

# INTERSECTIONAL EFFECTS OF GENDER AND PEDAGOGY SUBJECT ON EMOTIONAL INTELLIGENCE LEVEL OF PRE-SERVICE TEACHERS

Nisha Prajapati <sup>1</sup>✉ , Mayur Pujari <sup>2</sup>✉ , Akhilesh Mishra <sup>3</sup>✉ , Kiran Ghosh <sup>4</sup>✉ , Sanjay Sarkar <sup>5</sup>✉ 

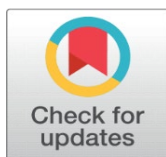
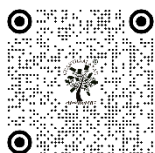
<sup>1</sup> Assistant Professor, Department of Education, Central University of Karnataka, Karnataka, Kalaburagi, India

<sup>2</sup> Assistant Professor, Department of Education, Central University of Karnataka, Karnataka, Kalaburagi, India

<sup>3</sup> Assistant Professor, Department of Education, Central University of Karnataka, Karnataka, Kalaburagi, India

<sup>4</sup> Research Scholar, Department of Education, Central University of Karnataka, Karnataka, Kalaburagi, India

<sup>5</sup> Research Scholar, Department of Education, Central University of Karnataka, Karnataka, Kalaburagi, India



## ABSTRACT

This research study investigates Emotional Intelligence (EI) level of pre-service teachers by examining the intersectional effects of gender and pedagogy subjects. A sample of 152 pre-service teachers (Male-40 & Female-112) were selected through convenient sampling technique. Data was collected through the standardized Emotional Intelligence self-assessment questionnaire developed by Daniel Goleman (1995). Independent variables namely gender and pedagogical streams were considered for data analysis. Specific objectives formulated were: To compare the influence of gender on the emotional intelligence levels among pre-service teachers; To analyze the effect of pedagogical subject specialization on the emotional intelligence levels of pre-service teachers; To investigate the intersectional effect of gender and pedagogical subject specialization on the emotional intelligence level of pre-service teachers. Findings of the study reveals that teacher training programs need to give importance to integrating EI training into pedagogical practices. Also, highlighted policy implications and practices, with a focus on enhancing future teacher's emotional readiness to meet the demand of diverse classrooms. A quantitative approach was adopted to carry out the study. Further some more exploration is required in this area to build the strong case to integrate EI in teacher education programmes.

**Keywords:** Emotional Intelligence, Pre-Service Teachers, Pedagogical Subjects

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**Corresponding Author**

Mayur Pujari, [mayurpujari@cuk.ac.in](mailto:mayurpujari@cuk.ac.in)

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## 1. INTRODUCTION

Profession of teaching in the modern educational environment has gone beyond the conventional knowledge dissemination process that involves a sense of urgency in the form of obligating the overall growth of learners, which includes the physical, mental, emotional, and social realms (Extremera and Fernandez-Berrocal, 2004; Brackett et al., 2010). In order to effectively perform this multipolar role, teachers need to possess an exceptional level of Emotional Intelligence (EI), which has generally been defined as the ability to feel, understand, manage, and utilize emotions in both

the teacher and the students (Mayer and Salovey, 1997). There is also a significant body of research highlighting the significant benefits of teacher EI, which has been associated with better classroom management, adaptive pedagogical practices, more positive student-teacher relationships, and reduced likelihood of professional burnout (Habeb and Garma, 2024; Chan, 2006; Valente and Lourenco, 2020). In this regard, researchers are also rushing to argue in favour of the factual integration of EI and Social-Emotional Learning (SEL) training into teacher-preparation programs to instil these prerequisite skills in pre-service teachers (Ozdemir Cihan and Dilekmen, 2024; Aponte et al., 2025).

Although there is general agreement on the prominence of EI, research on the development of EI in pre-service teachers reveals complex, sometimes opposing trends, especially when compared to demographic and contextual factors. A stringent analysis of the modern-day literature reveals two salient, but under-researched intersections. To begin with, the results related to gender differences in EI are rather inadequate; on one hand, some studies indicate that females outperform male in certain areas of EI including empathy and social cognizance (Chen et al., 2025; Adamakis and Rocliffe, 2024), on the other hand, researchers do not find a statistically significant gender effect, and observed differences are explained by distinctive factors such as personality, self-efficacy, or stress instabilities (Mintah et al., 2020; Atik et al., 2024). Second, the identified pedagogical field or specialization of pre-service teachers seems to be a possible moderator; it was shown that cohorts in the liberal sciences or other areas, like music, might have different EI profiles or developmental patterns than their peers in the sciences or physical education (Chen et al., 2025; Jiang and Tong, 2025; Bustamante-Mora et al., 2025). The intersectional influence of gender and pedagogical subjects on EI levels, however, remains largely unexplored. The majority of empirical studies consider these variables as independent or covariates and thus do not acknowledge the possibility of how the interaction of these two variables can distinctively shape the affective capabilities of emerging teachers (Zhao et al., 2025). Such a gap is consequential; an intersectional perspective could be used to shape more context-sensitive EI interventions in teacher education initiatives.

In turn, the present research aims to investigate the intersectional role of gender and pedagogical subjects on pre-service teachers' emotional intelligence. By collecting responses from pre-service teachers and presented the findings which can be utilized for further research in this area and adopted for developing the teacher education programme.

## 1.1. NEED AND IMPORTANCE OF THE STUDY

Emotional intelligence (EI) is acknowledged as a fundamental professional skill in modern teacher education since it is viewed as a key element of successful pedagogy, classroom organization, and interaction between teachers and students (Goleman, 1998; Habeb and Garma, 2024; Quansah et al., 2025). Nevertheless, although there is general consensus about the relevance of EI, the literature has indicated a crucial gap in the explanation of the development of EI amid pre-service teachers when the demographic and disciplinary factors are addressed in combination. The research that has been carried out previously is mostly univariate; their results are piecemeal and tend to be incongruent. The outcomes of gender-based research are mixed reports of greater empathy and emotional awareness in female pre-service teachers (Mayer and Salovey, 1997; Chen et al., 2025; Adamakis and Rocliffe, 2024) and no significant differences at all, especially in non-Western settings (Mintah et al., 2020). At the same time, the role of disciplinary specialization has proven to be an influential but understudied factor, and it has been proposed that different students have different EI profiles depending on the subject of interest: liberal arts, science, music, and physical education (Brackett and Katulak, 2006; Jiang and Tong, 2025). More importantly, the literature does not often investigate the interaction between gendered subject choice and disciplinary socialization to determine EI, which is a significant gap in theoretical and empirical understanding.

It is theoretically and practically important to fill this gap using an intersectional perspective. In theory, the combination of gender and pedagogy subject will advance a more diversified methodological and conceptual perspective to the area of EI development in teacher education in response to the state of the calls of increased methodological and conceptual diversification of the area (Turner et al., 2020; Zhao et al., 2025). In practice, determining the effects of interaction between gender and subject specialization can be used to guide the development of more reasonable and successful teacher-preparation programs. In case the levels of EI and developmental patterns are not the same in these intersections, even homogenous SEL interventions, which are effective at macro-levels (Ozdemir Cihan and Dilekmen, 2024), might become inadequate or unjust. The results of this research can consequently inform the creation of context-based, targeted treatments that can meet the unique emotional and pedagogical requirements of various subsets of pre-service teachers (Bustamante-Mora et al., 2025). Finally, it is essential to define these intersectional processes to ensure

the preparation of emotionally intelligent, resilient, and culturally responsive teachers who can provide inclusive and supportive learning conditions.

## 1.2. OBJECTIVES OF THE STUDY

- To compare the influence of gender on the emotional intelligence levels among pre-service teachers.
- To analyze the effect of pedagogical subject specialization on the emotional intelligence levels of pre-service teachers.
- To investigate the intersectional effect of gender and pedagogical subject specialization on the emotional intelligence level of pre-service teachers.

## 2. REVIEW OF LITERATURE

The review of existing literature on emotional intelligence (EI) on pre-service teachers reveals a substantial gap in intersectional analysis of gender and pedagogy subjects. Many studies acknowledge the importance of EI in teacher preparation (Habeeb & Garma, 2024; Quansah et al., 2025), and many examine either gender differences (e.g., Chen et al., 2025; Adamakis & Rocliffe, 2024) or subject-specific variations (e.g., Jiang & Tong, 2025; Bustamante-Mora et al., 2025) independently; but a few research is there that systematically investigates their interaction.

The empirical studies on gender differences in EI remains notably inconsistent and context-dependent. Some studies are reporting that higher EI or specific emotional competencies among female pre-service teachers (Chen et al., 2025; Adamakis & Rocliffe, 2024), while others suggest negligible or not significant effects of gender on EI (Mintah et al., 2020; Atik et al., 2024). Research trend shows that EI profiles and developmental needs may vary across disciplines — such as liberal arts versus sciences (Chen et al., 2025), music education (Jiang & Tong, 2025), physical education (Adamakis & Rocliffe, 2024), and STEM fields (Bustamante-Mora et al., 2025). However, these studies didn't explore how gendered patterns of academic choice, disciplinary specialization will produce distinct EI profiles.

Thus, the methodological approaches of the previous studies are fragmented, strongly relies on cross-sectional designs and analytic models that examine variables in isolation and overlooking possible interactional effects between/among variables (Turner & Stough, 2020; Aponte et al., 2025). Even the comprehensive longitudinal studies measuring EI development in relation to cultural beliefs (Varis et al., 2025; Varis et al., 2026) or resilience (Zhao et al., 2025) do not disaggregate their findings by the intersection of gender and specific pedagogy subject.

This study could address the existing gap in understanding how gender and pedagogy subject interact to shape the development of emotional intelligence among pre-service teachers. This gap could be addressed by an intersectional analytical framework that moves beyond univariate comparisons to examine the multiplicative and context-sensitive nature of EI. Addressing this gap is essential for developing differentiated, equitable, and effective teacher education curricula that are responsive to the diverse emotional competency needs of future educators across all disciplines.

## 3. METHODOLOGY

### 3.1. PROCEDURES

The study was conducted using a survey method. The participants of the study were pre-service teachers pursuing the fourth semester of the B.Ed. programme in the three different teacher education institutions (TEIs) of the Kalaburagi city of Karnataka state. There were a total 152 pre-service teachers (Male-40 & Female-112) selected purposefully using purposive sampling technique. The required data was collected through paper pencil test format by personally visiting the selected TEIs.

### 3.2. TOOLS

A self-assessment questionnaire — Emotional Intelligence (EI) Questionnaire by Daniel Goleman (1995) — was utilized for the purpose of data collection. The questionnaire consisted of the following five emotional competencies:

- 1) Self Awareness (SA): The ability to recognize what one is feeling, one’s habitual emotional responses to events and to recognize how one’s emotions affect their behaviour and performance. When a person is self-aware, s/he sees themselves as others see them, and have a good sense of abilities and current limitations.
- 2) Managing Emotions (ME): The ability to stay focused and think clearly even when experiencing powerful emotions. Being able to manage one’s own emotional state is essential for taking responsibility for one’s actions, and can save them from hasty decisions that they may later regret.
- 3) Motivating Others (MO): The ability to use one’s deepest emotions to move and guide towards one’s goals. This ability enables someone to take the initiative and to persevere in the face of obstacles and setbacks.
- 4) Empathy (E): The ability to sense, understand and respond to what other people are feeling. Self-awareness is essential to having empathy with others. If one is not aware of one’s own emotions, s/he will not be able to read the emotions of others.
- 5) Social Skills (SS): The ability to manage, influence and inspire emotions in others. Being able to handle emotions in relationships and being able to influence and inspire others are essential foundation skills for successful teamwork and leadership.

The Emotional Intelligence Questionnaire contained 50 statements. Each statement was to be answered on a scale of 1 to 5 intervals where 1 indicated the statement did not apply at all; 3 indicated the statement applied about half the time and 5 indicated the statement always applied to the respondent. The total score was then transferred to the calculation table and the emotional intelligence of the respondent was obtained in terms of five emotional competencies.

### 3.3. ANALYSIS

The raw score of the respondents against each of the 50 statements of the EI questionnaire was entered in the data analysis software SPSS version 29 for analysis. Descriptive as well as Inferential statistical analyses were performed to arrive at the findings. For descriptive analysis, mean and standard deviation were calculated. For inferential statistical analysis, the group differences were studied through t-test and Analysis of Variance (ANOVA). The grouping variables were Gender and two Pedagogy of School Subjects (POSS 1 and POSS 2) of the pre-service teachers.

## 4. RESULTS

### 4.1. SAMPLE SIZE

The following table contains the information about the subjects who participated in the present study according to their gender and POSS 1 & POSS 2.

**Table 1**

Table 1 Frequency and Percentage of Subjects with Respect to Variables			
Variable	Category	Frequency	Percent (%)
<b>Gender</b>	Male	40	26.3
	Female	112	73.7
	<b>Total</b>	<b>152</b>	<b>100</b>
<b>POSS 1</b>	Chemistry	4	2.6
	English	33	21.7
	Hindi	4	2.6
	Kannada	33	21.7
	Physics	34	22.4
	Physical Science	44	28.9
	<b>Total</b>	<b>152</b>	<b>100</b>
<b>POSS 2</b>	Biological Science	13	8.6
	Biology	4	2.6
	Commerce	3	2

History	24	15.8
Mathematics	66	43.4
Social Science	42	27.6
<b>Total</b>	<b>152</b>	<b>100</b>

## 4.2. NORMALITY OF THE DATASET

The normality of each item of the EI questionnaire was assessed in terms of Skewness and Kurtosis. It was found that the skewness and kurtosis values were lesser than 3 for each item, except SA2 which had skewness/kurtosis value greater than 3. Therefore, the item number SA2 was discarded from the EI questionnaire while analysing the data. Overall, it can be said that the dataset followed a normal distribution and was suitable for conduction of parametric tests for analysis.

## 4.3. RELIABILITY

Each component of the EI Questionnaire was examined for Cronbach's alpha reliability with the help of SPSS software. The following table represents the alpha values:

**Table 2**

EI Component	Cronbach's Alpha ( $\alpha$ )
Self Awareness (SA)	0.801
Managing Emotions (ME)	0.781
Motivating Others (MO)	0.752
Empathy (E)	0.764
Social Skills (SS)	0.814

Each component has Cronbach's Alpha value greater than 0.7. Therefore, it can be inferred that all the components of EI hold high reliability for the sample of the present study.

## 4.4. INDEPENDENT SAMPLES T-TEST

An independent samples t-test was conducted to compare mean scores. Although participants were selected through convenient sampling, assumptions of normality and independence were satisfied; therefore, the t-test was considered appropriate for analysis. Findings are interpreted with caution regarding generalizability.

The following table presents the results of independent samples t-tests comparing mean scores between male and female participants on five different variables: Self Awareness (SA), Managing Emotions (ME), Motivation (MO), Empathy (E), and Social Skills (SS). There were 40 male participants and 112 female participants in this study, indicating a larger female sample. The benchmark of alpha level ( $\alpha = 0.05$ ) was used to determine statistical significance.

**Table 3**

Component	Gender	N	Mean	Std. Dev.	t	p-value
SA_Avg	Male	40	3.8917	0.83052	-0.322	0.748
	Female	112	3.9375	0.7509		
ME_Avg	Male	40	3.4475	0.85184	0.115	0.908
	Female	112	3.4312	0.73289		
MO_Avg	Male	40	3.6225	0.57132	-1.058	0.292
	Female	112	3.7554	0.71645		
E_Avg	Male	40	3.8675	0.71302	0.34	0.734

	Female	112	3.8277	0.60586		
<b>SS_Avg</b>	Male	40	3.7325	0.67687	0.535	0.594
	Female	112	3.6509	0.87601		

Based on the above t-test results, all the components have p-values greater than 0.05. Therefore, there are no statistically significant differences observed between male and female participants on any of the five measured average scores: Self Awareness (SA), Managing Emotions (ME), Motivating Others (MO), Empathy (E), and Social Skills (SS). This suggests that, for this sample, gender does not appear to be a significant factor in explaining the variations in these average scores.

#### 4.5. ONE-WAY ANOVA FOR POSS 1

The following table presents the results of separate One-Way ANOVA tests for five dependent variables (SA, ME, MO, E, and SS) based on the independent variable POSS1, which has 6 subjects (df Between = 5, df Within = 146, Total df = 151, N = 152). The standard threshold for statistical significance is  $\alpha = 0.05$ . Cells highlighted in amber denote statistically significant findings.

**Table 4**

Table 4 One-Way ANOVA Results for POSS 1						
Component	Source	Sum of Squares	df	Mean Square	F	Sig.
<b>SA_Avg</b>	Between Groups	5.523	5	1.105	1.919	0.094
	Within Groups	84.027	146	0.576		
	Total	89.55	151			
<b>ME_Avg</b>	Between Groups	7.308	5	1.462	2.647	0.025*
	Within Groups	80.62	146	0.552		
	Total	87.928	151			
<b>MO_Avg</b>	Between Groups	5.957	5	1.191	2.706	0.023*
	Within Groups	64.27	146	0.44		
	Total	70.227	151			
<b>E_Avg</b>	Between Groups	2.205	5	0.441	1.102	0.362
	Within Groups	58.413	146	0.4		
	Total	60.619	151			
<b>SS_Avg</b>	Between Groups	3.888	5	0.778	1.143	0.341
	Within Groups	99.356	146	0.681		
	Total	103.244	151			

The One-Way ANOVA for POSS 1 results suggest that the independent variable POSS1 has a statistically significant effect on Managing Emotions (ME) and Motivation (MO) with p-values 0.025 and 0.023 respectively, which are less than 0.05. However, POSS1 does not have a statistically significant effect on Self-Awareness (SA), Empathy (E) and Social Skills (SS).

#### 4.6. ONE-WAY ANOVA FOR POSS 2

The following table presents the results of separate One-Way ANOVA tests for five dependent variables (SA, ME, MO, E, and SS) based on the independent variable POSS2, which also has 6 levels (df Between = 5, df Within = 146, Total df = 151, N = 152). The significance threshold is  $\alpha = 0.05$ .

**Table 5**

Table 5 One-Way ANOVA Results for POSS 2						
Component	Source	Sum of Squares	df	Mean Square	F	Sig.

<b>SA_Avg</b>	Between Groups	4.845	5	0.969	1.67	0.145
	Within Groups	84.705	146	0.58		
	Total	89.55	151			
<b>ME_Avg</b>	Between Groups	6.06	5	1.212	2.162	0.061
	Within Groups	81.868	146	0.561		
	Total	87.928	151			
<b>MO_Avg</b>	Between Groups	5.478	5	1.096	2.47	<b>0.035*</b>
	Within Groups	64.749	146	0.443		
	Total	70.227	151			
<b>E_Avg</b>	Between Groups	2.297	5	0.459	1.15	0.337
	Within Groups	58.322	146	0.399		
	Total	60.619	151			
<b>SS_Avg</b>	Between Groups	2.92	5	0.584	0.85	0.517
	Within Groups	100.324	146	0.687		
	Total	103.244	151			

The One-Way ANOVA for POSS 2 results suggest that the independent variable POSS2 has a statistically significant effect on Motivation (MO) with p-value 0.035, which is less than 0.05. However, POSS2 does not have a statistically significant effect on Self-Awareness (SA), Managing Emotions (ME), Empathy (E) and Social Skills (SS).

#### 4.7. TWO-WAY ANOVA FOR GENDER, POSS 1, AND POSS 2

The intersectional effect of all the independent variables on EI scores was studied through factorial ANOVA. Gender had 2 levels, POSS 1 and POSS 2 had 6 levels each. Therefore, a 2 × 6 × 6 factorial ANOVA on total EI scores was performed. The following table shows the analysis result:

**Table 6**

Table 6 Summary of 2 × 6 × 6 Factorial Design ANOVA of EI Scores					
Source of Variance	Sum of Squares	df	Mean Square	F	Sig.
<b>Gender (A)</b>	3.15E-05	1	3.15E-05	0	0.993
<b>POSS1 (B)</b>	0.772	4	0.193	0.46	0.765
<b>POSS2 (C)</b>	0.65	4	0.162	0.387	0.817
<b>A × B</b>	0.447	1	0.447	1.065	0.304
<b>A × C</b>	0.073	1	0.073	0.173	0.678
<b>B × C</b>	0.504	3	0.168	0.401	0.753
<b>A × B × C</b>	0	0	0	0	0
<b>Error</b>	56.615	135	0.419		
<b>Total</b>	<b>2299.8</b>	<b>152</b>			

The results of the 2 × 6 × 6 factorial ANOVA conducted to examine the effects of gender, POSS1, and POSS2 on Emotional Intelligence (EI) scores indicated that the main effect of gender was not significant,  $F(1, 135) = 0.00, p = .993$ . Similarly, the main effects of POSS1,  $F(4, 135) = 0.46, p = .765$ , and POSS2,  $F(4, 135) = 0.39, p = .817$ , were not statistically significant. The two-way interactions — gender × POSS1,  $F(1, 135) = 1.07, p = .304$ ; gender × POSS2,  $F(1, 135) = 0.17, p = .678$ ; and POSS1 × POSS2,  $F(3, 135) = 0.40, p = .753$  — were also non-significant. The three-way interaction could not be tested due to zero degrees of freedom. Overall, the findings suggest that EI scores did not differ significantly as a function of gender, POSS1, or POSS2, either independently or in combination.

Overall, the results of the t-test, one-way ANOVA for both POSS1 and POSS2, and factorial ANOVA indicate that Motivation (MO) is the only emotional competency that demonstrates a statistically significant effect across the different subject groups under POSS1 and POSS2 among pre-service teachers. In addition, Managing Emotions (ME) shows a

statistically significant effect with respect to POSS1. The other study variable, namely gender, was not found to have any significant influence on the Emotional Intelligence (EI) of pre-service teachers.

## 5. DISCUSSION

The results of the present study provided a more complex picture of emotional intelligence of pre-service teachers from Kalaburagi district of Karnataka, and made a valuable contribution to the discussion on interaction between gender and pedagogical specialization in terms of emotional intelligence development.

### 5.1. GENDER AND EMOTIONAL INTELLIGENCE

Contrary to various foreign studies which found certain gender differences in emotional intelligence in terms of empathy and emotional sensitivity in favor of women (Chen et al., 2025; Adamakis & Rocliffe, 2024), the present study showed no statistically significant differences in terms of all five EI components: Self-Awareness, Managing Emotions, Motivating Others, Empathy, and Social Skills. These null findings are consistent with accumulating cross-cultural research. Thus, Mintah et al. (2020), analyzing the correlation between gender and EI among pre-service teachers in Ghana, found no effect of gender on EI. Atik et al. (2024) demonstrated similar patterns for pre-service teachers from Turkey, explaining gender-invariance in EI with the dominant impact of self-efficacy and achievement motivation. Moreover, according to an extensive meta-analysis conducted in India, Rangeekar (2019) concluded that gender had no influence on the emotional intelligence of teachers based on synthesis of 26 previous studies involving 6,005 participants.

Thus, findings of past study indicates that gender differences in terms of emotional intelligence can be socio-cultural context-dependent and related to various factors such as socialization practices, educational background, and even the nature of the sample. Specifically, in the Indian context, the homogeneity of the teacher education student population with regard to gender and socialization makes it theoretically plausible that gender differences in terms of EI would not be significant. Consistently, the almost equal mean EI scores of both males and females with maximum disparity in Motivating Others (3.76 for females vs. 3.62 for males) support this view.

### 5.2. PEDAGOGICAL SUBJECT SPECIALIZATION AND EMOTIONAL INTELLIGENCE

From the one-way ANOVA analysis for POSS1 data set, there is a statistical significance for the competencies 'Managing Emotions' and 'Motivating Others,' which shows variations across the six groups based on the data collected for both ( $p=0.025$  and  $p=0.023$ ). Likewise, from the analysis of POSS2 data set, only 'Motivating Others' competency shows statistical significance ( $p=0.035$ ). These results collectively suggest that the pedagogical subject a pre-service teacher specializes in does bear some relationship with specific emotional competencies, particularly those oriented toward internal motivation and emotion regulation under pressure.

The present paper findings have relation with emerging subject-specific EI research. The work of Jiang and Tong (2025) predicted innovative teaching behavior of pre-service music teachers' EI through psychological empowerment and career commitment — pointing to a motivational pathway uniquely relevant to subject-specific professional identity. In case of STEM subjects, Bustamante-Mora et al. (2025) concluded that emotional intelligence, resilience, and motivation differs in respect of subject and gender, particularly in those disciplines where female representation was lower historically. The significant variation of scores for MO across both POSS groups noted in this study reflecting the differential occupational socialization and motivational landscapes experienced by pre-service teachers in language, science, and social science streams.

On the other hand, there were no significant differences among subjects regarding second-level social competencies—empathy and social skills. This result is particularly interesting, as it indicates that social-emotional intelligence competencies might not depend on the training students receive but rather on the overall educational culture of teachers' education.

### 5.3. INTERSECTIONAL EFFECTS: GENDER AND SUBJECT SPECIALIZATION

The three-way  $2 \times 6 \times 6$  factorial ANOVA was carried out with the purpose of establishing if there were any intersectional effects of gender, POSS1, and POSS2 on the total EI scores. The results show that there was neither a statistically significant main effect nor an interaction effect. While lack of a three-way interaction can partially be explained by methodological reasons (AXBXC effect with zero degrees of freedom), the significance of the two-way interactions (gender  $\times$  POSS1, gender  $\times$  POSS2, and POSS1  $\times$  POSS2) still holds some importance.

However, these findings contradict expectations based on intersectionality theory and certain parts of the international literature (Zhao et al., 2025; Bustamante-Mora et al., 2025). An explanation might be that the institutional setting (in the present case, the curriculum and teacher education culture at all three Kalaburagi TEIs) has a homogenizing effect on EI levels across gender and subject specialization intersectional groups. Indeed, the statement made by Turner & Stough (2020) that pre-service teacher EI depends more on institutional factors rather than demographic ones seems to support this hypothesis. According to Mintah et al. (2020), while analyzing gender and pedagogical specialization-related differences in EI, researchers managed to identify some subgroups but did not find an intersectional interaction of interest that would be significant.

Furthermore, using the tool suggested by Goleman (1995) in a self-assessment measure form may create similarity in responses to questionnaire items as pre-service teachers were trained in the same institutions. Thus, future research conducted through the means of ability or observer assessment of EI (e.g., MSCEIT) could shed light on intersectionality aspects.

### 5.4. MOTIVATION IS A CRITICAL EI COMPETENCY

One common result found in all three statistical analyses, namely the one-way ANOVA for POSS1, the one-way ANOVA for POSS2, and the total EI factorial ANOVA, is the MO subscale's sensitivity towards differences between the various subjects. This finding deserves special consideration in teacher education studies. Motivation, as conceptualized in Goleman's framework, reflects the ability to use one's deepest emotions to pursue goals, take initiative, and persevere through obstacles. Its variability across subject streams may reflect differences in career motivation, occupational identity, and the perceived relevance of teaching across disciplines.

Many studies link EI to teaching motivation, providing a supportive context for the above finding. The study conducted by Kyriazopoulou et al. (2024) found that pre-service teachers with high EI were more likely to choose teaching based on social utility values, and that this relationship was modulated by EI profile. Pre-service teachers of language subjects such as English, Kannada, Hindi — who may have stronger intrinsic connections to their subject matter and clearer pedagogical identities — might score differently on MO compared to those in physical science or mathematics, where teacher supplied motives may dominate. This hypothesis warrants direct testing in future subject-specific EI research.

## 6. LIMITATIONS OF THE STUDY

This paper has a meaningful contribution in the vast EI literature in context Indian teacher education; however, a few limitations must be acknowledged. In this research adopted purposive sampling technique to select three TEIs located in the district of Kalaburagi in Karnataka, restricting the generalizability of the results to this specific region and institution type. The adoption of a large sample size with stratification across districts and states is recommended to improve the generalizability of the results. In addition to above point, there is a chance that these factors may change within a teacher education programme based on practical experiences, social and emotional learning intervention, and peer interactions and several important covariates such as socialization at home, academic achievement, prior teaching experience, exposure to SEL curricula were not controlled for in this study. Future work should take into consideration these factors in regression or SEM designs to have a comprehensive understanding of the role of these variables in predicting EI scores among pre-service teachers.

## **7. IMPLICATION OF THE STUDY**

### **7.1. IMPLICATIONS FOR TEACHER EDUCATION POLICY**

According to the study, gender does not influence emotional intelligence (EI), and this finding has important equity implications for teacher education policy. It challenges the stereotype in society that female pre-service teachers are more emotionally intelligent by nature. The teacher education policy in future, Particularly the EI development framework policy for B.Ed. program need not be gender oriented as such.

The B.Ed. curricula must be evidence-based for specific designing of EI development framework. The B.Ed. structural and pedagogical aspects should be reviewed and re-examined by policy-makers focusing on nurturing emotional competencies of pre-service teachers. The notable difference in MO and ME framed under POSS1, and MO framed under POSS2, across subjects signifies the need for subject specialized EI developmental support and intervention in the Teacher Preparation. It definitely a matter for worry and attention for teacher education policy. As an illustration, the NCTE must take into account providing scope for B.Ed. curriculum for infusion of subject specialized socio-emotional learning modules. curriculum which are also sensitive to the socio-emotional and motivational requirements of teaching particular school subject.

### **7.2. IMPLICATIONS FOR TEACHER EDUCATORS AND INSTITUTIONAL PRACTICE**

Educators should keep in mind that pre-service teachers have different motivational orientations and emotional issues in the classroom as they are enrolled in different school subjects. Thus, there could be a need for subject specialized mentoring, reflective journaling as well as peer-learning communities for target specific EI development in the classroom. The extent to which interventions that aim to increase Motivating Others will succeed is likely to vary hugely across the population. The interventions that may yield greatest equity benefits include goal-setting workshops, career counselling, and subject-wise professional identity programmes.

While there are many studies recognizing the effectiveness of structured EI training programmes (Ozdemir Cihan & Dilekmen, 2024; Aponte et al., 2025; Zungu & Santos, 2025), the present findings established the need to integrate such EI trainings in B.Ed. curricula instead of keeping it as an occasional enrichment modules. Simple activities like mindfulness, emotional journaling, and collaborative reflective practice helps in self-emotion appraisal and peer empathy developmet (Zungu & Santos, 2025), and their integration as practicum activity would be a strategic shift.

### **7.3. IMPLICATIONS FOR STUDENTS AND FUTURE TEACHERS**

Pre-service teachers themselves should be made aware of EI as a professional competence irrespective of their subject specializations and gender identities. Institutional support including peer-support groups, counselling services, and resilience-building workshops can assist pre-service teachers develop the emotional readiness to navigate complex interpersonal and motivational demands of diverse learners in classroom (Zhao et al., 2025; Richards et al., 2022). Exposure to EI frameworks not only help B.Ed. pupils to manage their own emotions but also to make an emotionally safe and motivating learning environments during practice teaching in schools as well as in future classrooms.

## **8. CONCLUSION**

This study, based on 152 pre-service teachers, investigated the intersectional effects of gender and pedagogical subject specialization on the Emotional Intelligence (EI) using Goleman's EI framework. The findings reveal gender does not significantly impact the EI levels of pre-service teachers, however, pedagogical subject specialization plays a selective influence, particularly on the Motivating Others competency across both POSS groups, and on Managing Emotions within POSS1. Although the factorial ANOVA confirmed that the interaction between gender and subject specialization has no statistically significant compound effect on total EI scores.

The present findings of the paper have several important implications. They challenge gender-based assumptions embedded in EI research and teacher preparation policy, as well as motivational and emotional aspects that vary across subject specialization. The findings underscore that EI development among pre-service teachers is not a monolithic process; it gets shaped by the disciplinary cultures, professional identities, and occupational motivations of different

subject areas. Therefore, teacher preparation programs should not follow a one-size-fits-all EI training for all the B.Ed. trainees. Similarly, EI training in teacher education should not become merely a pedagogical enhancement — It is a moral responsibility to prepare future teachers with the emotional readiness needed to address the diverse, complex, and ever-changing demands of learners in the twenty-first century.

Further research should build upon these findings through longitudinal designs, large number of samples, and ability-based EI assessments. Qualitative methodologies can be adopted to analyze the lived emotional experiences of pre-service teachers from different pedagogical streams and gender identities.

## CONFLICT OF INTERESTS

None.

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## REFERENCES

- Adamakis, M., & Roccliffe, P. (2024). An examination of trait emotional intelligence in pre-service physical education teachers. *Journal of Physical Education and Sport*, 24(9), 1108–1116. <https://doi.org/10.7752/jpes.2024.09234>
- Aponte, M. L., Vargas Sánchez, A. D., & Vasquez, M. A. (2025). The effects of emotional intelligence training programs on educators: A systematic review. *F1000Research*, 14, 842. <https://doi.org/10.12688/f1000research.166190.1>
- Atik, U., Karaman, M. A., & Sari, H. I. (2024). Examining the relationship between emotional intelligence, achievement motivation, and self-efficacy among pre-service teachers in Türkiye. *Education Sciences*, 14(5), 526. <https://doi.org/10.3390/educsci14050526>
- Brackett, M. A., & Katulak, N. A. (2006). Emotional intelligence in the classroom: Skill-based training for teachers and students. In J. Ciarrochi & J. D. Mayer (Eds.), *Applying emotional intelligence: A practitioner's guide* (pp. 1–27). Psychology Press.
- Brackett, M. A., Rivers, S. E., & Salovey, P. (2010). Emotional intelligence: Implications for personal, social, academic, and workplace success. *Social and Personality Psychology Compass*, 5(1), 88–103. <https://doi.org/10.1111/j.1751-9004.2010.00334.x>
- Bustamante-Mora, A., Diéguez-Rebolledo, M., Díaz-Arancibia, J., Sánchez-Vázquez, E., & Medina-Gómez, J. (2025). Inclusive pedagogical models in STEM: The importance of emotional intelligence, resilience, and motivation with a gender perspective. *Sustainability*, 17(10), 4437. <https://doi.org/10.3390/su17104437>
- Chen, Y., Feng, Z., & Wang, H. (2025). An investigation of the pre-service teachers' emotional awareness in China. *Psychology Research and Behavior Management*, 18, 797–811. <https://doi.org/10.2147/PRBM.S491860>
- Extremera, N., & Fernández-Berrocal, P. (2004). The role of emotional intelligence in teacher ability. *Educational Psychology: An International Journal of Experimental Educational Psychology*, 24(3), 423–430.
- Goleman, D. (1995). *Emotional intelligence: Why it can matter more than IQ*. Bantam Books.
- Goleman, D. (1998). *Working with emotional intelligence*. Bantam Books.
- Hussain Garma, S. T. (2024). The role of emotional intelligence in enhancing teaching competency and student engagement among pre-service teachers. *International Journal of Teacher Education Research Studies (IJTERS)*. <https://doi.org/10.63090/ijters/3049.1614.0006>
- Jiang, X., & Tong, Y. (2025). Emotional intelligence and innovative teaching behavior of pre-service music teachers: The chain mediating effects of psychological empowerment and career commitment. *Frontiers in Psychology*, 16, Article 1557806. <https://doi.org/10.3389/fpsyg.2025.1557806>
- Kumar TD, P., & Sudharani, T. S. (2021). Quantitative study of pre-service teachers' emotional intelligence and their educational achievement. *Journal of Emerging Technologies and Innovative Research (JETIR)*, 8(9), f125–f130. <https://www.jetir.org/papers/JETIR2109519.pdf>
- Kyriazopoulou, M., Metsäpelto, R. L., Varis, S., & Muotka, J. (2024). Pre-service teachers' emotional intelligence and motivations for choosing a teaching career in Finland. *Cogent Education*, 11(1). <https://doi.org/10.1080/2331186X.2024.2429881>

- Liu, H., & Chen, B. (2025). Unravelling English as a foreign language teacher resilience and work engagement: The mediating role of subjective well-being. *European Journal of Education*, 60(4), e70348. <https://doi.org/10.1111/ejed.70348>
- Mayer, J. D., & Salovey, P. (1997). What is emotional intelligence? In P. Salovey & D. Sluyter (Eds.), *Emotional development and emotional intelligence: Implications for educators* (pp. 3–31). Basic Books.
- Mintah, P. C., Adasi, G. S., Amponsah, R. O., & Amponsah, K. D. (2020). Gender influence on pre-service teachers' emotional intelligence at selected colleges of education in Ghana. *American Journal of Educational Research*, 8(10), 795–803. <https://pubs.sciepub.com/education/8/10/9/>
- Özdemir Cihan, M., & Dilekmen, M. (2024). Emotional intelligence training for pre-service primary school teachers: A mixed methods research. *Frontiers in Psychology*, 15, 1326082. <https://doi.org/10.3389/fpsyg.2024.1326082>
- Quansah, F., Essel, D. W., Gyapong, N. A., N-Nandi Yabana, I., Dzakadzie, Y., Asamoah, P., & Addison, K. (2025). Enhancing teacher training through self-efficacy and emotional intelligence: A conditional process model of pre-service teachers' well-being and academic achievements. *Brain and Behavior*, 15(5), e70578. <https://doi.org/10.1002/brb3.70578>
- Richards, K. A. R., Trad, A. M., Kinder, C. J., Graber, K. C., & Woods, A. M. (2022). The role of emotional intelligence and resilience in physical education teacher education faculty perceived mattering. *Journal of Teaching in Physical Education*, 41(3), 455–465. <https://doi.org/10.1123/jtpe.2021-0031>
- Turner, K., & Stough, C. (2020). Pre-service teachers and emotional intelligence: A scoping review. *Australian Educational Researcher*, 47, 283–305. <https://doi.org/10.1007/s13384-019-00352-0>
- Varis, S., Tolvanen, A., Kim, L. E., et al. (2026). Longitudinal associations between pre-service teachers' emotional intelligence and cultural beliefs. *Australian Educational Researcher*, 53, 4. <https://doi.org/10.1007/s13384-025-00920-7>
- Varis, S., Tolvanen, A., Kyriazopoulou, M., Laine, A., Waltzer, K., Widlund, A., Kim, L. E., Klassen, R., & Metsäpelto, R. L. (2025). The role of emotional intelligence in shaping pre-service teachers' cultural beliefs. *PLOS ONE*, 20(9), e0331282. <https://doi.org/10.1371/journal.pone.0331282>
- Zhao, Y., Ai, L., & Wang, X. (2025). Relationships between emotional intelligence, resilience, and critical thinking disposition among pre-service teachers: A moderated mediation analysis by gender. *Acta Psychologica*, 259, 105314. <https://doi.org/10.1016/j.actpsy.2025.105314>
- Zungu, Z., & Santos, A. (2025). Shaping preservice teacher identity in South Africa: The impact of a brief growth mindset and emotional intelligence intervention. *International Journal of Learning, Teaching and Educational Research*, 24(8), 536–562. <https://doi.org/10.26803/ijlter.24.8.28>