

## Humanizing Artificial Intelligence In Education: The Central Role Of Teachers

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### Abstract

The rapid advancement of Artificial Intelligence (AI) in education has transformed teaching-learning processes by enabling personalized instruction, automated assessment, and data-driven decision-making. However, the effectiveness of AI in education largely depends on human mediation, particularly the role of teachers. This study examines humanizing artificial intelligence in education by emphasizing teachers' emotional intelligence, teacher effectiveness and teacher self-efficacy as essential human competencies that enable meaningful human-AI collaboration. Using a descriptive survey and correlational research design, data were collected from 300 higher secondary school teachers in the Kakching and Thoubal districts of Manipur. Standardized tools were employed to measure emotional intelligence, teacher effectiveness, and teacher self-efficacy. The findings revealed a significant positive relationship between emotional intelligence and both teachers' effectiveness and self-efficacy. The study highlights that emotionally intelligent, effective, and self-efficacious teachers play a central role in humanizing AI-driven education by ensuring ethical decision-making, emotional support, and meaningful learning experiences.

### Keywords

Artificial Intelligence in Education, Emotional Intelligence, Teacher Effectiveness, Teacher Self-Efficacy, Human-AI Collaboration

## INTRODUCTION

The integration of Artificial Intelligence (AI) into education marks a significant shift in how teaching and learning are organised. AI has become an influential force in modern education, offering data-driven insights, adaptive platforms, and automated assessment systems. AI-driven tools now assist in lesson planning, assessment, learning analytics and personalised instruction. While these technologies enhance efficiency and access, they cannot replace the human qualities grounded in emotional connection, ethical reasoning and social interaction that lie at the heart of education. In this evolving landscape, effective human-AI collaboration depends largely on the role played by teachers.

Humanizing artificial intelligence in education requires teachers who can balance technological tools with emotional sensitivity and pedagogical judgment. Teachers play a pivotal role in mediating AI-driven processes, ensuring that technology enhances learning without diminishing human relationships. Emotional intelligence, teacher effectiveness, and teacher self-efficacy emerge as critical human attributes that enable teachers to guide students meaningfully in AI-supported learning environments. Although AI can process large volumes of data and provide instant feedback, it lacks emotional understanding, moral reasoning, and contextual sensitivity. Teachers, therefore, remain indispensable in interpreting AI-generated information and applying it in ways that respect students' emotional needs, cultural backgrounds, and individual differences. This human judgement ensures that technology supports learning without undermining student well-being.

Emotional intelligence plays a crucial role in successful human-AI collaboration. Emotionally intelligent teachers are better equipped to manage the emotional impact of

technology-rich classrooms, such as student anxiety, reduced social interaction, or over-dependence on digital tools. By demonstrating empathy, self-regulation, and emotional stability, teachers create a balanced learning environment where AI enhances instruction without replacing human connection.

### **Objectives of the Study**

The study was undertaken with the following objectives:

1. To determine the relationship between emotional intelligence and teacher effectiveness.
2. To determine the relationship between emotional intelligence and teacher self-efficacy.
3. To examine the role of teachers' emotional intelligence, effectiveness, and self-efficacy in humanizing AI-supported educational practices.

### **Hypotheses of the Study**

The following alternative hypotheses were formulated:

1. There exists a significant positive relationship between emotional intelligence and teacher effectiveness.
2. There exists a significant positive relationship between emotional intelligence and teacher self-efficacy.

## **SIGNIFICANCE OF THE STUDY**

In an era of rapid digital transformation, the study holds considerable significance by emphasizing the human dimensions of teaching. AI can enhance instructional efficiency, but it cannot replace emotional understanding, ethical sensitivity, or interpersonal relationships. This study is significant as it emphasizes the need to humanize AI in education by foregrounding the central role of teachers and their emotional and professional competencies. The study highlights emotional intelligence as a critical human attribute that enables teachers to manage emotions, foster empathy, and create emotionally supportive learning environments in AI-enabled classrooms. By establishing a positive relationship between emotional intelligence, teacher effectiveness, and teacher self-efficacy, the study underscores that technological advancement alone cannot ensure educational quality without emotionally competent teachers. From a professional perspective, the study contributes to the understanding of teacher effectiveness in technology-rich educational settings. It demonstrates that effective teaching in the age of AI requires not only pedagogical and technological skills but also emotional balance, ethical judgment, and interpersonal sensitivity. The findings provide empirical support for redefining teacher effectiveness beyond traditional instructional roles.

## **METHODOLOGY**

The study employed a descriptive survey method with a cross-sectional and correlational research design. This approach was considered appropriate to analyse the interrelationships between emotional intelligence and teacher effectiveness, and emotional intelligence and teacher self-efficacy.

### **Population and Sample of the Study**

The population of the study comprised all higher secondary school teachers teaching classes XI and XII under the Council of Higher Secondary Education, Manipur, in the Kakching and Thoubal districts.

A sample of 300 teachers was selected using stratified random sampling, based on type of institution (government and private) and gender. The sample included teachers from 24 higher secondary schools, ensuring adequate representation of demographic categories.

## Tools Used

The following standardized tools were used for data collection:

- Emotional Intelligence Scale by Anukool Hyde, Upinder Dhar and Sanjyot Pethe
- Teacher Effectiveness Scale by Umme Kulsum
- Teacher Self-Efficacy Scale by Ashraf and Jamal
- School Background and Teachers' Information Sheet (self-developed)

### 1. Emotional Intelligence Scale (EIS):

This emotional intelligence tool was developed by Anukool Hyde, Upinder Dhar and Sanjyot Pethe. It has ten factors. They are self-awareness, empathy, self-motivation, emotional stability, managing relations, integrity, self-development, value orientation, commitment, and altruistic behaviour. It has consisted of a 5-point scale of 1- strongly disagree, 2- disagree, 3-uncertain, 4-agree, and 5-strongly agree.

### 2. Teacher Effectiveness Scale (TES):

The teacher effectiveness scale developed by Dr Umme Kulsum has been used to determine teacher effectiveness. It has 60 items and is administered on five areas/dimensions, namely-

1. Preparation and planning for teaching,
2. Classroom management,
3. Knowledge of subject matter, its delivery, and presentation, including B.B summary,
4. Teacher's characteristics, and
5. Interpersonal relations.

### 3. Teacher Self-Efficacy Scale (TSES-ANJS):

The Teacher Self-Efficacy Scale developed by Nahid Ashraf and Sajid Jamal has been used to determine teacher self-efficacy. It has 48 items and it is administered on six dimensions: Self-motivation, Commitment, Coping with Challenges, Decision-making, Classroom Instruction and School Climate.

## Statistical Techniques Used

The collected data were analyzed using the following statistical technique:

- Karl Pearson's Product Moment Correlation was used to determine relationships among variables

## Data Analysis and Interpretation

**Testing of Hypothesis No. 1: There exists a positive correlation between emotional intelligence and teacher effectiveness in higher secondary school teachers.**

**Table 1 Indicating Karl Pearson's Coefficient Correlation between the ten dimensions of emotional intelligence and teacher effectiveness**

	Dimensions of Emotional Intelligence	Product Moment Correlation
1	Self-Awareness	.210**
2	Empathy	.333**
3	Self-Motivation	.215**
4	Emotional Stability	.256**
5	Managing Relations	.125*
6	Integrity	.168**
7	Self-Development	.314**
8	Value Orientation	.159**
9	Commitment	.225**

10	Altruistic Behaviour	.198**
Overall Emotional Intelligence		.355**

**\*\*Correlation is Significant at the 0.01 level (2-tailed)**

### Interpretation of Result

The above table shows a positive correlation between the dimensions of emotional intelligence, i.e., self-awareness, empathy, self-motivation, emotional stability, integrity, self-development, value orientation, commitment and altruistic behaviour and teacher effectiveness at 0.01 levels. Further, one dimension of emotional intelligence, i.e., managing relations, is found to have a significant relationship with teacher effectiveness at 0.05 levels. Moreover, overall emotional intelligence was positively correlated with teacher effectiveness among the teachers of higher secondary schools in Kakching and Thoubal Districts, Manipur ( $r = .355$ ) at 0.01 levels.

Hence, it can be concluded that teachers' emotional intelligence is significantly related to teacher effectiveness. As such, the research hypothesis, "There exists a positive correlation between emotional intelligence and teacher effectiveness in higher secondary school teachers" is accepted.

**Testing of Hypothesis No. 2: There exists a positive correlation between emotional intelligence and teacher self-efficacy in higher secondary school teachers.**

**Table 2**

**Indicating Karl Pearson's Coefficient Correlation between the Ten Dimensions of Emotional Intelligence and Teacher Self-Efficacy**

Sl. No.	Dimensions of Emotional Intelligence	Product Moment Correlation
1	Self-Awareness	.366**
2	Empathy	.229**
3	Self-Motivation	.309**
4	Emotional Stability	.325**
5	Managing Relations	.168**
6	Integrity	.195**
7	Self-Development	.268**
8	Value Orientation	.146*
9	Commitment	.278**
10	Altruistic Behaviour	.154**
Overall Emotional Intelligence		.418**

**\*\*Correlation is Significant at 0.01 levels (2-tailed) \*Correlation is Significant at 0.05 levels (2-tailed)**

### Interpretation of Result

The above table shows a positive correlation between the dimensions of emotional intelligence, i.e., self-awareness, empathy, self-motivation, emotional stability, managing relations, integrity, self-development, altruistic behaviour and commitment and teacher self-efficacy at 0.01 levels. Further, one dimension of emotional intelligence, i.e., value orientation, is found to have a significant relationship with teacher self-efficacy at 0.05 levels. Moreover, the overall emotional intelligence was positively correlated with teacher self-efficacy among the teachers of higher secondary schools in Kakching and Thoubal Districts, Manipur ( $r = .418$ ) at 0.01 levels.

Hence, it can be concluded that teachers' emotional intelligence has a significant relationship with teacher self-efficacy. As such, the research hypothesis, "There exists a positive correlation between emotional intelligence and teacher self-efficacy in higher secondary school teachers" is accepted.

### **Main Findings**

➤ There was a positive correlation between overall emotional intelligence and teacher effectiveness ( $r = .355$ ) at 0.01 levels. Thus, there is a significant relationship between teachers' emotional intelligence and their effectiveness of higher secondary schools in Kakching and Thoubal Districts. Therefore, the study's hypothesis, **"There exists a positive correlation between emotional intelligence and teacher effectiveness in higher secondary school teachers"**, is accepted. So, emotional intelligence plays a crucial role in teacher effectiveness. Educators with high emotional intelligence can navigate the complexities of the classroom, demonstrating empathy, understanding and effective communication. This enhances their ability to connect with students, handle classroom dynamics and develop an optimistic knowledge environment.

➤ The findings showed the positive correlation between the dimensions of emotional intelligence and teacher self-efficacy of higher secondary school teachers in Kakching and Thoubal Districts, Manipur ( $r = .418$ ) at 0.01 levels. So, there is a significant relationship between the two variables. The research hypothesis, **"There exists a positive correlation between emotional intelligence and teacher self-efficacy in higher secondary school teachers"** is accepted. Hence, emotional intelligence is closely tied to teacher self-efficacy. Educators with high emotional intelligence often possess a strong sense of self-awareness and the ability to regulate emotions. This, in turn, contributes to greater confidence in their teaching abilities and a heightened belief in their capacity to impact students positively.

### **Role of Teachers' Emotional Intelligence, Effectiveness, and Self-efficacy in Humanizing AI-Supported Educational Practices**

#### **1. Strengthening Emotional Intelligence among Teachers**

Teachers should be provided with regular training programmes to enhance emotional awareness, empathy, and emotional regulation. High emotional intelligence enables teachers to address students' emotional needs in AI-supported classrooms and prevent emotional detachment caused by excessive technology use.

#### **2. Balancing AI Use with Human Interaction**

Teachers should consciously balance AI-based instruction with meaningful face-to-face interactions. By maintaining personal connections with students, teachers ensure that learning remains emotionally supportive and socially engaging.

#### **3. Integrating AI with Pedagogical Effectiveness**

Teachers should use AI tools as supportive resources rather than as substitutes for teaching. Effective teachers can integrate AI-generated insights into lesson planning, assessment, and feedback while retaining pedagogical control and instructional purpose.

#### **4. Enhancing Teacher Self-Efficacy through Professional Development**

Continuous professional development programmes focusing on AI literacy and emotional competence should be organized to strengthen teacher self-efficacy. Confident teachers are more willing to adopt AI tools and adapt to technological innovations.

#### **5. Encouraging Reflective Teaching Practices**

Teachers should be encouraged to reflect on their emotional responses, teaching strategies, and AI integration practices. Reflective teaching enhances self-efficacy and ensures that AI use aligns with students' learning needs.

#### **6. Supporting Inclusive and Learner-Centred Classrooms**

Emotionally intelligent and effective teachers can use AI to address diverse learning needs while ensuring inclusivity. Teachers should adapt AI tools to support slow learners, disadvantaged students, and those requiring emotional support.

### **7. Positioning Teachers as Human Mediators of AI**

Teachers should be recognized as mediators who interpret, contextualize, and humanize AI outputs. Their emotional intelligence, effectiveness, and self-efficacy ensure that AI serves educational goals grounded in human values.

## **CONCLUSION**

The study concludes that artificial intelligence can enhance education only when guided by strong human values and professional judgment. Teachers remain the central agents in humanizing AI by integrating emotional intelligence, pedagogical effectiveness, and professional confidence into technology-supported classrooms. Emotionally intelligent teachers ensure ethical decision-making, emotional well-being, and inclusive learning environments. Teacher effectiveness enables meaningful integration of AI into pedagogy, while teacher self-efficacy fosters confidence in adapting to technological change. Together, these qualities ensure that AI serves as a tool for human development rather than a replacement for human interaction. Strengthening teachers' emotional intelligence, effectiveness, and self-efficacy is therefore essential for achieving balanced and humane AI integration in education. This study reaffirms that the successful integration of AI in education depends on the extent to which human values are preserved and strengthened through the central role of teachers.

The findings highlight that teachers' emotional intelligence, effectiveness, and self-efficacy are crucial in humanizing AI-supported educational practices. Emotional intelligence enables teachers to understand and respond to students' emotional needs, maintain empathy, and foster supportive learning environments. Teacher effectiveness ensures the meaningful integration of AI tools into pedagogy, while teacher self-efficacy empowers educators to adapt confidently to technological innovations. The study also emphasizes that AI functions best as a supportive educational tool rather than a replacement for human agency. Teachers act as mediators who interpret AI-generated insights, exercise ethical judgment, and contextualize technology use according to learners' needs. Their emotional and professional competencies ensure that AI enhances learning without compromising inclusivity, emotional well-being, or moral development.

In conclusion, humanizing artificial intelligence in education requires sustained investment in teacher development. Strengthening teachers' emotional intelligence, professional effectiveness, and self-efficacy is essential for aligning technological advancement with educational values. By placing teachers at the centre of AI-supported education, education systems can ensure balanced, ethical, and meaningful learning experiences that uphold the human essence of teaching and learning.

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