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PROTAGONIST OF HEREDITY AND CLIMATE IN DECIDING KNOWLEDGE BY DEVELOPMENT OF INTELLIGENCE & PRECEDES LEARNING

Dr. Jayati Maiti, Asst. Professor, Department of Education, Swami Vivekananda University, Barrackpore, West Bengal, India

Abstract

Today, knowledge is much of the time portrayed as far as insightful and thinking abilities, which are a fundamental part to the outcome of numerous students. Be that as it may, there is not a great explanation for why different insights, like language capacities or profound mindfulness, ought not be viewed as a similarly legitimate indication of scholarly ability. Genetic factors play a significant role in determining an individual's intelligence level. Studies have shown that intelligence is highly heritable, with genetic factors accounting for around 50-80% of the variation in intelligence between individuals. Intelligence is a polygenic trait, which means that "***PROTAGONIST OF HEREDITY AND CLIMATE IN DECIDING KNOWLEDGE BY DEVELOPMENT OF INTELLIGENCE & PRECEDES LEARNING"*** it is influenced by multiple genes. Researchers have identified several genes that are associated with intelligence, including genes that affect brain development and function. However, it is important to note that genetics is not the sole factor that determines intelligence. Environmental factors also play a critical role in shaping an individual's intelligence. There are various perspectives to the development of intelligence. For instance, empiricists argue that a child's brain works exactly like that of an adult. They believe that a child's brain only lacks the experiences to make associations of various events but that of an adult is capable of making associations because it is exposed to many experiences (Kaufman & Lichtenberger, 2005).

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KEY WORDS : *1. HEREDITY AND CLIMATE 2. INTELLIGENCE 3. PSYCHOLOGICAL NATIVISTS*

Introduction

All in all, what is the distinction among simulated intelligence and AI? Man-made brainpower is a wide area of software engineering, determined to foster PC frameworks that capability in a free manner. AI, then again, is a smaller region that targets creating self-learning frameworks. In this sense, certain individuals sort AI as a subset of simulated intelligence. Profound Learning is an illustration of a particular sort of AI, which utilizes calculations enlivened by the construction of genuine brain organizations. Profound learning is a method that trains PCs to advance as a visual cue, taking in information to foster arrangements that are not planned by human designers. This perspective is opposed to the general idea that the environment has an influence on a person's intelligence because intelligence is an innate ability which is present in all human beings at birth. As we grow older therefore, we do not acquire more intelligence but our intelligence gets expanded. The perspective therefore seems to lean towards fluid intelligence and views crystallized intelligence as an abstract concept which may not exist. Psychological nativists base their argument about development of intelligence on the concepts of time, space, and numbers. They believe that these concepts are innate or "hardwired" into the brain at birth and as a result, babies are born with the ability to make use of them. Many of us are familiar with three broad categories in which people learn: visual learning, auditory learning, and kinesthetic learning. Beyond these three categories, many theories of and approaches toward human learning potential have been established. Among them is the theory of multiple intelligences developed by Howard Gardner, Ph.D., John H. and Elisabeth A. Hobbs Research Professor of Cognition and Education at the Harvard Graduate School of Education at Harvard University. Gardner's early work in psychology and later in human cognition and human potential led to his development of the initial six intelligences. Today there are nine intelligences, and the possibility of others may eventually expand the list.

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Background Of Study

Intelligence, like many other psychological terms, is not easily definable in terms that are universally acceptable.According to dictionary definitions, intelligence may mean either the power of understanding, the intellect as endowment, the capacity to know or comprehend, or mental acuteness. Stern defines intelligence as "a general capacity of an individual consciously to adjust his thinking to new requirements; it is general mental adaptability to new problems and conditions of life." Other psychologists use the term intelligence to mean native ability natural brightness, or inborn capacity that determines the acquisition of learning by children is influenced by their stages of development, meaning that at every level or stage of development, the child is capable of developing his or her intelligence faculties to match that stage or level of development. He believed in the idea that development of intelligence precedes learning, meaning that children are able to learn only those things which match their age or development stage. He identified four intelligence development stages namely sensory motor, pre-operational, concrete operational, and formal operational stages (Boeree, 2006). Another psychologist Steven Pinker argued that accepting that our intelligence is shaped by evolutionary psychology was tantamount to reducing our feelings, perceptions, motives, and emotions to mere processes of our genetic evolution, which gives biology an opportunity to "debunk all that we hold sacred" (Pinker, 2012).

Objectives Of Study

1. *To know the protagonist of heredity and climate in deciding knowledge in environment*
2. *To know the protagonist of heredity and climate on intelligence & precedes learning*

Situation and intelligence:

Abstract intelligence refers to the capacity to respond to symbols of various sorts, such as words, numbers, letters, literacy words, and the like. Concrete or mechanical intelligence refers to the capacity to manipulate and to deal with things such as mechanical contrivances, arts, and music. It is the ability to comprehend actual concrete situations and react adequately to them. Social intelligence refers to the capacity to deal with other people or with groups. Many psychologists and educational writers believe

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that these three types given by Thorndike are positively related to one another and exist in varying degrees in each individual. While differences are apparent in definitions and descriptions, authors and experimenters all agree that intelligence is a capacity for acting; that it is a native capacity; that the capacity grows and matures with age during childhood and adolescence; and that on the average, the capacity becomes mature sometime between the fourteenth and sixteenth years of an individual's life. Most psychologists place the age at somewhere between thirteen and eighteen.

1. Environmental factors such as nutrition, education, and social experiences can have a significant impact on an individual's intelligence. For example, children who receive adequate nutrition during early childhood tend to have higher intelligence scores than those who are malnourished.

2. Education is another important environmental factor that can influence intelligence. Studies have shown that individuals who receive a high-quality education tend to have higher intelligence scores than those who do not.

3. Social experiences can also have a significant impact on intelligence. For example, children who grow up in intellectually stimulating environments tend to have higher intelligence scores than those who do not.

4. It is important to note that environmental factors can interact with genetic factors to influence intelligence. For example, a child who is genetically predisposed to high intelligence may not reach their full potential if they do not receive adequate nutrition or education.

Evidence of Genetic Influences on Intelligence

Whatever technique of teaching is to be used by the teacher, the part that intelligence plays in the education of the learner must be considered. As far as teaching and learning are concerned, the true function of intelligence is what the child or pupil can do for the teachers and psychologists, general intelligence and ability to learn are very important. Teaching and learning processes are conditioned by intelligence. Both activities must meet certain conditions if they are to take place successfully. Learning is impossible without intelligence. In other words, intelligence is the basis of learning. The

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effectiveness of learning is conditioned by the degree of intelligence. It is an accepted fact that students with high intelligence are easier to teach or to direct and guide than students with low intelligence. Teaching- methods or procedures involving higher degree of thinking and reasoning can be utilized in teaching bright students. They also need less amount of drill work. Likewise, it is an accepted principle that the higher the intelligence, the greater the ability of learning; hence, the greater the amount of learning or achievement, or earning higher grades. It is therefore possible that a student with high intelligence can obtain good grades in school, college or university with an average of time and energy. The effectiveness of teaching and learning is conditioned by intelligence. Quality education can be easily achieved in this- country if we have high selected students. In other words, to- demand high quality education is to educate only the elite group.

Studies show that IQ scores of identical twins may be more similar than those of fraternal twins.

- Siblings who were raised together in the same environment have more similar IQs than those of adopted children who were brought up in the same household.
- In addition to inherited characteristics, other biological factors such as maternal age, prenatal exposure to harmful substances, and prenatal malnutrition may also influence intelligence.
- Studies have found that people with lower intelligence are more likely to report criminal victimization, which can have serious consequences including physical injury, loss of property, and psychological and emotional trauma.
- Heredity is defined as ‘the sum total of potentialities inherited at birth”.

Heredity must be given an environment to function, whereas environmental factors can contribute only to genetic potentialities of a living and growing organism.

- Heredity sets the limits to success in attaining these potentials depending on the environmental influences or facilities.

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- Physical Development: Heredity has a greater effect on physical and motor development, such as size, strength, appearance and metabolism. But on the other hand certain prenatal conditions such as maternal nutrition, infections of mothers, x–rays, emotional trauma during pregnancy have significant effect on physical development of the foetus. Nutrition in early childhood period directly influences the body growth and physical activity. Children who suffer from protein deficiency are stunted and are retarded in development.

- Intellectual Development: Heredity sets limits beyond which environment cannot enhance or retard intelligence. Heredity determines specific capacity in some areas of intellectual functioning. But on the other hand a highly intelligent person may not be able to make use of his inherent capacities (eg. memory, reasoning, creativity) due to environmental restrictions.

- Personality Development: Certain traits like activity levels, sociability and temperament are found to be genetically determined. Such personality traits which are determined by inherited potential are more resistant to change.

Heredity Factor "Heredity is the transfer of traits from one generation to another

Heredity Factor "Heredity is the transfer of traits from one generation to another with the help of chromosomes" Physical and Mental (emotional) are two traits together play a significant role in transfer of total personality from parents to off springs. 4 Physical Traits : Instances for physical traits are height, body structure, shapes of different parts of body, heart-trouble, diabetes, baldness, asthma, etc. Mental Traits : Mental and emotional traits are intelligence, memory power, interests and talent in music, art, literature, dancing etc. even cruel nature, cool-headed nature, etc. come under these traits. Laws of Heredity Like produces like : According to this law, human being will produce human beings. Only certain traits are transformed : According to this law, the dominant traits get transferred more easily than the recessive traits. Convergence of two lives : According to this law both the parents play an equally important role in converging their traits to their off springs. Inherited abnormalities Inherited abnormalities or developmental disorders appear due to variations in chromosomes or

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metabolic conditions. Some of the developmental disorders are: Down's syndrome: It is one of the types of mental retardation which occurs due to abnormal pairing of chromosomes. An extra chromosome is found on the 21st pair. It is characterized by distinctive physical appearance. The child with this syndrome has almond shaped eyes, small skull, chin, small ears, short broad neck, hands and feet, flat nasal bridge, sparse hair and very low intelligence quotient. Turner's syndrome: It is due to the sex chromosome abnormalities. The Turner's syndrome is the result of lack of sex chromosome in females (X0).

Exhibit Impulsive Behaviors & Have Lower Intelligence

This is caused due to problems in cell division during sperm production. Presence of extra Y chromosome produces aggressive and anti social behaviors. Phenylketonuria: It is a metabolic disorder which results due to absence of hepatic enzyme- phenylalanine hydroxylase (PAH). When phenylalanine accumulates, it is converted into phenylpyruvate, which is injurious to nervous system. The defect which is transmitted by autosomal recessive gene results in progressive mental retardation in majority of untreated individuals. Polydactyle: It is a condition where individual has an extra finger or toe. Module 4: Environment Human growth and development is influenced by a several factors, many of which are beyond our control. While heredity and genes certainly play a large role in terms of determining size and health, there are also environmental factors at play. An understanding of these environmental factors can help individuals and communities to play a part in ensuring that human growth and development are not adversely affected. Environment refers to all conditions to which an individual is subjected to in the course of development starting from foetal development to old age. It comprises of prenatal conditions such as mother's age, nutritional intake, health status, medical care, drugs and post natal conditions such as child rearing practices, cultural expectations, experiences, facilities and opportunities.[6] Based on its nature, environment is divided into prenatal and postnatal environment.

Prenatal environment: It is also called as internal or intrauterine environment where the child grows. Age of mother: Ideal age for healthy child birth falls between 25-30

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years of age of the mother. However, other factors being ideal, women can deliver healthy babies even up to 40 years.

But the tendency for later age pregnancies being unsuitable for healthy growth of foetus is also true. It is found that a woman after 35 years could produce irregular or abnormal eggs which result in Down's syndrome, leading to mental retardation in the child. Maternal Nutrition: The developing foetus derives food from the blood stream of the mother through placenta and umbilical cord. Any nutritional deficiency in the mother's food intake would result in nutritional deficiency in the fetus and its growth suffers. Low birth weight, premature and still births can result from such a condition. Maternal diseases: When a mother is exposed to German measles or syphilis, it would result in mental retardation and physical abnormalities in the baby.

Emotional stress: Emotional stress in the mother influences the fetus through glandular changes which could result in complicated deliveries and miscarriages. Radiation: Frequent exposure to X–rays during pregnancy may result in developmental disorders such as microcephaly, stunted growth and cleft palate.

Drugs: Some drugs that the mother may consume have severe negative effects on the foetus. Especially drugs like amphetamine may lead to negative effects on brain development. Rh Incompatibility: Difference with blood composition of foetus and mother leads to the biochemical incompatibility. The Rh negative mother produces antigens which enter into foetal blood stream.

Conclusion

While Gardner's MI have been conflated with "learning styles," Gardner himself rejects that they are one in the equivalent. The issue Gardner has communicated with "learning styles" is that the idea is poorly characterized and there "isn't enticing proof that the learning style examination delivers more viable results than a 'one size fits all methodology'" (as refered to in Strauss, 2013). As previous Aide Overseer of Vanderbilt College's Middle for Showing Nancy Chick (n.d.) called attention to, "Regardless of the prevalence of learning styles and inventories, for example, the VARK, it's essential to realize that there is no proof to help the possibility that matching exercises to one's

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learning style further develops learning." One tip Gardner offers instructors is to "pluralize your educating," at the end of the day to train in more ways than one to assist understudies with learning, to "pass what it implies on to comprehend something well," and to exhibit your own comprehension. He additionally suggests we "drop the term 'styles.' It will befuddle others and it won't help possibly you or your understudies" (as refered to in Strauss, 2013).

Antibodies are formed in the foetus through placenta. RBC of foetus is destroyed and it[7] prevents the supply of oxygen to fetus resulting in erythroblastoses (destruction of RBC). First born children are not affected by this blood incompatibility since the antigens are not yet developed by the mother's blood. The next pregnancy could become problematic for the foetus. Postnatal environment: It is called external environment. Based on quality of environment, it is further divided into enriched and impoverished. Enriched environment: It provides stimulation to the child and enhances inherited potentialities. An enriched environment provides child with opportunities for exploration and to realize its own strengths and inborn capacities. It is rich in verbal, social and physical stimulation. It provides variety and quality in the stimulation offered. It involves high level of adult interaction with the child to channelize its inbuilt potentials. An optimal/ enriched environment is one which is carefully constructed according to the needs and abilities of the child. Impoverished environment: It is a kind of environment where even basic needs of the child are not fulfilled. It does not provide scope and opportunity for child's growth and development, child's inner potentials and does not cater to the child's optimal development. On the contrary, it hampers the child's potentials and capacities for development.While the debate of the role of nature and nurture in the development of intelligence has been there for long time, scholars have attempted to think of the ways of optimizing the development of intelligence. According to a New Zealand breast feeding study, there exists a link between high Intelligence Quotient (IQ) and breast feeding (Northrup, 2005).The study followed up a group of children who were allowed to breast feed for prolonged periods and others who did not breast feed for prolonged periods. When all factors were held constant, the findings showed a positive correlation between breast feeding and high IQ because the children who breast fed for

prolonged periods obtained higher test scores than those who did not breast feed for prolonged periods .

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