EXAMINING THE ROLE OF SOCIO-EMOTIONAL INTELLIGENCE IN ENHANCING PEER COLLABORATION AMONG SECONDARY SCHOOL STUDENTS.

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Abstract
This study investigates the role of socio-emotional intelligence (SEI) in promoting peer collaboration among secondary school students in Punjab, Pakistan. Using a quantitative, cross-sectional design, data were collected from 605 students through self-developed SEI and peer collaboration scales. Findings revealed a significant, moderate positive relationship between SEI and peer collaboration (r = .405, p < .001). Regression analysis indicated SEI accounted for 16.4% of the variance in peer collaboration (R^2 = .164). Differences in SEI and collaboration were significant across age and locality but not gender. The study highlights the importance of fostering SEI to enhance collaborative learning and recommends incorporating SEI-focused interventions in secondary education.
Keywords: Socio-emotional intelligence, peer collaboration, emotional skills, secondary education, Pakistan.

Introduction

Socio-emotional intelligence (SEI) plays a vital role in shaping students' interpersonal skills and collaborative behavior in educational settings. Defined as the ability to recognize, understand, and manage emotions in oneself and others (Salovey & Mayer, 1990; Goleman, 2021), SEI fosters empathy, communication, and relationship-building—skills essential for collaborative learning. Goleman (2021) emphasizes SEI's core dimensions—self-awareness, self-regulation, motivation, empathy, and social skills—as critical in navigating social interactions and adapting to group dynamics.

Growing evidence suggests that SEI enhances students' resilience, academic engagement, and peer interactions (Gilar-Corbi et al., 2019; Gonzales, 2022). In particular, it supports peer collaboration, defined as cooperative efforts among students to achieve shared academic goals (Barkley et al., 2014). Grounded in Vygotsky's Zone of Proximal Development and Dewey's experiential learning, peer collaboration relies on emotional and social competence for effective communication and mutual accountability (Kuusisaari, 2014; Topping, 2017)

Although the relationship between SEI and academic outcomes has been studied globally, limited empirical research exists in Pakistan, especially at the secondary school level (Suleman et al., 2020). Given the country's unique socio-educational context, exploring how SEI influences peer collaboration may offer insights for policy and practice. This study aims to fill that gap by examining the impact of socio-emotional intelligence on peer collaboration among Pakistani secondary school students.

Problem Statement

Despite extensive international research on emotional intelligence in education, little empirical attention has been given to its direct role in peer collaboration among secondary school students

in Pakistan. While SEI is widely recognized as essential for personal and academic development (Goleman, 2021), its specific impact on collaborative learning in Pakistani classrooms remains underexplored. This study addresses this gap by investigating how SEI influences peer collaboration, offering practical implications for educators and curriculum developers.

Objectives of the Study

1. Assess the level of SEI among secondary school students.
2. Measure the extent of peer collaboration.
3. Examine the impact of SEI on peer collaboration.
4. Analyze the relationship between SEI dimensions (self-awareness, self-regulation, motivation, empathy, social skills) and peer collaboration.
5. Identify differences in SEI and peer collaboration based on demographic factors such as gender, age, and locality.

Hypotheses of the Study

The study was guided by the following hypotheses:

H_{01}: Socio-emotional intelligence has no significant effect on peer collaboration among secondary school students.

H_{02}: There is no significant gender-based difference in SEI.

H_{03}: There is no significant age-based difference in SEI.

H_{04}: There is no significant locality-based difference in SEI.

H_{05}: There is no significant gender-based difference in peer collaboration.

H_{06}: There is no significant age-based difference in peer collaboration.

H_{07}: There is no significant locality-based difference in peer collaboration.

Research Methodology and Data Analysis:

A quantitative, descriptive, and cross-sectional survey design was employed to examine the relationship between SEI and peer collaboration. The positivist paradigm guided the study, emphasizing objective measurement and statistical analysis.

The target population included secondary school students in Punjab; the accessible population comprised 605 students (333 males, 272 females) from public schools in Sahiwal, Okara, and Pakpattan, selected using convenience sampling.

Data were collected through a structured, self-developed questionnaire comprising SEI and peer collaboration scales. SEI dimensions included self-awareness, self-regulation, motivation, empathy, and social skills; peer collaboration dimensions included communication, teamwork, trust and respect, conflict resolution, and engagement/motivation. Reliability was confirmed through pilot testing (Cronbach's α = .937).

Data analysis was performed using SPSS 20.0, applying descriptive statistics, Pearson correlation, linear regression, t-tests, and ANOVA.

Results Descriptive analysis revealed high mean scores for SEI (M = 4.57, SD = 0.44) and peer collaboration (M = 4.36, SD = 0.62). Among SEI dimensions, empathy (M = 4.75) and motivation (M = 4.64) scored highest. Among collaboration factors, communication (M = 4.39) and teamwork (M = 4.37) were most prominent.

Table 1
Descriptive Statistics for Socio-Emotional Intelligence (SEI)

SEI Dimension	N	Mean	SD
Self-awareness	605	4.43	0.63
Self-regulation	605	4.52	0.56
Motivation	605	4.64	0.55
Empathy	605	4.75	0.53
Social Skills	605	4.21	0.51
Overall SEI	605	4.57	0.44

Table 2
Descriptive Statistics for Peer Collaboration

Collaboration Factor	N	Mean	SD
Communication	605	4.39	0.63
Teamwork	605	4.37	0.63
Trust and Respect	605	4.36	0.64
Conflict Resolution	605	4.34	0.64
Engagement & Motivation	605	4.37	0.64
Overall Collaboration	605	4.36	0.62

Table 3
Pearson Correlation between SEI and Peer Collaboration

Variable	N	r	Sig. (2-tailed)
SEI & Peer Collaboration	605	.405**	.000

Note: $p < .01$.

Table 4
Linear Regression of SEI on Peer Collaboration

Predictor Variable	β	R²	F	p-value
SEI	.605	.164	79.03	.000

A significant positive correlation was found between SEI and peer collaboration ($r = .405$, $p < .001$). Linear regression showed SEI significantly predicted peer collaboration ($β = .605$, $R^2 = .164$, $F = 79.03$, $p < .001$), explaining 16.4% of the variance.

Group comparisons revealed no significant gender-based differences in SEI or collaboration ($p > .05$), but significant differences by age and locality ($p < .05$), favoring older and urban students.

Discussion The findings demonstrate that socio-emotional intelligence is a meaningful predictor of students' ability to collaborate with peers. The strong association between SEI components such as empathy and motivation with collaborative dimensions like communication and teamwork highlights the importance of emotional competence in group learning settings. These results

reinforce the theoretical foundations of social constructivism and support the implementation of SEI-enhancing practices in the classroom.

The absence of gender differences contrasts with some previous research but suggests equitable emotional development across male and female students in this context. However, the influence of age and locality calls for targeted interventions in rural areas and younger age groups, where developmental or contextual limitations may affect emotional growth.

Conclusion This study concludes that SEI significantly influences peer collaboration in secondary school settings. Students with higher SEI exhibit better communication, teamwork, and conflict resolution skills, enhancing group-based academic engagement. These insights underline the necessity of integrating SEI training into school curricula.

Recommendations
1. Embed socio-emotional learning (SEL) programs within secondary school curricula.
2. Provide teacher training focused on fostering emotionally supportive classrooms.
3. Design targeted interventions for rural and younger students to address gaps in SEI.
4. Promote collaborative activities that naturally build SEI, such as peer mentoring and cooperative learning.
5. Encourage further research exploring mediating factors and longitudinal effects of SEI on educational outcomes.

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