

Intelligence Matters: A comparison of EQ and IQ

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Abstract—The purpose of the study is to study intelligence and compare IQ and emotional quotient. Intelligence is variously defined as the capacity for abstraction, logic, understanding, self-awareness, learning, emotional knowledge, reasoning, planning, creativity, critical thinking, and problem solving. Emotional intelligence (also known as emotional quotient or EQ) is the ability to understand, use, and manage your emotions in a positive way to reduce stress, communicate effectively, empathize with others, overcome challenges, and resolve conflicts. IQ (intelligence quotient) is a number used to express a person's relative intelligence. This is one of many intelligence tests. EI is related to the non-cognitive abilities of intelligence, which refers to the ability to read social and political situations and instinctively understand what other people need and want, and what their strengths and weaknesses are. This research paper focuses on emotional intelligence, IQ, academic performance, and various intellectual abilities. The emotional intelligence of students with average and high intellectual ability was higher than that of students with low average intellectual ability, and the emotional intelligence of students with average intellectual ability was higher than that of students with average intellectual ability. Although it is clear that students with average and high intellectual abilities perform better academically than those with below average intellectual abilities, all IQ groups appear similar in terms of achievement levels. The study concluded that emotional intelligence is positively correlated with academic ability and negatively correlated with IQ.

Index Terms—Intelligence, Intelligence Quotient (IQ), Emotional Intelligence (EI), Emotional Quotient (EQ), Academic Performance, Intellectual Ability, Cognitive Intelligence, Student Achievement.

I. INTRODUCTION

Intelligence research is a dynamic field that is continually evolving, developing, and gaining in importance. In fact, although there are several environmental factors designed to improve intelligence (such as workshops, educational

programs, coaching, and training), we still know little about what causes individual differences in intelligence and how many factors are involved in the development, organization, and implementation of intelligence. Intelligent people tend to benefit more than those with lower IQs, allowing them to continue learning and plan better.

In addition, intelligent people retain the knowledge and abilities gained through experience, are able to analyze new situations and develop new solutions. On the other hand, another ability, the emotional component, is also an important aspect that people must observe. Until now, organizations and institutions have not paid much attention to developing the emotional capabilities of their employees. However, this aspect requires institutional attention in the future for its success (Gondal & Husain, 2013).

Emotional intelligence is an individual's ability to recognize and regulate their own and others' emotions and use that information to guide their thoughts and actions (Giardini and Frese, 2006; Mayer et al., 2008). Emotional quotient can be described as the ability to understand, control, evaluate, and express one's emotions. Emotional intelligence also focuses on recognizing emotions, assessing the emotions of others, managing your own emotions, expressing the emotions of others, social communication, and communicating with others. The idea of multiple intelligences, including both interpersonal (i.e., understanding another person's emotions and intentions) and intrapersonal (i.e., understanding one's own emotions), forms the basis of emotional intelligence models.

EI is the ability of people to recognize their own and others' emotions, to distinguish different feelings and label them accordingly, to use emotional information to guide their thinking and behavior, and to manage or adjust their emotions to adapt to the environment and achieve personal goals.

Emotional intelligence (EI) is the ability to understand, use, recognize, and manipulate emotions and emotional facts. Emotional intelligence plays an important role in today's environment, especially in terms of its impact on today's workforce. Therefore, anything that affects people's intellectual efficiency has an impact effect on the agencies they own or manage. Each commercial enterprise company is constructed from people with numerous abilities, personalities, and feelings, which can have a significant impact on their work performance.

IQ or intelligence is an important factor in determining victory in certain fields such as sports, mainly soccer, volleyball, basketball, and tennis, which requires accurate and quick thinking and quick actions to anticipate your opponent. Therefore, intellectual achievements in sports are very important.

EI, on the other hand, is related to the non-cognitive abilities of intelligence, which refers to the ability to read social and political situations and instinctively understand what others need and want, and what their strengths and weaknesses are. It is the ability to maintain resilience and balance under stress, respond logically to life experiences and crises, use emotions to solve problems, and live a more effective life.

In this context, Gagné presented a theoretical model, the "Differentiation Model of Giftedness and Talent," and listed four areas of natural ability: 1. Intellectual abilities (memory, reasoning, judgment, etc.), 2.

Creative abilities (imagination, originality, ingenuity, etc.), 3. Socio-emotional competencies (influence, communication, empathy, sensitivity), 4. Sensorimotor skills (strength, sensitivity, endurance, coordination, etc.).

In fact, many experts now suggest that a person's EQ, or emotional quotient, is more important than IQ and is a better indicator of success, relationship quality, and happiness. For companies to be successful, they must invest in their employees and support them in developing their emotional intelligence talents so that they can work effectively within the company (Wall, Bob, 2008).

According to Dalip Singh (2001), emotional intelligence helps managers and employees recognize and understand emotions. Self-control and social balance are also two areas where emotional intelligence can help. Emotional intelligence in the workplace can be used to foster personal growth, group productivity, and business growth. A look at the evolution of emotional intelligence

According to David Wechsler (1940), popular intelligence tests are inadequate because larger cognitive factors, such as character, influence a person's intellectual development. H. R. Gardner developed the concept of social intelligence in 1983, distinguishing between interpersonal and internal forms of intelligence.

Table 1 below illustrates briefly the history of Emotional Intelligence

Year	Author	Theory
1930's	Edward Thorndike	Associating with the ability to get along with others
1940's	David Wechsler	Suggested that affective aspects of intelligence may be necessary for social interaction

Payne first used the term "emotional intelligence" in the title of his doctoral thesis in 1986. This qualitative study hypothesized that showing courage in the face of adversity, such as fear and difficult decisions, may be beneficial for people who have problems with emotional functioning and entitlement.

Reuven Bar-On (1997) coined the term "EQ" (emotional quotient) to provide a framework for

assessing a person's emotional and social talents. This man (EQ-i) became the inventor of the first-of-its-kind Emotional Quotient Inventory. Psychologists John Mayer and Peter Salovey first introduced the concept of "emotional intelligence" in 1990 in an essay in the journal *Imagination, Cognition, and Personality*.

1950's	Abraham Maslow	Describes how individuals can develop emotional resilience
1975	Howard Gardner	Published a book titled "The Shattered Mind," which is notable for presenting the idea of multiple intelligences.
1985	Wayne Payne	He suggested that weakness in emotional functioning and regulation could be overcome by displaying courage in the face of fear or desire.
1990	Peter Salovey and John Mayer	The term Emotional Intelligence was first used in writing. Emotional Intelligence is defined as "A form of intelligence that involves the ability to monitor one's own and others feelings and emotions to discriminate among them and to use the information to guide one's thinking and actions "(Mayer, 1997)
1995	Daniel Goleman	In his book titled "Emotional Intelligence," Daniel Goleman outlined four key emotional constructs: "self-awareness, self-management, social awareness, and relationship management".
1997	Bar-on	In 1997 Bar-on zeroed in on certain personality traits and social skills, such as self-awareness, -understanding, and -expression, as well as social-awareness, -understanding, and -relationship building.(Bar-on, 1997)

1995 Daniel Goleman: In his book Emotional Intelligence, Daniel Goleman identified four major emotional structures: self-awareness, self-management, social awareness, and relationship management. 1997 Bar-on In 1997, Bar-on focused on certain personality traits and social skills such as self-awareness, understanding and expression, as well as social awareness, understanding and relationship building. (Bar-on, 1997).

In 1995, Daniel Goleman spread the concept of "emotional intelligence" to hundreds of people. He studied the research of John Mayer and Peter Salovey and later developed his own idea of EQ.

II. INTELLIGENCE QUOTIENT

Each person has different intellectual potential. Intellectual intelligence (IQ) is the intelligence required to perform various mental activities such as thinking, reasoning, and problem solving (Robbins & Timothy, 2009). Indonesian education emphasizes intellectual ability over other types of intelligence. In reality, intelligence is measured by the value of school reports and intellectual property, but perspective, creativity, independence, emotionality, and spirituality are not given proportional value (Efendi, 2005).

According to Caruso's research, the fact that intellectual ability, as measured by IQ, remains important for success at work. "In fact, many psychologists still believe that IQ is the best indicator of success at work" (Caruso, 1999).

It is also described by the ability to understand complex ideas, overcome problems, adapt effectively to the environment, engage deeply in different types of reasoning, and think in an informed manner (Yu et al., 2016). Degree of intelligence is measured as the quotient of expected age and chronological age. Intelligence Quotient = Mental Age / Chronological Age

If your predicted age is the same as your actual age, your IQ will be 100. The higher the IQ level, the more elite the child will be. Primary IQ tests are designed to measure a child's intelligence at the level it "should" be when assessed for their age. A child with a high IQ is considered to be much more intelligent than the average toddler of the same age, and if the child's score is lower than expected for a child of the same age, the child has a low IQ (Dickens & Flynn, 2002).

Intelligence quotient (IQ) assesses an individual's intellectual ability, whereas EI measures an individual's inner emotional and social intelligence (Martins, Ramalho, & Moen, 2010). Emotional intelligence appears to be a stronger predictor of

success than IQ. Based on IQ, topics can be approached completely on the basis of intelligence quotient, but the final performance depends on emotional intelligence (Jeevan T, 2010).

It is emphasized by teachers and psychologists. Intelligence Quotient (IQ) assesses a person's intellectual ability. On the other hand, EI measures a person's inner emotions and social intelligence (Martins, Ramalho, and Moen, 2010). Education experts and psychologists emphasize the relationship between EI and student success.

The study found that higher EI scores indicate positive social functioning, as well as the ability to manage emotions, adapt to change and cope with stressful situations, which promotes cognitive and intellectual development, which can lead to better academic performance. Academic performance is the basis of the teaching and learning process and is influenced by the type of school, the socio-economic status of the student, educational background, intelligence, parent's personality, etc., all of which affect the student's performance and performance.

Environmental and biological variables influence intellectual development. Although intelligence and success are two different things, they are strongly related to each other (kaya, 2015). Intellectual power such as long-term memory, the ability to think theoretically, while non-intellectual power such as inspiration and self-control both impact the student's academic performance. Validated IQ measurement procedures have existed since the early 1900s and have been used in many studies to assess intellectual ability (Seligman & Duckworth, 2005). Good academic performance cannot be achieved without intelligence, while having high intelligence does not guarantee high academic performance (Iqbal et al., 2021).

In work, it is not only important to complete a task, but also the intelligence to analyze something, and intellectual intelligence plays a role when a person uses analytical and cognitive abilities to solve problems in completing work to achieve maximum results. But Goleman has a different opinion. The greatest abilities that influence a person's success at work are empathy, self-control, and initiative. Goleman (2001) suggests that emotional intelligence accounts for 80% of a person's success factors, and the remaining 20% is determined by intellectual intelligence (Mangkunegara, 2005).

III. MOVING FROM INTELLIGENCE TO EMOTIONAL INTELLIGENCE

In 1920, psychologist Edward Thorndike came to the conclusion that humans have different types of intelligence. He described social intelligence as the ability to understand people and act wisely in interpersonal relationships.

Wechsler (1958) described intelligence as the ability to act accessible and effectively when interacting with the surrounding environment. Howard Gardner (1983) expanded the definition of intelligence with the important additions of interpersonal and intrapersonal intelligence. Interpersonal intelligence is the ability to interact with others, and intrapersonal intelligence is the ability to be aware of oneself. Gardner argued that this intelligence is different from the many forms of intelligence that can be tested using IQ. essay.

Salovey and Mayer (1990) began their research on social intelligence and decided that their research on emotional intelligence relied largely on the idea of "social intelligence" put forward by earlier researchers. They argued that both concepts were originally equivalent and based on equivalent principles of human behavior. They found that people are better at managing and regulating their emotions than others. Daniel Goleman (1998) was primarily inspired by Salovey and Mayer's article on the emergence of the concept of emotional intelligence in the study of emotions, and associated it with the "field of work accomplishment." His best-selling book on emotional intelligence brought awareness to this idea. Goleman's model of emotional intelligence is widely accepted and serves as the basis for various studies related to emotional intelligence.

Boyatzis and Sala (2004) defined emotional intelligence as emotional statistics that are important for effective and good job performance.

IV. LITERATURE REVIEW

Singh et al (2022) continued their research by reviewing existing models, assessment tools, and the relationships between them. By comparing EI models along criteria such as the emphasis on emotions and emotional intelligence, the gap between the three models, and the perceived need for the development and standardization of EI scales, a contrast can be drawn between models that emphasize intellectual

abilities and those that combine intellectual abilities and personality traits.

Valenzuela et al. (2023) investigated the correlation between IQ and spelling, executive function, and emotional intelligence and sought to analyze the differences between participant-reported executive function profiles and IQ, spelling, and emotional intelligence. Multivariate analysis of variance (MANCOVA) revealed differences between different groups on the variables of IQ, spelling, and interpersonal emotional intelligence, showing that students with higher executive function profiles had higher scores on IQ, spelling performance, and interpersonal emotional intelligence.

Hasania and Rizal (2018) identify the influence of intelligence quotient (IQ) and emotional quotient (EQ) on organizational culture and employee performance. The results showed that intelligence quotients (IQ) have a significant impact on organizational culture. Emotional Quotients (EQ) have a significant impact on organizational culture. Intelligence Quotient (IQ) has a significant impact on employee productivity. Emotional quotient (EQ) has a significant impact on employee performance, and organizational culture has a significant impact on employee performance.

Siddiqui et al. (2022) studied the correlation between EQ and IQ and academic performance. This study concluded that emotional intelligence is positively correlated with academic performance and negatively correlated with IQ.

Mursaleen and Munaaf (2020) studied differences in emotional intelligence, aggression, and academic achievement of adolescents with below average, average, and high average intellectual abilities. The results revealed significant differences in the emotional intelligence and academic achievement of students with below average, average, and high intellectual abilities; however, an insignificant difference was found in their level of aggression. Therefore, this can be concluded that intellectual ability is an important determinant of emotional intelligence and academic performance of adolescent students.

Nakisa and Rahbardar (2019) aimed to investigate whether there is a significant correlation between intellectual intelligence (IQ) and emotional intelligence (EI) (Bar-On Emotional Intelligence Scale) and performance (Charbonneau Sports Performance Questionnaire) and to evaluate the

psychological characteristics of youth male soccer players in different playing positions using a descriptive method with correlation method. The obtained results support the hypothesis that positional differences in psychological characteristics exist. In addition, it can be concluded that young football players may differ in psychological skills and in the positions they play.

Singh and Sachdev (2019) investigated the correlation between general intelligence, emotional intelligence, and stress response after 1 month of moderate-intensity physical exercise. A positive correlation has been found between acute stress and chronic stress. After 1 month of practicing moderate-intensity physical exercise, a significant increase was observed between the investigated parameters, resulting in improved outcomes. Prolonged moderate aerobic exercise reduces stress and improves intelligence.

Vinoto et al (2019) studied “The impact of IQ and emotional quotient on creativity-mediated teacher effectiveness”. The results show that IQ has a significant positive impact on teacher performance. This shows that the higher the teacher's intellectual IQ, the better the academic performance. These results are consistent with previous studies that explain that aspects of intelligence play a fairly important role in predicting employee performance. The second result shows that emotional factors have a significant positive impact on teachers' work. This indicates that emotion management aspects are also important factors that can influence the final results. discussion

Although the four pillars of Goleman's theory seem to focus on EI, this theory does not mention the emotional capture dimensions that he proposed in his book (Goleman, 1995). However, the self-control subdomain of the self-management domain may be able to capture this important characteristic of emotional intelligence. Goleman's EI model, like Baron's, went beyond measuring emotions and emotional intelligence upon closer inspection. Components include: Social awareness (including organizational awareness and service orientation). Self-management (including initiative, integrity, reliability, adaptability, and desire to achieve). Managing relationships (including nurturing others, being a catalyst for change, effective collaboration and leadership) and managing conflict. These results may call into question the validity of Goleman's EI measure.

The EI ability approach was proposed by Mayer, Salovey, and Caruso (2002) as a means of measuring an individual's logical or cognitive ability to cope with emotional impacts. While Mayer et al. If researchers have indeed focused their research on the concept of emotion, the difficulty lies in their conceptualization of EI as cognitive processes.

It is well known that emotions precede logical thinking, and in some highly emotional people, these emotions can completely block or distract from stimuli before they reach the cerebral cortex, the brain's processing center for higher-order thinking.

The term "emotional hijacking" was coined by psychologist Daniel Goleman in 1995. Many people's temporary bad behavior can be attributed to experiences of emotional hijacking (Farooqi, 2019). Oddly enough, some people may find that emotionally hijacked events last longer than others. For some people, emotions may not fully subside for years.

In accordance with the proposed objectives, the direct relationships between the research variables EF, SP, IQ and several aspects of EI were examined. Regarding the EF profiles presented by elementary school students, two distinct profiles are clearly distinguished: those with high IQ, spelling performance, and interpersonal EI and those with low values.

However, care should be taken regarding the number of profiles obtained based on EF, as these profiles may vary depending on sample size and covariates such as age and gender. Finally, the development of interpersonal EI was observed to be associated with spelling ability in school children with high executive function profiles.

Emotional intelligence is a major predictor of academic performance in continuous assessment and final examination, indicating the existence of a direct impact of EI on academic performance in medical education.

The impact of EI on academic performance can be attributed to students' ability to accurately recognize emotions and understand their causes (Chew et al., 2013). Students with average IQs took more than a year to prepare for medical school entrance exams, while students with other high IQs took less time to prepare. Additionally, students with average IQs studied supplemented with regular activities and performed well on semester exams, whereas students with high IQs studied for less time and performed well.

It was observed that students with average IQs had about the same academic performance as students with higher IQs, but this was because they spent more time studying. Thus, academic performance was directly linked to the number of attempts at medical registration, the number of hours of study and the regularity of classes (Yesikar et al., 2015).

V. CONCLUSION

The present study concluded that emotional intelligence is positively correlated with academic performance and negatively correlated with IQ. This study focused on the emotional intelligence, intelligence and academic achievement of students with below average, average and high intellectual abilities.

From the results obtained, it is evident that there is a significant difference in the emotional intelligence and academic performance of adolescents with different IQ levels. The emotional intelligence of students with average and average intellectual ability was higher than that of students with below average intellectual ability, and the emotional intelligence of students with average intellectual ability was higher than that of students with average intellectual ability.

It was clear that students with average and high-average intellectual ability had higher academic performance scores than students with below-average intellectual ability, but all IQ groups appeared to be similar when it came to levels of aggression.

Therefore, from this result, we can conclude that emotional intelligence and academic performance of adolescent students depend on IQ level, but emotional intelligence is independent of IQ level. Results for the IQ-EQ group showed that the low IQ and high EQ group had the highest serum cortisol levels, and the low IQ and low EQ group had the highest soccer hand grip score, indicating better performance. This study revealed that people with higher levels of general and emotional intelligence have lower stress intensity, and chronic stress can develop in response to acute stress over long periods of time.

Emotion management here involves the process by which the speaker builds a good relationship. Of course, this makes for a more positive work environment, both teacher-student and teacher-coworker relationships. Aspects of creativity also play an important role in supporting student performance.

Creativity has been shown to play a mediating role in the relationship between IQ and student achievement. This condition shows that students with good intelligence are able to transfer their knowledge creatively in learning activities and that the methods influence the results.

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