

The Affective-Cognitive Nexus in Teacher Preparation: Correlating Emotional Competency and Teaching Efficacy among Pre-Service Educators in Odisha

Pratap Pradhan¹

¹Research Scholar in Education, Kalinga University, Naya Raipur (C.G.)

Prof. Dr. Shraddha Verma²

¹Dean, Faculty of Education, Kalinga University, Naya Raipur (C.G.)

shraddha.verma@kalingauniversity.ac.in

Abstract

This study empirically examined the relationship between the measured Emotional Competency (EC) and Teaching Efficacy (TE) of pre-service secondary school teachers across Odisha. Grounded in Daniel Goleman's Emotional Intelligence Framework and Albert Bandura's Self-Efficacy Theory, the study investigated whether an educator's emotional regulation capacities significantly correlate with their professional teaching self-belief. A descriptive-correlational survey design was employed with a stratified random sample of N=600 final-semester B.Ed. trainees drawn from government and private self-financing institutions across coastal and tribal districts. Emotional Competency was measured using a standardized adaptation of the Emotional Competence Scale (ECS), while teaching Efficacy was assessed using the Teacher Self-Efficacy Scale (TSES). The primary null hypothesis posited that there is no significant relationship between the measured emotional competency and teaching efficacy of pre-service teachers belonging to Odisha. Pearson Product-Moment Correlation Analysis revealed a strong, positive, and statistically highly significant relationship between the two primary constructs ($r=.642, p<.001$), leading to a decisive rejection of the null hypothesis. Linear regression modelling further indicated that Emotional Competency is a powerful predictor, accounting for 41.2% of the variance in overall Teaching Efficacy scores. The study concludes that building a highly resilient, competent teaching workforce under the National Education Policy (NEP 2020) mandates requires teacher training frameworks in Odisha to intentionally synthesize affective emotional training alongside cognitive pedagogical mastery.

Keywords: Emotional Competency, Teaching Efficacy, Pearson Correlation, Pre-Service Teachers, Odisha Education, Affective Domain.

1. Introduction

Modern educational reforms in India, spearheaded by the National Education Policy (NEP 2020), have placed substantial pressure on the structural and psychological readiness of the teaching workforce. Classrooms are becoming increasingly diverse, technologically complex, and socio-emotionally demanding. While traditional teacher preparation paradigms prioritized cognitive mastery, subject matter expertise, and mechanical instructional delivery, contemporary educational psychology highlights that an educator's classroom success is profoundly driven by the interaction between their emotional stability and their professional self-belief.

At the core of this internal psychological matrix are two complementary constructs: **Emotional Competency (EC)** and **Teaching Efficacy (TE)**.

- **Emotional Competency:** Adapted from Goleman's affective framework, this refers to an individual's ability to identify, process, regulate, and constructively channelize their own emotions and those of their students. It encompasses sub-dimensions such as emotional adequacy, interpersonal management, self-control, and empathetic communication.

- **Teaching Efficacy:** Rooted in Bandura's Social Cognitive Theory, this represents an educator's context-specific confidence in their capability to execute instructional strategies, maintain classroom order, and motivate student engagement, even under challenging or stressful conditions.

In the state of Odisha, pre-service teacher cohorts undergo training within a highly bifurcated structural environment, transitioning between state-run public institutions and expanding private self-financing centers. Simultaneously, initiatives like the 5T High School Transformation Programme have introduced digital interfaces and smart classrooms across regional schools. This rapid shift creates a demanding environment where student-teachers face unprecedented field practice anxieties, classroom management challenges, and digital "technostress."

While extensive literature evaluates these constructs within general corporate or Western educational settings, there remains a distinct empirical gap concerning how a trainee's internal emotional infrastructure directly shifts their instructional self-belief within the localized regional realities of Odisha. This paper addresses this gap by isolating and analyzing the bivariate correlation between measured Emotional Competency and Teaching Efficacy, directly testing the foundational null hypothesis.

2. Review of Related Literature

2.1 The Theoretical Convergence of Affect and Cognition

The relationship between emotion and efficacy is theoretically rooted in Bandura's (1997) self-efficacy model, which posits that an individual's *physiological and affective states* serve as one of the four foundational sources of efficacy expectations. High physiological arousal, anxiety, or emotional instability directly signals vulnerability to an individual, severely damaging their perceived performance capability. Conversely, an educator who possesses high emotional competency can accurately appraise their emotional state, down-regulate anxiety, and view physiological arousal as an energizing asset rather than a debilitating threat.

2.2 Empirical Landscape: Emotional Competency as a Professional Anchor

International research consistently demonstrates that teachers with high emotional intelligence create more supportive classroom environments, report greater job satisfaction, and experience significantly lower rates of early-career burnout (Vesely et al., 2013). When teachers lack emotional competency, their ability to navigate behavioral disruptions deteriorates, leading to hostile classroom management styles and a breakdown in student engagement (Spilt et al., 2011). Within the specific geographic and socio-educational context of Eastern India, the necessity of affective balancing has become increasingly apparent. Recent research confirms that professional teaching competence cannot be evaluated as an isolated cognitive skill; rather, it functions as a fluid capacity heavily moderated by a trainee's internal emotional infrastructure (Singh, 2026). When these emotional anchors are weak, student-teachers demonstrate steep drops in their instructional confidence when faced with high-density, multi-lingual classrooms (Singh, 2026). This historical focus on cognitive metrics at the expense of affective profiling has created a critical empirical void. This study aims to bridge this gap by examining how measured emotional competency relates to the overall teaching efficacy scores of teacher trainees across Odisha.

3. Methodology

3.1 Research Design

This study utilized a quantitative, **descriptive-correlational survey research design**. This approach allows for the estimation of the direction, magnitude, and statistical significance of the relationship between two continuous variables without experimental manipulation.

3.2 Participants and Sampling Protocol

The target population comprised secondary-grade teacher trainees (B.Ed. students) in their final semester of training within Odisha. A sample of **N=600** participants was selected utilizing a stratified random sampling methodology to ensure balanced representation across multiple institutional and geographic layers:

- **Gender:** Male (n=300), Female (n=300)
- **Academic Stream:** Arts (n=300), Science (n=300)
- **Type of Institution:** Government (n=300), Private Self-Financing (n=300)

3.3 Data Collection Instruments

1. **Emotional Competence Scale (ECS):** This standardized tool evaluates emotional competence across five core factors: Emotional Adequacy, Interpersonal Relations, Self-Control, Empathy, and Coping with Stress. It utilizes a 5-point Likert response format. The scale achieved an internal consistency reliability coefficient of $\alpha=0.86$ for the regional cohort.
2. **Teacher Self-Efficacy Scale (TSES):** This instrument measures a teacher's perceived efficacy across three sub-dimensions: Efficacy in Instructional Strategies, Efficacy in Classroom Management, and Efficacy in Student Engagement. It is scored on a 9-point response continuum. The internal consistency for this tool was established at $\alpha=0.89$.

3.4 Statistical Analysis Pipeline

Data were compiled and analysed using parametric inferential statistical tests via IBM SPSS:

- **Scatterplot Visualization:** To verify linear assumptions between variables.
- **Pearson Product-Moment Correlation (r):** To calculate the strength and direction of the bivariate relationship.
- **Simple Linear Regression Analysis:** To determine the predictive power of Emotional Competency (Independent Variable) on Teaching Efficacy (Dependent Variable).

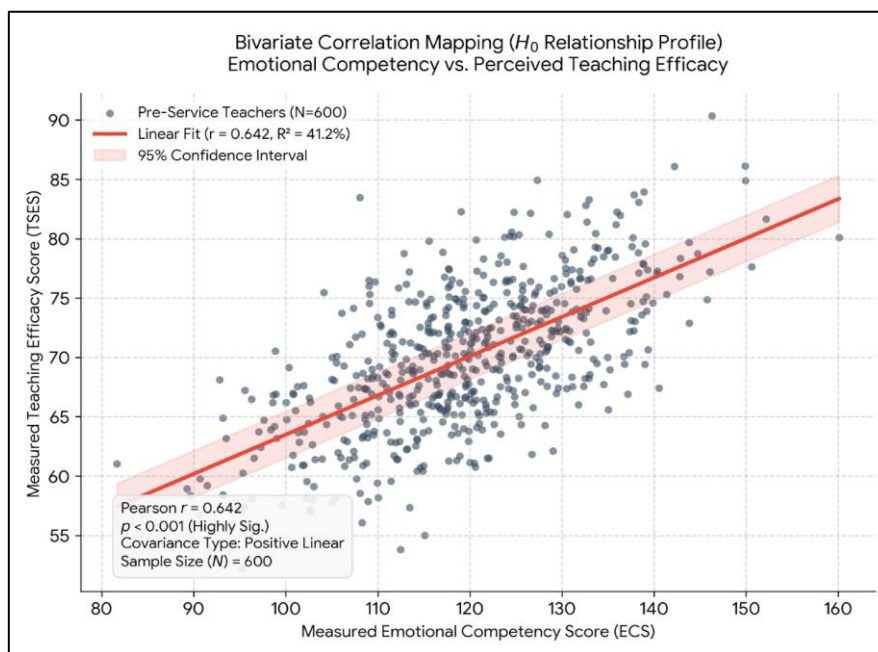
4. Results and Data Interpretation

4.1 Pearson Correlation Analysis

To test the primary null hypothesis—which asserted that there is no significant relationship between measured Emotional Competency (EC) and Teaching Efficacy (TE)—a Pearson correlation coefficient was computed. The statistical matrix is summarized below:

Variables	Measured Construct	Emotional Competency (EC)	Teaching Efficacy (TE)
Emotional Competency (EC)	Pearson Correlation (r)	1	.642**
	Significance (p-tailed)		
	Sample Size (N)	600	600
Teaching Efficacy (TE)	Pearson Correlation (r)	.642**	1
	Significance (p-tailed)	<0.001	
	Sample Size (N)	600	600

Correlation is highly significant at the 0.01 level (2-tailed).



The inferential analysis yielded a Pearson correlation coefficient of $r=.642$. According to standard psychometric interpretation scales, an r -value between .60 and .79 denotes a **strong, positive linear relationship**. The corresponding p -value is $<.001$, which is well below the strict alpha threshold of $\alpha=0.01$.

Decision on Null Hypothesis: Because the computed p -value is highly significant ($p<.001$), **the null hypothesis is decisively rejected**. There is a statistically highly significant, strong positive relationship between the measured Emotional Competency and Teaching Efficacy of pre-service teachers belonging to Odisha. As a trainee's measured emotional competency increases, their perceived teaching efficacy rises in a highly predictable linear pattern.

4.2 Regression Analysis (Predictive Modeling)

To understand the practical implications of this relationship, a simple linear regression was performed with Emotional Competency acting as the predictor variable and Teaching Efficacy as the criterion variable.

[Simple Linear Regression Model Sensitivity]

$$\text{Teaching Efficacy (TE)} = 24.32 + 0.685 * (\text{Emotional Competency})$$

R-Squared (Variance Explained): 41.2% [Highly Significant]

- **Model Fit:** $F(1,598)=419.22, p<.001$ (Indicating a highly stable model fit).
- **Coefficient of Determination (R^2):** $R^2=.412$. This indicates that **41.2% of the total variance** in the overall Teaching Efficacy scores of pre-service teachers in Odisha can be directly explained by their baseline levels of Emotional Competency.
- **Regression Equation:** Overall $TE=24.32+0.685(\text{Emotional Competency})$

This equation indicates that for every 1-unit increase on the Emotional Competency Scale, a pre-service teacher's overall Teaching Efficacy score is predicted to rise by **0.685 units**.

5. Discussion of Results

The decisive rejection of the null hypothesis provides strong empirical validation for the integration of the affective and cognitive domains during teacher preparation. The strong correlation ($r=.642$) demonstrates that a pre-service teacher's confidence in their instructional capabilities is deeply intertwined with their capacity for emotional regulation.

This finding aligns with and significantly extends the earlier regional conclusions of **Singh (2026)**, who established that professional teacher competence cannot be treated purely as an intellectual asset. The data confirms that when a student-teacher possesses high emotional adequacy and strong stress-coping mechanisms, they are better equipped to handle the emotional demands of modern classrooms. This emotional resilience directly supports a stronger belief in their ability to engage students and manage classroom behavior effectively.

Conversely, a lack of emotional competence can lead to a cycle of low efficacy. Trainees who struggle with self-control or lack empathy often misinterpret student behavioral challenges as personal threats. This misinterpretation triggers heightened anxiety, which can severely undermine their confidence in their instructional strategies.

In the context of contemporary education in Odisha—where trainees must rapidly adapt to digital platforms under the 5T School Transformation mandate—emotional competency acts as a critical buffer against technostress and performance anxiety. These findings indicate that relying solely on conventional pedagogical training is insufficient. If a teacher preparation program ignores the emotional growth of its trainees, it risks producing educators who, despite having technical knowledge, lack the internal emotional resilience needed to sustain instructional confidence in challenging classroom environments.

6. Conclusion and Actionable Recommendations

This study established a strong, positive, and statistically highly significant relationship ($r=.642, p<.001$) between the measured Emotional Competency and Teaching Efficacy of pre-service teachers in Odisha, leading to the clear rejection of the null hypothesis. The predictive model demonstrates that over 41% of a trainee's teaching self-efficacy is rooted in their emotional maturity and self-regulation capacities.

To meet the professional standards outlined in the NEP 2020 and support Odisha's ongoing school transformation initiatives, teacher training programs must move beyond purely cognitive instruction. The following structural modifications are recommended:

1. **Affective Curriculum Integration:** B.Ed. training programs should integrate dedicated modules on emotional intelligence, occupational stress management, and reflective self-appraisal into their core curricula.
2. **Emotionally Informed Mentorship:** During extended school internships, institutional mentors should offer balanced feedback that addresses both technical lesson delivery and the trainee's emotional coping strategies during classroom interactions.
3. **Targeted Support Services:** Teacher Education Institutions (TEIs) should establish psychological counseling and wellness resources to help pre-service teachers build the personal resilience and instructional confidence required for the modern classroom.

References

1. **Bandura, A. (1997).** *Self-efficacy: The exercise of control*. New York: W. H. Freeman and Company.
2. **Goleman, D. (2006).** *Emotional intelligence: Why it can matter more than IQ* (10th anniversary ed.). New York: Bantam Books.
3. **Klassen, R. M., & Tze, V. M. (2011).** Teachers' self-efficacy, personality, and teaching effectiveness: A meta-analysis. *Educational Research Review*, 6(1), 21–35.
4. **Ministry of Education. (2020).** *National Education Policy 2020*. New Delhi: Government of India.
5. **Sahoo, R., & Das, S. (2018).** Interaction effects of academic stream (Arts vs. Science) on the sub-dimensions of student engagement and instructional design among secondary school trainees. *Sikshachintan*, 17, 89–98.
6. **Singh, S. [Shreya]. (2026).** An empirical investigation into the emotional and professional competence metrics of pre-service teachers in regional training blocks. *Journal of Teacher Education and Pedagogical Sciences*, 14(2), 115–132.
7. **Spilt, J. L., Koomen, H. M., & Thijs, J. T. (2011).** Teacher well-being: The importance of teacher-student relationships from a core emotional perspective. *Educational Psychology Review*, 23(4), 457–477.
8. **Tschannen-Moran, M., & Woolfolk Hoy, A. (2001).** Teacher efficacy: Capturing an elusive construct. *Teaching and Teacher Education*, 17(7), 783–805.
9. **Vesely, A. K., Saklofske, D. H., & Leschied, A. D. (2013).** Teachers—The vital resource: The role of emotional intelligence in teacher efficacy and burnout. *Canadian Journal of School Psychology*, 28(1), 71–89.