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Intelligence versus Creativity in School Children: A Review

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Abstract
The main goal of education is to make the individual a better person, and by extension, sustainable development of the society. This is why teaching and learning in schools cannot be haphazard but strictly tailored towards achieving educational goals and objectives. In this regard, some knowledge of intelligence and creativity may give direction or guidance to teachers on which methods of instruction they might utilize in order to achieve educational objectives. This paper therefore discusses, in part, intelligence versus creativity in school children. It is aimed at enlightening readers about the concepts, their educational implications and how they could be fostered in school children. They are essential in education. It is more so if a society is striving for an educational system that addresses the problems confronting her. Nigeria deserves an educational system that promotes these elements. Theories/types, factors that influence intelligence, conditions that foster and those inimical to creativity, how creativity can be improved through instruction as well as the place of intelligence and creativity in education are discussed. Furthermore, some recommendations are also stated including that teachers should provide means for students to express themselves instead of confining them to school subjects only.

Keywords: goal, intelligence, creativity, school, children

Introduction
It is a well-known fact that various methods, approaches and materials enter the teaching-learning process every day. Changes in planning and policy-making in schools remain highly unpredictable, so much that it is impossible to predict accurately what will be the specific problem of education tomorrow. But it will fall back on the teacher to seek solutions for them, when problems arise. However, the teacher's ability to find valid solutions to those problems will depend largely on the extent to which they understand

their students. It will also depend on their understanding of the learning process as well as the skills they have in facilitating, stimulating and guiding learning.

To be able to do this, a teacher needs to be more competent in their profession if they have some knowledge or adequate understanding of the nature of human beings, especially the natural capabilities and endowments as well as the different levels of such natural attributes. Adequate knowledge of these would place the teacher strategically to appreciate nature and produce better methods of instruction and, of course, better manipulation of the learning environment to the benefit of all categories of learners. In this paper, some salient aspects of educational psychology - intelligence and creativity - are discussed with a view to highlighting their relationship with teaching and learning.

Intelligence

Intelligence, like most psychological concepts, does not have a consensus definition. That is why it has been variously defined by different scholars according to the way they understand it. In the opinion of Weder (2020), intelligence is the ability to solve complex problems or make decisions with outcomes benefitting the actor, and has evolved in life forms to adapt to diverse environments for their survival and reproduction. Similarly, Sternberg (2022) refers to intelligence as the mental quality that consists of the abilities to learn from experience, adapt to new situations and handle abstract concepts, and use knowledge to manipulate one's environment. Cherry (2022) opined that although the concept of intelligence does not have a generally agreed definition, specifically, current definitions tend to suggest that intelligence is the ability to:

- Learn from experience: The acquisition, retention and use of knowledge are important components of intelligence.
- Recognize problems: To use knowledge, people must first identify the problems it might address.
- Solve problems: People must then use what they have learned to come up with solutions to problems.

Some of the common ideas held about intelligence, according to Clifford (1981) as cited by Dimaro (2021), include:

- Being bright (not only in academic tasks but also in other endeavours of life.
- Obeying and respecting constituted authority, laid down rules, elders, customs and traditions.
- Being smart in handling issues and dealing with problems and situations.
- Being initiative and not waiting to be told what to do and what not to do.

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- Being responsible.
- Being sensible in any undertaking
- In terms of academic achievement, intelligence refers to the ability to learn and perform well.

Theories/classifications of intelligence

Psychologists have propounded several theories to explain the nature of intelligence. Some of the most common of those theories are discussed below:

1. **Faculty theory**: This is the oldest theory regarding the nature of intelligence. According to this theory, the mind is made up of different faculties like reasoning, memory, discrimination, imagination and so on. These faculties are independent of one another and can be developed by vigorous exercise of the difficult subject matter. This theory also gave birth to a new theory of education popularly known as mental discipline theory. Faculty theory is criticized by experimental psychologists who disagree with the existence of independent faculties in the brain (Current Nursing, 2020).

2. **Charles Spearman's two-factor theory**: This theory proposes that there is a generalized intelligence factor 'g' that relates to abstract thinking and that includes the abilities to acquire knowledge, to reason abstractly, to adapt to novel situations and to benefit from instruction and experience. Spearman (1904) hypothesized that the construct that the different abilities and skills measured on intelligence tests have in common the general intelligence factor 'g'. Although, some psychologists agree with Spearman (1904) that while 'g' exists, there is also evidence for specific intelligence 's' which is a measure of specific skills in narrow domains. Segal et al. (2023) believes that an empirical result in support of the idea of 'S' comes from intelligence tests themselves.

3. **Louis L. Thurstone's theory:** In this theory, Thurstone (1973) explained that intelligence is a person's "pattern" of mental abilities or a cluster of abilities. He opines that intelligence, considered as a mental trait, is the capacity to make impulses focal at their early, unfinished stage of formation. Therefore, intelligence is the capacity for abstraction, which is an inhibitory process. The theorist further explained seven different mental abilities, which he called primary abilities. They are:

1. Word fluency: The ability to produce words rapidly.
2. Verbal comprehension: The ability to define and understand words.
3. Spatial visualization: The ability to visualize relationships.
4. Numerical ability: The ability to solve mathematical problems.
5. Associative memory: The ability to memorize and recall.
6. Reasoning: The ability to find rules.
7. Perceptual speed: The ability to see differences and similarities among objects.

4. **Howard Gardner's theory of multiple intelligences:** This is one of the most recent theories of intelligence (Mehta, 2021). Gardner, the proponent of the theory, is of the opinion that the traditional IQ testing does not totally and precisely reflect a person's abilities. He then proffered eight different intelligences on the basis of skills and abilities that are valued in various cultures as follows (Cherry, 2022; Mehta, 2021):

- Bodily-kinesthetic intelligence: The ability to control body movements and handle objects skillfully.
- Interpersonal intelligence: The ability to detect and respond appropriately to the moods, motivations and desires of others.
- Intrapersonal intelligence: The ability to be self-aware and in tune with inner feelings, values, beliefs and thinking processes.
- Logical-mathematical intelligence: The ability to think conceptually and abstractly, and to discern logical or numerical patterns.
- Musical intelligence: The ability to produce and appreciate rhythm, pitch and timbre.
- Naturalistic intelligence: The ability to recognize and categorize animals, plants and other objects in nature.
- Verbal-linguistic intelligence: Well-developed verbal skills and sensitivity to the sounds, meanings and rhythms of words.
- Visual-spatial intelligence: The capacity to think in images and visualize accurately and abstractly.

Emotional intelligence theory: Some psychologists who consider intelligence as a cognitive ability have argued that individuals also use their emotions to solve problems and relate effectively with others. They decided to merge Gardner's intrapersonal and interpersonal intelligences to produce emotional intelligence. Emotional intelligence refers to the ability to accurately identify, assess and understand emotions, as well as to effectively control one's own emotions (Segal et al., 2023).

5. **Robert Sternberg's triarchic theory:** The triarchic theory was developed by Sternberg who believes that intelligence is made up of three parts (Sternberg, 1988 as cited in Spielman et al., 2020) which are:

- Practical intelligence, as proposed by Sternberg (1988), is sometimes compared to street smartness. According to the theorist, being practical means being able to find solutions that work in one's everyday life by applying knowledge based on their experiences. This type of intelligence seems to be different from the common understanding of IQ; individuals who score high in practical intelligence may or may not have comparable scores in creative and analytical intelligence (Sternberg as cited in Spielman et al., 2020).

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- Analytical intelligence is closely related to academic problem-solving and computations. Sternberg (1988 as cited in Spielman et al., 2020) opines that analytical intelligence is demonstrated by an ability to analyze, evaluate, judge, compare and contrast. When reading a classic novel for a literature class, for example, it is usually necessary to compare the motives of the main characters of the book or analyze the historical context of the story. In a science course such as anatomy, the individual must study the processes by which the body uses various minerals in different human systems. In developing an understanding of this topic, the student is using analytical intelligence. When solving a challenging mathematical problem, they would apply analytical intelligence to analyze different aspects of the problem and then solve it section by section.
- Creative intelligence is marked by inventing or imagining a solution to a problem or situation. Creativity in this realm can include finding a novel solution to an unexpected problem or producing a beautiful work of art or a well-developed short story. Assuming someone went camping with friends and realized that they have forgotten their coffee pot, the person in the team who figures out a way to successfully coffee for everyone would be credited as having higher creative intelligence.

6. **Raymond Cattell's theory:** In this theory which Raymond Cattell proposed, he divided general intelligence into two components: crystallized and fluid intelligences (Cattell, 1987). He explained that crystallized intelligence is characterized as acquired knowledge and the ability to retrieve it. According to Cattell (1987), when a person learns, remembers and recalls information, they are using crystallized intelligence; suggesting that people use crystallized intelligence all the time in their course work by demonstrating that they have mastered the information covered in the course. Fluid intelligence, on the other hand, encompasses the ability to see complex relationships and solve problems. Navigating one's way home after being detoured onto an unfamiliar route because of road construction would draw up fluid intelligence. Fluid intelligence helps people to tackle complex, abstract challenges in their daily lives, whereas crystallized intelligence helps them to overcome concrete, straight forward problems (Cattell, 1987 as cited in Niwlikar, 2022).

7. **Cattell-Horn-Carroll (CHC) theory of cognitive abilities:** This theory, according to Wilson (2023), is the most comprehensive theory of intelligence to date. The theorists believe that abilities are related and arranged in a hierarchy with general abilities at the top, broad abilities in the middle, and narrow (specific) abilities at the bottom. The narrow abilities are the only ones that can be directly measured; however, they are integrated within the other abilities. At the general level is general intelligence. Next, the broad level consists of general abilities such as fluid reasoning, short-term memory and processing speed. Finally, as the hierarchy continues, the narrow level includes specific

forms of cognitive abilities. For example, short-term memory would further break down into memory span and working memory capacity.

8. **Cultural intelligence theory**: Cultural intelligence (CQ) refers to a person's adaptation to new cultural settings and capability to deal effectively with other people with whom the person does not share a common cultural background (Paul, 2021). Paul (2021) added that cultural intelligence comprises four factors: metacognition, cognition, motivation and behaviour. According to him, metacognition is loosely described as thinking about thinking: it is the awareness and understanding of one's own thought processes. In other words, it is about the thoughts around acquisition and use of cultural knowledge. Cognition refers to more specific cultural knowledge and is measured by the knowledge of legal and economic systems of other cultures. The motivation aspect is the willingness to learn about and engage in intercultural interactions. Finally, the behaviour factor focuses on exhibiting appropriate actions. In the opinion of Spielman et al. (2020), intelligence can have different meanings and values in different cultures. For instance, if a person is living on an island where most people live by fishing from boats, it would be important to know how to fish and repair boats. If they were an exceptional angler, their peers would probably consider them intelligent. And, if they were also skilled at repairing boats, their intelligence might be known across the whole island. In Irish families, for example, hospitality and telling entertaining stories are marks of the culture. So, if one is a skilled storyteller, other members of Irish culture are likely to consider that person intelligent. Moreover, some cultures place a high premium on working collectively. In such cultures, the importance of the group supersedes the importance of individual achievement. Therefore, when a person visits such a culture, how well they relate to the values of that culture exemplifies their cultural intelligence, sometimes referred to as cultural competence (Spielman et al., 2020).

9. **E. L. Thorndike's multifactor theory:** In this theory, Thorndike (1949) as cited in Current Nursing (2020) classified intelligence into three categories, which are:

a) Concrete intelligence which means intelligence in relation to concrete materials. It is the ability of an individual to comprehend actual situations and react to them adequately. The concrete intelligence is evident from various activities of daily life. This kind of intelligence is measured by performance tests and picture tests in which the individual has to manipulate concrete materials.

b) Abstract intelligence is the ability to respond to words, numbers, and letters and so on. All tests of intelligence which require manipulation of symbols are tests of abstract intelligence. Abstract intelligence is required in the ordinary academic subjects in schools such as reading, writing, history and so on. The highest level of abstract intelligence is manifested in the thoughts of philosophers and in the use of mathematical formulas.

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c) Social intelligence means the ability of an individual to react to social situations of daily life. Social intelligence would not include the feelings or emotions aroused in a person by other people but merely their ability to understand others and to react in such a way towards them that the desired result should be achieved. High social intelligence is possessed by those who are able to handle people well. Adequate adjustment in social situations is the index of social intelligence.

Furthermore, Thorndike identified four important attributes of intelligent behaviour. They are (Current Nursing, 2020):

I. Altitude or level: This is the difficulty of a task that can be performed. The harder the task a person can perform, the more intelligent they are.

II. Breadth or range: This refers to the number of tasks at any given degree of difficulty that one can perform. The greater the number of different tasks of uniform difficulty they can carry out, the more intelligent they are. The range of intellectual growth is determined not only by level or altitude but also by range or experience or opportunity to learn.

III. Speed: The more quickly a person can produce a right response in a given time, the more intelligent they are.

IV. Area: This is the sum total of a certain number of tasks at each level to which a person is able to respond.

To Thorndike, level was the most important index of a person's intellectual capacity. He believed that intelligence is not a single ability or process but it is the arithmetical sum of a series of varied and unrelated abilities. There is no general intellectual factor and the different relationships found among the different abilities are due to their overlapping functions. In addition, he stated that, each of the individual intelligences is not of equal standard. For instance, one may have a supernatural abstract intelligence but lacks the ability to maintain good relations.

Factors that tend to influence intelligence

Intelligence is a complex construct that is influenced by a variety of factors. It is always said that nature and nurture both affect it (Jain, 2023; Sanderson, 2022a). Nature refers to heredity while nurture refers to the environment. Modern researchers agree that individual differences in intelligence are clearly the result of the interplay between genetic factors and the environmental conditions (Jain, 2023). Some of the most important factors that can impact intelligence, according to Jain (2023), include the following:

a. Genetics: Intelligence is partially influenced by genetic factors. Certain genes may be associated with higher intelligence.

b. Environmental factors: Environmental factors such as nutrition, stress and exposure to toxins can impact the development of the brain and therefore affect intelligence. She also asserted that there is evidence that environmental deprivation lowers intelligence while rich nutrition, quality education and good family background increase intelligence.

c. Brain development: The development of the brain, including the growth of the brain structures and the formation of neural connections, can significantly impact intelligence.

d. Health and well-being: Good health and overall well-being, including proper nutrition, exercise and sufficient sleep can contribute to higher levels of intelligence. A healthy diet will lead to better mental health and intelligence.

e. Learning experience: Formal education and informal exposure to new information and ideas can have significant impact on intelligence. With new learning and better ideas, the person becomes more intelligent.

f. Emotional and social intelligence: Emotional intelligence, the ability to understand and regulate emotions is important. Social intelligence, the ability to understand and navigate social relationships, is also an important component of overall intelligence.

Jain (2023) and Sanderson (2022) further opined that intelligence is not determined solely by any one of these factors, but by the interplay and combination of all of these factors. Additionally, intelligence is a dynamic construct that can change and develop over time.

Measurement of intelligence

Tests of intelligence are generally considered to be measures of intellectual abilities. A test of achievement measures existing knowledge and skills independent of the person's potential for achievement. The first successful attempt to measure intelligence was that of Alfred Binet who was asked by the French government to investigate causes of mental retardation in schools in 1905. Binet developed the concept of units on mental age. Average mental age (MA) scores correspond to chronological age (CA), that is the age determined from the date of birth. A bright child's MA is above their CA, while a dull one has an MA below their CA. The index of brightness is the intelligence quotient (IQ) which indicates how an individual scores relative to others of comparable age. On the Binet, the IQ is simply a ratio of mental age to chronological age by 100. The ratio is calculated by the formula: IQ = MA/CA × 100. The 100 is used as a multiplier to remove the decimal point and to make the IQ have a value of 100 when MA equals CA. If MA lags behind

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CA, the resulting IQ will be less than 100; if MA is above the CA, the IQ will be above 100. Thus, Alfred Binet was called the father of intelligence testing. The Binet scale was later revised and named Stanford-Binet scale (Sanderson, 2022b; Marteney, 2020).

Intelligence and learning

Intelligence is a multifaceted unit of independent abilities. It is the cornerstone of all human activities and guides learning and performance. Individuals with high intellectual capacities in some various ability areas will obviously do better than those with low intellectual capacities in the same ability areas. However, both genetic and environmental factors are known to influence human intelligence.

While it is difficult, if not impossible, to manipulate genetic factors, it is easy to manipulate the environment in order to modify the individual's level of intellectual functioning. At home, parents are implicated, while in the school, teachers are implicated in manipulating the environment to positively influence intellectual development. With knowledge of the environmental factors that influence intelligence, pregnant women are expected to care for themselves by engaging only in those things that enhance intellectual and/or mental development of their unborn children.

After birth, the child should be well-guided in activities that will help in proper intellectual development. Both parents and teachers should provide the child with developmental tasks that are appropriate for their age. Learning aids like books, tape recorders, charts, models and so on should be made available to stimulate the child's intelligence for optimal functioning. Individualized instruction, especially those that focus more on particular abilities that the child is deficient in, will undoubtedly play a good role in their intellectual stimulation. In doing that, the child or children should be constantly exposed to tasks generated from various areas of intellectual abilities; having known that intelligence is multifaceted.

Children should be encouraged to acquire a healthy reading culture. Reading widely from a variety of materials from diverse areas of knowledge boosts their intellect. Children who are academically high achievers (geniuses) should be motivated to remain high achievers by giving them appropriate tasks. Challenging tasks motivate them to aspire for greater intellectual achievement. On the other hand, simple and unchallenging tasks de-motivate them; and if presented to them continually, it could lead to stagnation or possibly diminish their intellectual capacity. In all, it is advised that parents and teachers should endeavour to handle them carefully so that the high achievers can sustain their intellectual abilities

whereas the low achievers are helped to improve on their intellectual functioning (Nash, 2023).

Creativity

Creativity refers to the ability to make or otherwise bring into existence something new, whether a new solution to a problem, a method or device, or a new artistic object or form (Kerr, 2023). To be creative is to be original. The objective of creative people is usually to express themselves, to make life more interesting and to seek improvements in their surroundings. The world is constantly presenting its inhabitants with new problems, and human beings are also constantly seeking new and better solutions to the problems. Some of the best solutions will be the results of creative thinking.

Characteristics of creative children

There are some behavioural traits that creative children exhibit. The list below is not all-inclusive; however, many of the listed indicators appear with some regularity in literature describing characteristics and differences in creative children (Wilson, 2023). According to Wilson, highly creative students may:

- Have the ability to make unusual associations or connections between seemingly unrelated or remote ideas.
- Have the ability to rearrange elements of thought to create new ideas or products.
- Have a large number of ideas or solutions to problems.
- Display intellectual playfulness, fantasize, imagine and daydream.
- Are often concerned with adapting, improving or modifying existing ideas, thoughts or products or the ideas or products of others.
- Have a keen or unusual sense of humour or see humour others do not see.
- Not afraid of being different but may still be emotionally hurt by non-acceptance. Often, the importance of an idea outweighs that of peer acceptance.
- Ask many questions at an early age. This trend generally continues past early childhood into adulthood. These are the kids that surprise others with their wonderings.
- Frequently challenge teachers, textbooks, authors and those in authority or ‘experts’.
- Sometimes come up with unexpected, futuristic, bizarre, even ‘silly’ answers or solutions.
- Are sometimes resented by peers because of crazy or unusual ideas and their forcefulness and passion in presenting them or for pushing their ideas on others. In the context of cooperative efforts or groupings, highly creative students may get along or work better with younger or older students, or with adults.

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- When completing special or unusual projects or assignments, they often show a rare capacity for originality, intense concentration, commitment to completion and persistence. In essence, may be perceived as working hard to achieve personal goals.
- Become obsessed with completing varied projects or exhibit unusual persistence in completing tasks. It is this obsessive need to complete a task that is so important in differentiating folks with good ideas from those who are truly creative.

Measures to promote creativity in school children

School children can be assisted to become creative by being placed in an environment that is conducive to the kind of behaviour which creativity requires. Team Varthana (2022) and Jolly (2023) suggest that the school can play an important role in developing a positive attitude for the development of creativity in children in these ways:

i. Elaboration: An important aspect of creative thinking is 'elaboration'. If the student is provided with a skeleton outline of a problem, they will use their imagination to complete the problem. This process of elaboration gives them an opportunity to develop their reasoning, thinking and problem-solving abilities which are pivotal to creativity. The classroom teacher can use this technique within the framework of his regular teaching.

ii. Imagination: Students should be given full freedom for the development of creativity.

iii. A young child observed to be scribbling on walls, floors, papers or books, is merely expressing an inner urge to create something. They should be encouraged by parents. Similarly, schools can develop creativity through artistic expression by providing material. Artistic expression gives an opportunity to originate new ideas.

iv. Use of analogy: Sometimes children fail to understand problems directly but when that problem is taught with the help of a comparable or similar situation, it becomes clear and understandable. The teacher should make use of analogies to clarify difficult concepts in teaching.

v. Thinking over consequences: Children should be encouraged to think on the consequences of an action. The mental exercise will be helpful in the development of creative thinking.

vi. Divergent thinking: Children should think critically and apply different approaches to a problem. Divergent thinking develops and/or leads to creativity.

vii. Provide constructive feedback and assistance: To develop and enhance their creative processes, students require constructive feedback. The ability to learn to accept mistakes or criticism and utilize it as a tool to produce greater ideas in the future. Students will be able to focus and give greater emphasis on the portions of their work that are going well by receiving immediate feedback on their ideas. Additionally, one to one

conversations are also beneficial; students will get a deeper knowledge of what they have done in the class. The qualities that power the future are imagination and should be incorporated into all aspects of a student's life.

Helpful conditions for creative work in schools

Going by the aforementioned ways to promote creativity, Durojaiye (2021) proffers the under-listed conditions as being helpful for creative work in schools:

1. Confidence: The teacher should seek and establish an atmosphere that encourages confidence in work. Children should feel confident of their abilities to perform a task set for them.
2. Opportunities for self-expression: The teacher should provide opportunities for students to express themselves. He/she should engage a wide variety of dispositions in the classroom, and learn to value creativity in his/her students by encouraging them to think and act creatively. Students should also be motivated to pursue their interests through various activities such as book collection, hobbies and development of specialized knowledge through active experimentation. The teacher should not reject the non-conformity of students in expressing their views on any problem.
3. Mental health: Scholars have suggested that two conditions are essential for the emergence of creativity, namely psychological safety and psychological freedom. The mental health of children should be sound, so that they may devote their time to creative activities.
4. Self-evaluation: The teacher should encourage students to evaluate their performance regularly.
5. Spontaneity: Spontaneous activities of children should be encouraged by the teacher.
6. Special programmes: The teacher, in collaboration with school authorities, should organize special programmes that are designed to facilitate divergent thinking and other aspects of creative thinking. Such special programmes help to improve students' creative abilities.
7. Brainstorming: This is a technique that emphasizes the importance of divergent thinking. It involves generating ideas in response to some problems in a group. Students should be encouraged to volunteer whatever ideas that occur to them. These ideas are to be recorded for evaluation later. It has been discovered that this technique increases divergent thinking.
8. Self-concept: Parents and teachers should endeavour to develop positive self-concept in children. It helps in promoting creative activities in children.

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Conditions inimical to creativity in children

There are some conditions that hamper creative thinking in children. Jolly (2023) identified and listed some of such conditions to include:

a. Autocratic restrictive family atmosphere: Parental upbringing of children should be less rigid, in order to allow children to explore and discover things in their environment.
b. Rigid and convergent teaching methods: The teacher should encourage divergent thinking. Teaching strategies should be flexible.
c. Poor teacher-student relationship.
d. Poor teacher environmental stimulation.
e. Negative self-concept, dearth of proper communication and interaction.
f. Atmosphere of fear, servility and insecurity is also inimical to creativity.
g. Lack of, or inadequate motivation equally hampers creativity.

Intelligence and creativity in school children

The relationship between intelligence and creativity has been a source of debate among psychologists and educationists. Some people claim that intelligence tests are defective because they fail to measure creativity. Others also argue that it is better to look at intelligence and creativity as two distinct and separate abilities. In an experiment by Getzel and Jackson (1962) as cited by Gayetti (2023), two groups of adolescent boys were compared. The result showed that one group scored high on IQ but low on creativity, while the other group was high on creativity but poor on IQ. It was also found that the highly creative were equally good on academic attainment, but less popular with teachers. Furthermore, it revealed that personality and intelligence were positively correlated. Hence, a certain amount of intelligence is required for creativity.

For Piaget (1950) as cited by Gayetti (2023), creativity has no place in classroom instruction but depends on original schema as built up by the child during the sensorimotor period. That is why; there should be an enriched environmental set up for the child during the sensorimotor period. Although creativity can be improved by instruction and training, intelligence cannot be improved. The learner only improves in ways of tackling a problem. Intelligence is almost constant after about 18 to 20 years.

Implications for educational practice

The following constitute implications for educational practice:

1. School administrators and teachers should provide avenues for students to express themselves freely and not confine them to school subjects only. In doing this, different talents and creative works may be discovered.

2. Teachers should utilize diverse teaching methods, especially discovery methods (Koroye & Anyanwu, 2023) for students to explore and/or express their investigative abilities. According to Koroye and Anyanwu (2023), this method is built on self-investigation and discovery through a systematic process. It helps students to find answers or solutions to problems and make necessary conclusions for them. Discovery method is suitable for improving intellectual capacity and creativity in students.

3. Parents, teachers and significant others in the lives of children should work together to provide means of reinforcement for students identified as being intelligent in different dimensions in order to keep them growing higher intellectually in that aspect. On the other hand, creative children should be assisted, by way of putting in place an enabling environment for their creativity to thrive both at home and in the school. More importantly, special days may be set aside for students to showcase their creative works for awards to be given to deserving students. This will go a long way to stimulate in the students the spirit of creativity.

Conclusion

From the foregoing discourse, it may be understood that intelligence and creativity are essential elements for education to achieve its goals in society. Although the two concepts may be different, there seems to be a symbiotic relationship between them. In other words, whereas some measure of intelligence is needed for creativity, creativity also provides the impetus for intelligence to be improved. On this premise, therefore, parents, teachers, counsellors, educational psychologists as well as other significant persons in the lives of children are urged to ensure that appropriate atmospheres are provided for children to exhibit their creative potentials while also assisting them to improve their IQ. Moreover, every necessary facility or equipment to aid a smooth teaching and learning process should be made available in the school, for, without such requisite teaching aids, classroom instruction may achieve very little or none of the set goals and objectives. Teaching may also become boring and ineffective on the part of the teacher thereby leading to low academic performance of learners. This would inadvertently cause a great setback for intelligence and creativity in school children.

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