

**Is emotional intelligence an indicator of academic  
achievement for elementary school students in  
Dubai?**

هل من علاقة بين الذكاء العاطفي والإنجاز الأكاديمي عند طلاب  
المرحلة الأساسية في دبي؟

by

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of the requirements for the degree of  
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at

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**Dr. David Solomon**

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## **Abstract**

With the increasing challenges of educating today's students, it has become necessary to look beyond mere cognitive abilities and knowledge acquisition and find other ways to reach the teenage heart and mind. One such other way of reaching students is through the affective domain or what has come to be known as emotional intelligence (EI). The aim of this research is to study the relationship between emotional intelligence and academic achievement for elementary grade students, living in Dubai. Before performing the methodology, the literature consulted comprised the history of emotional intelligence and how the concept was developed, well known emotional intelligence theories, in addition to previously conducted research, similar to this paper, conducted in different geographical locations and circumstances. After that, the quantitative research method has been used for the purpose of this research, where the emotional intelligence test TEIQue-CSF (Trait Emotional Intelligence Questionnaire – Child Short Form) was employed. A sample of 100 students has been selected. Their grades and emotional intelligence levels have been compared, trying to find a relationship. The findings suggest that no relationship occurs between the two. However, the data was not significant, so no assertions were made.

***Keywords: emotional intelligence, academic achievement, elementary school, students, United Arab Emirates, Dubai***

## Abstract (Arabic)

مع تفاقم الصعوبات في تعليم جيل اليوم، بات من الضروري النظر أبعد من القدرات المعرفية واكتساب المعرفة بالطرق التقليدية وإعتماد أساليب جديدة في إيصال الأفكار والمعلومات للمراهقين. واحدة من الطرق المعتمدة مرتبطة بالمجال العاطفي للطلاب، أو ما يعرف بالذكاء العاطفي. الهدف من هذا البحث هو دراسة وجود علاقة بين الذكاء العاطفي والانجاز الأكاديمي لطلاب المرحلة الأساسية في دبي. قبل تنفيذ المنهجية، تم دراسة تاريخ الذكاء العاطفي ومراحل تطور هذا المفهوم وتم عرض أهم النظريات المتعلقة بهذا المفهوم، بالإضافة إلى أبرز الدراسات الشبيهة بدراستنا هذه، والتي تنظيماً ضمن مواقع جيوغرافي وظروف مختلفة. بعد ذلك، تم إستعمال المنهجية الكمية من خلال توظيف إستطلاع مخصص بالذكاء العاطفي للاطفال. تم إختيار عينة من 100 طالب. تم مقارنة علاماتهم المدرسية في مادة الرياضيات، كمؤشر على انجازاتهم الأكاديمية، مع مستوى ذكائهم العاطفي، بغية محاولات وجود علاقة بين الإثنين. تشير النتائج إلى عدم وجود علاقة بين المتغيرات. إلا أن البيانات لم تكن كافية، لذا لم يتم تقديم أي تأكيدات.

*الكلمات الرئيسية: الذكاء العاطفي، الإنجاز الأكاديمي، المدرسة الابتدائية، الطلاب، الإمارات العربية*

*المتحدة، دبي*

## **Dedication**

To the soul of my father.

## **Acknowledgement**

I would like to dedicate this thesis to my very supporting husband, Samer Abou Daher, who has demonstrated nothing but complete patience and understanding through my long working hours. I also would like to dedicate this to my children, Nicole, Rami and Nathalie, who have tried to help me as much as possible.

I promise I will make you prouder, day after day.

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## **Chapter 1: Introduction**

### **1.1. Introduction**

As per Adelman and Taylor's (2000) claim, if the educational system concentrates only on theoretical teaching and in their attempts of guiding their students to reach scholarly success, they will meet a dead end. Students always have challenges that act as fences to their accomplishment as learners. No matter what their background is, or what their color is, students need extra efforts for the information to reach their understanding in a straightforward way. Throughout history, feelings and sentiments have been believed to be vital to the course of learning. Thus, the immergence of the notion of emotional intelligence arouse in the aim of supporting the proper methods of education. The amplified attention in exploration of emotional intelligence has led to a statistical journey linking the dimension of social and emotional learning (SEL) agendas which lead EQ to result with enhanced conduct and scholarly success (Bradberry & Greaves, 2005).

The emphasis on SEL within academic structures directs students to understand scholarly material using EQ aptitudes. In due course, educational institutions are starting to recognize the essential effects of curriculum integrated-high quality SEL programs (Zins et al., 2004). Students are developing their capacity of distinguishing and regulating emotions, through SEL programming, students learn to identify and control emotions, emphasize with others, make accurate decisions, act ethically and sensibly, advance confident relationships, and evade undesirable behaviors (Elias et

al., 1997). Originated through the efforts of Goleman, Shriver, and Rockefeller Growald in 1994, the Collaborative for Academic, Social, and Emotional Learning (CASEL), has been investigating effective implementation SEL programs, through Emotional and Social Learning at schools. CASEL (2003) has commenced the duty of assessing the efficiency of SEL programs, supplying standards-based indication that such fruitful models can be simulated in schools. Typical SEL programs studied by CASEL have witnessed application in schools of different regions.

SEL programs replicas permitted educationalists to concentrate resources on precautionary tactics emphasizing the growth of students. CASEL (2006) proposed that first-rate SEL programs are branded by 2 levels; the first level creates secure, thoughtful, well-controlled academic environments that directs to superior attachment of students to their school, lower risk on the behavior of students, and enhanced academic achievement, while the second assists student-progress and better scholarly achievement by teaching in a variety of social and emotional capabilities. As per Weissberg and Utne O'Brien's (2004) recommendation, SEL programs efficiently tackle behavioral and emotional issues within a wider background of school, structuring emotional skills with others, that helps students to adjust defensive factors that endorse educational accomplishment. The value of SEL programs mature an imperative assembly amongst students and teachers, students and students, teachers and parents, administrators and teachers, administrators and students, and the community and school, as designated by Luiselli, Putnam, Handler, and Feinberg (2005). Studies propose that there is something missing in

endorsing scholarly accomplishment, which indicated an instructional design that assimilates SEL into the prospectus of the educational institutions (Elias et al., 2002).

Starting in the 1960s, the combination of two SEL agendas had arose into the academic prospectus, showing actual outcomes: the School Development Program (SDP), created by James Comer, Connecticut, and the Self-Science, established by Karen Stone McKown, California. Such studies signify the status of agendas that support students to learn EQ capabilities, which mature moral that guide them on directing their emotions. SEL programs give students an outline for evolving compassion, evaluating the outcomes of decisions, and evolving acquaintances to the greater community, through the service of others (Haynes et al., 1996; Jensen, 2001).

## **1.2. Statement of the problem**

Apart from emotional intelligence capabilities, students may have higher susceptibility to physical complaints that deplete their vigor, energy and emotional worries which obstruct scholarly attainment (Elias & Arnold, 2006). Educationalists, day by day, are starting to acknowledge that students hurt intellectually, physically and emotionally, when EQ capabilities are not one of the school philosophy's priorities (Elias & Arnold, 2006). As per McCown (1998), a well-built EQ prospectus is a vital anticipatory explanation for many of today's academic problems. As an alternative to struggling with short-term interferences, a combined EQ prospectus could be most accommodating (Jensen et al., 2007). Studies show that

academically and socially efficient educational institutions are identified by an orderly SEL constituent joined into a school's life and prospectus, yet few schools administer actual whole-of-school SEL programs (Olweus, 1993). The issue is that schools, on average, have fourteen practices, to avoid five problematic behavior and endorse safe learning settings; the literature proposes such plans being unproductive because they have short-term durability and lack assembly and incorporation into the prospectus and life of schools (CASEL, 2003). Outcomes of study on present anticipation agendas demonstrated dispersed success, usually of a short period (Olweus, 1993; Adelman & Taylor, 2000; Ringwalt, Ennett, Vincus, Rohrbach, & Simons-Rudolph, 2004).

Conclusions on deterrence agendas in educational institutions specify the need to examine an inclusive path to endorse the well-being and health of students joining public schools. Furthermore, explorations on optimistic youth development and deterrence suggest that two or more years of development have better significance influence (Payton et al., 2000). According to CASEL's (2003) advise, schools should accept aggregate methods tackling students' health, which communicates EQ capabilities via school-based SEL curricula. The Six Seconds and CASEL EQ Organization have been established to support educational institutions seeking to run EQ and SEL programs. Slight research is presented on the connection between EQ-SEL programs and scholarly attainment for students at elementary schools.

### **1.3. Purpose and objectives**

The reason behind this research was to examine the relationship between emotional intelligence and scholarly performance and accomplishment for elementary school pupils at Sharjah American International School, in Dubai. The school has not yet established a tailor made emotional intelligence curriculum, and for that reason, this research is to play an active role in determining whether such program has a positive impact over the performance of the students, if established. For a number of years, the school has sought to develop new techniques to boost its students' performance, that is measured by their average grades. The school needed to link the performance of the students to a more social aspect, that can be controlled, in an efficient way.

The school is considered to have a traditional approach to evaluating students where a report card is the only means of communicating the students' achievements to the parents. The search for other effecting factors seemed as a must.

Thus, to reach an endpoint, the researcher has relied on the performing analyses of emotional intelligence and academic achievement, to end up linking them together to find whether a possible relationship exists or not.

#### **1.4. Research questions**

The research questions that are specifically intended to investigate the drive behind this research paper are as follows:

- 1- What is the level of emotional intelligence of elementary students?
- 2- What is the level of academic achievement of elementary students?

- 3- Is there a relationship between emotional intelligence and academic achievement of elementary students?

### **1.5. Hypothesis**

Teachers are being encouraged to deliver information in a very tightly prescribed manner. The aptitude to comprehend themselves and others; and specifically, to be conscious of understanding and using information about the emotional states proficiently is essential. It comprises the capability to comprehend, convey, and control emotions, and react to the emotions of others, in manners that are useful to them and others (Bhavard, 2015)

Throughout the author's research, various resources on a positive correlation between academic achievement and emotional intelligence have been observed. Thus, the researcher aims at quantifying this correlation through the following methodology.

- H<sub>0</sub>: There is no relationship between emotional intelligence and academic achievement in the subject of mathematics in Dubai.
- H<sub>1</sub>: There is a relationship between emotional intelligence and academic achievement in the subject of mathematics in Dubai.

### **1.6. Rational for the study**

Salovey and Mayer (1990), through their revolutionary work on EQ, fixated on capabilities which allow individuals to recognize, analyze and understand emotional material. These emotional informative skills signify a unified set of data-processing

aptitudes: a unique sort of intelligence. Supplementary research, by Mayer and Salovey, has suggested EQ capabilities to mature with experience and age (Mayer et al., 1997). Studies have recommended that EQ aptitudes might deliver an imperative link to academic attainment (Parker et al., 2004; Durlak & Weissberg, 2005). EQ has become a prevalent concept post to the efforts of Daniel Goleman. Structuring on the work and research exhorted by Mayer and Salovey, Goleman (1995) proposed that the social capability matures from 2 elementary EQ capabilities: self-management of emotions and consciousness of emotions. He proposed that emotional knowledge plans which concentrate on empowering students to identify, specify and guide emotions, advance students' scholarly achievement.

In the 20th century, students have faced increasing indications of mental distress (Pipher, 1994, 1996). Outcomes proposed a steady deteriorating of students' EQ. Study results demonstrate that the recent cohort of students are more emotionally concerned. Students are described to be more depressed and lonely, more unruly and angry, more prone to worry and nervous, and more aggressive and impulsive (Achenbach et al., 1991; Achenbach & Howell, 1993; Achenbach et al., 2003).

Vail (1994) agreed, having contended emotional stressors to disturb students' scholarly attainment by initiating depression, devaluation and depletion. Vail suggested that the brain has a biological reply to this anxiety, which often offers a blockade that stops students from retrieving healthy mental processing. When students feel threatened within their classroom or school, the cognitive

processes essential for scholarly attainment are dominated by the emotional procedures of self-defense and endurance (Bluestein, 2001).

## **1.7. Structure of the dissertation**

Throughout this chapter, a basic outline of what was discussed within this dissertation was explained. The purpose of this research, the research questions and the hypothesis were stated, based on the problem provided.

In the second chapter, the literature review examines the present state of the works on the dissertation area of emotional intelligence and on academic achievement, and clarifies why the thesis is unique.

The third chapter, the methodology, states the followed method of research and data collection and reveals the techniques employed to analyze it.

Furthermore, chapter 4 reveals the findings themselves and analyses the results for conclusions to be drawn out and for them to be compared with the literature review findings of the current state of research.

Last but not least, the final chapter discusses the results and opens up new horizon for future research and suggest new recommendations, while discussing the limitations faced throughout the implementation of this research.

## **Chapter 2: Literature Review**

### **2.1. Chapter Overview**

Managing and comprehending elementary students' emotional intelligence plays a key role in acquiring insights on various personal and educational levels. The usual habits that occur within the region of the Middle East rotate around stressing on the importance of EI for teachers and facilitators. Specialized organizations, such as the United Nations, always work on providing high quality training to provide teachers with the basic and advanced knowledge on how to control their emotions for the optimal performance.

This chapter aims at investigating the relationship between emotional intelligence of school students and their performance, mainly relying on previously conducted research over history. Throughout this chapter, literature regarding the background and history of EQ will be reviewed. On top of that, basic concepts relevant to emotional intelligence and academic achievement will be reviewed, while presenting the key theories and models thereafter. Also, relevant research will be discussed to find the link between emotional intelligence of students and their academic achievements, to conclude with a positioning of the current research

### **2.2. Background and History of Emotional Intelligence**

As of 1990, since emotional intelligence was first presented, it has converted to be the exhortation of psychology. It has been applied in various domains involving

management studies, education, and artificial intelligence (AI). The famous emotional intelligence spokesperson, Daniel Goleman (1995), defined emotional intelligence (EI/EQ) as involving “abilities such as being able to motivate oneself and persist in the face of frustration, to control impulses and delay gratification; to regulate one’s moods and keep distress from swamping the ability to think; to emphasize and to hope” (1995, p.34). Afterwards, Goleman has reformulated his primary definition of EI and broke it down into 25 distinctive emotional competencies, including but not limited to, self-confidence, consciousness, service orientation, political awareness, and achievement drive (Goleman, 1998). Examination has established that EQ plays a higher role in life, than IQ, in determining victory in life and education (Salovey& Mayer, 1990). Several research findings propose that EI is vital for work environments (Carmeli, 2003), and teaching spaces (Petrides et al., 2004), and improves reasoning (Shutte, Schuetplez, &Malouff, 2001), performance in interviews (Fox & Spector, 2000) and in relevant performance to certain events (Carmeli, 2003).

## **2.3. Conceptual Analysis**

### *2.3.1. Intelligence*

At early years of 1900s, the notion of intelligence started to ascend after the Alfred Binet designed the first test, at a French middle school, to check the probability of school students falling behind their peers (Pishghadam, 2009). Thus, Lewis Terman, in 1916, came up with the Intelligence quotient notion or the IQ, which has undergone several changes since then. When it was adopted at the beginning of the

20<sup>th</sup> century, IQ was only measured by a person's reasoning abilities, by testing aspects such as memory and language skills (Pishghadam, 2009). Currently, research has shifted from the fact of the IQ being the only measure of intellect. In 1958, Wechsler suggested that not only does IQ determine a person's success; however, social intelligence is what determines a person's level of achievement in life.

Thorndike (1920) theorized that actual intelligence is composed of not only the academic component, but of the social and emotional components as well. Social intelligence, as per Thorndike, is "the ability to understand and manage men and women, boys and girls – to act wisely in human relations". It has the capability of "showing itself abundantly in the nursery, on the playground, in barracks and factories and salesrooms, but it eludes the formal standardized conditions of the testing laboratory".

Despite the fact of the society has placing a significant emphasis on academic intelligence, in 1997, Bar-On reasoned that social and emotional intelligence are more effective predictors towards a person's success in life. More recent research, such as that of Gardner (1999), has defended the ideology of numerous intelligences. Gardner has suggested a model including at a minimum of 8 sorts of intelligence, including but not limited to musical intelligence, spatial intelligence, interpersonal intelligence, and intrapersonal intelligence, naturalistic intelligence, and bodily-kinesthetic intelligence, linguistic and logical-mathematical intelligence. He suggested the theory of "multiple intelligences" in his writing of 1983, claiming that interpersonal and intrapersonal intelligence should be added to the list of types of intelligence.

Thus, nowadays, intellect is no longer viewed as a one-dimensional concept (Binet, 1905) and has undergone several radical changes, to be transformed into a more complex one (Gardner, 1983), to finally relate it to the emotional notion (Salovey & Mayer, 1989).

### *2.3.2. Emotional Intelligence*

Throughout history, emotional intelligence (EI) has been theorized as a major factor in determining success (Bharvad, 2015). The ability to maintain and develop emotional intelligence of individuals is crucial for the wellbeing and inner peace of individuals and their surroundings.

Emotional intelligence is a term created, in 1990, by two doctoral researchers, Peter Salovey and John Mayer, from Yale and University of New Hampshire. It was further spread by Dan Goleman throughout the book “Emotional Intelligence”, which he published in 1996. The term emotional intelligence is defined as the ability of recognizing, understanding and managing our own emotions in addition to influencing the emotions of other.

Earlier in time, psychologists relied on cognitive abilities, such as problem-solving skills and memory strength to relate to intelligence (Khajepour, 2011). During early 1800s, Plato related all learning potential to an emotional criterion. He stated that “All learning has an emotional base” (Edmond-Kinger et al., 2006). Since then onwards, psychologists and scientists declared the importance of focusing their studies and research on proving whether this relationship exists or not (Freedman,

2009). During the 50s, Abraham Maslow stressed on how individuals could develop their “emotional, physical, spiritual, and mental strengths”, through his work “Human Potential”, which was one of the greatest contributions to humanism since renaissance. Following that, in the 70s and 80s, fundamental research was conducted to try to define the relationship between feelings and intelligence, as part of human capabilities. Salovey mentioned that the concepts on intelligence and emotions are ever-changing over time, where intelligence was previously conceived as perfection and emotions were seen as “perdition”. Nowadays, intelligence is proven to have more contributions to life and emotions are of more value to individuals (Freedman, 2009).

### *2.3.3. Emotional Intelligence and Capacities*

One area, out of two, in psychology, relates to how thinking and emotions relate (Isen et al., 1978; Zajonc, 1980; Clark & Fiske, 1982). Although emotions and intellect were previously considered to be opposites (De Sousa, 1987), studies in the 1980s recognized how reasoning and affect were combined progressions; affect impacts numerous aspects of cognitive performance, counting attention, memory, and decision making (Mayer & Bremer, 1985; Singer & Salovey, 1988; Salovey & Birnbaum, 1989; Damasio, 1994). Consequently, the EI theory hypothesizes that the emotional informational value has the capability of making thinking smarter.

EI theory, which was developed as the notion of emotional intelligence, was expansion to incorporate a selection of mental capabilities, including practical, social

and personal intelligence, instead of one (Sternberg, 1985; Cantor & Kihlstrom, 1987). Particular types of acuities are usually characterized depending on the kinds of information by which they operate on (Carroll, 1993; Wechsler, 1997). EI functions on “hot” information processing or cognitions that comprise of matters of emotional and personal significance to persons and their relationships (Abelson & Clarke, 1963; Mayer & Mitchell, 1998). EI is different than other intellectual skills, such as verbal–propositional intelligence, which primarily operate on “cold” cognitive progressions. EI is also empirically and theoretically different from personality and temperament characteristics (Mayer, Salovey, & Caruso, 2004). Whereas being neurotic, as an example, includes case-by-case differences in levels of intensity, expectancy recovery time and emotional reaction, (Rothbart, 1989), EI comprises the precise management of emotion-relevant information, such as facial expressions, and the aptitude of emotion-utilization to solve problems, by reasoning. The EI model is constituted of four emotional aptitudes, which are organized in a way that the simpler psychological processes are at the basis of the model, and the more advanced processes are at the top of the model. Aptitudes within each area are anticipated to mature with age and experience.

The following provides a concise description of the four elements of EI aptitudes (Mayer & Salovey, 1997; Brackett & Salovey, 2004; Rivers, Brackett, Salovey, & Mayer, 2007).

1. “Perceiving emotions” refers to the capability of identifying emotions in oneself and in others, in addition to other inducements, such as stories, music,

voices, and works of art (Ekman & Friesen, 1975; Scherer, Banse, & Wallbott, 2001).

2. “Using emotions” includes the ability of exploiting feelings which help in specific cognitive initiatives, like problem solving, reasoning, decision making, and social communication. (Isen, 1987; Schwarz, 1990; Palfai & Salovey, 1993; Schwarz & Clore, 1996).
3. “Understanding emotions” includes thoughts that reveal the capacity of analyzing emotions. This aptitude includes a perception of the emotional process, which is the means in which emotions associate, develop, and transition from one person to the other (Frijda, 1988; Lane, Quinlan, Schwartz, Walker, & Zeitlin, 1990).
4. “Managing emotions” refer to the ability of reducing, enhancing, or modifying an emotional comeback, as well as the aptitude to experience a variety of emotions, while effectively making decisions about the suitability or practicality of the emotion in given circumstances (Gross, 1998; Eisenberg et al., 2000).

Emotional intelligence is an intangible asset that any individual can own and which can lead to a competitive advantage, the higher it is. Emotional intelligence affects how people manage their behavior, how they overcome social hurdles, and their decision-making process to reach positive outcomes (Bradberry, 2014). There are 5 principal areas in which EQ can be categorized; self-awareness, self-regulation, motivation, empathy and social skills can reflect how well an individual meets the

requirements of recognizing, understanding and managing one's emotions. There are numerous ways of measuring EQ, and how much it affects abilities and performance, such as self-reporting methods or the 360-feedback evaluation. Emotional Intelligence can be measured through taking different tests, including but not limited to Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT), EQ-i, EQ-i 2.0 and EQ360, Genos EI and ECI or ESCL.

Each of those tests includes specific areas and definite requirements for its taker, such as age and gender. For example, the EQ-i measures five areas, the individual awareness, the personal relationships, stress tolerance, problem solving skills and happiness of a person, or in other words, the intrapersonal area, the interpersonal area, stress management, adaptability, and general mood. On the other hand, the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT) measures perceiving emotions, facilitating thought, understanding emotions and managing emotions. As an example to how the test helps determine how an individual can manage their emotions, the test requires, for example, portraying specific emotional problems, requiring participants to rank a number of likely actions on a scale ranging from "very ineffective" to "very effective". Answers are assessed through a contrast of responses made by either specialists or a normative sample.

#### *2.3.4. Emotional Intelligence and School Performance*

In the area of success at schools, several studies have examined the connotation between EI and positive outcomes. For example, Bar-On (1997) presented that first-

year military students having differences on all 15 of the EQ-i subscales conveyed considerably distinct levels of self-rated academic achievement. On another notion, Schutte et al., (1998) discovered a clear positive correlation between a first-year university grades and self-report measure of EI. Likewise, Parker et al., (2004) realized that academic success was greatly connected to numerous dimensions of EI, measured through the EQ-i scales, on a sample high-school students in the US. Moreover, Parker et al., (2004) measured the influences of EI on academic success with the students' shift from high school to university. They showed that EI moderated the relationship between academic performance and cognitive ability. On another notice, Dewaele et al., (2008) discovered that higher levels of EI are linked to lower levels of communicative nervousness, within foreign language and first language performances.

As a result, emotional skills, competencies, and knowledge are crucial to a student's progress. Refining EI is has a key influence on mental and physical health, personal satisfaction, academic achievement and career superiority. Emotional aptitudes are realized capabilities that must be developed and worked on to attain outstanding performance (Goleman, 1998).

#### **2.4. The Theoretical Framework of Emotional Intelligence**

As in Aristotle's notion, any person could happen to be angry, and this is only easy. However, to become angry with the right people, to the right extent, at right place, for the right reason and in the right manner; that is not easy (Bhavard, 2015).

Literature shows that emotional intelligence is a consequence of two fields of psychological investigation that came into view over forty years ago (Brackett et al., 2011). The initial area of EI is cognition and affect. It comprised how emotional and cognitive practices interrelate to improve thinking (Bower, 1981). Feelings such as annoyance, pleasure, and fear, as well as mood and bodily states shape how individuals reason, make decisions, and execute various tasks (Forgas & Moylan, 1987). The second area of EI was a progression of models of intelligence. Instead of strictly considering intelligence as how well an individual takes part of analytic tasks related to memory, reasoning, judgment, and abstract thought, researchers, such as Cantor & Kihlstrom and Gardner, started allowing for intelligence to be viewed as a larger range of mental abilities.

Nowadays, two scientific approaches are available for emotional intelligence. They can be categorized into the mixed models and the ability models (Mayer, Caruso, & Salovey, 2000).

#### 2.4.1. The Mixed Models

The mixed models are self-defined as they combine the ability notion with personality capabilities and characters like self-esteem, optimism, and emotional self-efficacy (Cherniss, 2010). Advocates of the approach use self-report tools which is contradictory to ability assessments to evaluate emotional intelligence (MacCann et al., 2003).

#### 2.4.1.1. Goleman's Model

Established by Daniel Goleman, this Emotional Intelligence model is deeply concentrated on identifying Emotional Intelligence using an immense selection of competencies and skills that influence leadership performance. Therefore, the Mixed Model is frequently employed in a corporate or specialized settings to educate and assess management skills and potential, in order to maximize the effectiveness of human capital. The Model summaries "The Five Components of Emotional Intelligence". It includes the following constituents:

- 1- Self-awareness: the capacity to distinguish and comprehend personal moods, emotions and drive, in addition to their effect on others. Self-awareness includes realistic self-assessment, self-confidence, and a self-deprecating sense of humor. Self-awareness relies on a person's aptitude to monitor their own emotional status and to properly recognize and name their emotions.
- 2- Self-regulation: the capability of controlling negative moods, and the tendency to postpone judgment and to think before taking actions. It includes integrity and trustworthiness, comfort with vagueness and openness to change.
- 3- Internal Motivation: referred to as the passion to work for personal needs, apart from money and prestige, such as an internal visualization of is essential matters in life or the inquisitiveness in knowledge, with liveliness and perseverance. Internal motivation includes a bright drive to accomplish, hopefulness even during failure, and organizational dedication.

- 4- Empathy: the skill of understanding the “emotional makeup” of others, a proficiency in handling others in accordance with their emotional reaction. Empathy includes knowledge in building and maintaining talent, cross-cultural sympathy, and assistance to others. In education, empathy is usually seen as including, or leading to sympathy, which entails concern of removing negative experiences or emotions of others.
- 5- Social Skills: described as the skill of handling relationships and establishing connections, and the capacity to discover things in common with others, and establish good relations based on that. Social skills include efficiency in leading change, proficiency in building and leading groups and persuasiveness.

Through each construct of the model, Goleman involved a series of emotional capabilities that are not inborn personality characteristics or aptitudes, but rather abilities that can be taught and advanced to attain higher levels of performance. This model supposes that people are born with specific cognitive abilities, on top of personality characteristics.

The model has obtained some critique from researchers who believe it to be less systematically proven (Daus&Ashkanasy, 2005). They have claimed it to be more similar to pop psychology (MacCann et al., 2003). Despite the fact that "pop psychology" characteristically has a negative connotation; it is not the case all the time.

#### 2.4.1.2. *The Bar-On Model*

The Emotional Social Intelligence Model, the Bar-On, is based on the theory that a person's social aptitudes are distinct from their Emotional Intelligence abilities. However, it is important to attain the goals delineated in the other models of EI. Merely, the Bar-On Model differentiates the ability to influence the behaviors and emotions of others, from the capacity of recognizing and regulating one's personal emotions. A more holistic approach is followed within the Bar-On Model to characterizing EI, where it includes an individual grasp oneself, comprehension of others, and relating appropriately to people (Bar-On et al., 2004).

Instead of essentially defining precise attributes as being better than others on the level of EI, Bar-On trusts that individuals with high EQ are more competent of controlling emotional encounters and environmental pressures and needs (Carmeli, 2003). Along these lines, the theory rotates around the individuals 'ability in meeting their own needs instead of focusing on one skill or characteristics and giving it more attention (Akers and Porter, 2003). Nonetheless, the model still suggests that individuals with higher EQs will be more successful in several situations (O'Connor & Little, 2003). Even though some researchers might claim that this decisively positions the Bar-On Model with other theories that outline some type of emotional

dominance, proponents trust in the victory that individuals with a high EQ attain because they do so according to their own personal ideals.

The Bar-On Model does suggest that individuals with lower emotional quotients are more probable of struggling with instinct control, problem solving, stress tolerance, and so on. Fundamentally, the Bar-On Model considers that Emotional Intelligence and cognitive intelligence equally promote an individual's total intelligence, which offers an indication of a person's potential of succeeding in life.

#### *2.4.2. The Ability-based Models*

The ability model perceives EI as ordinary intelligence and claims that the theory meets conventional standards for intelligence (Mayer & Salovey, 1997; Mayer et al., 2008a; Mayer et al., 2008b). Advocates of the ability model quantify EI as an intellectual capacity with performance valuations that are based on accuracy (MacCann et al., 2004).

Advocates of the ability model, while comparing the it to the mixed model, usually state that the main error applied within the mixed model is that it incorporates features of character that are not integrally based in neither intelligence nor emotion (Ashkanasy & Daus, 2005). Thus, it is not an appropriate measure of EI. Proponents trust that if the other aspects of character included, other than purely assessing intelligence or emotion, will result with imprecise results as per the genuine Emotional Intelligence.

#### 2.4.2.1. *Salovey and Mayer's Theory*

As defined by Salovey and Mayer (1990), “Emotional intelligence is the ability to perceive emotions; to access and generate emotions so as to assist thought; to understand emotions and emotional knowledge; and to reflectively regulate emotions so as to promote emotional and intellectual growth.” So, to Salovey and Mayer, there are four parts to emotional intelligence:

1. Perceiving or sensing emotions: The initial phase in emotional awareness is to accurately distinguish emotions. In numerous cases, this includes understanding non-verbal signals, like facial expressions and body language. This is the principal skill entailed in emotional intelligence since unless emotions are perceived, they cannot be managed.
2. Using emotions to assist thoughts: following that is the use of emotions to advance thinking and cognitive activity. An individual with high EQ can utilize their feelings to help themselves reason through a condition and solve problems. Emotions contribute to prioritizing what has to be paid attention and reacted to. Therefore, resulting in attaining a good arrangement of emotional contribution. This helps target thinking towards issues that are significant. Moreover, several researchers have proposed that emotions are vital for particular types of creativity.
3. Understanding emotions: Understanding the fact the one's emotions can incorporate a wide assortment of connotations helps individuals to apprehend the emotional situation of others and the reason behind why it occurred. For

example, if a person is angrily expressing ideas, we have to analyze the reason behind this annoyance and its possible meanings. Considering emotional communications and the actions related to them is a very important part of this skill.

4. Managing emotions: The capacity of effectively controlling emotions is a main area of EI. The central areas of emotional management include:
  - a. Emotions Regulation
  - b. Appropriate Responsiveness to one's emotions
  - c. Appropriate Responsiveness to emotions of others

Individuals with a high level of this aptitude can collect negative or positive emotions and direct them in a manner that simplifies the achievement of required errands. Individuals need to recognize emotions in order to communicate info.

#### 2.4.2.2. *David Caruso's Theory*

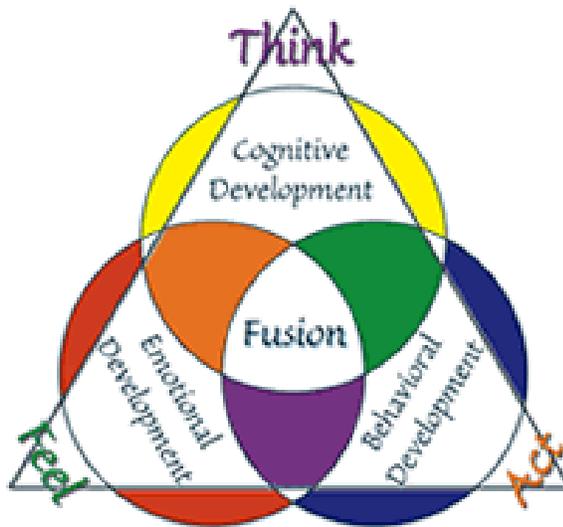
The researcher David Caruso complemented their concept by stating that “It is very important to understand that emotional intelligence is not the opposite of intelligence, it is not the triumph of heart over head — it is the unique intersection of both” (Sundari, 2013). This indicates that in order to achieve emotional intelligence, a person needs to be intelligent. However, a person not achieving emotional intelligence is not an indicator of stupidity.

#### 2.4.2.3. *Six Second's Model*

Furthermore, Six Seconds built a model that captures EI practices in three areas:

- 1- “Know Yourself”
- 2- “Choose Yourself”
- 3- “Give Yourself”

Figure 1: “Six Seconds” Model of Emotional Intelligence



Source: Six Seconds – The Emotional Intelligence Network (2010)

As demonstrated in Figure 1, the Six Seconds Model comes with eight explicit skills. Six Seconds’ approach reflects David Caruso’s visualization that the aim is to combine thinking and feeling for more effective living. The model is based on action, which are quantified by “Six Seconds Emotional Intelligence Assessment.”

Although the various models of EI constitute the concept differently, they all have to do with the incorporation of emotion, reason, and action. Six Seconds utilizes a

triangle to illustrate that thoughts, actions and feelings are “co-equally interlocking” (Freedman, 2010).

## **2.5. Emotional Intelligence and Academic Achievement – Overview of Previous Research**

EQ is assumed to help in prioritizing thoughts and to enabling individuals to administer feelings in anxiety-infuriating occasions, like taking standardized tests. Data supporting the role of EQ towards academic performance is mixed. Certain researches reveal a positive correlation, such as those of Barchard (2003) and Brackett & Mayer(2003), while others reveal negative or no correlation whatsoever.

### *2.5.1. Study 1: Prosocial Foundations of Students' Academic Achievement, Caprara et al., 2000*

Caprara (2000) and his associates, for instance, conducted a study on the correlation between EQ and academic achievement from the journal “Psychological Science”, which was done in Rome, Italy, on 294 students, out of which 166 were boys, and who had an average age of 8.5 years. The study was done using a longitudinal research design, divided into four distinct cohorts, multi-method evaluations, and various sources of evaluation. The aim of the study was to evaluate how EQ of students affects their academic achievement after a 5-year-period. Data on the students’ prosocial conduct were attained from various sources, using different methods of assessment. Students rated their pro-socialness on a scale of 10, which measures their degree of cooperation, sharing, and gentleness (Caprara&Pastorelli, 1993). Various methods were utilized such as assessing prosocial performance by asking students to pick peers who collaborated, shared, supported, and assisted

others. On top of that, teachers were asked to rate the students, while students were asked to self-rate themselves based on how much they fought with others or hurt them. The results have shown a significant correlation stating that emotional intelligence skills were a key considerable predictor of following academic accomplishment.

Indication that EQ is a major predictor of following academic achievement is in correspondence with the ecological viewpoint of socio-cognitive theories (Vygotsky, 1962; Bandura, 1997). Students' academic progression is highly inspired by the social and interpersonal efforts.

*2.5.2. Study 2: Relationship among Emotional Intelligence, Parental Involvement and Academic Achievement of Secondary School Students in Ibadan, Nigeria., Aremu et al., (2007).*

Researchers such as Aremu and Tejumola (2008) inspected the relationship between EQ, parental involvement, and academic success of secondary school students in Ibadan, Nigeria. The study was conducted over a randomly selected sample size of 500 senior students, in secondary schools at Ibadan, Oyo State. It was carried on through a questionnaire called the (SEIPIRS), personally developed by the researchers. The questionnaire consisted of the 3 areas; the first related to demographic questions, the second focused on matters related to EQ while the third questioned parental involvement. On top of that, students' grades were collected from

their schools for research purposes. When it comes to the analysis of the collected data, it was all conducted based on a 0.05 margin of error.

The research resulted with a significant correlation between EQ and academic achievement of secondary school students as a measurement of by GPA (grade point average).

*2.5.3. Study 3: Academic Achievement and Emotional Intelligence:  
Predicting the Successful Transition from High School to University:  
Parker et al., (2005)*

Parker et al., (2005) investigated the relationship between selected emotional intelligence skills and the academic success of newly enrolled university students who had left high school within two years. The students in their study were students with demonstrated academic success, achieving 80% or better in their course work, and students who were academically unsuccessful, achieving 59% or less in their course work, based on information collected from the university registrar's office. The sample constituting the research was comprised of 372 young adults attending Ontario University, with average age of 19.34 years of age. The research was based on the Bar-On's EQ-i form.

Parker et al. (2005) established that students who performed better academically also had higher emotional intelligence skills. Differences were noted between the two groups with the greatest difference revealed in stress management. Academically brighter students displayed increased concentration, was an integral factor of stress

management. Lesser differences were yielded in adaptability and intrapersonal ability.

*2.5.4. Study 4: Job Competencies and the Curriculum: An Inquiry into Emotional Intelligence in Graduate Professional Education: Jaeger (2003)*

Jaeger (2003) examined the influences of emotional intelligence coaching on academic accomplishment. Five clusters of management students, on a graduate-level, have undergone preliminary and post-emotional intelligence exercises. Only one of the groups obtained emotional intelligence coaching during their studies, while the remaining four groups got no formal or informal emotional intelligence discussion or coaching. In relation to that, final grades were employed to assess students' academic performance.

Jaeger (2003) verified that the group obtaining the emotional intelligence prospectus drastically increased their EQ scores and academically achieved higher than the other four groups of students who did not get such coaching. Per se, Jaeger (2003) assumed that higher levels of EI could be significantly correlated to enhanced academic performance

*2.5.5. Study 5: Revisiting the predictive validity of emotional intelligence: self-report versus ability-based measures: O'Connor & Little (2003)*

Researches, such as that of O'Connor and Little (2003) demonstrate no correlation whatsoever, between emotional intelligence and academic achievement. In response

to the generally circulated concept that emotional intelligent training provided to students will lead to positive outcomes, this research observed the relationship between academic achievement and emotional intelligence (EI) for college students, using the two measures of EI, the self-report and ability-based measures. Precisely, what has been used are the Mayer, Salovey, Caruso Emotional Intelligence Test (MSCEIT) for the ability-based measure, and the Bar-On Emotional Quotient Inventory (EQ-i) for the self-report measure, were used to forecast academic achievement. Achievement was based on the respondents' cumulative GPA.

Findings showed that emotional intelligence is not a solid analyst of academic achievement irrespective of the type of measure utilized. Yet, the study discovered that the MSCEIT highly correlated with cognitive aptitudes but slightly with personality dimensions. On the contrary, the EQ-I did not correlate with the cognitive aptitude but significantly correlated with several personality dimensions.

## **2.6. Summary**

Throughout this chapter, literature on emotional intelligence, its history and background have been discussed. Theories regarding EQ were consolidated for a wider horizon on the matter. On top of that, previous literature on the relationship between emotional intelligence and its relationship with academic achievement has been observed. The next chapter is dedicated to the methodology of research to be carried on.

Based on the collected literature, the study will focus on combining the mixed model of the emotional intelligence theories, focusing on the trait emotional intelligence and the personality capabilities within individuals, in order to assess its relation to the academic performance of elementary school students in Dubai, within scientific material generally, and math specifically. The next chapter aims at identifying the methodology towards revealing the nature of the correlation between academic performance and emotional intelligence in addition to quantifying it.

## **Chapter 3: Methodology**

### **3.1. Chapter Overview**

This chapter presents the methodology used within this research. It highlights the tools utilized on the sample population sample. On top of that, the data analysis technique is revealed. The last segment of this chapter has to do with the research delimitations, the ethical considerations, and the trustworthiness and reliability of the research.

### **3.2. Research Approach**

The approach followed within this research is comprised of quantitative measures that rely on dimensions and amounts collected through individuals and events (Thomas, 2003). Quantitative research allows for a view of persons' attitudes and reactions. Consequently, the research's data has been gathered through the survey responses of the "Trait Emotional Intelligence Questionnaire - Child Short Form", in addition to the grades of the corresponding students. Cohen et al. (2000), clearly state that it is impossible to absolutely confirm results using quantitative research; therefore, the basis behind this approach is to get as close to the absolute as possible. Furthermore, the researcher addresses this issue objectively and independently of the phenomena being studied. The researcher also uses formal and impersonal language to reach deductions to the research question (Cresswell, 1994).

### **3.3. Data Collection**

#### *3.3.1. Method*

EI was measured by the Trait Emotional Intelligence Questionnaire-Child Short Form (TEIQue-CF), developed by Mavroveli et al., (2008), that has been specifically established to study the emotional intelligence of students aged between 8 years old and 10 years old. This test, being the short one, contains 36 short phrases that have to be reacted to; on a 5-point Likert scale ranging from completely disagrees to completely agree. The average time of completion of the test was between 10 and 15 minutes. For the purpose of this research, the total trait EI score will be employed, in comparison with academic performance that consists of the average grade of each student, until date of the academic year 2016-2017, collected from school archives. Grades are scaled between 0 and 100.

Verbal directions were given to the students, explaining the procedure. The tests were done under administration through class periods, while making sure that full confidentiality and autonomous responding were applicable. Throughout the process, all students were well-aware that they have the choice of withdrawing at any time.

Post to the completion of the tests by the students, the results were communicated to Dr. Estella Mavroveli for the proper scoring key, in order to receive the required mean and outcomes.

The test's outcomes were conveyed to the school's administration.

### *3.3.2. Site*

The researcher requested the authorization from the school's administration for the regard of data collection. The researcher obtained high collaboration from the class advisers and teachers while personally controlling the EQ testing procedure. To ensure maximum efficiency with precise and truthful responses, the researcher concisely clarified while guiding the respondents on the process to completing the emotional intelligence test, while translating every question to Arabic, for clarification and cultural variations.

### *3.3.3. Population*

Kenney and Keeping (1962) defined a population as “a finite and actually existing group of objects which, although possibly large, can be enumerated in theory”. The target population addressed within the present research comprises all upper elementary school students of Sharjah American International School, in Dubai. The upper elementary level within the school consists of classes ranging from grade three to five. From each grade between three and five, to stay compliant with the test's target, a sample was selected to reach 100 respondents, out of the 389 students constituting the full population, in order to achieve the study's objectives.

### *3.3.4. Samples*

Sampling is the technique, act or process, of choosing an appropriate sample, or an illustrative part of a population with the aim of defining characteristics or parameters as the complete population (Mugo, 2002). The sampling procedure is conducted to draw deductions from samples about populations, using inferential statistics. Sampling is usually done for the purpose of being more economically efficient in addition to saving time (Mugo, 2002).

Demographic criteria in the study's sample included age and residency, but not nationality. Indications of academic performance included elementary school grades, on the subject of mathematics, on a scale ranging from "A" to "F".

The sample included 100 students, all between 8 and 10 of age. The sample significantly varied in social and ethnic environments, exposing the broader community when was selected. Students with English as an additional language and with special educational needs were excluded from the study. Questionnaires with more than 15 items missing were omitted from succeeding analyses.

### 3.3.5. *Instruments*

The TEIQue, developed by K. V. Petrides, is a methodical tool utilized in measuring trait emotional intelligence (Petrides et al., 2004). It is an essential fraction of the scholarly research plan on trait EQ. This trait based model refers to one's aptitude to fathom, apply, and identify information based on emotional cues; it is a combination of an individual's perception of others and his/herself (Petrides et al., 2003). A distinct edition understands this model by analyzing emotional traits across different sample age groups. For this study, the researcher measured trait emotional intelligence using the Child Short Form version of the Emotional Intelligence Questionnaire. The thirty-six questions of the TEIQue-CSF are a simplified version of the long form and are intended to measure the emotional intelligence of students

between the ages of 8 and 10. The form takes around 10 to 15 minutes to completion and is based on a five-point-Likert-type scale as follows, (5) Completely Agree, (4) Agree, (3) Neither Agree nor Disagree, (2) Disagree, and (1) Completely Disagree, as demonstrated in "References

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## **Appendix A: Trait Emotional Intelligence Questionnaire – Child Short Form”.**

To analyze the students’ level of EQ based on the TEIQue-CS form, the researcher used the following descriptive and numerical equivalents; Very High: 5 to 4.5, High: 4.49 to 3.5, Moderate: 3.49 to 2.5, Low: 2.49 to 1.5, and Very Low: below 1.5. Another scale was used to identify the quality of academic achievement of the sampled students. The numerical equivalent, using similar descriptive status as the one used to describe the level of EQ (Very High: above 90, High: 89 to 80, Moderate: 79 to 70, Low: 69 to 60, and Very Low: below 60), used in the scale was drawn from the letter based grading system used by the students’ school (

Figure 2: Descriptive and Numerical **Equivalents**).

**Figure 2: Descriptive and Numerical Equivalents**

<b>Numerical Equivalent</b>		<b>Description</b>
<b>Emotional Intelligence</b>	<b>Academic Achievement</b>	<b>Interpretation</b>
<b>5.0 – 4.5</b>	Above 90	Very High
<b>4.49 – 3.5</b>	89 – 80	High
<b>3.49 – 2.5</b>	79 – 70	Moderate
<b>2.49 – 1.5</b>	69 – 60	Low
<b>Below 1.5</b>	Below 60	Very Low

### **3.4. Data Analysis**

To analyze the relationship between EQ and academic achievement, the researcher developed a specific coding plan to collect the data and enter it error-free. Then to empirically analyze the data, the answers were transferred to SPSS (Statistical Package for the Social Sciences) software. Using SPSS, the researcher used four major data analysis tools were used:

- 1- Frequencies: To clearly view the number of occurrences of each response by each respondent. Furthermore, the researcher analyzed the minimum, maximum, mean, and standard deviation of the data.
- 2- Cross-tabulation: To combine the variables and summarize them against one another in a form of matrix, that clearly identifies the number of occurrence of one variable in relationship to another.
- 3- Bivariate Correlation: To determine to what extent we can predict value for a specific variable knowing a distinct one. The correlation scale ranged from -1 (Perfect Inverse Correlation) to +1 (Perfect Correlation).
- 4- Regression: to estimate the relationship within our dependent and independent variable. For the purpose of this data analysis tool, a formula will be created to quantify this correlation.

### **3.5. Delimitations**

The scope of this research is the Sharjah American International School, located in Dubai, UAE. For the academic year 2016 – 2017, the total number of elementary

students in the school is 389 out of which 100 were randomly sampled representing 25.7 % of the total population. The data in this study is primarily concerned with the relationship between academic grade averages and the level of emotional intelligence. The data collected was coded and entered into the Software of Microsoft Excel and then transferred into SPSS for the detailed statistical analysis.

### **3.6. Ethical consideration**

Whenever anyone thinks of ethics, rules that discriminate between right and wrong are considered. Consequently, the Golden Rule is to be considered: "Do unto others as you would have them do unto you", which is a code of professional conduct (Resnik, 2015). Several principles need to be monitored for the purpose of ethical research.

The survey and its ethical respects were approved by the school's administration, through signing an "Informed Consents Form" (**Appendix B: School Authorities Consent Form**), after the researcher assured full confidentiality on the research's individual findings. Thus, data collection was performed following the routines of getting those approvals.

Throughout the study, the researcher has also guaranteed operation with transparency when it comes to the participants as any questions were immediately answered, without any discrimination between entities, ensuring equality of treatment as well.

On top of that, to ensure the security of the data, and to protect the participants' identities, surveys were collected manually to avoid the risks of cyber security, after which were documented in a coded manner to remain confidential.

The tests were collected distinctly from any contact information and were anonymized and demolished post the final submission of the research paper. Moreover, the researcher informed the students' guardians about the objectives and goals of the research in addition to the importance of their role and their students' participation. Parents who requested a copy of the final report were arranged with access. Additionally, their contact information was deleted once the report was communicated. Also, to ensure the safety of the students, the data was not massively communicated, even if made anonymous and confidential, to eliminate the risk of bullying.

### **3.7. Reliability and Validity of the Study**

The composition of defensible research is fundamental in all types of research, including quantitative research. Another tag for “validity” in quantitative research is “legitimation.” In quantitative research, the researcher endeavored making interpretations, called meta-inferences, from the findings (Sullivan and Sweeter, 2009).

As a teacher, the researcher has sustained neutrality and objectivity throughout the process, while objectively performing the measures. The relativeness of the researcher to the educational field has smoothed the procedure of communicating with the target audience. Thus, the validity of the study has been attained through the individual communication that has been comprised between the target audience and the researcher.

On the level of reliability, obtaining comparable results in case the research was constantly vital (Zohrabi, 2013). A key contributor to the reliability of the thesis is the process of response coding. Moreover, the recruitment and data collection were done personally and with close communications. The disclosed data of the study was not considered to be violating laws.

## **Chapter 4: Results**

### **4.1. Presentation and Analysis of Data Results**

Through the implementation of the quantitative data collection methodology, this research's results are based, as previously mentioned, on the TEIQUÉ- CSF.

To be able to conclude on the research question on whether emotional intelligence has an effect over academic achievement in scientific subjects, generally, and mathematics, specifically, the first step was to descriptively display the findings of the survey.

The mean of the 2 main quadrants of the research, emotional intelligence and academic achievement have been graded over five, and are 3.25 and 3.89 (77.83/100) respectively, by extracting the results of the TEIQUÉ-CSF and the mathematics average grade throughout the year. As for the lowest and highest emotional intelligence test scores and grade averages recorded throughout the study, the table demonstrates the findings.

	<b>TEIQUE-CSF (EQ)</b>	<b>Mathematics Grade (AC)</b>
<b>Mean</b>	3.25	3.89
<b>Minimum</b>	2.45	2.5
<b>Maximum</b>	4.36	4.9

Table 1: Data Mean, Minimum & Maximum

To be able to understand the data results, the SPSS statistical software was utilized. By means of SPSS, 4 data analysis tests were applied. They are the frequencies, crosstabulation analysis, correlation analysis, and regression analysis.

#### 4.1.1. **Frequencies**

Frequencies have shown, as per the table below, that out of the 100 respondents, only 1% had low emotional intelligence, 77% had moderate emotional intelligence and 22% had high emotional intelligence. None of the respondents belonged to the extreme cases of having very low or very high emotional intelligence.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Low	1	1.0	1.0	1.0
	Moderate	77	77.0	77.0	78.0
	High	22	22.0	22.0	100.0
	Total	100	100.0	100.0	

Table 2: Frequencies – Average EQ

As for the average grades achieved throughout the academic year, on the subject of mathematics, 8% of the sample students had very low grades, 16% had low grades, 29% had moderate grades, 30% had high grades and 17% had very high grades, as demonstrated with the below table.

		<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>	<i>Cumulative Percent</i>
Valid	<i>Very Low</i>	8	8.0	8.0	8.0
	<i>Low</i>	16	16.0	16.0	24.0
	<i>Moderate</i>	29	29.0	29.0	53.0
	<i>High</i>	30	30.0	30.0	83.0
	<i>Very High</i>	17	17.0	17.0	100.0
	<i>Total</i>	100	100.0	100.0	

Table 3: Frequencies – Average Mathematics Grades

This shows that the majority of the tested students belonged to the middle-upper percentile of the academic achievement levels, while tested over their mathematics grades.

#### 4.1.2. Crosstabulation

Secondly, the crosstabulation analysis showed that one student with low emotional intelligence could highly score on his mathematics exams throughout the year. Moreover, out of the 77 students who revealed moderate emotional intelligence skills, 6 had very low math grades, 13 had low grades, 22 had moderate grades, 20 had high

grades and 16 had very high grades. Also, out of the 22 students who scored high points on the emotional intelligence test, 2 had very low academic achievement on the subject of mathematics, 3 had low grades, 7 had moderate grades, 9 had high grades, and only 1 student had very high grades. The results are demonstrated within the below table.

		Average Mathematics Grade 2016-2017					Total
		Very Low	Low	Moderate	High	Very High	
Average EQ Score	Low	0	0	0	1	0	1
	Moderate	6	13	22	20	16	77
	High	2	3	7	9	1	22
Total		8	16	29	30	17	100

Table 4: Crosstabulation - Emotional Intelligence and Academic Achievement

The crosstabulation results signify irregular patterns where having low emotional intelligence does not seem to result with having low grades, and vice-versa.

#### 4.1.3. Correlations

As for the correlations, after the performance of the correlations test on SPSS, with the 2 variables, emotional intelligence scores and the mathematics grades, there seemed to be a very low correlation of  $-0.074$ , which is considered to be negligible, as per the Pearson's Correlation Coefficient. The Pearson correlation coefficient, also referred to as the bivariate correlation, is the direct measurement of the linear relationship between the two studied variables, and it indicates that it is negligible. This reveals that the relationship between emotional intelligence and academic achievement cannot be specified throughout the correlation testing, making the researcher move closer the null hypothesis.

The critical ranges of the 2-tailed significance test depend on the accuracy the researcher chooses for the resulting outcomes, and can be any number under 0.05. In our case, the 2-tailed significance test has shown an outcome of 0.464, as demonstrated in the below table.

<b>Correlations</b>			
		<i>Average EQ</i>	<i>Average Grades</i>
<i>Average EQ</i>	Pearson Correlation	1	<b>-.074</b>
	Sig. (2-tailed)		.464
	N	100	100
<i>Average Grades</i>	Pearson Correlation	<b>-.074</b>	1
	Sig. (2-tailed)	.464	
	N	100	100

Table 5: Correlations

#### 4.1.4. **Linear – Regression**

Moving forward, taking into consideration the dependent variable to be the grades achieved within the subject of math, the coefficient of correlation turned out to be 0.74, as seen in the below table.

As for the  $R^2$ , which presents the percentage of explained variation and how all independent variables affect the dependent variable in the model. In this case, this value resulted to be 0.005.

On the level of the adjusted  $R^2$ , which is also known as the coefficient of determination or the coefficient of multiple determination for multiple regression, and explains how close the data are to the fitted regression line, and is expressed in percentage, the results turned out to be -0.005.

<b>Model Summary</b>		
<i>R</i>	<i>R Square</i>	<i>Adjusted R Square</i>
.074	.005	-.005

Table 6: Research Model Summary

Thus, the linear regression formula results to be “Academic Performance= 3.962 – 0.074(EQ)”, as per the below.

As for the ANOVA results, they are revealed in **Error! Reference source not found..**

<i>Coefficients</i>						
<i>Model</i>		<i>Unstandardized Coefficients</i>		<i>Standardized Coefficients</i>	<i>t</i>	<i>Sig.</i>
		<i>B</i>	<i>Std. Error</i>	<i>Beta</i>		
<i>1</i>	<i>(Constant)</i>	3.962	.882		4.494	.000
	<i>EQ</i>	-.200	.272	-.074	-.735	.464

Table 7: Linear – Regression Model

As previously mentioned, and again, the research findings show that the relationship between academic achievement and emotional intelligence is insignificant, thus showing that emotional intelligence has no effect over the academic performance in the subject of mathematics for elementary school students in Dubai.

However, the data employed to achieve the research findings does not seem to be significant as it is shown to be significant only 53.6% of the time; where for results to be significant, they have to be true at least 90% of the time.

#### **4.2. Empirical Findings vs. Theoretical Findings**

Researches, such as that of O'Connor and Little (2003) prove zero correlation between emotional intelligence and scholarly attainment. As a response to the commonly distributed concept that EQ training provided to students will have optimistic outcomes; this research, for example, detected the relationship between academic achievement and emotional intelligence (EI) for college students, using the two measures of EI, the self-report and ability-based measures. To be specific, what has been used are the Mayer, Salovey, Caruso Emotional Intelligence Test (MSCEIT) for the ability-based measure, and the Bar-On Emotional Quotient Inventory (EQ-i) for the self-report measure, were used to forecast academic achievement. Achievement was based on the respondents' cumulative GPA.

The findings of the previously mentioned research exhibited that EQ is not a solid analyst of academic achievement irrespective of the type of measure applied. Yet, the study exposed that the MSCEIT highly correlated with cognitive aptitudes but slightly with personality dimensions. On the contrary, the EQ-I did not correlate with the cognitive aptitude but significantly correlated with several personality dimensions.

Other researchers like Caprara, Aremu & Parker, were able to relate emotional intelligence to scholarly performance.

As for this research, emotional intelligence and academic achievement were not proven to have any correlation. The findings thus reveal that no significant correlation

occurs between the two research, variables, whatsoever. However, the data collected for the purpose of this research has not been proven to be significant, and this could be due to the small sample size employed. Thus, no declarations have been made, based on this paper.

## **Chapter 5: Conclusion**

### **5.1. Introduction**

This chapter's anticipated outcomes are to summarize the whole research and to state its key findings, followed by the author's recommendations of the topic, based on the experience gained conducting this study.

On top of that, within this chapter, the implications of this study on the educational field in Dubai were stated and recommendations for scope of further studies were suggested.

This chapter was accomplished with concluding notes.

### **5.2. Summary of the Study**

The motivation behind this research was to explore the likelihood of a connection between Emotional Intelligence (EI) capabilities and scholarly accomplishment at school, at the elementary level. Moreover, it focused on an investigation of the observations related to the ability of elementary-school students to learn how to successfully utilize and control their emotions. Throughout this study, emotional intelligence has been defined in several ways; the famous emotional intelligence spokesperson, Daniel Goleman (1995), defined emotional intelligence (EI/EQ) as involving “abilities such as being able to motivate oneself and persist in the face of frustration, to control impulses and delay gratification; to regulate one's moods and keep distress from swamping the ability to think; to emphasize and to hope” (1995,

p.34), while Goleman has reformulated his primary definition of EI and broke it down into 25 distinctive emotional competencies, including but not limited to, self-confidence, consciousness, service orientation, political awareness, and achievement drive (Goleman, 1998). Examination has established that EQ plays a higher role in life, than IQ, in determining victory in life and education (Salovey& Mayer, 1990). Within this study, 100 elementary school students attending schools in Dubai, United Arab Emirates have been examined, to study the effect of their emotional intelligence competencies over their scholarly outcomes. The assessment was based on the Trait Emotional Intelligence Questionnaire-Child Short Form (TEIQue-CF), developed by Mavroveli et al., (2008), that has been specifically established to study the emotional intelligence of students aged between 8 years old and 10 years old. SPSS Statistical Software was used to drive insights out of the collected data from the filled and collected tests, after school grades and emotional intelligence grades were compared.

### **5.3. Key Findings**

To better understand the data output from SPSS, the researcher explained the results in context of the classroom.

- 1- The frequencies analysis highlighted that all the 100 students had average or higher than average emotional intelligence with the exception of one outlier who had low emotional intelligence. It is important to note that none of the students reported very high or very low emotional intelligence and this is explained by the fact that all the students share similar backgrounds and

upbringings. This rule that holds true for emotional intelligence doesn't apply to mathematical test achievements. Nonetheless, 47% of the students had high or very high grades while only 24% had low or very low ones, with 29% having average grades. This represents a rather high quantitative in the overall school system and the students themselves.

- 2- Following, we saw a surprising result in the cross-tabulation analysis with the lowest scoring student in emotional intelligence scoring rather high in mathematics constantly throughout the year. This raised a few doubts in us concerning the relationship between emotional intelligence and academic achievement. Furthermore, the students (77) who scored moderate emotional intelligence scores, had a ranging variety of mathematic scores, with 7.8% scoring very low math grades, 16.9% having low grades, 28.6% having moderate grades, 26% having high grades, and 20.8% having very high grades. For the students who scored high on emotional intelligence, 9.1% had very low grades, 13.6% had low grades, 31.8% had moderate grades, 40.9% had high grades, and only 4.5% had very high grades. The above results all indicate a lack of relationship between emotional intelligence and academic achievement as we cannot spot a clear and concise pattern.
- 3- Third, in line with the previous analysis, the study of correlations, proves no significance with a negligible correlation of -0.74 significant in only 53.6% of the time this is not enough for us to claim that the data is significant or not. Moreover, these results have no statistical validation and renders the whole study obsolete.

4- Finally, our linear regression analysis led us to create a formula where  $\text{Academic Performance} = 3.962 - 0.074(\text{EQ})$ ; however, this formula is invalid 46.4% of the times it is applied and in turn is not enough for us to calculate academic performance by simply entering the emotional intelligence score obtained by the student. It is important to note that this does not mean that the data is false or inaccurate, this only states that this formula in absolute terms is not enough to determine a student's success based on his/her emotional intelligence score.

#### **5.4. Recommendations**

Several recommendations have been stimulated after the finalization of this research.

- As a start, emotional intelligence should not be given the priority in determining the cognitive abilities of elementary school students in Dubai, when it comes to mathematics. Of course, this decision needs to be taken after a more significant research is conducted, with more significant data.
- Also, it should not play an active role in predicting or forecasting the performance of those students, in mathematics.
- However, emotional intelligence should be studied against other scientific subjects, in addition to literature courses to determine if any relationship occurs, for it to be treated accordingly.
  - If a relationship occurs, curricula regarding EQ should be tailor made to suit those subjects and should be consequently added to courses.

- If we make sure that emotional intelligence is not an indicator of academic achievement, another criterion needs to be considered to find a relevant influential factor on academic achievement that can be quantified and controlled, for more efficient and optimal outcomes. This will help students, the school and parents perfectly deal with their students' academic achievement and put the right efforts in the right places, through the focus on proper studying methods, the performance of certain sports or activities, or others.

### **5.5. Implications**

As mentioned throughout previous research and the collected literature review, emotional intelligence has proved to have extra influence on students' scholarly achievement, other than the efforts that teachers exert to delivery clear and beneficial information, but not in all cases.

When it comes to Dubai, in specific, and the United Arab Emirates, in general, this study could not draw out conclusions. However, when the same research is conducted with more significant data, multiple implications will arise, having significant impact over the education industry in the region, and changing the way things are carried on, while giving more focus on need methodology in conveying information.

I believe that the same methodology has been employed in passing on knowledge to children for way too long. It is time to introduce more adaptive methods, with all the changes that have happened in the 21<sup>st</sup> century.

## **5.6. Limitations**

This study has faced a few limitations since, throughout the examination of the relationship between EI and academic achievement, only 100 students have been tested. This gives a narrow sample for conclusions to be drawn out. Moreover, all of those students come from one school with very similar backgrounds which decreases the variety of the test. It is very vital to imitate these conclusions in a bigger and more diverse sample of elementary school students. For instance, it is significant to determine if EQ correlates to academic achievement with students from all class levels, such as elementary, middle, and high school students that come from diverse socioeconomic and ethnic backgrounds, in Dubai. Also, because of the small sample that has been studied in this sample, the researcher was incapable of testing for gender differences when it comes to the correlations between academic achievement and emotional intelligence. Also, the grades of mathematics cannot be generalized to conclude on academic achievement as whole, but are specific to scientific subjects in general, and mathematics in specific.

On top of that, emotional intelligence with self-report tests limits the significance of the results. Means of more objective tests like those coming from teachers, parents or friends gives a more holistic view of the situation.

Finally, research need to be done on other influential factors on academic achievement for them to be implemented at schools to boost performance.

## **5.7. Scope for Further Study**

Several ideas for future research have arose post to the conduction of this study, and after studying the few limitations that have acted as an obstacle to the completeness of this thesis. They are specified below:

- 1- One of those ideas is that more research needs to be done on the level of emotional intelligence testing, where self-report is not the only measure. Objective opinions of parents, teachers and school friends need to be collected and analyzed as well, to conclude with more objective results.
- 2- Research with emotional intelligence as an independent variable, or other independent variables, are to be conducted on a widen level, with a bigger sample size that is more diversified from several school in Dubai, where students come from different socioeconomic and ethnic backgrounds, to produce with more significant data and reliable results.
- 3- On top of that, factors other than emotional intelligence needs to be found and taken into consideration, to know which factors to focus on in order to boost the performance of elementary school students.
- 4- Teachers' EQ and IQ can also be related to the academic achievement of their students to see if the level of emotional intelligence and intellectual quotient of the teacher affects their performance on delivering the required material effectively to their students, which will definitely have an impact on the students' academic achievements.

- 5- Also, research can be conducted on why emotional intelligence is considered to have an effect over academic achievement while this research resulted with no significant correlation.

## **5.8. Concluding Notes**

This research paper inspected the relationship between emotional intelligence and academic achievement for elementary school students in Dubai. The outcomes do not confirm the incremental validity of emotional intelligence as an indicator of academic achievement and provide no significant correlation between the two factors, when it comes to elementary school students in Dubai. We cannot conclude that students with elevated levels of emotional intelligence tend to have higher performance abilities at school. This suggests that more research needs to be conducted on emotional intelligence and academic achievement with more significant data, to find the proper factors to be integrated with the students' academic curricula in order to better perform, thus accordingly answering the research questions suggested within this research paper, and reaching the relevant objectives.

It is time to change the methods in how education is passed on to children. Having significant results and drawing out conclusion must be done in the near future. Despite the fact that some scholarly researches found a correlation between emotional intelligence and academic achievement, I believe that it's a vital topic to be studied and acted upon. I believe that different conclusions might arise, based on geographical locations of the students. Thus, causing the system to be obliged to

follow adaptive means of delivery knowledge and education to children, based on their needs.

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## Appendix A: Trait Emotional Intelligence Questionnaire – Child Short Form

### - Instructions

- Please try to answer all questions.
- Please remember there are no right or wrong answers.
- Work as quickly as possible and do not think too much about the questions.
- Circle the answer that you believe describes you best.

1

2

3

4

5



**Disagree**
**Disagree**
**Neither agree**
**Agree**
**Agree**  
**completely**
**nor disagree**
**completely**

	completely Disagree	Disagree nor	Neither agree	Agree	completely Agree
1. I always try to be in a good mood.	1	2	3	4	5
2. I like meeting new people.	1	2	3	4	5
3. I find it hard to get used to a new school year.	1	2	3	4	5
4. I feel great about myself.	1	2	3	4	5
5. When I feel sad, I try to do something to change my mood.	1	2	3	4	5
6. I often feel sad.	1	2	3	4	5

7. If I'm happy with someone, I will tell them.	1	2	3	4	5
8. I get along with everyone.	1	2	3	4	5
9. I often feel angry.	1	2	3	4	5
10. The kids at school like playing with me.	1	2	3	4	5
11. When I'm in a new place, I get used to it quickly.	1	2	3	4	5
12. Often, I'm not happy with myself.	1	2	3	4	5
13. Many times, I don't think before I do something.	1	2	3	4	5
14. I'm very good at understanding how other people feel.	1	2	3	4	5
15. I don't like trying hard for something.	1	2	3	4	5
16. It's easy for me to understand how I feel.	1	2	3	4	5
17. If I have to do something, I know I can do it very well.	1	2	3	4	5
18. I get angry very easily.	1	2	3	4	5
19. I try to do my homework as well as I really can.	1	2	3	4	5
20. It's easy for me to talk about my feelings.	1	2	3	4	5
	com	gree	nor	e	com

21. I don't like waiting to get what I want.	1	2	3	4	5
22. I'm a very happy kid.	1	2	3	4	5
23. I don't like studying hard.	1	2	3	4	5
24. I think I may be sad when I grow up.	1	2	3	4	5
25. Most people like me.	1	2	3	4	5
26. I think very carefully before I do something.	1	2	3	4	5
27. I'm not good at controlling the way I feel.	1	2	3	4	5
28. I get used to new people very quickly.	1	2	3	4	5
29. I can't find the right words to tell others how I feel.	1	2	3	4	5
30. I don't like trying out new things.	1	2	3	4	5
31. I like being with other people.	1	2	3	4	5
32. I know how to show to others how much I care about them.	1	2	3	4	5
33. I'm often confused about the way I feel.	1	2	3	4	5
34. I find it difficult to understand what others are feeling.	1	2	3	4	5

35. If I don't do something well, I don't like trying again.	1	2	3	4	5
36. Usually, I think very carefully before I talk.	1	2	3	4	5

## **Appendix B: School Authorities Consent Form**

“Emotional Intelligence and Academic Achievement”

### ***INTRODUCTION***

A Sample of the students, at your esteemed school, *Sharjah American International School*, has been invited to participate research study to look at the relationship between emotional intelligence and academic achievement. The decision letting your students join or not is up to you. In this research study, we are investigating and evaluating the relationship between emotional intelligence and academic achievement.

Your students will be asked to participate in an emotional intelligence test. It will approximately take him/her 10-15 minutes. Your students can discontinue the test at any time.

### ***BENEFITS***

This study will play a vital role in discussing how both factors affect each other. This will lead to better tackling of arising problems in the future. Nevertheless, the researcher cannot guarantee that personal experience benefits from participation within this study.

***CONFIDENTIALITY***

No personal information will be collected or used within the publication of this research. All efforts will be put in keeping the research records and other private material confidential.

***Contact Information***

Call Mrs. Pascale Shakky Abou Daher at 00 971 (0) 55 286 829 or email her at

[Pascale\\_shakky@hotmail.com](mailto:Pascale_shakky@hotmail.com) for any enquiries, problems or suggestions.

***Permission for Students to Participate in Research***

As the school's principle, I authorize my students to become a participant in the research study described in this form.

**School Authorities' Signature and Stamp**

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**Date**

---

**Appendix C: ANOVA**

<b>ANOVA</b>						
<i>Model</i>		<i>Sum of Squares</i>	<i>df</i>	<i>Mean Square</i>	<i>F</i>	<i>Sig.</i>
<i>1</i>	<i>Regression</i>	<i>.744</i>	<i>1</i>	<i>.744</i>	<i>.540</i>	<i>.464</i>
	<i>Residual</i>	<i>135.016</i>	<i>98</i>	<i>1.378</i>		
	<i>Total</i>	<i>135.760</i>	<i>99</i>			