
Disagreements On The Correct Definition Of Intelligence

Human intelligence, in a sense, is what humans possess and something being shared in common. It differentiates us from other animals and species alike and has made Homo sapiens the most successful beings on the planet. It involves language and it gives us the ability to transmit culture, to think and reason out, test reasonable assumptions, and understand regulatory instructions and more. But talking about individuality, people are different from one another, whether it is a physical or mental state. Same with intelligence, it differs to all other people regardless that humans belong to the same species (Robert Plomin, 2018).

In one of the earliest days of psychology, there has been difficulty of measuring and defining intelligence. There are many controversies since the time of Darwin and Galton, where arguments were brought in whether intelligence is inherited or influenced by the environment (The Psychology Book, DK London and Delhi, 2012, pp. 302-303). Some believe that intelligence is one ability. While others say that it is a variety of talents, skills, and abilities (Psych 101 by Paul Kleinman, 2012, p.1 124). Though intelligence is a broad topic to be discussed, psychological studies were conducted in attempt to understand how and why people differ in intelligence.

Intelligence and any correlated terms are used commonly by people. Humans know when something is out of cleverness or stupidity and with these choice of words, someone exclaims the contrast of one event or a person to another and it adds a level of comparison. With the usage of this terms, people must have at least some implicit or intuitive theory of what intelligence is. We all have a refined definition of the term "intelligence," knowing that it is a vague idea. If we are to define intelligence, we can think of it as two levels: scientific theories that uses mathematical concepts and competing theories that includes practical intelligence and creativity (James Flynn, 2012).

People can compare one's intelligence to another and that is why different aptitude tests are created to measure someone's intellect. In the early 1900s, French psychologist Alfred Binet and his colleague Henri Simon are attempting to create a test that differentiates students that were expected to do well from those students that were most likely to be slow learners. With this assessment, it aims to help the teachers better educate the two groups of students such as knowing which group is falling behind and needs more focus. Not all students are the same in picking up information or being a so-called "fast learner" because some insufficiently process the information (Hubert Dinse, 2013). Simon and Binet developed what most psychologists regard as the first intelligence test which contains a variety of questions such as naming objects, completing and constructing sentences, drawing pictures, defining words, and comparing items.

Binet and Simon believed that these questions will test what every student possess: the ability to understand, reason and make judgments. As a result, the parallelism among these different types of measure are in fact positive and as expected, the students who got one question correct were more likely to get the other items correct, regardless of the questions being distinct. Basing on these results, Charles Spearman theorized that there must be a little bit something that they all share that would lead to an umbrella. He believed that all these measures are just "subs." He later on called the construct that these measures have in common as the "general

intelligence factor” and can be shortened by the notation “g.”

All psychologists now believe that the generalized intelligence factor relates to the abstract thinking and reasoning as well as the abilities to obtain knowledge, adapt to novel situations and to benefit from the instruction and experiences. This factor is what mostly the aptitudes now are measuring. People who gets a high score on this exam tends to be a fast-learner. American psychologist Lewis Terman developed an American version of Stanford-Binet Intelligence Test which still has a constant goal.

Psychologists now also agree to another factor, the specific intelligence factor, which measures specific skills in narrow domains. Another distinction is the fluid intelligence, which means it measures the capacity of a person to learn new approaches to solve a problem and add to that is the crystallized intelligence, referring to the knowledge someone learns during their lifetime (Salthouse, 2005). In this case, intelligence and age are directly proportional when talking about the crystallized intelligence while the intellectual ability is inversely proportional to the age if we are to regard the fluid intelligence.

Gardner proposed on 1983 that intelligence is not unitary but rather composed of eight multiple intelligences: Bodily-Kinesthetic, Interpersonal, Intrapersonal, Verbal-Linguistic, Logical-Mathematical Intelligence, Spatial, Musical and Naturalistic Intelligences. This test is one of the mostly used measurement in schools since students are not expected to learn the same materials in the same way, which makes every person’s mind distinct (Joan Hanifin, 2014). The use of this aptitude test is way more effective in terms of student achievement levels and their attitude towards learning (Bas and Beyhan, 2010). Since the multiple intelligence test was widely used, Gault (2009) conducted a study about a strategy called Differentiated Instructions (DI) wherein educators plan for students’ differences so that every child could learn actively in accordance to their various backgrounds, readiness, skill levels and interests. In a differentiated classroom, the teacher divides their time, effort and resources just so to teach students effectively.

Psychologist Robert Sternberg (2005) became an advocate of Gardner’s Multiple Intelligence Test where he proposed the triarchic theory of intelligence saying that people may possess less or more analytical intelligence (ability to have one right answer in a problem), creative intelligence (ability to adapt to new situations and have new ideas) and practical intelligence (ability to deal with responsibility). Research has found that analytical intelligence has not much connection with creative intelligence (Furnham and Bachtiar, 2008). Furthermore, brain areas subordinate with convergent thinking leads directly to finding the correct answer are different from those with divergent thinking, the ability to generate many ways or solutions towards a problem (Tarasova, Volf, & Razoumnikova, 2010). On the other hand, the practical intelligence is something you cannot obtain from books or reading materials since it is associated as you go through life. It also includes the abilities you can use to perform well on jobs and does not much connect with general intelligence factor.

As mentioned, most intelligence tests are more on measuring the general intelligence factor and these tests are being improved as time passes by. Psychologists make sure that these tests are consistent or reliable and actually measures intelligence alone, nothing else. The ability to accurately measure intelligence with a test is one of the substantial contributions in the field of psychology. These tests must also have standardization, wherein it involves getting the average score of all people who took the test regardless of the ages, or simply being fair. Having it

standardized on a regular basis is crucial to provide comparison of the intelligence level of the population as it changes overtime.

According to the Flynn Effect, it has been observed worldwide that the scores in the intelligence tests increased worldwide (Trahan, Stuebing, Hiscock, and Fletcher, 2014). There has been a set of inferential reasons but the concept of humans getting smarter is debatable. After the standardization has been accomplished, it shows a clear picture of the abilities one possess at different ages and with this, we are able to calculate a person's mental age, which means the age at which a person is performing intellectually. And here, we derive the IQ as we compare the mental age of the person to the chronological age. Most modern intelligence tests base their results as of its ranking or position among all the subjects of different ages but the aspect of the IQ gives a good description or meaning to measuring intelligence.

Many scales moreover are based on the concept of IQ such as the Wechsler Adult Intelligence Scale (WAIS), widely intended for adults. The most recent version of WAIS is the WAIS-IV, having the standardization of 2,200 people from 16 to 90 years old. It showcases 15 different tasks that would gauge intelligence including working memory, arithmetic ability, spatial ability, and general knowledge about the world and the usual surroundings. It has four parts: verbal, perceptual, working memory, and processing speed. The reliability of this test is more than 95% and has a strong construct validity. WAIS-IV is much correlated not just to the intelligence but also with any exemplary performance such as grades, work performance and occupational level. Later on, the Wechsler Scale has been adapted for preschool children known as the Wechsler Primary and Preschool Scale of Intelligence (WPPSI-III) along for the older children and adolescents using the Wechsler Intelligence Scale for Children (WISC-IV).

The aptitude test is one of the intelligence tests that people are most familiar, which aims to measure one's ability in doing a specific task. These tests varies from undergraduate, graduate or post-graduate attainment. In American college and universities, they require students to take the Scholastic Assessment Test (SAT) or the American College Test (ACT). Having the post-graduate schools take the Graduate Record Examination (GRE), Graduate Management Admission Test (GMAT), Medical College Admissions Test (MCAT), or the Law School Admission Test (LSAT) is a must and a requirement in both Canada and America. These tests are effective and useful at the same time for it tells if the students will be a success as they take the programs they are considered for (Kuncel, Hezlett, & Ones, 2010).

This recent 1990s, researchers now settle and approve the "big five" personality traits: openness, conscientiousness, extraversion, neuroticism and agreeableness (The Psychology Book, DK London and Delhi, 2012, p. 303).

Intelligence tests are not just used for measuring intended for comparison, but also used for the process of personnel selection, which is used to help select people who are more likely to do well in their tasks or jobs. It is also used for job analysis in which it determines what skills, characteristics, behavior and abilities are needed for a specified job (Agnello, Ryan, & Yusko, 2015).