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STUDY ON THE IMPACT OF ARTIFICIAL INTELLIGENCE ON EMOTIONAL INTELLIGENCE AND SELF-EFFICACY OF SECONDARY SCHOOL TEACHERS

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Abstract:

The growing influence of Artificial Intelligence (A.I.) in the educational sector is leading to significant changes in the role of teachers. The aim of this research is to study the impact of Artificial Intelligence (AI) on the emotional intelligence and self-efficacy of secondary school teachers. This research reviews the use of AI technology in teaching processes, its impact on mental health, and the changes occurring in teaching methods. The primary objective of this study is to examine the effect of AI on the emotional intelligence and self-efficacy of secondary school teachers. The research explores how AI technology impacts teacher's emotional management, interpersonal relationships, and self-confidence.

In this research, a study was conducted with 100 teachers from secondary schools in the Mumbai division, analyzing the impact of Artificial Intelligence on their emotional intelligence and self-efficacy. Out of these, 50 teachers used AI-based tools, while 50 teachers used traditional teaching methods. The research methodology employed is descriptive and survey-based.

The study showed a positive impact of Artificial Intelligence on the emotional intelligence and self-efficacy of teachers. The research indicates that AI can reduce stress and make work easier for teachers, but it can also have consequences related to job insecurity, technical adaptation, and emotional connection with students.

Keywords :Artificial Intelligence, Emotional Intelligence, Self-Efficacy & Secondary School Teachers

Introduction:

Teachers play a crucial role in shaping society, the nation, and the entire world, and the standard of a school depends on the quality of its teachers. Artificial Intelligence (AI) has become an important tool in the field of education. AI technology is enhancing teaching, assessment, and administrative efficiency. However, it is essential to understand how AI impacts teachers' emotional intelligence (EI) and self-efficacy.

Artificial Intelligence :

Artificial Intelligence (AI) refers to the ability of computer systems to replicate human intelligence functions. It includes aspects like learning (Machine Learning), reasoning, problem-solving, understanding language, and decision-making. AI-based tools, such as Chat GPT, Google Board, and AI Tutors, help teachers learn new methods of instruction.

Emotional intelligence :

By understanding a teacher's emotions and managing them effectively, we can say that the teacher possesses emotional intelligence. Emotional intelligence refers to the ability to recognize one's own emotions, manage them, and understand the emotions of others.

Self-efficacy of Teachers :

Teacher self-efficacy refers to the ability to guide students toward success, assist them in learning, create effective programs for students, enhance emotional intelligence, and meet the needs of students. When a

teacher is emotionally mature, they will be able to view situations from both positive and negative perspectives. This ability to convert negative thoughts into positive ones will increase their capacity to perform tasks effectively.

Importance of the Research :

If teachers possess emotional intelligence, it can help foster positive thinking and a positive outlook on life among students. It will empower teachers to bring about changes in existing situations and contribute to the emotional development of students. The emotional intelligence of teachers certainly impacts their self-efficacy, which in turn directly affects their teaching. Additionally, it can help teachers improve their self-efficacy in terms of student-related work, teaching methods, and other educational tasks. Teachers' emotional intelligence helps establish positive relationships with students in the classroom, as well as improves stress management and decision-making.

AI can assist teachers in making data-driven decisions and help them progress in their teaching practices with the help of new technologies. However, AI may also generate feelings of insecurity among some teachers. There is a risk that AI-based teaching might reduce human interaction between teachers and students.

Statement of the Problem :

A study on the impact of Artificial Intelligence on the emotional intelligence and self-efficacy of secondary school teachers.

Operational Definitions of Variables in the Research :

1. **Artificial Intelligence (AI):**
    AI refers to developing computer systems that can think, learn, and make decisions like humans. It is based on data analysis, machine learning, natural language processing (NLP), and automation.

2. **Emotional Intelligence:**
    A teacher or individual with emotional stability and emotional intelligence always manages their emotions while interacting with society. Such individuals are self-motivated and adaptable in any situation.

3. **Self-Efficacy:**
    Self-efficacy helps teachers understand their professional goals, the values they hold as educators, their strengths, and limitations. Teachers with self-efficacy are constantly striving for self-improvement through continuous evaluation of their teaching performance.

4. **Secondary School Teacher:**
    A person who teaches students at the secondary level i.e. from class VIII to X in aided or unaided schools through Marathi, Hindi or English medium

Research Objectives :

1. To compare teachers who use Artificial Intelligence with those who do not.
2. To examine the impact of Artificial Intelligence on teachers' emotional intelligence.
3. To study the impact of Artificial Intelligence on teachers' self-efficacy.

Scope of the Research :

The scope of the research needs to be defined to ensure it is comprehensive and effective. It includes the geographical area, the population involved, and the timeframe of the study. The research will focus on:

1. The study of the impact of Artificial Intelligence on emotional intelligence and self-efficacy among teachers.
2. A comparison between teachers using AI tools and those who do not.
3. The inclusion of teachers working in secondary schools.
4. Only government-aided and unaided secondary schools in the Mumbai district will be included.

Limitations of the Research :

1. The research will include only teachers from Marathi and English medium secondary schools affiliated with the Maharashtra State Secondary

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Education Board. Teachers from Urdu, Gujarati, and other medium schools, as well as from ICSE and CBSE schools, will not be included.

2. The study will focus on secondary school teachers and will not extend to primary or higher education levels.

3. Teachers using and not using Artificial Intelligence in their teaching will be considered for the study.

Research Sample :

The present study included 100 teachers from aided and unaided schools affiliated to the Maharashtra State Board of Secondary and Higher Secondary Examinations (S.S.C.) in Greater Mumbai. A three-stage sampling technique was used to select the sample in the present study. In this, 50 teachers were included who used AI-based tools and 50 teachers who taught in the traditional method.

Research Tools :

The following tools were used for the study:

1. **Teacher Emotional Intelligence Scale** by Nahid Ashraf & Sajid Jamal

2. **Self-Efficacy Scale for Teachers** by Dr. Sushma Talesara & Dr. Farzana Irfan

Research Methodology :

This study used a **mixed-methods approach.**

Questionnaire: In this research, a questionnaire was used to collect information from 100 secondary school teachers.

Survey: 100 secondary school teachers were asked questions about the impact of AI. Interviews: Teachers were interviewed directly to learn about their experiences with AI.

Case Studies: Changes in teachers' emotional intelligence and self-efficacy were studied in schools where AI systems were used. in teachers' emotional intelligence and self-efficacy.

Research Procedure :

Since this is an exploratory research study, the researcher used the validated scales for measuring **emotional intelligence in teachers by Nahid Ashraf & Sajid Jamal and self-efficacy in teachers by Dr. Sushma Talesara & Dr. Farzana Irfan** for data collection. Additionally, surveys, interviews, and case studies were used to study the changes in emotional intelligence and self-efficacy of teachers in schools where AI systems are being used. For this research paper, the impact of artificial intelligence on the emotional intelligence and self-efficacy of 100 teachers from secondary schools in the Mumbai region was studied. The study adopts a mixed-method approach, where both qualitative and quantitative data collection methods are used. After collecting all the information through the responses in the questionnaires, the sum of each teacher's scores was filled in the score sheet as per the guidelines, and a table of the standardized scores for all teachers was created.

Conclusion :

1. **Emotional Intelligence and Self-Efficacy of Teachers Using Artificial Intelligence:**

Emotional Intelligence		
Scores	No. of Teachers	Interpretation
121-130	9	Below Average
131-140	10	Average
141-150	23	High
151-160	8	Extremely High

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Self-Efficacy		
Scores	**No. of Teachers**	**Interpretation**
55-60	5	Below Average
60-55	10	Average
65-70	26	High
70-75	9	Extremely High
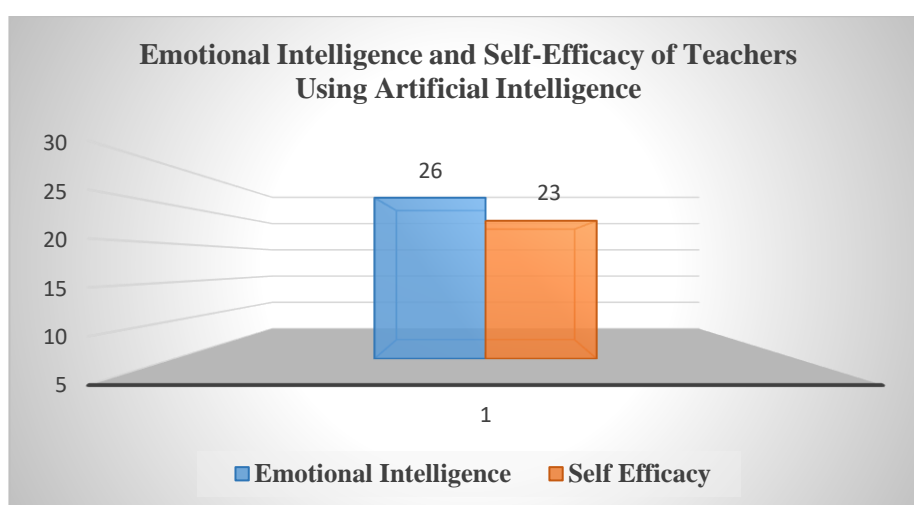
2. **Emotional Intelligence and Self-Efficacy of Teachers Not Using Artificial Intelligence:**

Emotional Intelligence		
Scores	**No. of Teachers**	**Interpretation**
121-130	10	Below Average
131-140	21	Average
141-150	16	High
151-160	7	Extremely High

Self-Efficacy		
Scores	**No. of Teachers**	**Interpretation**
55-60	5	Below Average
60-55	23	Average
65-70	20	High
70-75	4	Extremely High

Emotional Intelligence and Self-Efficacy of Teachers Not Using Artificial Intelligence
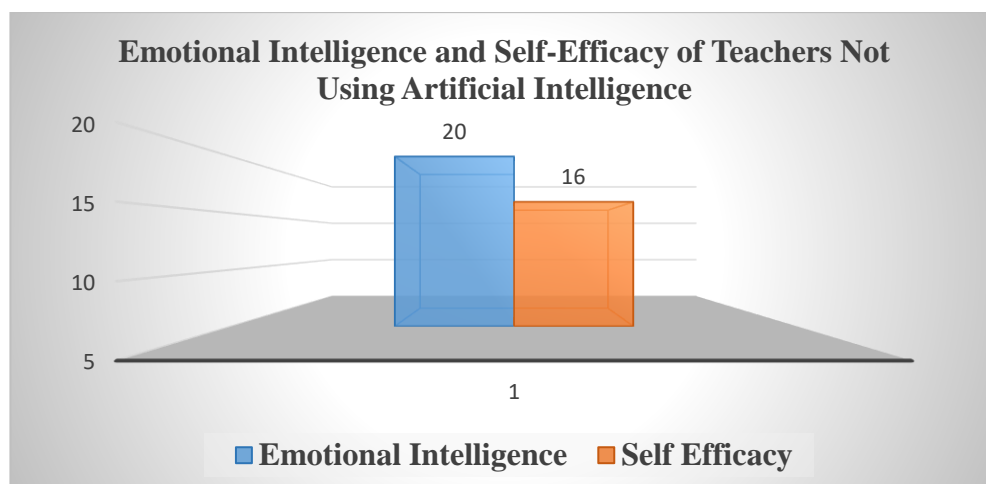
3. **Comparison of Emotional Intelligence and Self-Efficacy of Teachers Using and Not Using Artificial Intelligence:**

Emotional Intelligence				
Scores	Emotional Intelligence of Teachers Using Artificial Intelligence		Self-Efficacy of Teachers not Using Artificial Intelligence	
	No. of Teachers	Interpretation	No. of Teachers	Interpretation
121-130	9	Below Average	10	Below Average
131-140	10	Average	21	Average
141-150	23	High	12	High
151-160	8	Extremely High	7	Extremely High

Self Efficacy				
Scores	Emotional Intelligence of Teachers Using Artificial Intelligence		Self-Efficacy of Teachers not Using Artificial Intelligence	
	No. of Teachers	Interpretation	No. of Teachers	Interpretation
55-60	5	Below Average	5	Below Average
60-55	10	Average	23	Average
65-70	26	High	18	High
70-75	9	Extremely High	4	Extremely High

Comparison of Emotional Intelligence and Self-Efficacy of Teachers Using and Not Using Artificial Intelligence
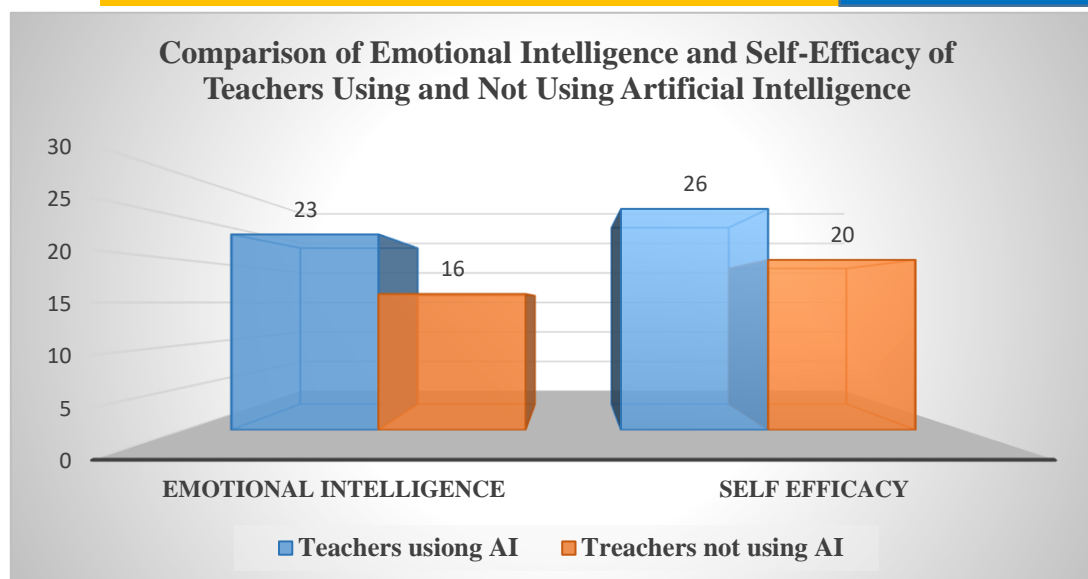
Conclusions Derived from the Above Table :

The impact of AI in the education sector is significant. If used correctly, it can enhance teachers' emotional intelligence and self-efficacy. However, it is essential to avoid excessive use of AI and the lack of human interaction. Therefore, it is crucial to train teachers alongside AI technology. In the future, it will be necessary to study the long-term effects of AI on education.

Effects of AI on Teachers' Emotional Intelligence:

- Improved time management with the help of AI has led to an increase in positive emotional intelligence.
- AI automates administrative tasks, allowing teachers to spend more time with students.
- AI-based training programs help teachers acquire new skills.
- Overuse of AI can reduce teacher-student interaction, limiting opportunities to build a friendly relationship with students.
- Constant changes and technical challenges brought by AI can cause stress for some teachers.
- Some teachers fear that AI will reduce their role in the classroom.
- When AI systems are not used properly, some teachers experience a decrease in confidence.

- Teachers using AI tend to experience higher levels of emotional stress because they have to adapt to new technologies.

Effects of AI on Teachers' Self-Efficacy:

- AI-based analytics enable teachers to make better decisions about student progress.
- Teachers using AI-based tools are more confident in their teaching.
- Some teachers fear that AI may reduce their need, lowering their self-efficacy.
- AI is changing traditional teaching methods, leading some teachers to feel insecure.
- The complexity of AI may cause some teachers to feel less confident in their own skills.

There is a mixed effect of artificial intelligence on the emotional intelligence and self-efficacy of secondary school teachers. With appropriate training and ethical, safe use policies for AI, these effects can be more positive.

Conclusions & Recommendations :

1. **Organizing AI Training Workshops** – Teach teachers how to use AI effectively.
2. **Adopting Blended Teaching Models** – Use AI as an aid to give more importance to the role of teachers.

3. **Mental Health Support Programs** – Provide counseling facilities to teachers to reduce stress caused by the effects of AI.

4. **Balancing AI's Impact in Education** – Ensure that AI's influence is balanced.

5. **AI Should Be Used as an Assistant Tool, Not as a Replacement.**

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