Journal for Educators, Teachers and Trainers
The PROFESIOLab electronic, peer-reviewed, open-access Magazine

ISSN 1989 – 9572

DOI: 10.47750/jett.2023.14.04.005

Relationship between the Mathematical Quotient and Emotional Quotient as a Driven Factor to Improve the Social Profile Characteristics of Students

Nancy G. De Leon[1*]

Journal for Educators,Teachers and Trainers, Vol. 14 (4)

https://jett.labosfor.com/

Date of reception: 19 Jan 2023

Date of revision: 20 Mar 2023

Date of acceptance: 24 Mar 2023

Nancy G. De Leon (2023). Relationship between the Mathematical Quotient and Emotional Quotient as a Driven Factor to Improve the Social Profile Characteristics of Students.*Journal for Educators, Teachers and Trainers*,Vol. 14(4). 53-61.

---

[1]Isabela State University, Philippines

Journal for Educators, Teachers and Trainers
The LabOSfor electronic, peer-reviewed, open-access Magazine

Journal for Educators, Teachers and Trainers, Vol. 14 (4)
ISSN 1989 – 9572
https://jett.labosfor.com/

Relationship between the Mathematical Quotient and Emotional Quotient as a Driven Factor to Improve the Social Profile Characteristics of Students

Nancy G. De Leon[1*]
[1]Isabela State University, Philippines
*Corresponding Author
Email: nancy.g.deleon@isu.edu.ph

ABSTRACT
This study investigated the profile, emotional and mathematical quotients of 323 college students in the Philippines. The researcher gathered the data through the EQ Map questionnaire and Scholastic Ability Test for Adults. Results indicated that the respondents' emotional quotient level is moderately well, and their mathematical quotient is poor. Results also showed that the number of hours studying their lesson among the respondents' profile variables affect their emotional quotient. On the other hand, the place where respondents learn their lessons affects their mathematical quotient. This study also signified that the mathematical quotient has no significant relationship to the emotional quotient. This study can show students how social profile characteristics influence their emotional and mathematical quotients. It is recommended that a local study be conducted to evaluate whether or not there is a substantial association between students' emotional quotients and their academic achievement. The results of this study might then be concluded. In addition, a study on the factors affecting the emotional and mathematical capacity of the student may also be undertaken in a specific group within the institution, and the results may then be compared to those obtained from studies conducted at other universities. In a similar sense, it is also recommended to carry out research that will serve the needs of both private and government institutions regarding the aspects that influence emotional intelligence.

Keywords: Profile analysis, emotional quotient, emotional intelligence, mathematical ability, Philippines

INTRODUICTION

Your chances of becoming successful will increase if you have high emotional intelligence. This has been demonstrated by a lot of research, as well as articles. For instance, in his article, Lawson (2014) states that Seligman researched salesmen at MetLife and found that optimists sold 37 percent more insurance in their first two years than pessimists did. This information was found in the research that Seligman conducted. In Schulman's (1995) study on students, a total of 500 students from the first-year class at the University of Pennsylvania participated in the study. He came to the conclusion that the test takers' levels of optimism were stronger indicators of their true freshman grades than either their SAT scores or their grades from high school. Managing one's feelings and being able to cope with stress has been identified as an additional component of emotional intelligence that contributes significantly to one's level of success. According to a number of studies, those who have a high emotional intelligence (EI) have a greater chance of being employed, advanced in their careers, and rewarded with a higher income. But what exactly is EI, and why is it considered to be so vital? When it comes to emotional intelligence, being able to recognize when and how to express emotions is equally as crucial as being able to control them. Emotional intelligence can be defined as the capacity to recognize and take control of one's own feelings as well as the capacity to comprehend the sentiments of other people. According to Cherniss (2000), this capability is crucial for anyone who wishes to be prepared for a profession in any field. Having a high EQ can help in the development of relationships, the alleviation of tension within a team, the settlement of conflicts, and the enhancement of one's level of satisfaction in their work.

On the other side, one's level of emotional intelligence can be determined by their EQ, which stands for emotional quotient (Ahmad et al., 2009). The emotional intelligence (EQ) test is a psychological examination that measures a person's capacity to recognize and deal with their feelings, both inwardly and externally, as well as their capacity to exert control over their reactions.

In the meantime, mathematical competence is described as the ability to learn, comprehend, and absorb mathematical information, as stated by Vilkomir and O'Donoghue (2009). From this angle, one way to think of

it is as the ability to do mathematical operations and find effective solutions to mathematical problems that are presented to one. This definition also applies to processing numerical data and completing a mathematical calculation based on that data, whether the calculation is learnt or viewed as a natural skill. Whether learned or seen as a natural skill, this can be considered to be mathematical reasoning.

In a study conducted by Kamid and Huda (2021), explained that the emotional quotient can be broken down into three different categories: high, moderate, and low. Each category corresponds to a different level of emotional intensity. It was supported by Nwokah and Ahiauzu (2009), those who have a high emotional quotient are characterized by having qualities such as being socially stable, having an easy time getting along with others, not being easily frightened or disturbed, and having a big responsibility. Pupils that have a high emotional quotient are able to exercise good self-control, have the motivation to excel, are ready to study with excitement and put in a lot of effort, are self-starters, are innovative, and have the correct mentality. Medium emotional quotient is characterized by right psychological conditions, positive attitudes toward themselves and high self-esteem, as well as maturity in making decisions where students still have the proper motivation, and many students also have motivation lacking in learning mathematics. In addition, Yahaya, et al. (2012), medium emotional quotient is characterized by right psychological conditions, positive attitudes toward themselves, and high self-esteem. Students can learn how to cope with feelings of stress, anxiety, or frustration in mathematics classes by combining emotional learning with academic subjects, especially mathematics. (Schutte, et al. ,2009). Particularly beneficial for this endeavor is the inclusion of mathematics. Therefore, it is essential for teachers of specific subjects to pay attention to the level of emotional intelligence exhibited by their students.

After the publication of Daniel Goleman's book in 1995, the concept of Emotional Intelligence (EI) entered the mainstream discourse on what constitutes intelligence and quickly gained widespread acceptance. He explained that one's Intelligence contributes just 20% to their success in life, while other circumstances account for the remaining 80%. Emotional intelligence, luck, and social class are all potential contributors to these characteristics. He is of the opinion that emotional intelligence has a more significant bearing on general intelligence. In addition, there are methods of instruction that can help students improve their emotional intelligence. According to Goleman (1995), emotional intelligence is defined as the ability to understand one's own and other people's sense of self and others, as well as the ability to motivate oneself and manage emotions in intimate connections with other people. To measure the EI emotional quotient and mathematical quotient. Several Studies have been conducted about IE as follows:

Relationship between Emotional Intelligence and Academic Achievement

The study of Krouse & Krouse (1981) and Brown & Langer (1990) developed a model for low academic achievement

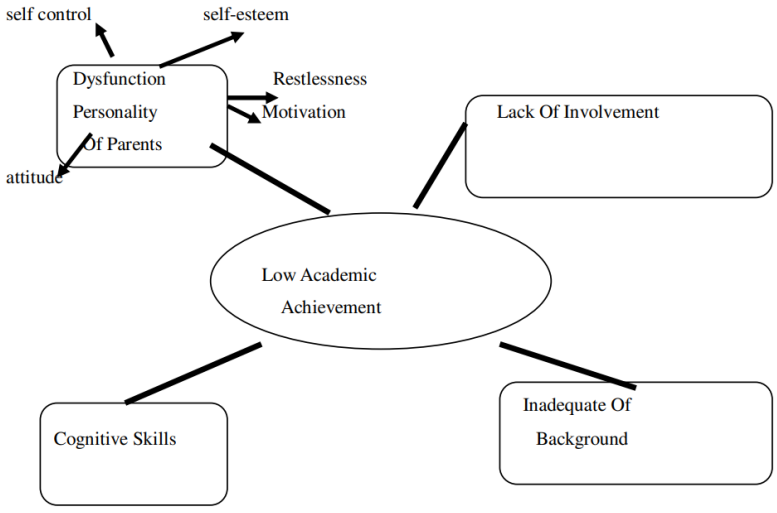

Figure 1: Model of Low Achievement

Adapted from Krouse & Krouse, 1981; Brown & Langer, 1990 as cited by Yahaga, et al.(2012)

According to this model, dysfunction can be understood to refer to an individual personality that is not motivated, lacks confidence, has low self-esteem, lacks self-control, and has high levels of anxiety. Pupils that exhibit the aforementioned traits are considered to have a low emotional intelligence, which will, in turn, have a negative impact on their academic achievement. This result was affirmed by the study carried out by Rode et al. (2007) that emotional intelligence was projected to be related to academic success for two reasons. First, there is a tremendous deal of room for interpretation in terms of academic success. Second, the vast bulk of work done

in academic settings is self-directed, which necessitates advanced degrees of self-management. Hence, people who have a high emotional intelligence might do better academically if they applied themselves.

Relationship between Self Awareness and Academic Achievement

A person's level of self-awareness can be measured by how well they can recognize their own feelings and understand how those feelings influence their performance. This self-awareness is the critical component in sensitizing a person to their own strengths and weaknesses. One can then acquire self-confidence as a result of having this level of self-awareness. According to the findings of a study that was carried out by Holahan and Sears (1995) over a period of sixty years on more than one thousand individuals who had had a high IQ from the time they were children until they reached retirement age. It was discovered that those who gained self-confidence throughout the first year of their careers had greater chances of being successful in their careers.

Johnson (2009) concurred that having good mental health is essential to having successful educational experiences. Understanding how to learn is the single most important factor in determining a student's level of success. Students who are self-aware and who are motivated by their own interests will almost certainly have very high levels of academic success.

Relationship between Emotional Management Element and Academic Achievement

Learning and academic achievement are directly correlated to a student's level of self-control, both cognitive and behavioral, within the context of the classroom (Corno and Mandinach, 1983; Corno,Rohrkemper, 1985).

In the Sommerville study, which was a research project on 450 males who had grown up in the town of Sommerville, Massachusetts. One-third of the guys had an IQ that was lower than 90, and two-thirds of them hailed from families who are still alive. According to the findings of this study, people with high IQ had little success in their personal and professional relationships. One thing that sets them apart from other successful people is their capacity to communicate their worries, feelings, and friendliness to other individuals (Snarey and Vaillant, 1985).

Relationship between Empathy Element and Academic Achievement

Enables one to easily empathize with the emotional and sensitized needs of other people, demonstrating their compassion for other people. Have compassion for people who are able to interpret or comprehend non-verbal indicators such as voice intonation, facial expression, and so on. One of the roles that the school plays is that it gives the child the opportunity to freely describe specific feelings associated with having sympathy and empathy for other people. Additionally, the school assists the child in gaining control of feelings such as not being good enough, not having particularly great anger, and extreme excitement (Fontana, 1984).

Those who are able to identify the feelings of others and have the capacity to empathize with both the gain and the loss were shown to be more successful in both their professional and social lives by Rosenthalet.al (1977) in their research.

The abovementioned literature has triggered the researcher to find out if Mathematical Quotient and Emotional Quotient can be a Driven Factor to Improve the Social Profile Characteristics of Students. The focus of the research was to see if the mathematical ability has any bearing on the emotional quotient or vice versa. This study can show students how their social profile features influence their emotional and mathematical quotients. Hence, the researcher performed this study.

METHODOLOGY

This study utilized a descriptive correlational design. The researcher used two sets of questionnaires to collect data from the respondents; the Scholastic Ability Test for Adults and the EQ MapTM. The respondents were 323 third year college students in one of the universities in the Philippines.

The respondents' mathematics ability was assessed using the Scholastic Ability Test for Adults (SATA). The SATA consists of 35 math questions that include both calculation and application. The respondents have 45 minutes to complete the assessment. The SATA was administered by a guidance counselor from Isabela State University's Cauayan Campus to avoid instrument duplication or copying. She handed over the output to the researcher for encoding and analysis. SPSS 14 was used to arrange and tabulate the data gathered via questionnaires.

The researcher also used the EQ MapTM, developed by Cooper & Sawaf (1997). The instrument has three EQ dimensions and fourteen scales in total. Emotional literacy was the instrument's first dimension, which focused on emotional self-awareness, emotional self-expression, and emotional awareness of others. Intentionality, creativity, resilience, and interpersonal interactions were all addressed in the second component, Emotional Quotient Competency. Finally, compassion, outlook, intuition, trust radius, personal power, and integrity were linked to the third dimension – Emotional Values and Attitudes.

The researcher used the mean of the respondents' EQ and Mathematical ability scores. The total mean of the respondents' profile, EQ, and MQ level was calculated using the weighted mean across all variables. The

researcher used ANOVA and Kruskal-Wallis tests to determine the difference between EQ and MQ and profile variables. Finally, she computed the correlation between respondents' EQ and mathematical abilities using the Pearson Correlation Coefficient.

RESULTS AND DISCUSSIONS

Table 1 shows the frequency and percentage distributions of respondents' social profiles.

In terms of where respondents review their lessons, 214 respondents review at home (66.26 percent), 92 respondents review in a classroom (28.48 percent), and 17 respondents' study anywhere (5.26%). One hundred seventy-seven or 54.80% of respondents spent at least one hour studying their lesson, 69 or 21.36 percent spent thirty minutes studying, 66 or 20.43 percent spent two hours studying, and 11 or 3.41 percent spent three hours studying.

Table 1: Frequency and Percentage Distribution of Respondents' Social Profile

Place where they review their lesson	Frequency (n=323)	Percentage (%)
At home	214	66.26
In the classroom	92	28.48
Anywhere	17	5.26
Number of hours spent in studying lesson		
Thirty minutes	69	21.36
One hour	177	54.80
Two hours	66	20.43
Three hours	11	3.41
Things they do during leisure time		
Watching television	175	54.18
Reading comics/magazines/books	54	16.72
Ballgames	33	10.22
Going to movies	7	2.17
Listening to radio	35	10.84
Singing and dancing	9	2.78
Playing with friends	10	3.09
Persons they spend with during leisure time		
Alone	34	10.53
Family	157	48.60
Friends	132	40.87
Co-curricular involvement in school		
Organizational	181	56.04
Socio-cultural	52	16.10
Sports	90	27.86
Type of lodging		
Boarder	96	29.72
Non-boarder	227	70.28

Furthermore, 175 respondents, or 54.18 percent, stated that they watch television; 54, or 16.72 percent, said that they read comic books/magazines; 35, or 10.84 percent, stated that they listen to the radio; 33, or 10.22 percent, stated that they play ball games; 10, or 3.09 percent, said that they play with friends; and 9, or 2.78 percent, stated that they sing and dance. Only 34 or 10.53 percent choose to spend their leisure time alone, with 157 or 48.60 percent spending it with family, 132 or 40.87 percent with friends and only 34 or 10.53 percent with strangers. One hundred eighty-one respondents (56.04 percent) participated in organization activities, 52 respondents (16.10 percent) in sports, and 52 respondents (16.10 percent) in socio-cultural activities as a result of their involvement in co-curricular activities at school. Non-boarders make up 227 of the respondents, or 70.28 percent, while boarders make up 96, or 29.72 percent.

According to the statistical data, a large proportion of respondents preferred to study their lessons at home for at least one hour per day. This also relates to the fact that a large proportion of them are non-boarders. This signifies that they live in the same house as their family. Additionally, the statistics reveal that many respondents spend their free time watching television and with their families. Numerous respondents also engage in outdoor recreational activities. This indicates that majority of the respondents are sports enthusiasts.

Table 2: Weighted Mean of the Level of Respondents' Emotional Quotient

Emotional Quotient Dimensions	Weighted Mean	Descriptive Interpretation
First Dimension – Emotional Literacy Emotional Self-Awareness	2.95	Moderately Well
Emotional Expression	2.78	Moderately Well
Emotional Awareness of Others	2.95	Moderately Well
Second Dimension – Emotional Quotient Competency Intentionality	2.99	Moderately Well
Creativity	2.87	Moderately Well
Resilience	3.00	Moderately Well
Interpersonal Connections	2.99	Moderately Well
Constructive Discontent	2.77	Moderately Well
Third Dimension – Emotional Values and Attitudes Compassion	2.75	Moderately Well
Outlook	3.51	Very Well
Intuition	2.93	Moderately Well
Trust Radius	2.81	Moderately Well
Personal Power	2.69	Moderately Well
Integrity	2.81	Moderately Well

Table 2 presents the weighted mean of the level of respondents' emotional quotient.
The weighted mean of the respondents' outlook is 3.51, suggesting a "very well" rating. The "very well" attitude of the respondents indicates that they can overcome social anxiety and dismiss people who criticize them. The figures suggest that the respondents have a positive outlook. According to Gallup, a polling agency, a positive outlook is closely linked to school accomplishment, as Heitin, L. (2012) stated in her article. Similarly, Ferlazzo (2015) said that teachers contribute to students' positive outlooks by establishing an environment suitable for attitude development.
On the other hand, the remaining 13 EQ scale items indicate emotional literacy, emotional quotient competency, and emotional values and attitudes at a "moderately good" level. With a mean of 3.0, resilience is placed top at this level. The American Psychological Association describes resilience as the ability to bounce back from adversity. Respondents with a moderate level of resiliency can successfully adapt in the midst of suffering, sorrow, calamity, threats, and other similar situations. The above-average levels of resilience demonstrated by respondents are significant for academic and personal success. This was also noticed in a study by Yeager et al. (2012), who said that resilience is essential for educational and personal success because obstacles are ubiquitous. They also demonstrated how students' mindsets influence their capacity to endure when confronted with academic and social challenges.
The findings suggest that even when challenged with academic and social problems, the participants can continue to thrive and have a positive outlook.

Table 3: Frequency and Percentage Distribution of the Mathematical Quotient Level of the Respondents

Level of Mathematical Quotient	Frequency	Percent
Outstanding	0	0.00
Very Satisfactory	0	0.00
Satisfactory	59	18.30
Fair	115	35.60
Poor	119	36.80
Very Poor	30	9.30
Total	323	100.00

The table above summarizes the frequency and percent of respondents' level of mathematical ability gathered using a Scholastic Ability Test for Adults (SATA).
Additionally, the data indicate that 119 respondents (36.6%) have a poor mathematical quotient, 115 respondents (35.6%) have a fair mathematical quotient, and 59 respondents (18.3%) have a satisfactory mathematical quotient. In comparison, 30 respondents (9.3%) have an extremely poor mathematical quotient, whereas none have an exceptional or very good score. The fact that third-year respondents have a poor mathematical quotient is concerning. The lack of constant exposure to Mathematics content is most likely the

cause of poor performance. Math achievement is linked to both individual and instructional qualities, according to Andaya (2014). Even though only science high schools competed in the Advanced Mathematics category in 2008, the Philippines came in last (Department of Education, 2010). Nickson (2004) claims that the poor score is due to a lack of information retention.

The SATA findings, which emphasized mathematical aptitude, revealed that students' accomplishment for calculation and application of the Third Year participants is on the low and fair side. These indicate that individuals have difficulty understanding or only have the bare minimum of knowledge, abilities, and core understandings; needed and level of expertise and skills have not been gained or developed sufficiently to facilitate comprehension.

Table 4: Test of Difference of Emotional Quotient and Profile Variables

Profile Variables	F-ratio	Probability
1. Place here they study their lesson	0.40	0.75^{ns}
2. Number of hours they spend to study lesson	4.87	0.00*
3. Things they do during leisure time	1.33	0.24^{ns}
4. Persons they spend with during leisure time	0.26	0.85^{ns}
5. Co-curricular involvement in school	2.20	0.07^{ns}
6. Type of lodging	0.97	0.41^{ns}

*Significant ^{ns}Not Significant

The test of the difference between the respondents' emotional quotient and profile factors is shown in Table 4. One of the seven profile factors has a strong connection to the emotional quotient. The number of hours spent studying their course by respondents has a probability of 0.00, indicating a substantial difference compared to the approved probability limit of less than 0.05. This substantial result suggests that the amount of time spent studying affects the emotional quotient of respondents. Sandhu's (2014) results that there is a significant positive association between academic achievement and emotional intelligence and between academic achievement and teens' study habits are supported by these data. Similar findings were observed by Nonis et al. (2010), who discovered that study habits affected the link between study time and study time.

Furthermore, the findings imply that the respondent's emotional quotient or emotional intelligence may be affected by his or her study habits.

Table 5: Test of Difference of Mathematical Quotient and Profile Variables

Variables	h-value	probability
Place where they study their lesson	4.33	0.04*
Number of hours they spend to study their lesson	1.94	0.16^{ns}
Things they do during leisure time	0.83	0.36^{ns}
Persons they spend with during leisure time	0.17	0.67^{ns}
Co-curricular involvement in school	0.71	0.39^{ns}
Type of lodging	0.28	0.60^{ns}

*Significant ^{ns} Not Significant

The table illustrates the mathematical quotient and profile variable test of difference. Additionally, the data demonstrates that among the six profile factors, the place where they study their lesson, which has a probability of 0.04 and an h-value of 4.33, has a substantial difference with the mathematical quotient. The numbers suggest that respondents' mathematical intelligence was influenced by the location where they studied their lessons.

The data support Kyriakides' (2010) conclusion that classroom conditions have an impact on respondents' math achievement. It should be mentioned that while respondents in Cho et al. (2009)'s survey believed that learning settings are essential for critical thinking, some learning environments were not capable of supporting students in the type of learning they need.

As a result of the finding mentioned earlier, a conducive area to study lessons may influence the mathematical quotient, which must be addressed appropriately to avoid defeating the primary purpose.

Table 6: Test of Relationship of the Emotional Quotient and Mathematical Quotient

Emotional Quotient Dimension	Mathematical Ability	
	r-value	p-value
First Dimension – Emotional Literacy	-0.01	0.82^{ns}
Second Dimension – Emotional Quotient Competency	-0.02	0.69^{ns}
Third Dimension - Emotional Values and	-0.00	0.88^{ns}

Attitudes		
Total	-0.01	0.76 [ns]

*Significant [ns] Not Significant

The preceding table summarizes the results of a 0.05 level of significance relationship test on the respondents' emotional and mathematical quotients. On the first dimension, the r-value is -0.01, indicating an inverse association, while the probability is 0.82, indicating no significant relationship exists between the two variables. On the other hand, the second dimension's r-value is -0.02, implying an inverse association, and its probability of 0.69 indicates that no significant relationship exists between the two. Finally, the third dimension has an r-value of -0.017 and a possibility of 0.767, indicating no meaningful association exists.
The data suggests that there is no substantial link between emotional and mathematical competence. The findings contradict Maree et al.'s (2013), indicating that a combination of El aspects and problem-solving behavior, such as study habits, information processing, and mathematics anxiety, are predictors of mathematics achievement.
According to the results, respondents' emotional quotient has nothing to do with their mathematical abilities.

CONCLUSIONS AND RECOMMENDATIONS

The majority of the respondents study their lessons at home and spend their leisure time watching movies. Most of the respondents spend their leisure time with their families and participate in organizational activities in school. More number of the respondents is non-boarders. Too few respondents' friends love reading books, but most of them have funny friends. This is an evident that the level of the respondent's emotional quotient is "moderately well." In addition, the level of the respondent's mathematical quotient is poor to fair and the number of hours that respondents spend in studying lessons affects the emotional quotient. Surprisingly, the place where they study lessons affects the mathematical ability and finally, there is no significant relationship between the respondents' emotional quotient and mathematical ability when grouped according to profile variables. It is recommended that a locally based study that will determine the significant association between emotional quotient and academic performance of students may be concluded. In addition, a study on the factors affecting the emotional and mathematical ability of the student may be also be conducted in a certain group in the university and compare it to other university. Likewise, it is also advisable to conduct a study that will cater both private and government institution about the factors affecting the emotional intelligence.

REFERENCES

1. Ahmad, S., Bangash, H., & Khan, S. A. (2009). Emotional intelligence and gender differences. Sarhad J. Agric, 25(1), 127-130.
2. American Psychological Association. (2020, February 1). Building your resilience. http://www.apa.org/topics/resilience
3. Andaya, O. J. F. (2014). Factors that affect mathematics achievements of students of Philippine Normal University-Isabela Campus. Researchers World, 5(4), 83.
4. Brown,J. and Langer,E.(1990). Mind fullness and intelligence: a comparison educational psychologist.25(3).pg 303-309.
5. Cherniss, C. (2000). Emotional intelligence: What it is and why it matters (p. 15). Rutgers University, Graduate School of Applied and Professional Psychology.
6. Choy, S. C., & Cheah, P. K. (2009). Teacher perceptions of critical thinking among students and its influence on higher education. International Journal of teaching and learning in Higher Education, 20(2), 198-206.
7. Cohen, J. (2007). The power of optimism: how it boosts your bottom line. Journal of Marketing, 2007(10), 18.
8. Cooper, R. K., & Sawaf, A. C. (1997). Executive EQ: Emotional intelligence in leadership and organization (No. 658.409 C7841c Ej. 1 000003). GROSSET,.
9. Corno,L.and Mandinach,E.(1983).The role of cognitive engagement in classroom learning and motivation, Educational Psychologist 18, pg 88-100.
10. Corno,L.,and Rohrkemper,M.(1985). The intrinsic motivation to learn in classrooms. In Ames, C and Ames,R.(eds).Research on Motivation.vol 2
11. Department of Education. (2010). Discussion paper on the enhanced K to 12 education program. Pasig City: CEAP.
12. Ferlazzo, L. (2015). Building a community of self-motivated learners: Strategies to help students thrive in school and beyond. Routledge.

13. Fontana, David. (1984). Towards a Psychology of the Emotions. Educational Psychology, vol. 4, No. 1.

14. Goleman, D. (2012). Emotional intelligence: Why it can matter more than IQ. Bantam.
15. Heitin, L. (2012). Gallup poll: Student success linked to positive outlook. Education Week, 32(2), 11.
16. Holahan, C.K. and Sears,R.R. (1995). The gifted group in later maturity. Stanford: Stanford University Press.
17. Johnson,B. (2009). Emotional Intelligence and Adolescents. available at http://www.beenajohnson.com/2009/02/emotional intelligence and adolescents.html. access on 3/4/2010
18. Krouse,J.and Krouse,H.(1981).toward a multimodal theory of academic under achievement. Educational Psychologist, 16(3),pg 151-164.
19. Kyriakides, L. C. R. J., Campbell, R. J., & Gagatsis, A. (2000). The significance of the classroom effect in primary schools: An application of Creemers' comprehensive model of educational effectiveness. School effectiveness and school improvement, 11(4), 501-529.
20. Lawson, J. (2014). I'm a technologist, what's that got to do with Emotional Intelligence?. Food New Zealand, 14(6), 24-25.
21. Maree, J. G., Fletcher, L., & Erasmus, P. (2013). The relationship between emotional intelligence, study orientation in mathematics and the mathematics achievement of the middle adolescent. Journal of Psychology in Africa, 23(2), 205-211.
22. Montague, M., Enders, C., & Dietz, S. (2011). Effects of cognitive strategy instruction on math problem solving of middle school students with learning disabilities. Learning Disability Quarterly, 34(4), 262-272.
23. Nickson, M. (2004). Teaching and learning mathematics: A teacher's guide to recent research and its application.
24. Nonis, S. A., & Hudson, G. I. (2010). Performance of college students: Impact of study time and study habits. Journal of education for Business, 85(4), 229-238.
25. Nwokah, N. G., & Ahiauzu, A. (2009). Emotional intelligence and marketing effectiveness. Marketing Intelligence & Planning, 27(7), 864–881. https://doi.org/10.1108/02634500911000199
26. Rode, J., Mooney, C., Arthaud-Day, M., Near, J., Baldwin, T., Rubin, R., and Bommer,W. (2007) Emotional intelligence and individual performance: Evidence of direct and moderated effects. Journal of Organizational Behavior, 28, pg 399-421.
27. Rosenthal,R.et.al.(1977). The PONS Test: Measuring sensitivity to nonverbal cues. In McReynolds,P.(ed).
Advances in psychological assessment. San Francisco:Jossey-Bass.
28. Schutte, N. S., Malouff, J. M., & Bhullar, N. (2009). The Assessing Emotions Scale. Springer US EBooks, 119–134. https://doi.org/10.1007/978-0-387-88370-0_7
29. Snarey,J.R. and Vaillant, G.E.(1985). How lower and working class youth become middle-class adults: The association between ego defense mechanisms and upward social mobility. Childeren Development,56, pg 899-910.
30. Syaiful, S., Kamid, K., & Huda, N. (2021). Identifying of emotional quotient junior high school students in mathematics. International Journal of Evaluation and Research in Education, 10(1), 202. https://doi.org/10.11591/ijere.v10i1.20681
31. Vilkomir, T., & O'Donoghue, J. (2009). Using components of mathematical ability for initial development and identification of mathematically promising students. International Journal of Mathematical Education in Science and Technology, 40(2), 183-199.
32. Yahaya, A, SarEe, N, Bachok, J, Yahaya, N, Boon, Y, Hashim, S and Lee, G. (2012). The impact of emotional intelligence element on academic achievement. Archives Des Sciences, vol. 65, no. 4, pp. 2–17, 2012.
33. Yeager, D. S., & Dweck, C. S. (2012). Mindsets that promote resilience: When students believe that personal characteristics can be developed. Educational psychologist, 47(4), 302-314.