The Influence of Emotional Intelligence (EI) On the Learning Outcomes in Science of Ste Junior High School Students

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INTRODUCTION

In the global educational landscape, emotional intelligence (EI) has gained significant attention for its role in academic success and psychological well-being (Goleman, 1995; MacCann et al., 2020). However, this concept has yet to achieve its full potential, resulting in the underutilization of Emotional Intelligence (EI) in the classroom. This is particularly concerning, as global research indicates that students with higher levels of EI tend to exhibit greater motivation, resilience, and stress management—all essential traits that significantly enhance learning outcomes. This is especially true in subjects like science, which demand critical thinking and problem-solving skills (Brackett, Rivers, & Salovey, 2011). Recognizing and integrating EI into educational practices can pave the way for more effective teaching strategies that support not just cognitive development but also the emotional and social growth of students. With increasing emphasis on holistic education, countries have begun integrating social-emotional learning (SEL) into their curricula to foster not only cognitive but also emotional competencies in learners.

In the Philippines, the Department of Education (DepEd) through its K to 12 Basic Education Curriculum highlights values formation and social-emotional learning as essential components in fostering well-rounded learners. Studies conducted locally indicate a positive relationship between emotional intelligence and academic performance in Science and Mathematics among Filipino students (Abubakar, 2024; Reyes, 2022). However, these studies often combine Science with other subjects or focus on senior high school students, leaving a gap in research specifically on junior high learners and Science outcomes.

At the local school level, educators have observed challenges faced by junior high school students in science subjects due to emotional factors such as anxiety, low motivation, and poor stress management. These factors are particularly evident in practical, laboratory, and inquiry-based learning activities. The disruptions caused by the COVID-19 pandemic have also intensified the need to understand how emotional intelligence can support students' academic resilience and success in science.

Hence, despite the recognition of EI as crucial for academic success, a significant research gap exists regarding its specific impact on junior high school students' performance in science. Addressing this gap through this study is essential, especially in the light of the past pandemic, to understand how EI enhances the learning outcomes of junior high school students.

Significance of the Study

The findings of this study hold significant implications for the following beneficiaries:

STE Students. This study allows them to understand their emotional competencies. Here, they can develop resilient learning strategies that enhance even further their learning outcomes and attribute positive mindset towards subjects, per se.

STE Teachers. Educators can gain insights into how EI affects student engagement and motivation, allowing them to tailor their teaching approaches and create supportive classroom environments that nurture both emotional and cognitive development.

Guidance and Counseling Personnel. School guidance advocates can utilize the study's findings to design targeted interventions focused on emotional skills, providing STE students with the tools needed to manage stress and anxiety in academic settings.

School Administrators. The results of this study will inform administrators about the importance of integrating emotional intelligence training in the curricula, promoting holistic approach to education that emphasizes both emotional well-being and academic success.

Policy-makers. Policymakers can leverage the inputs derived from this study to advocate for curriculum reforms that embed social-emotional learning within educational frameworks, ensuring that future educational policies support emotional and psychological needs of the students.

Future Researchers. This study lays the groundwork for further exploration as to the relationship of EI and learning outcomes along with other potential variables, encouraging future researchers to investigate diverse educational contexts and demographic variables that may influence EI's impact on learning.

Statement of the Problem

The objectives of this study are to assess the levels of emotional intelligence among junior high school students and determine their correlation with learning outcomes in science. It aims to identify which components of emotional intelligence—such as self-awareness, emotional regulation, motivation, empathy, and social skills—most significantly influence academic performance. The study also seeks to provide evidence-based recommendations for integrating emotional intelligence development into teaching strategies and student support services. Ultimately, it intends to contribute to a more holistic educational approach that fosters both emotional well-being and academic achievement in science.

This study further seeks to answer the following:

1. What is the level of emotional intelligence of the junior high school STE students in terms of:

a. Self-awareness;

b. Self-regulation;

c. Motivation;

d. Empathy; and,

e. Social Skills?

2. What is the level of learning outcomes in science of the junior high school STE students?

3. Is there a significant relationship between emotional intelligence and learning outcomes in science of the junior high school STE students?

4. Is there any indicator of emotional intelligence that significantly influence the learning outcomes in science of the junior high school STE students?

Hypotheses

The null hypotheses were examined at 0.05 level of significance.

HO1: There is no significant relationship between emotional intelligence and learning outcomes in science of the junior high school STE students.

HO2: There is no indicator of emotional intelligence that significantly influence the learning outcomes in science of the junior high school STE students.

Theoretical and Conceptual Framework

This study in anchored on the Emotional Intelligence Theory (ETT) by Salovey and Mayer (1990). This posits that emotional intelligence comprises the ability to perceive, understand, manage, and utilize emotions effectively in oneself and others.

In the context of education, this theory suggests that students with higher emotional intelligence are better equipped to handle academic challenges, such as stress and anxiety, leading to improved learning outcomes. By the familiarity of emotional competencies, students can enhance their motivation, resilience, and adaptability in science learning, making this theory particularly applicable to the study's focus on STE junior high school students.

Attributively, this study also taps on the pragmatic philosophical worldview, which emphasizes the practical application of research in addressing real-world problems. Pragmatism allows the use of both quantitative and qualitative approaches to gain a comprehensive understanding of how emotional intelligence influences students' learning outcomes in science.

The figure that follows emphasize the conceptual framework of the study involving the independent variable (emotional intelligence) along with its indicators and the dependent variable (learning outcomes).

Conceptual Framework

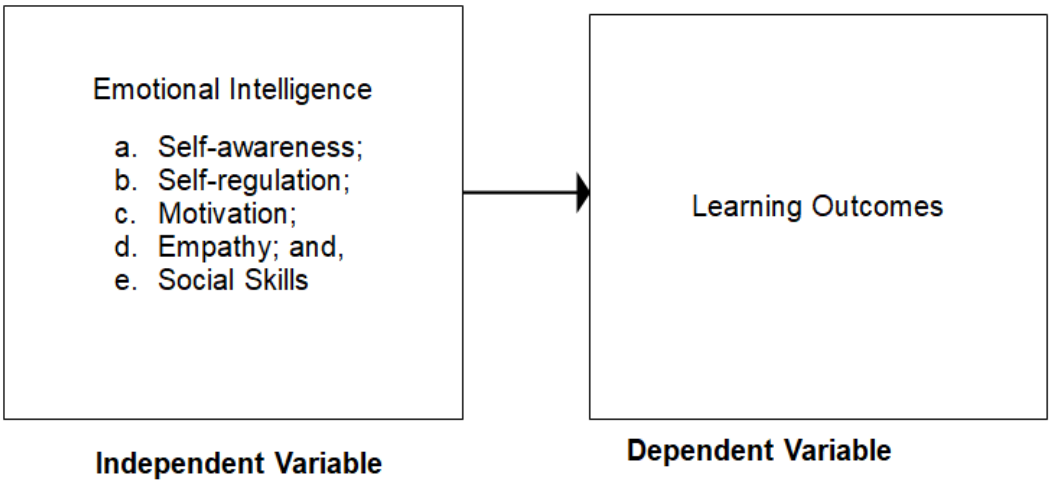

Figure 1. Conceptual Framework of the Study

METHODOLOGY

The researcher this study presents the methodologies utilized in this chapter. Research design, locale of the study, sample and sampling, research instrument, data gathering procedures, data analysis, and ethical considerations are well attributed to harness the direction and flow of this research.

Research Design. This study employed a quantitative, non-experimental, correlational research design to examine the relationships between emotional intelligence and learning outcomes. The quantitative approach was appropriate for this research because it enabled the collection of measurable and objective data, which supported a comprehensive and data-driven assessment of the variables at hand (Creswell & Creswell, 2018). A non-experimental design was utilized, as manipulating variables related to students' academic experiences, skills, or attitudes would have been impractical and raised ethical concerns. Instead, the study observed existing conditions and perceptions to identify statistically significant relationships among variables.

Standardized instruments were used to gather data, allowing for consistency in measurement and minimizing subjectivity in analysis. This enhanced the reliability of the findings by identifying patterns and correlations across the data set (Siripipatthanakul et al., 2023). By applying uniform measurement tools and statistical methods, the study ensured the accuracy of results and provided evidence-based insights into the cadets' level of preparedness, their strengths, and areas requiring improvement.

Locale of the Study. The research was conducted in Davao City, the sole highly urbanized area in the Davao Region of the Philippines. Specifically, the study took place at a public secondary school operated by the Department of Education under Cluster 14. As Davao City continued to manifest itself as an excellence hub for learning, there was an increasing need to assess the students' learning outcomes as related or put in relation to emotional intelligence, to accommodate further and varied demands I the avenue of learning.

Sample and Sampling. The participants of the study will consist of 150 junior high school students from STE Grade 7 to 10, selected through stratified random sampling, a method that divides the population into specific subgroups before randomly selecting individuals from each group, from Cabantian National High School to ensure representation across all sections.

In the study's context, particularly when employing inferential statistics and structured surveys, a sample size of 150 is generally considered sufficient. Kline (2023) suggested that sample sizes ranging from 100 to 200 are appropriate for regression and factor analyses, assuming the data meet normality criteria. Similarly, Taherdoost (2022) noted that a sample of 100 respondents can yield reliable outcomes in survey-based research when the population is relatively homogeneous.

Research Instrument. The study used two main instruments.

Firstly, an adapted version of the Schutte Self-Report Emotional Intelligence Test (SSEIT), developed by Schutte et al (1998), to assess five components of emotional intelligence—self-awareness, self-regulation, motivation, empathy, and social skills—on a 5-point Likert scale, was notably utilized. The SSEIT has expressed a Cronbach Alpha coefficient of .90, a Spearman-Brown coefficient of .91, and Guttman Split-Half coefficient of .91, showing a reliable attribution of the tool utilized (Oyindamola et al., 2020). This has also been validated accordingly by a pool of panel experts to ensure validity.

Secondly, students' grades in science from school records to measure learning outcomes was also used. This notable measurement adheres to the promulgation of Department of Education's assessment and grading scheme as highlighted in DepEd Order 08, S. 2015. Furthermore, Scoulas et al. (2025) emphasized that students' grades are necessary and vital in the measurement of learning outcomes as situated by students or learners.

Data were analyzed using descriptive statistics (mean, standard deviation) to determine levels of emotional intelligence and Science performance, Pearson correlation to examine their relationship, and multiple regression analysis to identify which emotional intelligence components significantly predict Science learning outcomes.

Emotional Intelligence among junior high school STE students was scaled using the following Likert scale:

Range of Means	Descriptive Equivalent	Interpretation
4.20-5.00	Very High	The emotional intelligence of the junior high school STE students is considered excellent.
3.40-4.19	High	The emotional intelligence of the junior high school STE students is considered very good.
2.60-3.39	Moderate	The emotional intelligence of the junior high school STE students is considered fairly good.

1.80-2.59	Low	The emotional intelligence of the junior high school STE students is considered somewhat good.
1.00 - 1.79	Very Low	The emotional intelligence of the junior high school STE students is considered poor.

Lastly, the researcher will use the Department of Education's grading scale for the learners' learning outcomes, noting DO 08, s. 2015. The grading scales, with their respective corresponding descriptors, are in the table below:

Range of Means	**Descriptive Equivalent**	**Interpretation**
90-100	Outstanding	This means that the learning outcomes of the junior high school STE students is excellent.
85-89	Very Satisfactory	This means that the learning outcomes of the junior high school STE students is very good.
80-84	Satisfactory	This means that the learning outcomes of the junior high school STE students is good.
75-79	Fairly Satisfactory	This means that the learning outcomes of the junior high school STE students is fairly good.
Below 75	Did Not Meet Expectations	This means that the learning outcomes of the junior high school STE students is poor

***Data Gathering Procedure*.** The following procedures guided the researcher in the data collection process to ensure that sufficient and accurate information was obtained from the respondents:

First, the research instruments, adapted from standardized surveys, were validated by a panel of experts. Following this, the researchers submitted a formal request letter to the Davao City Division Office thru the Schools Division Superintendent seeking permission to conduct the study with the selected respondents.

Second, upon completion of the validation process and receipt of the required approvals, the researcher sent a formal letter to the school principal, again with the research adviser's acknowledgment, requesting permission to proceed with the data collection. The researcher then prepared an Informed Consent Form, which was presented to the respondents before the actual data gathering. The researchers explained the study's purpose, procedures, potential outcomes, and any possible risks or inconveniences to the participants.

After collecting the survey responses, the data were organized using Microsoft Excel and then forwarded to a research statistician for analysis and interpretation. The researcher engaged in further discussions and consultations with both the statistician and the research adviser to ensure the accuracy and integrity of the data handling and interpretation. Finally, the research manuscript was developed and finalized through ongoing consultations and multiple rounds of revisions.

Data Analysis. The data were analyzed using the following statistical tools:

Mean. This was used to describe the level of emotional intelligence among the junior high school STE students.

Pearson Moment Correlation Coefficient (Pearson r). This was used to examine the significance and strength of the relationship between the independent and dependent variables.

Simple Linear Regression., This was used to determine the indicators of Ei that significantly influence the EI of the junior high school STE students.

Scope and Delimitations. This study was notably limited to the Junior High School STE students of a public school in Davao City and their views on emotional intelligence, being self-reported. Moreover, this study situates the correlation of emotional intelligence and learning outcomes, including regression analysis.

Ethical Consideration. This study was conducted with respect, fairness, and justice for all participants, particularly the respondents. The researchers prioritized obtaining informed consent, ensured the protection of respondents' privacy and confidentiality, assessed potential risks and benefits, and aimed to contribute meaningful insights to the field. The study adhered to the ethical guidelines set by the Ethics Committee to uphold the integrity of the research process. Throughout the study, transparency was a priority. Respondents were fully informed of their rights, participated voluntarily, and were assured of their freedom to withdraw from the study at any point without any negative consequences.

Additionally, the safety and well-being of the respondents were of utmost concern. Necessary precautions were taken to protect personal information in compliance with the Data Privacy Act of 2012. The researcher remained committed to fairness and justice, ensuring that all respondents were treated equally and that their responses accurately reflected their perceptions and experiences. Efforts were also made to maintain transparency by addressing any potential conflicts of interest throughout the duration of the study.

RESULTS

The researcher, in this chapter presented the results of the study and their corresponding interpretation in relation to the research questions and objectives. The data gathered were carefully analyzed and are presented through tables, figures, and narrative explanations. Each section highlights key findings and discusses their implications, drawing connections to relevant literature and theoretical frameworks. The aim of this chapter is to provide a comprehensive understanding of the outcomes of the study and to offer insights into their significance within the context of the research problem.

As expressed, this study centered on the Junior High School students belonging to the Science, Technology, and Engineering program (STE) of a public school in Davao City. Including Science, Technology, Engineering, and Mathematics (STEM) students in the correlation study of Emotional Intelligence (EI) and learning outcomes provides valuable insights, especially given their demographic breakdown of 54 male and 96 female students in grades 7-10. This gender distribution is noteworthy, as research indicates that females often exhibit higher levels of emotional intelligence, showcasing greater emotional awareness and social skills (Fischer, 2018). Such differences can significantly influence group dynamics, collaborative efforts, and overall engagement in the classroom, all of which are essential for achieving positive learning outcomes. Furthermore, the ages of these students, ranging from 12 to 16 years, represent a pivotal stage of both emotional and social development, where effective interpersonal interactions become increasingly important (Birrell, 2025). Understanding how these demographic factors interact with emotional intelligence can help educators tailor strategies that better support these students, ultimately enhancing their educational experiences and learning outcomes.

Summary of the Level of Emotional Intelligence of Junior High School STE Students

Table 1 expressed the level of Emotional Intelligence of the junior high school STE students in terms of self-awareness, self-regulation, motivation, empathy, and social skills.

Table 1. The Level of Emotional Intelligence of Junior High School STE Students.

Emotional Intelligence Indicators	Mean	Descriptive Level
Self-awareness	4.17	High
Self-regulation	4.46	Very High
Motivation	4.21	Very High

Empathy	4.54	Very High
Social Skills	4.23	Very High
Overall	**4.32**	**Very High**

The initial table outlined the students' level of emotional intelligence focusing on five key areas: Self-awareness, Self-regulation, Motivation, Empathy, and Social Skills. Garnering the highest average response is Empathy (M = 4.54), with Self-regulation following closely (M = 4.46). Social Skills and Motivation (M = 4.23 and 4.21, respectively) also garnered very high response rates. Lastly, self-awareness attributed a high level having garnered M = 4.17. All these results indicate a very high and strong attribution for emotional intelligence as expressed by the respondents, particularly the junior high school STE learners.

Furthermore, the data reflects a commendable level of emotional intelligence among students, with the overall mean score of 4.32 indicating a "very high" capacity for managing emotions effectively. Each indicator reveals insights into specific areas of emotional intelligence. Notably, the scores in self-regulation, social skills, and empathy suggest that students are adept at controlling their impulses and understanding the emotions of their peers. Their capability is critical in educational settings, where emotional interactions play a vital role in collaboration and group learning. Furthermore, the elevated scores in motivation imply that students possess a strong drive toward achieving their academic goals, which can positively influence their engagement and persistence in studies. The "high" score in self-awareness compared to other indicators indicates that while students exhibit robust emotional handling, there may be opportunities for further development in recognizing their own feelings and how those affect their behavior and learning.

Summary of the Level of Learning Outcomes of Junior High School STE Students in Science

Table 2 expressed the level of Learning Outcomes of the junior high school STE students.

Table 2. The Level of Learning Outcomes of Junior High School STE Students.

Number of Students	**Mean**	**Descriptive Level**
N-145	**92.61 %**	**Outstanding**

The data presented indicates that the learning outcomes of junior high school STE students are exceptionally high, with an impressive mean score of 92.61%. This "outstanding" level suggests that the majority of students are not only grasping the content effectively but are also likely able to apply their knowledge in practical contexts. Such outcomes imply a strong instructional approach, where teachers effectively engage students and facilitate a productive learning environment. The high performance may also reflect students' persistence in the STE subjects, expressing a culture of academic excellence.

Furthermore, these findings are significant for educational policy makers and educators. Achieving and maintaining such high outcomes opens discussions on best practices and pedagogical strategies involving emotional intelligence that could be replicated in other subjects. Additionally, the result may serve as motivation for the school to continue investing in resources and training in support to STE education.

The Relationship Between Emotional Intelligence and Learning Outcomes of the Junior High Schol STE Students

Table 3 expressed the relationship between emotional intelligence and learning outcomes of the junior high school STE students.

Table 3. The Relationship between emotional intelligence and learning outcome of junior high school STE students

	Learning Outcomes			
	r	**p-value**	**Decision on $H_0$1 at α 0.05 level of significance**	**Interpretation**
Emotional Intelligence	0.225	0.006	Reject $H_0$1	There is a significant positive correlation between the determined variables.

Table 3 results showed a positive correlation between the two variables, as reflected by a Pearson correlation coefficient (r) of 0.225 and a p-value less than the commonly accepted threshold of 0.05, thereby leading to the rejection of the null hypothesis, which asserted that no significant relationship exists between emotional intelligence and learning outcomes. Moreover, the strength of the correlation, although moderate, highlights the importance of emotional factors in the educational context, emphasizing that the students' emotional abilities can influence their learning success.

The Pearson correlation coefficient of 0.225 signified a substantial relationship between these two factors, suggesting that the adept tapping of emotional intelligence directly contributes to the learning outcomes of students. This result underscores the necessity of noting that emotional intelligence must also be given due attention to achieve academic milestones.

In addition, we can infer that supporting emotional intelligence in educational settings could have considerable benefits for students learning outcomes. Programs aimed at enhancing students' emotional skills may contribute to improved academic performance. This approach aligns with contemporary educational philosophies that advocate for whole-child education, recognizing that cognitive development cannot be isolated from emotional growth.

The Emotional Intelligence Indicators that Significantly Influence Learning Outcomes (Regression)

Table 4 expressed the emotional intelligence indicators that significantly influence learning outcomes of junior high school STE students.

Table 4. The Emotional Intelligence Indicators that Significantly Influence Learning Outcomes (Regression).

	Learning Outcomes						
	Unstandardized Coefficients		**Standardized Coefficients**				
Emotional Intelligence	**B**	**Std. Error**	**Beta**	**t**	**Sig.**	**Decision on $H_0$3**	**Interpretation**
Constant	87.352	2.044		42.733	.000		
Social Skills	1.242	.481	.210	2.583	.011	Reject $H_0$3	Significant Predictor
Self-awareness	-	-	-.036[b]	-.287	.775	Accept $H_0$3	Non-Significant Predictor
Self-regulation	-	-	.065[b]	.761	.448	Accept $H_0$3	Non-Significant Predictor
Motivation	-	-	-.068[b]	-.256	.798	Accept $H_0$3	Non-Significant Predictor
Empathy	-	-	.106[b]	1.174	.242	Accept $H_0$3	Non-Significant Predictor

Table 4 reveals that among the emotional intelligence indicators, "Social Skills" (B=0.312, $p<0.05$) serves as a significant predictor of learning outcomes. With an unstandardized coefficient of 1.424, it suggests that for each unit increase in social skills, the learning outcome improve significantly, In contrast, "Self-awareness, self-regulation, motivation, and empathy" do not demonstrate a statistically significant relationship with learning outcomes, as indicated by their non-significant p-values, leading to the acceptance of the null hypothesis for these indicators, respectively.

This finding underscores the relevance of "Social Skills" in attributing positive learning outcomes. In educational settings, the ability to interact effectively with peers and teachers is crucial for collaborative learning and overall student-engagement. Enhanced social skills may lead to improved communication, teamwork, and conflict resolution capabilities, all of which are essential for thriving in both academic and social environments.

Moreover, the lack of significant predictive power from other indicators invites a closer examination of how these emotional intelligence components are integrated into educational practices. While they are essential for personal development, their direct impact on learning outcomes may not be as pronounced and profound. This suggests that while fostering emotional intelligence holistically is important, targeted interventions focusing specifically on enhancing social skills could yield more immediate benefits in increasing learning outcomes.

DISCUSSION

Emotional Intelligence of Junior High School STE Students

The results displayed in the emotional intelligence indicators table reveal critical insights into the competencies of individuals, particularly reflecting high levels in self-regulation (Mean = 4.48) and empathy (Mean = 4.54). These findings suggest that participants possess substantial abilities in managing their own emotions and understanding others' emotions, which are key components of emotional intelligence. Conversely, self-awareness, while rated as high (Mean = 4.17), presents an opportunity for growth compared to the more elevated ratings of other dimensions. Similarly, social skills (Mean = 4.23) and motivation (Mean = 4.21) indicate a strong overall emotional intelligence profile, yet also leave room for enhancement.

Recent studies support the relevance of these emotional intelligence dimensions in various domains. For instance, Shengyao et al. (2024) assert that emotional intelligence is pivotal in academic settings, where higher self-regulation and motivation can significantly influence students' performance. Additionally, a 2024 study by Silke et al. emphasizes the importance of empathy in fostering relationships and enhancing collaboration, aligning with the findings in this study that highlight high empathy scores. Moreover, Billore et al. (2024) discusses how self-regulation not only affects personal well-being but also contributes to effective leadership and improved decision-making processes. Also, Huang and Lajoie (2023), reinforces the idea that social skills are integral to group dynamics, advocating for their development in educational contexts. Lastly, a systemic review by Arteaga-Cedeno et al. (2025) finds that emotional intelligence training can lead to improvements in self-awareness and other emotional competencies, highlighting the potential for targeted interventions in educational practices.

The implications of these findings are multifaceted. Firstly, the high levels of empathy and self-regulation suggest that educational institutions should focus on maintaining and further strengthening these competencies among students. Emphasizing training programs in emotional intelligence can foster an environment where students not only excel academically but also thrive socially. Furthermore, the relatively lower score in self-awareness indicates a critical area that warrants attention; schools could benefit from integrating specific curricula aimed at enhancing self-awareness through reflection and feedback mechanisms.

Additionally, the findings highlight the potential for emotional intelligence programs to impact not just individual performance but also overall school climate. By cultivating emotional intelligence skills, educators can create more supportive and emotionally intelligent communities that enhance peer interactions and mitigate conflicts. This holistic approach can lead to improved academic outcomes and well-being, equipping students with essential skills for future personal and professional success. Ultimately, prioritizing emotional intelligence

development in educational curricula can serve as a cornerstone for creating resilient, adaptive, and emotionally competent individuals in society.

Learning Outcomes of Junior High School STE Students

The table 2 results indicate that the Level of Learning Outcomes of Junior High School STE (Science, Technology, and Engineering) students is notably high, with a mean percentage of 92.61%, classified as "Outstanding.". Recent studies corroborate the significance of effective teaching strategies along with promulgation of emotional intelligence consideration in the thriving performance of students in STEM fields. Sahara (2024) explored project-based learning in STE education and found it significantly boosts student engagement and comprehension while also enhancing emotional intelligence.

Another study by Bhat (2025) assessed the impact of technology integration and attitude formation through collaboration on student achievement in a STE curriculum, revealing a direct correlation between tech use and improved learning outcomes. These findings align with the results from the current study, reinforcing the notion that engaging and innovative instructional methods coupled with the addressing of emotional intelligence enhance students' learning experiences and achievements. Hence, the outstanding mean percentage of 92.61% in learning outcomes for Junior High School STE students illustrates the effectiveness of contemporary pedagogical interventions in this field and the attributive value of emotional intelligence.

Relationship Between Emotional Intelligence and Learning Outcomes of Junior High School STE Students

The tabular presentation in table 3 illustrates a significant positive correlation between emotional intelligence and the learning outcomes of junior high school STE (Science, Technology, and Engineering) students, with a correlation coefficient (r) of 0.225 and a p-value indicating statistical significance at the $\alpha = 0.05$ level. This finding suggests that as students' emotional intelligence increases, their academic performance in STE subjects may also improve. Such a relationship emphasizes the importance of emotional factors in educational contexts, particularly in subjects that demand higher levels of cognitive engagement and interpersonal collaboration.

Several studies support the link between emotional intelligence and academic success. Hashim et al. (2025) found that high emotional intelligence among students positively impacted their academic performance in science subjects, underscoring the importance of emotional skills in learning environments. Similarly, Herut et al. (2024) revealed that students with higher emotional intelligence tend to exhibit better academic outcomes across various disciplines, including STE. These findings reinforce the idea that fostering emotional intelligence can play a vital role in enhancing students' learning experiences and outcomes.

Moreover, the role of emotional intelligence in enhancing student motivation and resilience has been suggested in literature. Nieto-Carracedo et al. (2024) highlighted that students' emotional competencies contribute to their motivation to engage with challenging STE content, leading to improved academic performances. In another study, Saleem et al. (2024) emphasized that emotional intelligence equips students with the skills to navigate the emotional challenges present in rigorous academic settings, further supporting the significance of emotional competencies in academic success.

The findings from this analysis suggest crucial implications for educational practice and policy. By recognizing the impact of emotional intelligence on learning outcomes, educators and curriculum designers can implement strategies to cultivate students' emotional skills alongside cognitive training. Ultimately, boosting students' emotional intelligence may foster not only better academic performance but also holistic personal development, preparing them for the complexities of both academic and real-world challenges.

Emotional Intelligence Indicators Significantly Influencing Learning Outcomes of Junior High School STE Students

The results presented in Table 4 provide an insightful look into various emotional intelligence indicators and their influence on learning outcomes. Specifically, the data indicates that "social skills" emerge as a significant

predictor of learning outcomes, with a standardized coefficient (Beta) of 0.242 and a t-statistic of 2.583, resulting in a significant p-value ($p < 0.05$). This finding underscores the pivotal role that social competencies play in enhancing academic performance. Conversely, the indicators of "self-awareness", "self-regulation", “motivation”, and “empathy” did not show significant effects on learning outcomes ($p > 0.05$), suggesting that while important, they may not directly correlate with academic achievement in the context examined.

Several studies corroborate the significance of social skills in educational settings. Eriksen et al. (2025) and Alzahrami (2019) demonstrated that students with higher social-emotional competencies tend to better engage with their peers and teachers, which, in turn, positively affects their learning experiences and academic outcomes. Similarly, a study by Cagatan and Quirap (2024) found that social skills contribute significantly to collaborative learning environments, fostering cooperation and improved academic performance. These results align with the findings in Table 4, reinforcing the idea that social skills are critical for effective engagement in educational contexts.

On the other hand, the lack of significant correlation for self-awareness, self-regulation, motivation, and empathy raises interesting questions. While research by Lourenco and Paiva (2024) highlights the importance of self-regulation, and other factors, in academic success, the context of this particular study may indicate that other factors overshadow these traits. Hence, although self-regulation, among others, is crucial, its impact might be more pronounced in different settings or with varying student demographics. This indicates that emotional intelligence is a multifaceted construct whose relevance may depend on specific conditions and contextual factors in the classroom.

The implications of these findings are significant for educational practice. Prioritizing the development of social skills within the curriculum could not only boost academic performance but also foster a more collaborative learning environment. Schools might explore targeted programs that nurture these competencies through cooperative learning activities, peer mentoring, and social-emotional education, creating spaces where students feel supported both academically and emotionally. While other indicators of emotional intelligence did not demonstrate direct significance in this study, they are still vital for holistic emotional intelligence development and could be seamlessly woven into broader initiatives. By concentrating on enhancing social skills, educators can create a positive ripple effect, ultimately leading to improved learning outcomes and a more engaged student body in academic settings.

CONCLUSION

The researcher, in this chapter, presented the study’s concluding statements, synthesizing the main findings and proposing actionable recommendations for the identified beneficiaries of the study. The insights notably derived from the findings of the study are necessary inputs to allow the further enhancement of learning outcomes through emotional intelligence.

Based on the findings of the study, the following conclusions are drawn:

The respondents possess a very high level of emotional intelligence, particularly in empathy and self-regulation. This suggests that students exhibit strong capacities of emotional intelligence with factors that are critical to attributing positive educational experiences and effective personal development, leading to positive learning outcomes.

Notably, the component scores reveal that while self-regulation (4.48) and empathy (4.54) stand out as exceptional strengths, self-awareness (4.17) displays potential for improvement. This insight underscores the necessity of educational programs and interventions focusing on enhancing self-awareness to elevate the overall emotional intelligence of students,

On the other hand, learning outcomes reflect an outstanding mean score of 92.61%, highlighting academic achievement levels. Furthermore, the significant positive correlation ($r=0.225$), with $p=0.006$, between emotional intelligence and learning outcomes indicates that higher emotional intelligence is associated with better academic performance, reinforcing the idea that EI plays a crucial role in educational success.

Furthermore, regression analysis reveals that while social skills significantly predict learning outcomes (B=i.242; p=0.011), neither self-regulation, empathy, motivation, nor self-awareness serves as significant predictor. This suggests that interventions aimed at enhancing social skills might yield considerable benefits in improving learning outcomes, whereas strengthening self-regulation, self-awareness, empathy, and motivation might require a different strategic approach.

Hence, the findings affirm the essential role of emotional intelligence in shaping academic achievement among junior high school STE students. This implies that by prioritizing the development of emotional intelligence, educational institutions can facilitate better learning environments and outcomes.

RECOMMENDATION

Based on the results of the study, the researchers have identified several practical steps to enhance emotional intelligence among the junior high school STE students, thereby improving their learning outcomes further,

The STE students are recommended to engage in reflective practices, such as journaling or peer feedback, to improve self-awareness, and participate in group projects and extracurricular activities to develop further their social skills. Seeking constructive feedback from peers and teachers will also aid in identifying areas for improvement. Moreover, for teachers, incorporating EI into lesson plans through SEL (Social-Emotional Learning) can help students better understand and manage their emotions. Creating a supportive classroom environment that encourages open communication and emotional expression is crucial, as is modelling effective emotional intelligence in interactions with students.

In addition, guidance and counselling personnel should offer workshops focused on emotional intelligence themes, while conducting assessments to monitor students' EI development continuously. Establishing a peer mentoring program can also provide valuable support for students. Also, school administrators play a key role by facilitating the integration of Ei into the curriculum and investing in professional development of teachers. They should ensure that safe spaces exist for students to express their emotions and seek help.

Furthermore, for policy-makers, it is vital to promote the inclusion of emotional intelligence in educational curriculum standards and allocate funding for EI programs. This is also notably emphasized by supporting research initiatives that explore the impact of EI on academic performance and personal development.

Lastly, future researchers are encouraged to conduct longitudinal studies to examine long-term effects of emotional intelligence and learning outcomes and to investigate its implications across diverse populations and scopes. A cross-cultural study, along with experiments and longitudinal tracking, may also be conducted. A qualitative study about the lived experiences of potential participants may be held to further understand the impact of emotional intelligence in the development of students academically.

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