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Analysis of Predictive Relationship of Emotional Intelligence and Teacher Self-Efficacy with Instructional Effectiveness among Prospective Teachers Enrolled in Teacher Education Institutions in Pakistan

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Abstract

The research titled "Analysis of predictive relationship of emotional intelligence and teacher self-efficacy with instructional effectiveness among prospective teachers enrolled in teacher education institutions in Pakistan" is an effort to explore and determine the relationship between the independent variables "Emotional Intelligence" and "Teacher Self-Efficacy" and the dependent variable of Instructional Effectiveness. The study evaluates the predictive nature of two significant attributes of a professional teacher, one of which is psychological and the other is professional, to the outcome variable, "instructional effectiveness". Prospective Teachers who were enrolled in teacher education institutions in Karachi were selected as the population of the study. The nature of the research is quantitative. A closed-ended questionnaire (a 5-point Likert scale) was used to collect data. The sample size of the study was 400 respondents from the selected sample. Cluster sampling technique, one of the probability sampling techniques, was the adopted technique in the study. Careful efforts were made to ensure the trustworthiness and credibility of the study. The obtained numerical data were statistically analyzed by using multiple linear regression. SPSS 20 was employed to carry out the statistical analysis. The regression analysis enables the researcher to predict the variance in the dependent variable because of the independent variables. The study intends to assess the sources of productive teaching and learning processes that determine the student's performance or achievement. Research studies have proven that students' achievement and success depends upon several external factors among them teachers' emotional intelligence and their self-efficacy are more crucial. The study presents valuable empirical insights about the impacts of teachers' emotional intelligence and their self-efficacy, obtained inductively from our local context, that may benefit policy planners, researchers, teacher educators, teacher education academia, curriculum developers, and all stakeholders in developing teacher development programs by including the dimensions of emotional intelligence skills, and to maximize the teachers'

professional competency essential to enhance instructional effectiveness and school performance. Finally, the researcher suggests new directions for future research in the domain of the research.

Introduction

The current study is an endeavor to explain the complex phenomena of effective teaching at the secondary level and to make it more useful and productive by determining the effects of emotional intelligence and teachers' self-efficacy. Two essential constructs: one from the psychological attributes and the other from the professional expertise. These are also crucial to foster the learners' motivation for learning, make the teaching process joyful and interesting, and learning at higher level by developing analytical reasoning, rational reasoning, and critical thinking. Such kind of teaching brings significant changes in the teaching-learning process by motivating and encouraging the learners to do work maximum for inferring from the observed phenomena. Emotional intelligence is a combination of core competencies like self-awareness, self-regulation, motivation, empathy, and social skills in an individual. These competencies are built into every individual by birth but need to be cultivated through personality development. When teachers in an education system can develop these competencies in their learners, nations become strong, progressive, and passionate. To develop the learners with these competencies. Teachers should already be aware of the significance of these competencies and be equipped with them. Teachers should already be aware of the significance of these competencies and be equipped with them. Besides these competencies, they should also have sufficient command over the strategies essential to teach students effectively, such as fostering motivation to the learners for learning new concept. Teacher educators are responsible for making the teachers able to utilize such competencies appropriately, and also competencies to empower learners to make them independent learners with the skill for continuous learning.

Teacher education is crucial for providing effective teachers to the school educational system. Its significance lies in preparing teachers for handling the school learners by providing subject knowledge, teaching skills, social and emotional competencies, and professional attitudes to make them effective teachers to make the educational practices successful. The teacher education equips the teachers to design and implement effective learning experiences by providing them with essential knowledge of teaching and learning processes, instructional strategies, educational technologies, and assessment methods. It also prepares teachers to organize and facilitate co-curricular activities, guidance and counseling services, and other educational programs that contribute to the holistic development of learners.

Besides promoting positive professional attitudes, commitment, and ethical values, Teacher education also develops social awareness and cultural sensitivity to enable the prospective teachers to foster inclusive and harmonious learning environments. Teacher education is considered a prerequisite for quality education, effective instructional practices.

The research study aims to analyze how prospective Teachers perceive emotional intelligence and how much they are able to employ it in their teaching practices. Besides having proficiency in different strategies and methodologies, a teacher should have sufficient command over the emotional intelligence competency to enhance their teaching efficacy. When prospective teachers possess high

levels of self-efficacy tend to demonstrate greater confidence in areas such as classroom management, instructional design, student engagement, and the application of innovative pedagogical approaches. Instructional Effectiveness (IE) is mostly accepted as a key factor of teacher quality and professional competence. It refers to teachers' ability to design and deliver effective lesson plans, utilize appropriate pedagogical strategies, and manage classroom activities efficiently.

Thus, the teacher education institutions should adopt more holistic frameworks aim at developing the personal, social, emotional, and professional competencies instead of applying the traditional approaches to inculcate the teachers' pedagogical skills.

Literature Review

The literature review illustrates the Emotional Intelligence, Teacher Self-Efficacy, and Instructional Effectiveness, and also describes the analysis of the Predictive Relationship of these variables. All of these competencies are effective for teaching practices and the necessary for making the teaching mechanism humanistic in education at all level. This study intends to present pragmatic confirmation concerning the force emotional intelligence and teachers' self-efficacy for instructional effectiveness and social and emotional development of learners at the school level.

In recent years, researchers have increasingly highlighted that effective teaching depends not only on pedagogical knowledge and subject expertise but also on teachers' psychological competencies, particularly Emotional Intelligence (EI) and Teacher Self-Efficacy (TSE). These constructs have been identified as important determinants of teachers' instructional effectiveness, classroom management, professional commitment, and student engagement.

Teacher quality is widely recognized as one of the most significant factors in improving students' learning outcomes and overall educational quality. In recent years, researchers have increasingly highlighted that effective teaching depends not only on pedagogical knowledge and subject expertise but also on teachers' psychological competencies, particularly Emotional Intelligence (EI) and Teacher Self-Efficacy (TSE). These constructs have been identified as important determinants of teachers' instructional effectiveness, classroom management, professional commitment, and student engagement. Bar-On (1997) introduced the concept of "emotional intelligence" and told that emotional intelligence was having traits like self-control, passion, and persistence, as well as the ability to motivate oneself. By having this ability, a person become able to understand and control his own emotions as well as the emotions of others and it make able to understand and control his connections with other people. According to (Mayer et al., 2000), it is emotional intelligence due to which a man recognizes his own and other people's emotions, to tell them apart, and to use this knowledge to guide his behavior.

Within educational settings, emotionally intelligent teachers are better able to establish positive classroom environments, manage occupational stress, build productive relationships with students, and respond effectively to classroom challenges. Consequently, emotional intelligence has emerged as an essential professional competency for teachers in contemporary educational systems (Goleman ,1995).

Problem Statement

Emotional Intelligence and Teacher Self-Efficacy are significant attributes and determinants of instructional effectiveness, which are considered crucial for imparting quality education, as it directly influences students' learning outcomes, classroom engagement, and overall academic achievement. These determinants seem to be ignored in overall teachers' professional development to seek teaching efficacy. Research suggests that personal attributes such as emotional intelligence and teacher self-efficacy play an important role in shaping teachers' instructional practices. Despite the recognized importance of these variables, empirical evidence regarding their predictive relationship with instructional effectiveness remains limited, particularly in the context of teacher education institutions in Pakistan. There is insufficient evidence regarding the relative contribution of emotional intelligence and teacher self-efficacy in predicting instructional effectiveness among prospective teachers. This gap in the literature highlights the need for a comprehensive investigation of these relationships within Pakistan's teacher education context.

Thus, the current study intends to analyze the relationship of emotional intelligence and teacher self-efficacy with instructional effectiveness and their impacts. Whether prospective teachers enrolled in teacher education institutions consider the variables as significant factors for making teachers effective for learners and education. The findings of this study are expected to provide empirical evidence for further researches in the local context.

Research Objective

1. To examine the relationship between emotional intelligence and teacher self-efficacy among prospective teachers.
2. To investigate the relationship between teacher self-efficacy and instructional effectiveness among prospective teachers.
3. To determine the predictive effect of emotional intelligence and teacher self-efficacy on instructional effectiveness among prospective teachers.

Research Question

- Do the prospective teachers' emotional intelligence and teachers' self-efficacy predict instructional effectiveness in teacher education institutions?

Research Hypotheses

- H_4: Emotional Intelligence and Teacher Self-Efficacy jointly predict instructional effectiveness among prospective teachers.

Significance of the Study

This study is significant as it provides empirical evidence for the relationships of the variables and their impacts on predicting the outcome variable: emotional intelligence and teacher self-efficacy with instructional effectiveness. Prospective teachers enrolled in teacher education institutions are selected as the population. The findings will help teacher educators and academic institutions in considering emotional competencies and self-efficacy significant for improving the instructional effectiveness of the prospective teachers and will also give insight to curriculum developers and policymakers in designing teacher education programs and professional development initiatives that strengthen these essential

competencies. Furthermore, the findings will contribute to the broader literature of research by portraying.

Scope of the study

This study is intentionally limited in scope due to its small-scale nature and focus on local context. This limited scope enables managing the study by making it doable and focused, making it error-free. Such research is essential and useful in discovering and determining the relationships and their impacts of Emotional Intelligence and Teacher Self-Efficacy on Instructional Effectiveness. Prospective Teachers Enrolled in Teacher Education Institutions in Pakistan are the population of the study.

The study is limited to selected Teacher Education Institutions in Sindh as the target population, while Teacher Education Institutions in Karachi as accessible population. Prospective Teachers Enrolled in Teacher Education Institutions in Karachi are used to select the sample. Only those Prospective Teachers who were enrolled in 3rd semester and above were liable to be part of the sample. The study collects the perceptions of those prospective teachers about their learning of emotional intelligence competency who were enrolled in the 3rd semester and above, and their self-efficacy in becoming an effective teacher as they are in the middle of their academics; their attitude and their learning both are at the middle of their professional and personal development.

Research Methodology

The research is a small-scale study conducted in selected Teacher Education institutions in Sindh. The adopted approach was quantitative as the research was carried out under the positivist paradigm. Objectivity was the adopted principle and all processes of the research remained influence- free as any kind of influences were absolutely avoided throughout the research. survey was the adopted research design. Numerical data were collected by using close-ended questionnaire based on a 5-point Likert scale prospective teachers enrolled in the Teacher education institutions to collect their perceptions of learning and attitude about the use emotional intelligence and teachers' self-efficacy.

Population

The Target population for this study includes prospective teachers in Teacher Education Institutions in Sindh. Prospective teachers in Teacher Education Institutions Karachi was selected as an accessible population to make the study do able as well as to maintain accessibility with the respondents

Sample of the Study

Teacher Education Institutions in Karachi were selected as a cluster in the first step. In second step Prospective teachers enrolled in Teacher Education Institution in Karachi were randomly from these clusters. 400 prospective teachers were selected as sample. Only those prospective teachers were selected who were enrolled in 3rd and above semesters.

Research Instrument

A closed-ended questionnaire based on 5-points Likert scale was used for collecting Prospective teachers' perceptions about their learning and beliefs for using emotional intelligence and teachers' self-efficacy for instructional effectiveness. Split-half reliability measure was used to obtain the coefficient of reliability for the instrument. The obtained coefficient of reliability of the instrument was .697 that determined the efficacy of the instrument for measuring the respondents' perceptions of learning and attitude towards the emotional intelligence and teachers' self-efficacy for instructional effectiveness.

Analysis of Closed-Ended Items

A closed-ended questionnaire was administered to prospective teachers to collect their perceptions on learning and beliefs about emotional intelligence and teachers' self-efficacy for instructional effectiveness. Collected data was numerals. Descriptive and inferential statistics were used to analyze statistically, and correlation and multiple linear regression analysis were used to test the hypotheses to predict the outcome variable "instructional effectiveness" on behalf of emotional intelligence and teachers' self-efficacy jointly.

Hypothesis 1

The hypothesis was framed to examine the prospective teachers' perceptions of their learning and attitude about Emotional Intelligence and Teacher Self-Efficacy for instructional effectiveness, and also the independent variables predicting the outcome variable.

- *$H_{1:}$ Emotional Intelligence and Teacher Self-Efficacy jointly predict instructional effectiveness among prospective teachers.*

Table 1

Descriptive Statistics

Variables	Mean	Std. Deviation	N
Instructional Effectiveness	43.64	1.278	400
Prospective Teachers' Emotional Intelligence	44.20	1.417	400
Prospective Teachers' Self-Efficacy	44.10	1.225	400

Table 1 signifies the descriptive statistics for the relationship test. The variables are presented in the first column. Means are in the second column and standard deviations in the third column. N= 400 for each group of variables is shown as the sample size in the fourth column. In the second column, the found means are 43.64, 44.20and 44.10. In the third column, the standard deviation of the variables is 1.28,1.417 and 1.225.

Table 2

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.967[a]	.935	.935	.327

a. Predictors: (Constant), Prospective Teachers' Self-Efficacy, and Prospective Teachers' Emotional Intelligence

Table 3 indicates that the regression model was statistically significant, F (2, 397) = 2860.281, p < .001. This indicates that Prospective Teachers' Emotional Intelligence and their Self-Efficacy jointly

predict the quality of the outcome variable, "Instructional Effectiveness," significantly. The obtained large sum of squares (609.838) for regression and the obtained smaller sum of squares (42.322) for residual demonstrate that the model explains most of the variation in the outcome variable "Instructional Effectiveness", while only a small proportion of its variation remains unexplained.

Table 4

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-.826	.599		-1.380	.168
	Prospective Teachers' Emotional Intelligence	.470	.017	.521	27.197	.000
	Prospective Teachers' Self-Efficacy	.537	.020	.515	26.869	

a. Dependent Variable: Instructional Effectiveness

Table 4 reveals that both prospective teachers' emotional intelligence and self-efficacy significantly predict the outcome variable, "instructional effectiveness". Emotional intelligence has a significant positive impact on instructional effectiveness (B = 0.470, β = 0.521, t = 27.197, p < .001). This indicates that a one-unit increase in emotional intelligence leads to a 0.470-unit increase in instructional effectiveness while holding self-efficacy constant. Correspondingly, self-efficacy significantly and positively predicts instructional effectiveness (B = 0.537, β = 0.515, t = 26.869, p < .001), indicating that a one-unit increase in self-efficacy increases instructional effectiveness by 0.537 units while holding the emotional intelligence constant. Based on the standardized beta coefficients, emotional intelligence (β = 0.521) is a marginally stronger predictor than self-efficacy (β = 0.515). The intercept is not statistically significant (p = .168); therefore, it does not affect the interpretation of the regression model.

Research Findings & Discussion

The following findings are based on the analysis of quantitative data inductively collected from prospective teachers enrolled in the different Teacher Education Institutions in Karachi.

The study revealed that a significant majority of prospective teachers believed in the significance of teachers' emotional intelligence and their self-efficacy and acknowledged the importance of these two attributes in maintaining instructional effectiveness as well as in enhancing it.

These findings suggest that teachers who possess higher levels of emotional intelligence and stronger beliefs in their self-efficacy utilize their capabilities in using diverse teaching methods as well as adopt different motivational techniques to make the instruction effective and stable.

The model summary shows that the predictors in the study; Teachers' emotional intelligence and self-efficacy have a direct proportion to outcome variable, "Instructional Effectiveness". The value of R^2 .935 explained that the predictors of the study, "emotional intelligence" and "self-efficacy" 93.5% variance in the "instructional effectiveness". the results described that teachers' emotional intelligence is better

predictor of instructional effectiveness which indicate that teachers' emotional intelligence is a key determinant of instructional effectiveness. Teachers with higher emotional intelligence are better able to recognize, regulate, and manage emotions, enabling them to enhance classroom instruction, build positive interpersonal relationships, and create supportive learning environments.

The findings concerning teachers' emotional intelligence show that emotional competencies are essential determinants of effective teaching. Teachers who possess higher emotional intelligence are generally better able to recognize, understand, regulate, and utilize emotions in ways that enhance classroom instruction and interpersonal relationships. Such teachers are more capable of managing classroom challenges, responding appropriately to students' emotional and academic needs, maintaining positive learning environments, and promoting student engagement. Similarly, the teachers' self-efficacy is also having significant predictive effect on effectiveness of the instruction by using their professional abilities confidently. Teachers with high self-efficacy tend to employ innovative instructional strategies, maintain higher expectations for student achievement, demonstrate greater persistence when facing instructional challenges, and remain committed to continuous professional improvement. Their confidence enables them to motivate learners effectively, manage classroom activities efficiently, and adapt teaching practices to meet diverse learning needs.

The main goal of the study was to find out the effects of Prospective Teachers' emotional intelligence and self-efficacy on the Instructional effectiveness, Findings revealed here based on testing hypotheses and results, that both are essential components of Instructional effectiveness, and have a very strong positive link, The combined regression model further indicates that emotional intelligence and self-efficacy together explain a meaningful proportion of the variance in instructional effectiveness. This finding suggests that effective teaching is not solely dependent upon subject knowledge or pedagogical skills but is also influenced by psychological and professional attributes that enable teachers to perform effectively in diverse educational settings. The results emphasize that both emotional competencies and efficacy beliefs operate simultaneously to enhance teachers' instructional practices.

Conclusion:

In conclusion, the findings of this study provide compelling empirical evidence that teachers' emotional intelligence and teachers' self-efficacy are significant predictors of instructional effectiveness. The rejection of the null hypotheses confirms that these psychological and professional attributes play the significant role in enhancing teachers' instructional practices and overall teaching performance. It is clear from the findings of the study that hardworking and sincere teachers with their profession, improve their emotionally intelligent in order to create positive learning environments, employ effective instructional strategies, engage students in meaningful learning experiences, and overcome classroom challenges successfully. These findings indicate that instructional effectiveness depends not only on pedagogical knowledge and subject expertise but also on teachers' emotional intelligence and self-efficacy. Therefore, teacher education institutions, educational leaders, and policymakers should strengthen these competencies through effective pre-service education, continuous professional development, mentoring, and supportive institutional practices to enhance teaching quality and improve educational outcomes. By focusing development of these essential competencies of prospective

teachers, educational institutions can strengthen teaching quality, improve student learning outcomes, and contribute to the broader goal of achieving excellence and sustainability in education.

Recommendations:

Following recommendations are proposed to enhance teachers' emotional intelligence, teachers' self-efficacy so that the instructional effectiveness can be enhanced in educational institutions specially in secondary schools.

1. Professional development programs should strengthen teachers' self-efficacy by providing opportunities for mentoring, collaborative learning, reflective practice, constructive feedback, and continuous professional growth.
2. Educational institutions should recognize that effective teaching requires not only academic qualifications and pedagogical expertise but also emotional competence and confidence in one's professional abilities.
3. Workshops, mentoring programs, and reflective teaching practices should be designed to strengthen teachers' instructional competence and professional self-efficacy.
4. Continuous professional development opportunities should be offered to equip teachers with innovative instructional strategies, learner-centered pedagogies, and classroom management techniques to maximize teachers' self-efficacy for classroom instructional effectiveness.
5. Teacher development policy makers should integrate these significant attributes into their policies so that the effectiveness of the educational program and institutional performance would be ensured.

Future Research Suggestions

In the future, experimental and causal-comparative research should be employed to examine strong, concrete impacts on the outcome variables. Longitudinal or mixed-method research approaches should be employed to examine the causal dynamics of the selected significant psychological and professional factors in enhancing instructional effectiveness.

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