Situation of Academic Achievement in Pakistan

There has been much emphasis placed on getting Pakistani children into primary schools to ensure that they receive at least a basic education. While it is critical that children stay in school, it is equally important that they perform well. Unfortunately in Pakistan, this does not usually happen. The basic competencies of children in a nationwide sample of 11 and 12-year-olds who had completed primary school were very low. Only 33.5 percent could read with comprehension and only 17.4 percent could write a letter. In one study, less than 10 percent of the representative sample was competent in basic reading and comprehension.

These figures clearly indicate that if Pakistan wants to move forward, it cannot simply focus on herding its children into school. It must ensure that they graduate from school with at least basic literacy skills. Otherwise, not only will the children and their families suffer, so will the country's economy. Pakistan will be deprived of highly skilled workers to boost economic development.

In order to raise the achievement levels of Pakistan's primary school students, a number of critical steps must be taken. The focus of these efforts must be to raise the quality of Pakistan's schools by improving teachers' ability to teach effectively and students' capacity and motivation to learn. A higher level of learning achievement requires four things: a strong curriculum, the necessary tools for teaching, the proper tools for learning (textbooks and other learning materials); and time for learning.

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There is clearly a need to produce better quality textbooks. There is also an urgent need for improved distribution. Often, students in far-flung regions do not have access to schoolbooks. In addition, teachers need to be trained in how to incorporate textbook material into the classroom's teaching curriculum and model. This can be done with the inclusion of teacher guides with the textbooks.

Proper teacher training is another element that can raise school achievement. While many teachers may be familiar with their subject matter, they are lacking in teaching know-how. Better training of teachers through established institutes, a revised curriculum, and vigorous pre- and in-service training will result in better teachers and, in turn, better student performance.
(www.yespakistan.com/education/lowachiev_primary.asp)

After describing the definition of academic achievement and the theories of achievement motivation as well as obstacles to achievement now come the explanation of creativity. The definition of creativity, the theories and models of creativity are described below.

Creativity

According to May (1975) creativity is the stepchild of psychology. It is the spring, which surges forth from the unknown, which lavishly nurtures human mind and fees itself, on the beauty and innovation in universe. The process of creativity and cretin is a process of change with a certain dynamic of beginning and an end. The beginning of a new product of creation and the end of world before such an act of creation and change. So creativity is an essence of life.

Creativity or creativeness is a mental process involving the generation of new ideas or concepts, or new associations between existing ideas or concepts. From a scientific point of view, the products of creative thought (sometimes referred to as divergent thought are usually considered to have both originality and appropriateness. An alternative, more everyday conception of creativity is that it is simply the act of making something new. Although intuitively a simple

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phenomenon, it is in fact quite complex. It has been studied from the perspectives of behavioural psychology, social psychology, psychometrics, cognitive science, artificial intelligence, philosophy, history, economics, design research, business, and management, among others. The studies have covered everyday creativity, exceptional creativity and even artificial creativity. Unlike many phenomena in science, there is no single, authoritative perspective or definition of creativity. Unlike many phenomena in psychology, there is no standardized measurement technique.

It has been associated with genius, mental illness and humour. Some say it is a trait we are born with; others say it can be taught with the application of simple techniques. Although popularly associated with art and literature, it is also an essential part of innovation and invention and is important in professions such as business, economics, architecture, industrial design, science and engineering.

Creativity and Innovation

Creativity is typically used to refer to the act of producing new ideas, approaches or actions, while innovation is the process of both generating and applying such creative ideas in some specific context.

In the context of an organization, therefore, the term innovation is often used to refer to the entire process by which an organization generates creative new ideas and converts them into novel, useful and viable commercial products, services, and business practices, while the term creativity is reserved to apply specifically to the generation of novel ideas by individuals or groups, as a necessary step within the innovation process.

For example, Amabile et al. (1996) suggest that while innovation "begins with creative ideas, creativity by individuals and teams is a starting point for innovation; the first is a necessary but not sufficient condition for the second.

Neurobiology of Creativity

The neurobiology of creativity has been discussed by Balzac (2006) reported coactivation and communication between regions of the brain that ordinarily are not strongly connected. Highly creative people who excel at creative innovation tend to differ from others in three ways: they have a high level of specialized knowledge, they are capable of divergent thinking mediated by the frontal lobe, and they are able to modulate neurotransmitters such as norepinephrine in their frontal lobe. Thus, the frontal lobe appears to be the part of the cortex that is most important for creativity.

After giving the definitions of creativity and expalining the innovation and neorobiology of creativity I will now turn to the theories of creativity.

Theories of Creativity

Psychoanalytic theory. Psychoanalysis (Freud, 1908) proposes that creativity wells up from unconscious drives. There are differing opinions about how this occurs, but the various psychoanalytic schools of thought generally suggest that creativity is a by-product of primary processes. Freud takes a pathological view of the creative process. This seems characteristic of his general view of man. Freud felt only unhappy people experienced daydreams and fantasies; these are an integral part of the creative process. Unsatisfied wishes are the driving power behind fantasies; every separate fantasy contains the fulfillment of a wish, and improves and unsatisfactory reality" (as cited in Arieti, 1976). To Freud there was great similarity between neurosis and creativity. He felt both originated in conflicts stemming from wish fulfillment and biological drives. Creativity is the sublimation of sexual drives in the psychoanalytic depiction. According to Freud, the creative person's curiosity about sexual matters starts at three years of age and has three outlets later in life: first is repression, which is quite energetic. The second outcome occurs when sexual investigation is not totally repressed but is coped with by thought processes or by compulsive defenses. In the third outcome,

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which is the' most rare and perfect type,' sexual curiosity is sublimated into that inquisitive attitude which leads to creativity (as cited in Arieti, 1976).

Humanistic views.   Humanistic psychology brings wholeness to human beings and the creative process. Creativity is essential to growth, as the individual learns, and adapts to his environment and to an inner sense of values (this is the part of being healthy human being).   Maslow (1968) describes creativity in three categories primary creativity, describes creativity which proceeds from the primary processes, the cognitive and creative processes in addition to the Dionysian drives of the id. He separates primary process from the forbidden impulses. Secondary creativity results from the use of higher thought process, it is apollonian it takes over the creative process from primary creativity and adds to it analysis, discipline and hard work. Maslow final category is integrated creativity. This category fuses primary and secondary creativity it is source of great works of art, philosophy and scientific work

Land (1982) describes four orders of the creative process and its products. First order creativity occurs in the learning process of a child. This order may also engage when there is an immediate and urgent need such as threat to survival. Second order creativity involves analytic process. The individual is self aware and consciously involved in the project at hand. The process focuses on improvement, extension and evaluation. Third order creativity becomes more abstract. It deals with synthesizing and innovation. The product created is as much new as old. The fourth order as the ultimate form of relatedness in this the individual attains cosmic consciousness and beholds order in chaos. (www.vantagequest.org)

Models of Creativity

Cps model of creativity.   Alex Osborn (as cited in Anwar, 2005) presented the Cps model of creativity.   The model is usually presented as five steps, but sometimes a preliminary step is added called Mess finding which involves locating a challenge or problem to which to apply the model.

The total six stages are:

1. Mess finding (object finding) identify goal, wish or challenge
2. Fact finding, gather data
3. Problem finding, clarify the problem
4. Idea finding, generate ideas
5. Solution finding, select and strength solutions
6. Acceptance finding, plan for action

Each step first involves a divergent thinking phase in which one generates lots of ideas (facts, problem definitions, ideas, evolution criteria, Implementation strategies), and then a convergent phase in which only the most promising ideas are selected for further exploration (www.members ozemail.com)

Wallis model of creativity. Wallis model creative process consists of a 5 stage process:

(i) *preparation* (preparatory work on a problem that focuses the individual's mind on the problem and explores the problem's dimensions),

(ii) *incubation* (where the problem is internalized into the unconscious mind and nothing appears externally to be happening),

(iii) *intimation* (the creative person gets a 'feeling' that a solution is on its way),

(iv) *illumination* or insight (where the creative idea bursts forth from its preconscious processing into conscious awareness); and

(v) *verification* (where the idea is consciously verified, elaborated, and then applied).

4P's of creativity.   Rhodes (1961) said that creativity as a whole entity is composed of the 4P's.

The creative person -level of creativity the person has some tangible characteristics etc.

The creative Process -it involves thinking stages or operations that happen when people engage in creative behavior.

The creative Product- it is the out come of creative act can have a fluctuating range of both usefulness and novelty.

The creative press- it refers to the environment the person is in. this is where the creativity and creative behavior can flourish or be fatally hindered.

Carl R. Roggers (1954) as cited in Rothenberg (1976) says that human beings have a tendency to create just like they have an innate tendency to actualize themselves, potential to become full of his potentialities. The individual creates because it is satisfying for him.

Roger considers some conditions necessary for creativity.

Openness to experience.   It is opposite to psychological defensiveness. It means instead of perceiving in predetermined categories that the individual is aware of the existential moment, as it is thus being alive to many experiences, which fall outside the usual category. It means lack of rigidity and permeability of boundaries in concepts, perceptions and hypotheses. It means a tolerance for ambiguity where ambiguity exists. It means ability to receive much conflicting information without forcing closure upon the situation.

An internal locus of evaluation.　　In a creative act the source or locus of evaluative judgment is internal. The value of his product is, for the creative person is established not by the praise or criticism of others, but by himself, It is the feel of being me in action.

The Ability to toy with elements and concepts.　　It is the ability to play spontaneously with ideas, colors, and shapes. Relationships to juggle elements into impossible juxtapositions, to shape wild hypotheses. From a new and significant way.

Rothenberg (1971) coined the term "Janusian thinking" or "oppositional thinking". It is the capacity to conceive and utilize two or more opposite or contradictory ideas concepts or images simultaneously. The concept comes from Janus, the Roman God with two faces, the god who looked and apprehended in opposite directions simultaneously.

Janusian thinking is a secondary process in nature, so it accounts for the seeming ubiquity of primary process thought. The defense mechanism which is associated with Janusian thinking is "Negation". The eastern concepts of Yin-Yan. Mazda and Ahriman, Nirvana and Samsena, the pre-Socratic conceptions of being and becoming. Freud's concept of Eros and Thanatos all convey simultaneous oppositions.

Ann Roe (as cited in Anwar 2005) maintains that creative process differs from creativity because the immediate goal is not a specific one. Logical and orderly modes of approach may not be appropriate. The creative person is one who can permit himself to indulge in the easily to rational thought.

Newll, Shaw & Simon (1964) consider that creative activity appears simply to be a special class of problem solving activity characterized by novelty, unconventionality, persistence and difficulty in problem formulation.

Dimensions of Creativity

There are two dimensions of creativity: Level and Style. Recently researchers have discovered that individuals not only differ in the amount or level of the creative ability that they possess, but they also differ in their Style of creativity i.e., two individuals who posses equal level of creativity may exhibit their creativity in two very different ways. Guilford (1980); Kirton (1976); Messick (1984); Bloomberg (1967); Kirton (1976); Spotts and Meckler (1967) and Zilewicz (1986) demonstrated that individual with various styles will possess different strengths and weaknesses. Kirton (1961) presented two different types of cognitive styles Innovators and Adaptors.

Innovative creativity breaks down paradigms and establishes new ones, while adaptive creativity can improve upon the current paradigm. Kirton maintains that Adaptors and Innovators posses equal level of creative potential. However Kirton states that both innovators and adaptors create in their own way. Literature on creativity has concentrated on describing innovators. Innovators and adaptors are important and necessary for the development and growth of our society.

Guilford (1977) Torrance (1974) found that one of the first challenges of the researcher were to identify the level of creative ability possessed by an individual for this reason several researchers developed measures of creative ability.

Parnes and Noller (1972) obtained similar results from a creative training program conducted at the state University College at Bufflo.

Alpaugh and Birren (1975) showed that the normal population showed pronounced differences by age in a composite creativity score. The maximum level of creativity obtained was for 30 years old, with a gradually lower level of creativity there after (Lehman, 1953, Dennis, 1956). The greatest differences in creativity are found between the old aged and the middle ages groups the differences in then middle aged and old people are relatively small.

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The Psychological Components of Creativity

Cognitive elements. Guilford initiated Work in this area Torrance and Hall (as cited in Anwar 2005) for instance concluded that creativity involves:

1. Uniting disparate ideas by putting them into a common context.

2. Being able to imagine at least as a theoretical possibility almost anything.

3. Enriching ones own thinking through the application of fantasy.

4. Adding spice to ones thinking through the use of humor.

Creativity involves production of a large number of associations more or less randomly or blindly, and the change occurrence of configurations, happy combinations that represent just what is needed to solve the problem in question.

The creative person is especially good not only at producing associations, but also at recognizing that a configuration has occurred and grasping that it offers a solution.

The role of motivation. Bierman (1985) concluded on the basis of a study of creative mathematicians of the 17th and 19th century, that fascination with the subject matter and consequent extreme motivation was one of the major features of his subjects.

According to Amabile (1983) the crucial element in motivation for creative behavior is that the drive or urge must come from within (intrinsic motivation) and can not be imposed from without (extrinsic motivation). Infact she reported studies showing that extrinsic motivation tended to inhibit extrinsic motivation needs.

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Personality.   Creative individuals have personalities different from their less creative counter parts, like flexibility, sensitivity, tolerance, and sense of responsibility empathy, independence, and positive self-image. Farisha (1978) concluded that a relationship between personality and creativity is one of the most consistently emphasized findings in the literature.

Social Factors.   Neff (1975) pointed out that creative youngsters are often uninterested in making a good impression on others or confirming. As Cropley (1973) pointed out, being creative involves thinking or behaving differently from others (otherwise the elements of originality will be missing). Consequently creative individuals must display "the courage to create" (Motamedi 1982) they must risk censure and rejection often associated with failure to confirm.

Measuring Creativity

Psychometric approach.   Guilford's group, developed the Torrance Tests of Creative Thinking. They involved simple tests of divergent thinking and other problem-solving skills, which were scored on:

Fluency. The total number of interpretable, meaningful, and relevant ideas generated in response to the stimulus.

Flexibility. The number of different categories of relevant responses.

Originality. The statistical rarity of the responses among the test subjects.

Elaboration. The amount of detail in the responses.

Personality inventories.   The first category includes traditional personality inventories from which creativity scales have been developed. Cattel and Eber's (1968) Sixteen Personality Questionnaire. Gough and Heilbrun's (1965). Adjective checklist and Hiest and Yonge's (1968) Omnibus Personality Inventory (Hiest 1968).

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Behavioral Tests. In this category, test developed by Gilford (1968) originally devised to tap the divergent thinking component in his structure of intellect theory have served as a model. The most widely used test batteries used however, and the criteria against which many other creativity tests are validated are the Torrance test of Creativity Thinking (TTCT) also called Minnesota Test Creative Thinking. Torrance, (1988).

Obstacles to Creativity

Obstacles to creativity can lie not only within a person but also in the external environments.

Stress. It is a distraction that drains energy, which could otherwise be used creatively.

Routines. Routine or sets of ways of performing tasks have their uses, but allowing them to become too entrenched in ones life cause one to limit the range of responses available and can lead to the development of the anathema of creativity, the bureaucratic mind.

Beliefs. Having a strong belief in something not only limits our response options, but causes us to limit the way in which we perceive and process information from the outside world we may filter out information, which contradicts our belief, and end up in our own reality tunnel, in which we remain blissfully unaware of much, that occurs in front of our very eyes.

Ego. Having a strong belief with a particular belief exacerbates this situation and can lead us to aggressively ending it to the detriment of our selves, our creativity and aware of ones beliefs and there consequent limitations.

Fear. Fear of self-expression and of judgment of others can severely limit ones creativity.

Self-Criticism. Negative thinking and self-criticism are also limiting factors of an individual creativity. (www.members.ozemail.com)

Ways to Enhance Creativity

There are several ways to enhance ones creativity

1.   Insist on giving yourself daydreaming time give your mind the time to float freely.

2.   Be curious, ask questions, and do not readily accept answers if they do not make sense to you.

3.   Ignore tradition, just because certain things have always worked in a certain fashion it does not mean that they cannot change.

4.   Play a game with yourself and with others to find the maximum uses of the every day use objects like pencil brick etc, this will develop fluency and flexibility in your ideas.

5.   Ask "what if"? Pick one aspect of an ordinary situation and imagine what would change if one aspect of the situation were different. Follow this through in all its implications.

6.   Contemplate impossible things and parallel universes.

7.   Accept your initial ideas without judgment give them time to grow and develop before you test them

8   Take risks do not fear to try previously untested ideas

9   Enjoy the process of creation do no worry about the results Because the beauty of creation lies in the process itself if one constantly breaks the flow to check the results you will subvert the process and possibly damage it.

10   Go ahead to it. (www.Enchantedmind.com)

Rationale of the Study

The study, which I want to conduct, will measure the academic achievement and creativity among children studying in private and public schools.

To explore the creativity in school children there are different tests available one of them is Wallach and Kogan Creativity test, it consists of three items upon which creativity is judged, which are instances, alternate uses, and line and pattern meaning. I will use the abbreviated version of Wallach-Kogan Creativity Test (1965).

The reason of this research is to find out the creativity in school children as well as to check their academic achievement to compare the results, for this purpose the data will be collected from government and private schools, the government school will be the F.G Girls Middle Model School and the private school will be Beaconhouse School System. The sample used will be of 152 children, 76 will be government school children and 76 will be private school children. There academic record will be taken from the administration of the schools to compare the results. The comparison will be made to check the gender differences in creativity and academic achievement, as well as the comparison of government and private schools.

This research is conducted to support the findings of a few of the previous researches.

It is a common observation that private schools academic achievement is high as compared to the government school children, the children of private schools are given more attention as compared to the children of government schools, private school children are given more opportunities to express themselves through a lot of activities in class and as well as extra co curricular activities. Their teachers also support them in a good way as they are highly qualified as compared to the children of government schools. On the other hand, the government school children do not get an opportunity to take admission in private schools because of their high fees, so this in turn effects their education and they lack behind the children of private schools who all get good education and a good back from their parents as well, as the parents of private school children are more supportive as well as, well educated, to give a nice platform to their children when they are born, and throughout their lives, the result of which their creative thinking and academic achievement is increased.

The children of government schools do not receive that good education as compared to private school children as their parents do not have many resources to support their children to take admission in private schools, their parents are also not that much literate that's why they lack behind the children of private schools in creativity and academic achievement.

This research is conducted to see the differences in academic achievement and creativity in government and private school children as well as the comparison of government and private schools themselves.

METHOD

METHOD

Objectives

The study has following objective:

1. To investigate the difference in creativity with reference to academic achievement, among children studying in government and private schools.

Hypotheses

In order to achieve the objectives of the study following hypothesis were formulated:

1. Children who have high academic achievement are highly creative as compared to children who have low academic achievement.

2. Girls are more creative as compared to boys.

3. Boys have high academic achievement as compared to girls.

4. Children studying in private schools are more creative as compared to children studying in government schools.

5. Academic achievement is high amongst children studying in private schools as compared to children studying in government schools.

Definition of Variables

Creativity. Creativity is defined as the tendency to generate or recognize ideas, alternatives, or possibilities that may be useful in solving problems, communicating with others, and entertaining others and ourselves.

For the present study creativity is defined in the terms of scores obtained on abbreviated version of test of creativity put forth by Wallach and Kogan (1965). This test measures creativity along with dimensions of fluency and originality.

Fluency. It is the number of responses that an idividual makes (writes) on each item.

Originality. It is the uniqueness of an individual's responses. For the present study response made only once in the whole sample (i.e., 1 in 152) will be considered original.

Academic Achievement. Academic achievement is task oriented behavior that allows the individual's performance to be evaluated according to some internally or externally imposed criterion, that envolves the individuals in competing with others, or that otherwise involves some standard of excellence (Spence, 1983). For the present study academic achievement is defined in the terms of scores students obtain in annual examination held by the school.

High Achievers. Students scoring above 70 percent in the annual examination (i.e., cumulative record based on scores obtained in six taught subjects, as given in the result card) are considered as high achievers.

Low Achievers. Students scoring below 70 percent in the annual examination (i.e., cumulative record based on scores obtained in six taught subjects, as given in the result card) are considered as low achievers.

Instrument

For the present study the the abbreviated version of Wallach-Kogan Creativity Test (1965) was used. The test comprises three parts, first part consists of instances (item No. 1 to 4), second consists of alternative uses (item No. 5 to 8) and the third consists of line and pattern meaning (item No. 9 to12) (For details see the annexure).

Each of the three parts of the test measures creativity along two dimensions i.e., fluency and originality. Fluency is the number of responses made by the individual whereas, originality is the unique response made only once in the whole sample.

Sample

The sampling technique which was used in the study was "purposive conveniance" sampling. The sample included 152 children, age range 8 to 11 years. These children were studying in grade five. 76 children from government school (i.e., F.G. Girls Middle Model School, G-8/4, Islamabad) and and 76 children from private school (Beaconhouse School System, H-8/ 4 Islamabad) were included in the sample.

Procedure

The data was collected from government and private schools. After obtaining permission from the school administration children were approached in the classrooms. They were briefed about the purpose of the test being administered. However, the test was presented to them as a game that is they were told that the researcher is presenting them few interesting games and one by one each item of the test was introduced. Children were asked to record their responses on the answering sheets provided to them. After completion of the three parts of the test answering sheets were collected back from the students.

The academic record of students i.e., their result in the annual examination was collected from the school administration in the form of their 'result cards'. Researcher was not allowed to take away the result cards so; reults of the students were recorded on separate sheets of paper for each of the schools.

RESULTS

RESULTS

The tables below show the results of the study which according to the serial number of the hypotheses.

Table 1

Mean Score, Standard Deviation, and t-value Scores of High and Low Achievers on test of Creativity (N=152)

	High Achievers (n=58)		Low Achievers (n=94)			
	M	SD	M	SD	t	P
Creativity	34.50	15.97	27.77	9.75	5.147	.000

df=150

It was assumed that children who have high academic achievement are highly creative as compared to the children who have low academic achievement. Table 5 shows significant differences exist in the scores of high achievers (M=34.50, SD=15.97) as compared to the low achievers (M=27.77, SD=9.75) at p<. 01. So the hypothesis was confirmed.

Table 2

Mean Score, Standard Deviation, and t-value Scores of Girls and Boys Students on Academic Achievement (N=152)

	Girls (n=76)		Boys (n=76)			
	M	SD	M	SD	t	P
Academic Achievement	411.21	81.20	391.75	76.21	1.52	.130

df=150

25

It was hypothesized that boys have high academic achievement as compared to girls. The results indicate that gender differences exist in academic achievement. Table 2 shows that non-significant gender differences exist in academic achievement of students, Girls (M=411.21, SD=81.20) and boys (M=391.75, SD=76.21) at p>.05. Hence the hypothesis was rejected.

Table 3

Mean Score, Standard Deviation, and t-value Scores of Girls and Boys Students of Public and Private Schools on test of Creativity (N=152)

	Private schools (n=76)		Government schools (n=76)			
	M	SD	M	SD	t	P
Creativity	37.42	16.70	20.98	6.00	8.07	.000

df=150

It was hypothesized that the children of private schools are more creative. Table 3 shows that significant differences exist in the scores of children studying in private schools (M=37.42, SD=16.70) and government schools (M=20.98, SD=6.00) at p<. 01. Thus indicating that children of private schools are more creative. Hence the hypothesis was confirmed.

Table 4

Mean Score, Standard Deviation, and t-value Scores Students studying in Public and Private Schools on Academic Achievement (N=152)

	Private schools (n=76)		Government schools (n=76)			
	M	SD	M	SD	t	P
Academic Achievement	451.75	74.04	351.21	44.62	10.13	.000

df=150

It was assumed that children studying in private schools have high academic achievement as compared to children studying in government schools. Table 4 shows that Academic achievement of children studying in private schools is higher (*M*=451.75, *SD*=74.04) as compared to children studying in government schools (*M*=351.21, *SD*=44.62) at *p*<. 01. So the hypothesis was confirmed.

Table 5

Mean Score, Standard Deviation, and t-value Scores of Girls and Boys Students on test of Creativity (*N*=152)

	Girls (*n*=76)		Boys (*n*=76)			
	M	*SD*	*M*	*SD*	*t*	*P*
Creativity	31.76	15.53	26.64	14.04	2.13	.035

df=150

It was hypothesized that girls are more creative as compared to boys. Table 1 shows that significant gender differences exist in creativity, girls (*M*=31.76, *SD*=15.53) and boys (*M*=26.64, *SD*=14.04) at *p*<.05. The table also shows that girls have scored higher on the test of creativity as compared to boys, which implies that girls are more creative as compared to boys. So the hypothesis was confirmed.

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DISCUSSION

DISCUSSION

The present study aimed at exploring the creativity and academic achievement in children studying in private and government schools. Abbreviated version of Wallach and Kogan (1965, as cited in Riaz, 1979) was used as a measure of creativity in children. Students' academic record (as per annual examination result) was taken as a measure of academic achievement of children.

It was hypothesized that girls are more creative as compared to boys. The results show that there were significant gender differences in creativity among girls and boys. Scores of the studies have answered this, the results have been quiet mixed, depending on the study women have sometimes scored higher than men and men have sometimes scored higher than women (Baer, 2005). But this finding is consistent with the research literature such as reported by (Helson, 1990) according to him combination of cultural values, social roles and sexiest thinking explain the differences in creative achievement by men and women. Comparison of male and female divergent thinking test scores indicate gender differences in their divergent thinking patterns. Furthermore, in a series of studies (Baer, 1997, 1998b), it was found that there are significant gender differences in the girls and boys creative performance which is influenced by such extrinsic motivators appraise and rewards. Across a variety of tasks middle school boys' creativity was little affected by such extrinsic constraints, while girl's creativity was significantly diminished. Most studies have revealed no significant gender differences, but in those studies in which one group out performed the other, female subjects have more often scored higher than male subjects.

The second hypothesis was boys have high academic achievement as compared to girls. The independent sample t-test revealed that there are significant gender differences in the academic achievement of girls and boys, but girls have

higher academic achievement (in terms of total marks obtained in the annual examination held by the schools) as compared to boys.

The third hypothesis was that children studying in private schools are more creative as compared to children studying in government schools. The results of study indicate significant differences in the creativity of children studying in private and government schools with children studying in private schools scoring high on the test of creativity as compared to the children studying in government schools. It has already been mentioned in the rationale of the study that common observation suggests that the children studying in private schools have better opportunities to learn. The environment of private schools is more succulent and conducive to nurture the creative potential of children. Such an environment does not suppress the curiosity and exploration present by instinct in children. But instead allows the talents of children to grow and bloom to an optimum level.

On the other hand scene within a typical government sector school is not very bright, rather the picture is quite dismal. Whatever the underlying reasons may be (e.g., lack of monetary resources, lack of teacher motivation, ineffective government policies, large class size etc) environment of government schools does not allow children to experience 'formal education' as a growth opportunity as conceptualized by Piaget or Vygotsky; rather it makes education a mechanical process. Child is the sole recipient of the information presented to him/her in the schools by the teachers in the form of classroom lectures. Teachers discourage many ways by which nature enhances the inborn talents and creativity of children.

Fourth hypothesis was that academic achievement is high amongst children studying in private schools as compared to children studying in government schools. The results of the study support this hypothesis. One of the explanations for this finding could be the sample of children studying in private schools i.e., the Beaconhouse School System and the government was F.G. Girls Middle Model School. It is common observation that the standard of education is in private schools of Pakistan is much better as compared to the government sector schools, not only the school environment in private schools is fertile but these children

usually enjoy higher socioeconomic status and their home environment is also supportive as their parents are educated. So, the children studying in private schools already have a platform in their homes, whereas they are 'polished' by schools further. Hence this finally results in higher academic achievement amongst children studying in private schools. On the other hand children studying in government schools usually come from impoverished backgrounds, their parents might be illiterate and they usually do not enjoy better financial status at the same time government schools further worsen the situation by suppressing the talents of children.

Although the reasons presented by the researcher to defend the third and fourth hypothesis might appear to be loaded with superlatives but this is the educational scenario of Pakistan as it appears to a common person.

Last hypothesis was that children who have high academic achievement are highly creative as compared to children who have low academic achievement. T-analysis revealed that high achievers have scored higher on the test of creativity as compared to low achievers as high achievers are more creative as compared to the low achievers.

Limitations

The limitations of the study are as follows:

1. A smaller sample size has decreased the generalizability of the study.

2. Only previous academic record was taken as a measure of academic achievement.

3. Socio economic status of the children studying in private and public sector schools was not taken into consideration.

Suggestion

1. It would have been much better if teacher rating of students' academic performance or some qualitative measure e.g., portfolio assessment was also used as representative of academic achievement.

Conclusion

In the end it could be concluded that despite the differences in the educational services provided to children studying in schools (i.e., private and government schools) there is ample room for improvement in the education system of Pakistan. This improvement in turn would improve the academic achievement, nurture the intellect and facilitate in enhancing natural and inborn talents of children.
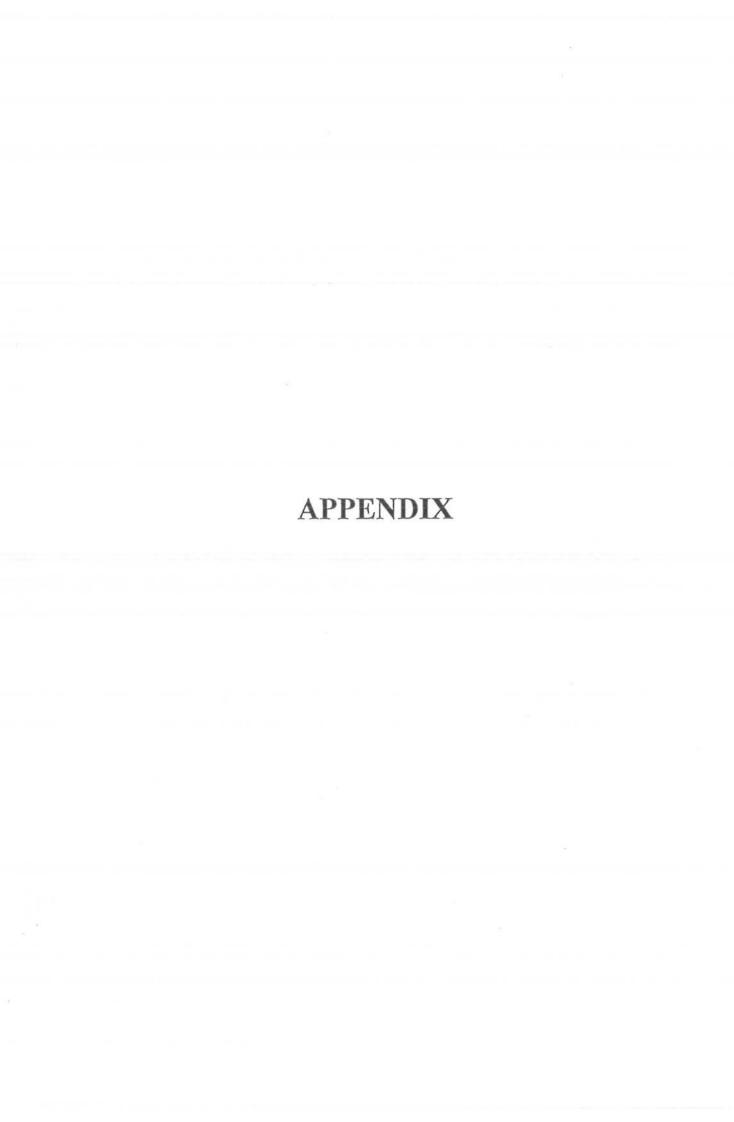
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APPENDIX

The Abbreviated Version of Wallach-Kogan (1965)
(Creativity Test used in this study)

I.   **INSTANCES**

Tell me all the different things that are like that,

1.   Things that are round;

2.   Things that make noise;

3.   Things that are square;

4.   Things that move on wheels.

II.   **ALTERNATE USES**

5.   Tell me the different ways you could use a newspaper;

6.   Tell me the different ways you could use a knife;

7.   Tell me the different ways you could use a shoe;

8.   Tell me the different ways you could use a key – the kind that is used in doors.

III.   **LINE AND PATTERN MEANING**