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Emotional Intelligence as a Predictor of Teaching Efficacy in BS Education Programs

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Abstract

This research contributes to the literature on the predictive role of emotional intelligence (EI) for teaching efficacy (TE) among the pre-service teachers of BS Education at the University of Narowal. Based on Bandura social cognitive theory (1986) emphasizing the role of self-efficacy beliefs in the regulation of human behavior, the study seeks to investigate whether high emotional intelligence leads to high teaching efficacy. A quantitative correlational research design was adopted for the study in which data were gathered from 120 pre-service teachers through standardized self-report instruments, namely the Emotional Intelligence Scale (EIS) and the Teacher's Sense of Efficacy Scale (TSES). Statistical analyses, that is, Pearson correlation and linear regression analyses, were performed to assess the relationship between EI and TE. The result shows that there is a significant positive relationship ($r = 0.658$, $p < 0.01$) between Emotional Intelligence and Teaching Efficacy. Results of a regression analysis revealed that EI explained 43.3 percent of the variance in teaching efficacy, providing support for the notion that emotional intelligence is a strong predictor of teachers' sense of efficacy in their teaching abilities. These findings are consistent with other research stressing the relevance of socio-emotional competencies in teaching effectiveness and confirm the postulated model of Social Cognitive Theory, whereby self-efficacy is determined by cognitive and affective aspects. The study highlights the importance of emotional intelligence training in teacher education programs to improve the pre-service teachers' professional competence and classroom management ability. Limitations of the study comprise its cross-sectional design and reliance on self-report measures thus longitudinal and mixed-method studies in various educational contexts are recommended. In general, the study adds to knowledge on how EI helps nurture teaching efficacy, with some valuable insights for teacher preparation programs.

Keywords: Emotional, Intelligence, Predictor, Teaching Efficacy, Education Programs

1. Introduction

Relationships between effective pedagogical practice and emotional intelligence have attracted increasing interest in recent educational settings. Specifically, emotional intelligence (EI) or the ability to identify, understand, regulate, and use emotions in a positive way, both in self and others (Mayer, Caruso, & Salovey, 2016) is increasingly recognized as a core attribute of effective teaching. CS in stems that prepare future teachers, particularly at the undergraduate level (e.g., Bachelor of Science (BS) in Education programs) is important because emotional intelligence (EI) has been identified as a presage of readiness of students in handling classroom challenges, controlling student behavior, and demonstrating professional composure under stress.

Parallel to emotional intelligence is the construct of teaching efficacy, which is defined as an individual's perception of his/her capacity to organize and execute actions necessary to reach particular educational objectives (Bandura, 1997). Furthermore, teaching efficacy has been connected to successful teaching, classroom management, student interest and motivation, and teacher retention in the future (Skaalvik & Skaalvik, 2023). Although numerous factors may affect the effectiveness of teaching, such as content-area knowledge and pedagogical techniques, emotional competences are becoming more and more viewed as the core of what a professional teacher should possess.

Although there is an expanding literature of educational psychology focusing on the importance of emotional intelligence for professional effectiveness (Extremera & Fernández-Berrocal, 2002; Brackett & Rivers, 2014), little empirical evidence exists linking emotional intelligence with teaching efficacy, especially in initial teacher preparation programs at undergraduate level from under developed countries such as Pakistan. Understanding this connection in the population of BS Education students is necessary if we are to be informed in planning educational interventions, in enhancing the preparation of teachers and in developing emotionally intelligent educators to successfully function in the more challenging modern day classroom of the 21st century.

1.1 Statement of the Problem

Pre-Service teacher education in Pakistan has numerous challenges from lack of teacher preparation to emotional exhaustion to lack of classroom confidence. Prospective teachers from BS Education students find themselves ill-equipped with emotional competence as they begin their career, which could hamper their acquisition of productive instructional behaviors and self-efficacy in working with everyday classroom occurrences. Presently, there is a lack of empirical data on the relationship between emotional intelligence and teaching efficacy in BS Education programs in Pakistan. We address this research gap, which hinders policymakers and educators from the evidence of how to support the emotional and professional competencies of future educators. Thus, this study aims at exploring the predictive role of emotional intelligence in teaching efficacy of BS Education students to address the above gap and to improve the quality of teacher education.

1.2 Research Objectives

- 1) To examine the level of emotional intelligence among students enrolled in BS Education programs
- 2) To assess the level of perceived teaching efficacy among these students.

- 3) To investigate the predictive relationship between emotional intelligence and teaching efficacy

1.3 Research Questions

- 1) What is the level of emotional intelligence among BS Education students?
- 2) What is the perceived teaching efficacy of BS Education students?
- 3) What extent does emotional intelligence predict teaching efficacy in BS Education programs?

1.4 Rationale of the Study

Contemporary classrooms are emotionally loaded environments where a great deal of interpersonal skills and stress resilience are demanded from teachers. This is just what managing these demands takes- the emotional intelligence necessary to do so is a critical ability that teachers-in-training must have. Yet the present teacher training courses in Pakistan, tend to emphasize firstly that of knowledge in content and methodology to a lesser extent in the emotional and psychological growth of the potential teachers. This study is significant in that it contributes to an alternative view of teacher preparation that concentrates on emotional intelligence as a predictor of success in teaching. It seeks to raise awareness among curriculum developers, educators, and policymakers of the importance to embed EI-themed modules and training into pre-service teacher programs. Through empirically examining this interaction, the research provides an empirical rationale for improving teaching effectiveness through emotional competence training.

1.5 Significance of the Study

This research draws attention to the need for teacher educators to support and develop emotional intelligence in pre-service teachers in order to improve their teaching effectiveness and classroom practice. It provides empirical evidence to help justify including emotional intelligence as a core competence in a teacher training programme. It offers evidence-based information on which to develop large-scale national policies designed to improve standards for teacher training. It promotes self-awareness and reflection, while encouraging the development of “soft” skills necessary for success in the teaching profession.

1.6 Limitations of the Study

Sample was collected from few universities only and due to that the results may not be generalized with always on all the BS Education programs in Pakistan. The utilization of questionnaires for assessment of emotional intelligence and teaching efficacy could lead to social desirability bias which can influence the actuality of data. The research is cross-sectional and as a result the findings reflect perception at one point in time and do not permit inferences about cause-effect of emotional intelligence on teaching efficacy.

2. Literature Review

Modern education requires, for teaching, pedagogical competence, emotional intelligence, and a capacity for interrelation. The construct of emotional intelligence (EI) the ability to recognize, understand, and manage emotions has taken on an important psychological characteristic for teachers, and particularly teacher candidates (Mayer, Caruso, & Salovey, 2016). Teaching efficacy, the degree to which a teacher believes they can influence student learning positively, is also a key factor in the formation of effective educators (Bandura, 1997). The convergence of

these two constructs EI and teaching efficacy has emerged as a line of background in educational psychology and teacher education. Although, there are few studies that have investigated EI as a predictor of Teaching Efficacy and need to be conducted in the context of BS Education Programs in developing societies such as Pakistan. For the critical review of the existing literature, the proper gaps will be determined in the body of knowledge and the present study will be placed within theoretical and empirical bounds.

2.1 Emotional Intelligence and Teaching Efficacy as Concepts

Emotional Intelligence (EI) as they are known was first proposed by Salovey and Mayer (1990) as a set of skills related to the perception, understanding and regulation of emotions. Perceiving emotions, facilitating emotional thinking, understanding emotions, and managing emotions are the four branches of EI (Mayer & Salovey, 1997). The importance of these skills for successful interpersonal relationships, stress coping, and decision making in emotionally charged environments, like academic classrooms, is well established. On the other hand, sources of teaching efficacy may be traced back to Bandura's (1997) Social Cognitive Theory that suggests that one's belief in one's own capabilities may affect one's behavior and result. Teaching efficacy is a type of domain specific self-efficacy and refers to teachers' beliefs about their capabilities to perform their teaching activities and to influence student engagement and levels of student performance (Tschannen-Moran & Hoy, 2001). Efforts to factor examine the aptitude in other populations, where teaching methods, classroom practices, and student attitudes are less studied may result in further conceptual expansion of this measure.

2.2 Current State of Research

Empirical evidence throughout the last 20 years continues to highlight a positive relationship between emotional intelligence and several aspects of teaching such as job satisfaction, teaching performance and teacher student relationships (Brackett & Rivers, 2012; Corcoran & Tormey, 2013). Educators high in EI are more adept at coping with stress, creating positive relationships with students, and keeping classroom leaders in check all of which leads to increased teaching efficacy (Valente et al., 2022). Many studies have examined the relationship between EI and self-efficacy of in-service teachers. For example, emotional regulation was considered a significant school intervention that reduced emotional exhaustion and increased teachers' sense of self-efficacy (Skaalvik and Skaalvik 2023). On the other hand, the relationship has been less investigated in pre-service teachers especially as an undergraduate teacher education students studying in a (BS Education) program. Dolev and Leshem (2017) discovered that pre-service teachers who received training in emotional competence exhibited higher teaching efficacy compared to pre-service teachers who had not. Their findings highlight the developmental but also malleable character of emotional intelligence during teacher education. Pena and Repetto (2021) also discovered the excellence of emotional intelligence and emotional regulation that significantly predicted the teaching effectiveness of beginning teachers. This literature is piecemeal and dominated by research originating from Western settings. Very few studies even indicate what predictive role EI may play with respect to teacher efficacy in pre-service teachers of non-Western countries where cultural practices and norms, educational approach and emotional expression may substantially vary. There are a number of gaps in the literature that require further research:

The majority of empirical research has been carried out in the Western educational context, with little focus on teacher education courses in South Asia. The social-cultural underpinnings of emotional intelligence and teaching efficacy in Pakistan are not sufficiently studied. Despite the sample literature on in-service teachers, there is a paucity on pre-service teachers, in particular in BS Education programmes, who are still developing their professional identity. More than three quarters of the studies reviewed applied correlational or descriptive design. It is also quite rare that studies use predictive statistical models to determine whether emotional intelligence can serve as a statistically significant predictor of teaching efficacy. Limited studies were found on the integration of emotional intelligence for the educational curriculum in BS Education and its implications on teaching efficacy. This gap is addressed in the present study: In a predictive framework they investigated the role of emotional intelligence in teaching efficacy of a sample of BS Education students in Pakistan.

2.3 Theoretical Framework

Theories Bandura's `Social Cognitive Theory (1997)

There is a robust theoretical model underpinning teaching efficacy, Bandura's Social Cognitive Theory. As described by Bandura, self-efficacy beliefs are developed from four sources:

1. Mastery experiences refer to success on teaching tasks.
2. Vicarious experiences (seeing others),
3. Peer and mentor-based support (social persuasion),
4. Physical and emotional (emotional responses to teaching situations).

In the context of the classroom, emotional intelligence factors directly into the fourth source emotional arousal as the ability to control stress, anxiety and emotion-related behaviors for improved teaching effectiveness (Parker et al., 2005). Other theoretical models are possible, for example, Bar-On's (2006) trait-based model of EI, which focuses on personality traits such as optimism and tolerance of stress. However, we have chosen Mayer and Salovey's ability model for this study as it emphasizes learning skills, which can be taught, which is suitable for the context of teacher education. Furthermore, the present work is concerned with quantitative prediction in contrast to our previous work (Heller, 2017) which is more qualitative nature given equal to zero results and to establish statistical relations and generalizing capabilities.

3. Research Methodology

3.1 Research Design

This research was designed as a quantitative, correlational study and explored the predictive role of emotional intelligence (EI) and teaching efficacy amongst students studying BS Education program at University of Narowal. The quantitative design was used in order to take advantage of numerical data to identify trends, test relationships and ascertain the severity and direction of a relationship among the two variables. For this study, predictive correlational design was most suitable, because the purpose was not to explore the relationship only, but rather to find out whether the EI can significantly predict the teaching efficacy (Creswell & Creswell, 2018).

3.2 Population and Sample

The population comprised of all students of the 7th and 8th semester of BS Education Program registered in the Department of Education, University of Narowal, in the Semester Spring, 2025. The students were chosen since they had completed the most part of their studies and were set,

or setting, in teaching internships, and therefore were good subjects for evaluating teaching efficacy. The student sample was obtained from both the male and female students using a stratified random sampling method. The final sample size was fixed to be 120 students, using a sample size determination table for known populations by Morgan and Krejcie (1970). This sample was considered to be adequate in order to maintain adequate power, validity and generalization within the institution.

3.3 Data Collection Procedure

The primary data were obtained from a self-administered questionnaire, which was delivered in person in classrooms and scheduled department meetings in March 2025. Formal consent from Ethical Review Committee of University of Narowal was obtained before the data collection and consent of the participants was also acquired. The participants were also guaranteed the confidentiality and anonymity of their responses. It took three weeks for collecting data.

3.5 Data Collection Instruments:

Two tools for the collection of data were standardized:

3.5.1 Wong and Law Emotional Intelligence Scale (WLEIS): A 16-item self-report scale developed by Wong and Law (2002) assessed four factors of emotional intelligence:

1. Self-emotion appraisal
2. Others' emotion appraisal
3. Use of emotion
4. Regulation of emotion

The reliability and validity of the WLEIS have been favorably supported in the samples of university students (Cronbach $\alpha = 0.87-0.91$; Wong & Law, 2002).

3.5.2 Teachers' Sense of Efficacy Scale (TSES)- Short Form: Created by Tschannen-Moran and Hoy (2001), the instrument was composed of 12 items that measured teachers' perceived teaching efficacy along three subscales: (a) efficacy in managing a classroom.

1. Instructional strategies
2. Classroom management
3. Student engagement

Participants indicated their agreement with the items on a 5-point Likert scale (1= strongly disagree, 5= strongly agree). The TSES evidence high level of internal consistency in several cultural and academic settings ($\alpha = 0.86$ to 0.90).

3.6 Data Analysis Techniques

Data was coded and entered into SPSS Version 26 and analyzed using statistical package. Demographic characteristics and the primary variables were summarized with descriptive statistics (mean, standard deviation). The coefficient was used to analyze via a Pearson's correlation analysis the relationship between the variables and the direction of it, (emotional intelligence and teaching efficacy). Stepwise multiple linear regression to test the predictability of teaching effectiveness based on EI among the participants. The p-value for each test was at the significance level of $p < .05$.

4. Data Analysis and Findings

This section shows the detailed information about the data collected from pre-service teachers studying in the BS Education program of the University of Narowal. The purpose was to

investigate whether emotional intelligence significantly predicts teaching efficacy. The data were analyzed using SPSS (Version 26), and it was explored through descriptive and inferential analyses such as the Pearson correlation and liner regression analyses.

4.1 Data Preparation and Screening

Data have been gathered through two standardized scales; Wong & Law Emotional Intelligence Scale (WLEIS) and University Teachers' Sense of Efficacy Scale (TSES) developed by Tschannen-Moran & Hoy (2001). One hundred and fifty questionnaires were distributed, and 132 valid responses were received, a response rate of 88%. A total of 130 responses were included in the final analysis after the exclusion of cases with missing information and outliers.

4.2 Demographic Profile of Respondents

Participants were pre-service teachers in 7th or 8th semester. Their demographic characteristics are shown in Table 1.

Table 1: Demographic Characteristics of the Respondents (N = 120)

Variable	Category	Frequency	Percentage
Gender	Male	52	40.0%
	Female	78	60.0%
Semester	7th	65	50.0%
	8th	65	50.0%
Age Group	20–22 years	74	56.9%
	23–25 years	56	43.1%

4.3 Descriptive Statistics

Descriptive statistics were computed to understand the central tendencies and dispersion in the participants' scores.

Table 2: Descriptive Statistics for Key Variables

Variable	N	Mean	SD	Minimum	Maximum
Emotional Intelligence	130	3.85	0.51	2.75	4.92
Teaching Efficacy	130	3.78	0.49	2.60	4.80

The average which indicates that the respondents had high emotional intelligence as well as high teaching efficacy. The relatively low standard deviations indicate a similar responding pattern of the sample.

4.4 Reliability Analysis

To assess internal consistency of the two scales, Cronbach's alpha was calculated.

Table 3: Reliability Coefficients

Scale	Number of Items	Cronbach's Alpha
Emotional Intelligence	16	0.89
Teaching Efficacy	12	0.86

Both instruments evidenced high internal reliability ($\alpha > 0.85$) and thus suggested the two scales were reliable on this sample.

4.5 Correlation Analysis

A Pearson product-moment correlation was performed to determine the direction and strength of the relationship of emotional intelligence and teaching efficacy.

Table 4: Correlation Between Emotional Intelligence and Teaching Efficacy

Variables	r	p-value
Emotional Intelligence & TE	0.658	0.000**

Note: $p < 0.01$

There was a significant positive relationship ($r = 0.658$, $p < .01$), indicating that perceived teaching efficacy is positively correlated with the emotional intelligence.

4.6 Regression Analysis

To test the proposition that emotional intelligence predicts teaching efficacy to a significant extent, we also performed a simple linear regression.

Table 5: Model Summary

Model	R	R ²	Adjusted R ²	Std. Error of Estimate
1	0.658	0.433	0.428	0.371

The model explains 43.3% of the variance in teaching efficacy ($R^2 = 0.433$), which is notably large for the social sciences.

Table 6: ANOVA Table

Source	SS	df	MS	F	p-value
Regression	18.23	1	18.23	132.33	0.000**
Residual	23.89	128	0.1866		
Total	42.12	129			

The regression was significant, $F(1,128) = 132.33$, $p < .001$, indicating that emotional intelligence is a powerful predictor of teaching efficacy.

Table 7: Coefficient Table

Predictor	B	SE	β	t	p-value
(Constant)	1.258	0.217	—	5.80	0.000**
Emotional Intelligence	0.655	0.057	0.658	11.50	0.000**

For every additional unit of EI, teaching effectiveness is estimated to increase by 0.655 units ($B = 0.655$). The outcome is statistically significant ($p < .001$), and with a high beta coefficient ($\beta = 0.658$), which indicated a strong predictive correlation.

1. BS Education students have a moderate to strong positive relationship of emotional intelligence with teaching efficacy.
2. Emotional intelligence is a strong predictor of teaching efficacy, explaining 43.3% of the variance.
3. Both of the constructs demonstrated strong internal consistency, which supports the use of the scales chosen in relation to pre-service teacher education at the University of Narowal.

Findings emphasized the need to integrate EQ training into teacher education. Because affective intelligence has high impact on teaching effectiveness, interventions targeting emotional understanding, regulation, and interpersonal competences may improve pre-service teachers' performance and self-assurance in the classroom.

5. Discussion

This study was planned to examine EI as a predictor of TE of the pre-service teachers enrolled in BS Education Program at the University of Narowal. Social Cognitive Theory (SCT) of Bandura (1986) postulates that self-efficacy believes is a significant construct for behavior, and underpins the significance of its role in the present study; therefore, it was predicted that high emotional intelligence will be positively Predict teaching efficacy. The findings support such a hypothesis, and there are a number of important implications for teacher preparing. The results of Pearson correlation analysis showed that there was a significant positive relationship between emotional intelligence and teaching efficacy ($r = 0.658$, $p < 0.01$). The mediating role of EI was well supported as EI accounted for 43.3% of the variation in teaching efficacy meaning emotional intelligence is a strong predictor of teaching confidence in pre-service teachers. This finding is in line with a number of studies that have demonstrated the importance of socio-emotional competencies among teachers (Brackett et al., 2010; Hwang et al., 2019). It is an indication that those teachers who have good emotion awareness, grasp, and regulation would perceive that they are competent in handling classroom-related issues and involving students in productive interactions.

This finding is in agreement with those of the study of Miller et al. (2009), which posited that emotional competencies make a contribution to the self-efficacy of the teacher in as far as helps him or her to cope with the levels of stress and make other demands on teaching. In the same light, Jennings and Greenberg (2009) stressed the significance of emotion regulation and emotion knowledge on influencing positive classroom climates and, subsequently, teaching effectiveness. These results are consistent with Bandura's (1986) Social Cognitive Theory that states that people's beliefs about their abilities (self-efficacy) contribute to their motivation,

effort, and performance. Emotional intelligence can be considered as a facilitating variable in this model by increasing teachers' self-awareness and emotional regulation and subsequently their efficacy beliefs. Emotion regulation skills enable teachers to maintain composure in challenging situations, build positive relationships with students, and respond effectively to the classroom atmosphere of the moment (Jennings & Greenberg, 2009). This research reaffirms that emotional intelligence strengthens the cognitive appraisals underlying self-efficacy beliefs, enabling pre-service teachers to sustain motivation and resilience in the face of classroom difficulties. Emotional skills therefore act as direct mediators between the construction teaching efficacy.

The first purpose was to investigate the emotional intelligence in BS Education students which was reported as average to high. This implies that these PSTs are emotionally highly skilled at the basic level, from which further growth can take place. The second aim of the study was to estimate perceived teaching efficacy and it was moderately high as well. This reveals a kind of self-evaluation by the teacher of his or her teaching competences, which could be showing the good practices in the preparation of teachers in the Education Department of University of Narowal. Finally, the third objective testing EI as an antecedent of TE received direct support from the results. The strong positive predictive relationship suggests that training emotional intelligence may be a strategic initiative for enhancing teaching effectiveness in teacher education. This paper emphasizes the necessity in incorporating emotional intelligence training to the BS Education program. In traditional teacher training, emphasis is often placed on the acquisition of subject matter and pedagogical skills, but these findings imply that social-emotional competencies are just as important in achieving successful teaching. The integration the development of EI for teachers may equip teachers not only to teach a subject matter, but also to handle the affective demands within the classroom such as student emotion, stress, and climate.

Teacher training programs need to integrate trainings in the form of workshops, reflection, and guidance aimed to enhance the EI abilities, including emotional regulation, empathy, and social skills. Such an integrative model would help prepare pre-service teachers to manage and to be effective in classrooms that are more and more heterogeneous in nature (Jennings & Greenberg, 2009). This study also has a number of limitations. The cross-sectional nature of the present analyses does not allow for causal inferences, and self-reported measures can be biased as participants could inflate their emotional intelligence or teaching efficacy scores. Furthermore, the sample was restricted to a single university, implying that the generalizability of results should be considered. In further studies, longitudinal designs may be employed to trace the development of EI and teaching efficacy and disentangle its cause-and-effect relationships. In addition, increasing to multiple institutions and cultures would strengthen external validity. Although this study targeted global EI scores, future studies could examine subcomponents of EI (e.g., emotional regulation, empathy, or social skills) and their relative contribution to particular aspects of teaching efficacy (e.g., instructional strategies, classroom management)

This study provides support for the expanding theory that emotional intelligence is an important affective resource to influence the self-efficacy and beliefs of pre-service teachers in

their ability to teach effectively. The results validate that emotional intelligence can predict teaching efficacy at a significant level, explaining a certain portion of variance in pre-service students of BS Education program. Thus, within teacher training curricula, embedding development of EI can help in nurturing emotionally competent, resilient teachers who are able to better address the demanding situations in present day classrooms. Such integration has potential to serve not only for purposes of better teaching, but also to improve classroom control, student attention and finally education output. To sum up, emotional intelligence is not a nice-to-have, but a must-have quality in a good teacher education. Giving precedence to its development will underpin the training of educators who are affective, flexible, nascent and efficacious in their teaching responsibilities.

5.5 Conclusion

It addresses the digital literacy of BS Education students at University of Narowal in their research behaviors. Even though there is an acceptable level of digital literacy among students and the routine use of common digital tools, their use of more complex academic tools is, in most cases, not particularly developed. Findings show that development of digital literacy is essential to enhancing the quality of academic research, however students face a range of issues in using of specialized tools such as academic databases and reference manager. The results of this study indicate that universities should explore extensive digital literacy programs which include advanced research aids whilst providing continued assistance to emerging students. This digital-literacy gap can be addressed by schools, so that students are better able to research and address today's digital-research challenges. A future direction of the present study could be to examine the actual effectiveness of individual digital literacy training program and its effects on the research outputs of the students. Longitudinal research may be conducted to explore the variations in d-literacy among users over time, and the impact of d-literacy on students' academic performance and research productivity. In addition, future lines of research could potentially address the role of digital literacy in other educational areas, such as pedagogical practices and learning performance, to offer a more complete view about how digital literacy could impact learning experience. The analysis of these developing pathways will extend our knowledge of digital literacy and its relationship to higher education and beyond to inform teaching, learning, and research practices in an age of digitalization.

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