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Effectiveness of a Strategy to Enhance Emotional Intelligence

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Abstract

In today's dynamic and emotionally complex world, emotional intelligence (EI) plays a crucial role in shaping students' personal and academic growth. This study aimed to develop and evaluate a structured strategy to enhance emotional intelligence among secondary school students. Using Quasi-experimental design, the research was conducted on students who are in English medium schools affiliated with the CBSE board in Modasa city. The study utilized a non-equivalent two-group pre-test post-test design, where one group received the intervention while the control group did not. A self-constructed Emotional Intelligence Inventory was utilized as the assessment tool. Data were analysed using non-parametric statistical techniques, specifically the Mann-Whitney U test. The results indicated a statistically significant improvement in emotional intelligence scores of the experimental group post-intervention, while the control group showed no notable change. Further, a comparison of the gain scores between groups confirmed the strategy's effectiveness, as the experimental group showing significantly higher improvement. The findings suggest that well-structured and targeted interventions can positively influence students' emotional development. This research underscores the importance of integrating emotional intelligence intervention into school curricula, not only to enhance emotional regulation and empathy but also to support students in building healthier relationships and navigating academic and social challenges with greater confidence. The study highlights emotional intelligence as a critical life skill that contributes meaningfully to holistic development and long-term well-being of students.

Key Words: Emotional intelligence, Strategy, Secondary school students

Introduction

“Anyone can become angry; that is easy. But to be angry with the right person, to the right degree, at the right time, for the right purpose, and in the right way this is not easy.”

-Aristotle

It is a reality that our education system is focusing more on the cognitive and psychomotor domain at times ignoring the affective domain. This is not to imply that there are no exceptions or that all educational institutions are equally miserable; the basic challenge we face today is that most of our educational institutions do not devote proper attention to the development of the affective domain in students at all levels (Mangal & Mangal, 2015). It demonstrates our shortcomings in this crucial area, which must be illuminated to improve emotional stability. The affective domain encompasses adolescents' motivation, attitudes, interests, beliefs and values in addition to their overall social and emotional development (Mangal & Mangal, 2015). Therefore, when students are being nurtured, attention needs to be paid to their emotional growth. One with a high emotional Intelligence might cause the entire garden to bloom. Adolescents who are nurtured in this will mature into responsible adults who can meet the needs of the country and oneself.

In today's rapidly evolving world, emotional intelligence has emerged as a crucial aspect, particularly in India. With the increasing complexity of interpersonal relationships, professional demands, and societal pressures, the ability to understand and manage emotions effectively has become essential for success. Therefore, it is imperative to recognize the significance of emotional intelligence and its relevance in the contemporary Indian context. Developing emotional intelligence of students is vital for several reasons. Firstly, it equips them with the necessary skills to navigate the difficulties of social interactions, both in academic settings and beyond. Enhanced emotional intelligence fosters empathy, communication, and conflict resolution abilities, which are integral for fostering harmonious relationships. Individual success and performance in an organisational environment are closely linked to emotional intelligence. Furthermore, resilience is thought to be accompanied by emotional intelligence (Magnano, 2016). Recent research further indicates that emotional intelligence helps adolescents cope effectively with stress, academic pressure, and emotional challenges (Năstăsă et al., 2021). Additionally, those with high emotional intelligence are better able to manage stress, adjust to change, and show perseverance in the face of difficulties in a competitive environment of education and employment (Magnano, 2016). Additionally, recent research emphasises the growing significance of emotional intelligence

for fostering academic motivation and emotional adjustment in secondary school students (B & R, 2023; Sharma, 2021). Therefore, researcher decided to enhance emotional intelligence by developing a strategy and check the effectiveness of the developed strategy.

The research title reflects importance of addressing emotional intelligence of secondary school students, focusing on the strategy that may impact students' overall development and well-being. Emotional intelligence, in general, enhances a person's social effectiveness.

The quality of social interactions increases with emotional intelligence (Mayer et al., 2004). Most importantly, a high EI person is able to recognise emotions, utilise them in thought, comprehend their significance, and control emotions better than others; for such a person, solving emotional problems involves less cognitive effort (Mayer et al., 2004). Particularly, if the person scores higher on the EI's understanding emotions section, the person tends to have slightly higher verbal, social, and other intelligence. The person is typically more approachable and open than other people (Goleman, 1995). The high EI person is more inclined towards jobs that require social interaction, such as teaching and counselling, rather than jobs requiring clerical or administrative work. In comparison to others, the high EI person is less likely to engage in undesirable behaviours and tends to avoid harmful and self-destructive conduct such as smoking, binge drinking, drug abuse, or violent outbursts with others (Mayer et al., 2004). Additionally, these individuals are more likely to have favourable social connections and might be better at articulating motivational missions, goals, and aims (Mayer et al., 2004). Furthermore, emotional intelligence is considered an antecedent to resilience and contributes significantly to an individual's ability to cope with challenges and adapt effectively in different life situations (Magnano et al., 2016). Such emotional and social competencies become especially crucial during adolescence, a developmental period characterised by identity formation, emotional fluctuations, and psychosocial challenges (Erikson, 1950).

The fifth stage of the psychologist Erik Erikson's theory of psychosocial development is 'identity versus role confusion'. Between the ages of around 12 to 18, adolescents go through this stage during adolescence. Adolescents explore their independence and solidify their sense of self throughout this phase (Erik Erikson, 1950). According to another study, a neurobiological model of adolescence suggests that increased emotionality at this time may be caused by an imbalance in the development of subcortical limbic (such as the amygdala) compared to prefrontal cortical regions (Casey, 2010).

As a result, this age group is the most impressionable since they are developing their unique personalities, sensing who they are, and learning how to regulate their emotions. Studying the emotional intelligence of secondary school students is necessary because it directly contributes to their personal growth, academic success, mental health, and ability to navigate the difficulties of the modern world. It has far-reaching implications for both individual well-being and society as a whole. Developing emotional intelligence of secondary school students is crucial for their personal, academic, and social growth. It equips them with essential skills that not only benefit them during their school years but also lay the foundation for success and well-being throughout their lives.

To develop strategy to enhance emotional intelligence is necessary because it provides a structured, consistent, and supportive approach to developing these critical life skills in students, with benefits that extend beyond the classroom into their future personal and professional lives. For that reason, researcher consider it as a core area of development of any individual. For the betterment of education and the societal reforms researcher wanted to develop a strategy to help every individual in enhancing their emotional intelligence. Many renowned psychologists have presented diverse perspectives on emotions, providing valuable insights that can guide efforts to enhance emotional intelligence.

On the basis of Candace pert theory researcher has developed a strategy to enhance emotional intelligence of the secondary school students. This strategy is comprising of the following 5 steps

1. Providing stimuli
2. Recall past experiences
3. Peptide release mechanism
4. Influencing effect one on another (Head influencing body or body influencing head)
5. Outcome

The fortnight strategy focused on enhancing emotional intelligence of students through a structured series of interactive, reflective, and experiential learning activities conducted over fifteen days. Each day's activity was planned to enhance specific emotional intelligence components such as self-awareness, empathy, cooperation, communication, leadership, decision-making, adaptability, conflict management, and achievement drive. Techniques like role play, storytelling, empathy mapping, collaborative tasks, autobiography writing, and group discussions provided opportunities for students to express emotions, understand others' feelings, and develop interpersonal skills in real-life situations. Reflective questions at the end

of each activity encouraged introspection, emotional understanding, and meaningful learning experiences, making the strategy learner-centred, participatory, and experience-oriented.

Objective

To develop a strategy to enhance emotional intelligence among secondary school students.

To check the effectiveness of a developed strategy to enhance emotional intelligence among secondary school students.

To check emotional intelligence among secondary school students with respect to gender.

Hypothesis

H₀₁: There will be no significant difference between the sum of ranks of the pre-test and post-test on emotional intelligence in the experimental group.

H₀₂: There will be no significant difference between the sum of ranks of the pre-test and post-test on emotional intelligence in the control group.

H₀₃: There will be no significant difference in the sum of ranks of gain scores on emotional intelligence between the control group and the experimental group.

H₀₄: There will be no significant difference in the sum of ranks of gain scores on emotional intelligence between the Male and Female of experimental group.

Variables

Independent variable: Strategy

Dependent variable: Emotional intelligence

Control variable: Secondary school students

Operational definition

Emotional Intelligence: In this study, emotional intelligence is measured through the Emotional Intelligence Inventory. The scores obtained by the students on self-developed Emotional Intelligence inventory are considered as their emotional intelligence.

Effectiveness: The strategy will be considered effective if the post-test scores are found significantly higher than the pre-test scores in the experimental group, and if the mean gain scores of the experimental group are significantly higher than the control group

Delimitation

The study was delimited to 9th standard students of English medium school of Modasa city in academic year 2024-2025. Research Methodology

Method of Research

The present study is experimental research method because it involves manipulating an independent variable (Strategy) and measuring its effect on a dependent variable (Emotional

intelligence of secondary school students). In the experimental research method, the quasi-experimental research design is used by the researcher.

Table 1

Non-Equivalent Two Group Pre-test Post-test design

	Pre-test	Treatment	Post-test
A	O1	X	O2
B	O3	-	O4

Where,

O1 and O3: Administered pretest

O2 and O4: Administered post test

X: exposure of a group to an experimental (treatment) variable

-: No Treatment

(Best, 2009)

Population of the study

The population of the present study comprise 9th standard students of English medium school which are located in Modasa city which falls under CBSE board. The schools which are following syllabus prescribed by NCERT.

Sample and Sampling Technique

In the present study, the sample consisted of ninth standard students of English medium schools following the NCERT-prescribed syllabus in Modasa city. There were only two such schools in the city. Among them, school students with lower scores in the pre-test was considered as the experimental group, while the other school students was considered as the control group.

Research Tool

The Emotional Intelligence Inventory for Secondary School Students was developed by the researcher after an extensive review of related literature and emotional intelligence theories. The researcher selected the 5 components of emotional intelligence proposed by Daniel Goleman as the foundation for tool construction. The Emotional Intelligence Inventory was prepared in the form of situational judgment items in which none of the response options were completely right or wrong. Different emotional intelligence levels were represented by each option. A four-point rating system was used to rate the responses; a

score of four indicated a higher degree of emotional intelligence, while a score of one indicated a lesser one.

The tool was developed to measure five major components of emotional intelligence, namely emotional self-awareness, managing emotions, harnessing emotions productively, empathy, and handling relationships.

In the initial draft, a total of 42 items were prepared by the researcher. Out of these, 31 items were developed based on specific sub-components of emotional intelligence, while 11 items were prepared as age-specific items suitable for secondary school students. Among the age-specific items, the last item of the Emotional Intelligence Inventory was prepared separately for both the genders according to contextual suitability.

The preliminary draft of the Emotional Intelligence Inventory was submitted to experts in the field of education and psychology for expert opinion. The experts provided several suggestions regarding demographic categorization, removal of repetitive statements, reduction of assumptions in item wording, avoidance of double negative statements, improvement in language clarity, and refinement of the scoring process. Necessary modifications were incorporated according to the suggestions given by the experts.

The updated tool was used for pilot testing after incorporating expert recommendations. 31 pupils from Modasa City's English-medium schools participated in the pilot study. The pilot study's objectives were to do item analysis and evaluate the items' effectiveness.

Individual item scores were correlated with the overall test score in order to perform item discrimination analysis. According to Donald Ary et al. (2014), an item should possess a minimum item-total correlation of 0.25 in order to be considered useful for the inventory. The analysis revealed that items 6, 29, 34, 36, and 40 had low or negative item-total correlations; therefore, these items were rejected from the inventory. Ultimately, the final version of the Emotional Intelligence Inventory kept 35 items.

The reliability of the Emotional Intelligence Inventory was determined using Cronbach's alpha and split-half reliability methods. Reliability refers to the consistency and stability of a measuring instrument. The Cronbach's alpha coefficient of the Emotional Intelligence Inventory was found to be 0.854, which indicates high internal consistency among the items. According to DeVellis (2017) and Nunnally and Bernstein (1994), reliability values between 0.80 and 0.89 are considered highly reliable.

Table 2***Reliability Measure of emotional intelligence inventory***

Reliability Measure	Value
Cronbach's Alpha	0.854

Expert opinion was used in this study to establish the face validity of the Emotional Intelligence Inventory. The experts reviewed the inventory and confirmed that the items appropriately represented the construct of emotional intelligence among secondary school students. Therefore, the inventory was considered suitable and valid for the present study.

The final draft of the inventory consisted of 35 items. Out of these, 29 items were based on the specific sub-components of emotional intelligence, while 6 items were age-specific in nature. Among the age-specific items, the 35th item was prepared separately for both the gender according to their contextual experiences and suitability.

Data collection procedure

The researcher personally visited the school to gather data, got the principal's approval, and explained the study's goals. Additionally, the researcher gave information about the study's purpose, methods, potential risks, and advantages.

The researcher administered a pre-test to both groups (experimental and control) to assess the existing level of emotional intelligence through a self-developed inventory. The experimental group received a strategy as an intervention for fifteen days.

This intervention included various activities based on the components of emotional intelligence. After the intervention, the researcher administered a post-test to both groups to measure the impact of the strategy on the emotional intelligence of the experimental group.

The post-test was the same as the pre-test. Throughout all the activities, the researcher incorporated reflective inquiries on a daily basis, as outlined in the study's framework. Additionally, a diary was used as a data collection tool. Throughout the study, the researcher made sure that ethical standards were upheld, respecting the participants' rights and welfare while preserving their anonymity and confidentiality.

Data Analysis Technique

The researcher used the Mann Whitney U test to compare the pre-test and post-test score of the two groups of students.

Testing of Hypothesis

Objective: To check the effectiveness of a developed strategy to enhance emotional intelligence among secondary school students.

H01: There will be no significant difference between sum of rank of pre-test and post-test on emotional intelligence of experimental group.

Table 3

Mann Whitney U Statistics of Pre-test and Post-test scores for Experimental Group

Mann Whitney U Statistics						Decision
Time Phase	N	Mean Rank	Sum of Ranks	Statistics	p	Null
Pre-test	21	17.71	372	139	0.041	hypothesis rejected
Post-test	21	25.29	531			

Table 3 shows that the mean rank of the experimental group increased from 17.71 in the pre-test to 25.29 in the post-test. The Mann–Whitney U statistic was found to be 139, with a p-value of 0.041. Since the obtained p-value is less than 0.05, the null hypothesis is rejected. Therefore, it can be concluded that a significant difference exists between the pre-test and post-test scores of the experimental group. The higher mean rank in the post-test indicates an improvement in the emotional intelligence scores of the students following the intervention.

H02: There will be no significant difference between sum of rank of pre-test and post-test on emotional intelligence of Control group.

Table 4

Mann Whitney U Statistics of Pre-test and Post-test scores for Control Group

Mann Whitney U Statistics						Decision
Time Phase	N	Mean Rank	Sum of Ranks	Statistics	p	Null
Pre-test	32	31.09	995	471	0.582	hypothesis is not rejected
Post-test	32	33.91	1085			

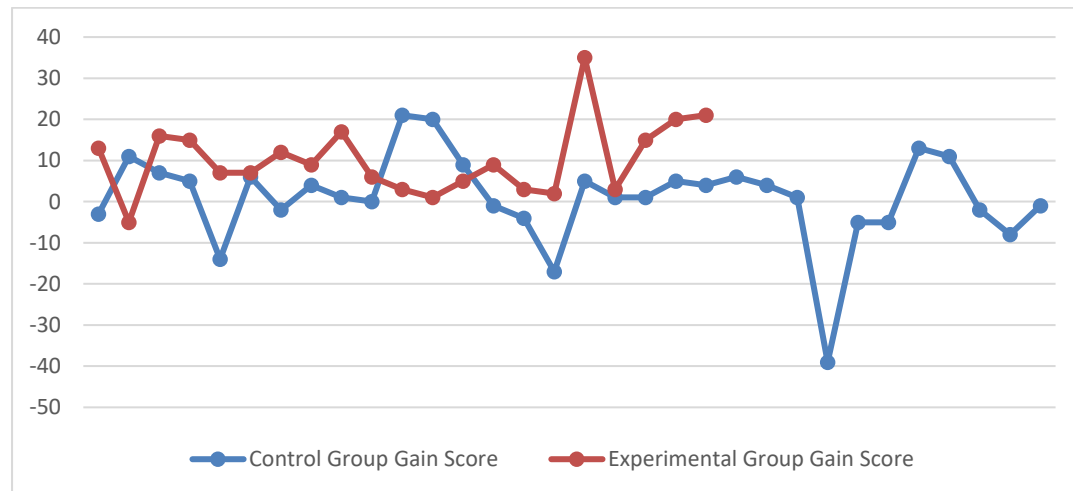
Table 4 shows that the mean rank of the control group increased slightly from 31.09 in the pre-test to 33.91 in the post-test. The Mann–Whitney U statistic was found to be 471, with a p-value of 0.582. Since the obtained p-value is greater than 0.05, the null hypothesis is not rejected. Therefore, it can be concluded that no significant difference exists between the pre-test and post-test scores of the control group. Although the mean rank in the post-test is

slightly higher than that in the pre-test, the difference is not statistically significant, indicating that there was no significant improvement in the emotional intelligence scores of the students.

H₀₃: There will be no significant difference in the sum of ranks of gain scores on emotional intelligence between the control group and the experimental group.

Figure 1

Comparison of Gain Scores between Control and Experimental Group



The above Figure 1 shows graphical representation of the Gain score of control and experimental group students in emotional intelligence inventory. The graph reveals that the Gain score of experimental group students is better than the Gain score of control group students.

Table 5

Mean Gain Score of Control Group and Experimental Group

Group	N	Mean Gain Score
Control Group	32	1.06
Experimental Group	21	10.19

Table 6

Group Statistics of Mean Gain Scores for Control and Experimental Groups

Mann Whitney U Statistics						Decision
Group	N	Mean Rank	Sum of Ranks	Statistics	p	Null
Control Group	32	21.72	695	162	0.002	hypothesis is rejected
Experimental Group	21	35.05	736			

According to the Table 18, the mean rank for the gain score of control group is 21.72, while for the gain score of experimental group, it is 35.05. It can be inferred that the p value 0.002 for the Mean Gain Scores for Control and Experimental Groups, with a Mann-Whitney U value of 162. The obtained p-value of 0.002 is below the significance threshold of 0.05, therefore null hypothesis is rejected. This indicates a significant difference between the control group and the experimental group. Given that the mean rank of the mean gain scores of experimental groups is higher than that of the mean gain scores of the control group, it can be concluded that a significant enhancement in emotional intelligence was observed in experimental group.

Figure 2

Box Plot of Gain Scores for Control and Experimental Groups

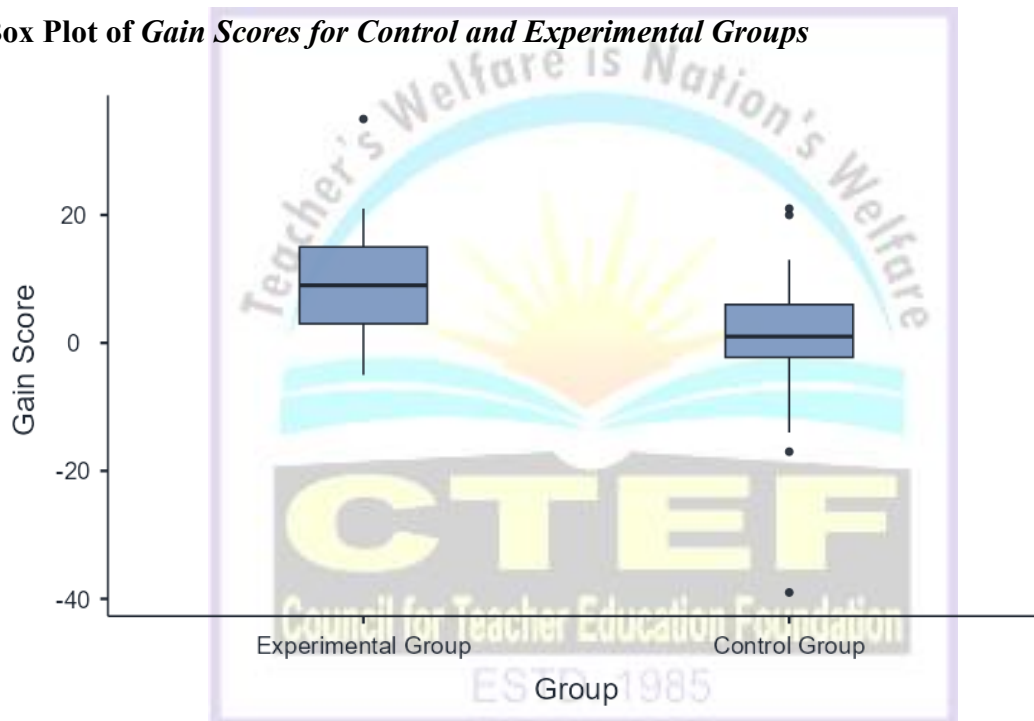


Figure 2 presents the box plot comparison of gain scores of the control group and the experimental group on emotional intelligence. The figure indicates that the experimental group obtained comparatively higher gain scores than the control group after the implementation of the developed intervention strategy.

H₀₄: There will be no significant difference in the sum of ranks of gain scores on emotional intelligence between the Male and Female of experimental group.

Figure 3

Comparison of Gain Scores between Male and Female of Experimental Group

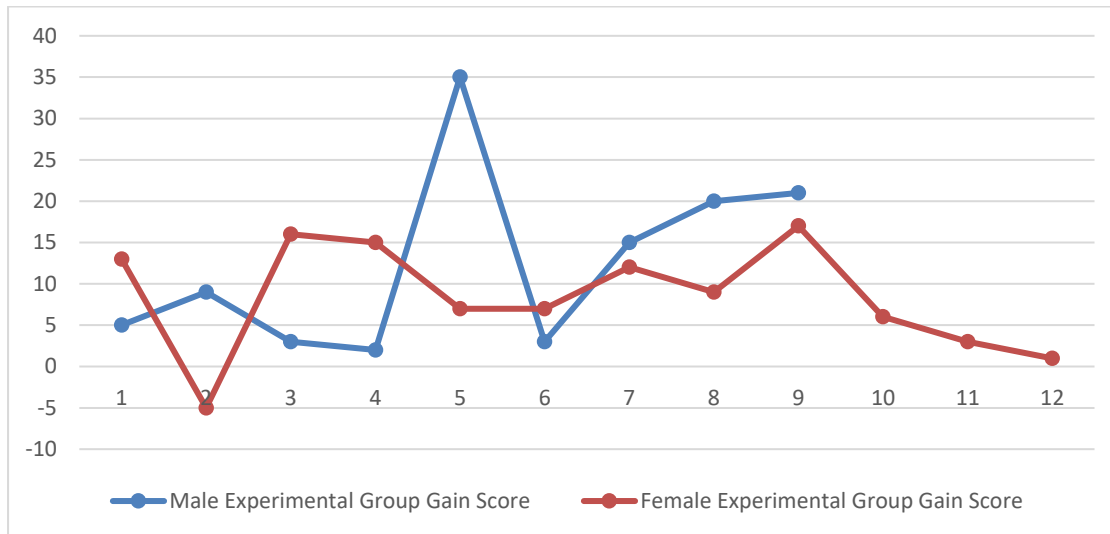


Figure 3 illustrates the comparison of gain scores between male and female students of the experimental group. The figure shows that both male and female students demonstrated improvement in emotional intelligence after the intervention. Although the mean gain score of male students was slightly higher than that of female students, both groups demonstrated improvement following the intervention. The graphical representation indicates that the intervention was effective for both genders, with male students showing comparatively greater improvement than their counterparts.

Table 7

Mean Gain Score of Male and Female of Experimental Group

Descriptives

	Gender	N	Mean
Gain Score Experimental Group	Female	12	8.42
	Male	9	12.56

The table 7 presents the mean gain scores of male and female students in the experimental group after the implementation of the developed intervention strategy for enhancing emotional intelligence. The experimental group consisted of 12 female students and 9 male students. The mean gain score of female students was 8.42, whereas the mean gain score of male students was 12.56.

Table 8***Group Statistics of Mean Gain Scores for Male and Female of Experimental Group***

Group	N	Mean Rank	Sum of Ranks	Statistics	P value	Decision
Male	9	11.89	107	62.0	0.593	Null Hypothesis not rejected
Female	12	10.33	124			

According to the table 8, the mean rank for the gain scores of male students is 11.89, while the mean rank for the gain scores of female students is 10.33. The obtained Mann–Whitney U value is 62.0 with a p-value of 0.593. Since the obtained p-value of 0.593 is greater than the significance level of 0.05, the null hypothesis is not rejected. This indicates that there is no significant difference between male and female students in the gain scores of emotional intelligence in the experimental group.

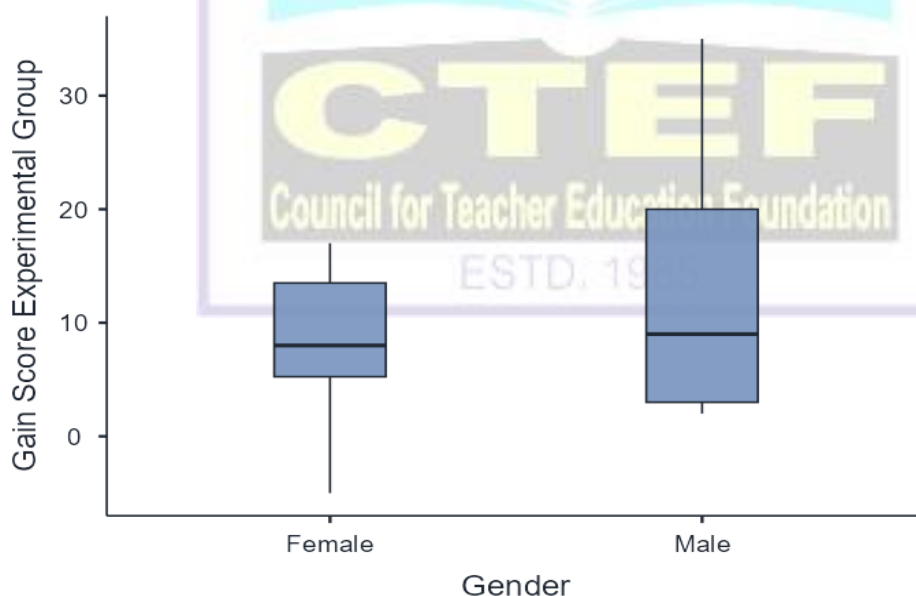
Figure 4***Box Plot of Gain Score for Male and Female of Experimental Group***

Figure
4 presents the
box plot of

gain scores for male and female students in the experimental group. The figure demonstrates that both groups experienced improvement in emotional intelligence after the intervention. The distribution of scores among male students appears slightly higher than female students; however, there is considerable overlap between the two groups. This overlap indicates that

the variation in gain scores between male and female students is not substantial. The box plot visually confirms the statistical findings that no significant gender difference exists in the enhancement of emotional intelligence among students in the experimental group.

Findings of Research

Table 10

Findings of Research

Objective	Hypothesis	Findings
To check the effectiveness of a developed strategy to enhance emotional intelligence among secondary school students.	H ₀₁ : There will be no significant difference between the sum of ranks of the pre-test and post-test on emotional intelligence in the experimental group.	A significant enhancement in emotional intelligence was observed in experimental group after the intervention.
	H ₀₂ : There will be no significant difference between the sum of ranks of the pre-test and post-test on emotional intelligence in the control group.	No significant enhancement in emotional intelligence was found in the control group.
	H ₀₃ : There will be no significant difference in the sum of ranks of gain scores on emotional intelligence between the control group and the experimental group.	The developed strategy was found effective in enhancing emotional intelligence among secondary school students.
To check emotional intelligence among secondary school students with respect to gender.	H ₀₄ : There will be no significant difference in the sum of ranks of gain scores on emotional intelligence between the male and female students of the experimental	No significant difference was found with respect to gender in the enhancement of emotional intelligence, indicating that the intervention was equally effective for both male and

group.

female students.

Conclusion

The present study aimed to evaluate the effectiveness of a strategy to enhance the emotional intelligence of secondary school students, employing a quasi-experimental research design. By utilizing nonparametric data analysis, the study provided significant insights into the impact of this intervention. The findings clearly indicate that the implemented strategy is highly effective in fostering emotional intelligence among students, equipping them with essential skills for emotional regulation, self-awareness, and social interactions. Beyond the immediate classroom setting, the study underscores the broader implications of integrating emotional intelligence strategies into school education. Given the increasing recognition of social-emotional learning as a critical component of student development, this research highlights the necessity of structured interventions to support students' emotional and social growth. By nurturing emotional intelligence, schools can help students develop resilience, empathy, and interpersonal skills that extend far beyond academic achievements. The study's findings also emphasize the readiness of such strategies for pedagogical implementation. Emotional intelligence is not just an abstract concept but a crucial competency that prepares students to navigate the difficulties of the modern world with confidence and adaptability. By incorporating structured emotional intelligence programs into educational curricula, educators can empower students with the skills necessary for personal and professional success. This research reinforces the transformative potential of emotional intelligence education. Implementing such strategies in schools can significantly contribute to students' holistic development, enabling them to manage emotions effectively, build meaningful relationships, and thrive in an ever-evolving society.

Reference

- Ary, D., Jacobs, L. C., Sorensen, C. K., & Walker, D. A. (2014). *Introduction to research in education* (9th ed.). Cengage Learning.
- Best, J. W., & Kahn, J. V. (2009). *Research in education*. PHI Learning Private Limited.
- Casey, B. J., Jones, R. M., Levita, L., Libby, V., Pattwell, S. S., Ruberry, E. J., Soliman, F., & Somerville, L. H. (2010). The storm and stress of adolescence: Insights from human imaging and mouse genetics. *Developmental Psychobiology*, 52(3), 225–235.
<https://doi.org/10.1002/dev.20447>

- DeVellis, R. F. (2017). *Scale development: Theory and applications* (4th ed.). Sage Publications.
- Erikson, E. H. (1950). *Childhood and society*. W. W. Norton & Company.
- Ghorai, B. C. (2023). Emotional intelligence and achievement motivation: An investigation on higher secondary school students in Paschim Medinipur District. *International Journal of Advanced Research*. <https://doi.org/10.21474/IJAR01/17818>
- Goleman, D. (1995). *Emotional intelligence: Why it can matter more than IQ*. Bantam Books.
- Magnano, P., Craparo, G., & Paolillo, A. (2016). Resilience and emotional intelligence: Which role in achievement motivation. *International Journal of Psychological Research*, 9(1), 9–20. <https://doi.org/10.21500/20112084.2096>
- Mangal, S. K., & Mangal, S. (2015). *Emotional intelligence: Managing emotions to win in life*. PHI Learning Pvt. Ltd.
- Mayer, J. D., Salovey, P., & Caruso, D. R. (2004). Emotional intelligence: Theory, findings, and implications. *Psychological Inquiry*, 15(3), 197–215.
- Năstăsă, L. E., Zănfirescu, Ș. A., Iliescu, D., & Farcaș, A. D. (2021). Improving emotional intelligence in adolescents: An experiential learning approach. *Current Psychology*, 42(11), 9119–9133. <https://doi.org/10.1007/s12144-021-02132-5>
- Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (3rd ed.). McGraw-Hill.
- Sharma, M. C. (2021). Emotional intelligence of secondary school students in relation to their gender. *International Journal of Creative Research Thoughts*, 9(12).