

Impact of Artificial Intelligence Tools in Inclusive Environment in Promoting Flexible Education

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Abstract—The transformative technology of artificial intelligence encourages learning in a flexible manner. This research examined the numerous impacts of artificial intelligence and its tools in promoting flexible learning, accessibility of equity and equality, emphasizing its potential to enhance the 21st century skills and building teaching-learning capacities of teacher educators. A survey method adopted in this study and 150 teacher educators selected as samples through simple random sampling technique from Coimbatore district. The investigator constructed and validated the questionnaire tool to collect the data. Data collected by using a questionnaire tool with 5-point likert scale and the reliability of the tool is 0.81. Data were statistically analyzed through SPSS 26 version. Descriptive means, standard deviation, percentages were employed to analyze the data. The findings of the study indicated that the artificial intelligence tools created a high impact on teacher educators in an inclusive environment. The study also suggested that the insightful implementation and ethical considerations of integrating AI into education provides sustainable flexible learning opportunities.

Index Terms—Artificial Intelligence, Artificial Intelligence Tools, Inclusive Environment, Flexible Education

I. INTRODUCTION

Collaborating on inclusive education to address major educational issues, democratizing learning options, and promoting lifelong learning at the International Conference at Geneva (2008), for sustainable development Lifelong learning for all and equal access to all levels of education to all priorities, Education is defined as “a broader concept of inclusive education,” regarded as a broad guiding idea for improving education. In the statement of William Butler Yeats, the role of innovation in education is “Education should not be the filling of a pail, but the lighting of a fire.”

Equity and equality ran in our country for many decades. The machines were helping to develop an individual with equity and equality in a new technological world. Educating an individual has changed from teaching knowledge to skills. Every individual should be free from the classroom environment and modified into an inclusive environment with the adoption of technological tools to acquire skills. Burgeoning artificial intelligence technology skilling, up-skilling, and reskilling the capacity of prospective teachers for the future world. The transformative technology of artificial intelligence enhances 21st century skills among educators. Artificial intelligence and its tools generate personalized learning and teach the application of emerging educational tools for future teachers and for nurturing new generations.

1.1 OBJECTIVES OF THE STUDY

1. To examine the impact of Artificial Intelligence Tools in Inclusive Environment

2. To develop the Flexible Education in Inclusive Environment

1.2 THEORITICAL FRAMEWORK

Sustainable development goals to Inclusive Environment

Sustainable Development Goal 4 focuses on promoting inclusive and equitable education for all, regardless of gender, disability or socio-economic status. This involves creating lifelong learning opportunities that are affordable and accessible to all, including marginalized children. To achieve this goal, it is important to establish an inclusive and flexible learning environment that can accommodate the diverse needs of all learners.

Envision 2030 aims to achieve the full inclusion of disabled children by focusing on three objectives:

1. Raising awareness about the Sustainable Development Goals (SDGs) for disabled children. 2.

intelligence. k-means clustering was used to identify different categories of students. The outcome implies that students' opinions towards writing tools driven by AI differ. Unreflective and unskeptical usage of them by certain students may result in (un)voluntary plagiarism. Some students might not use writing tools at all, possibly due to a lack of general useful learning tactics (course repeaters) as well as skepticism. Individualized teaching tactics may be useful to encourage or advise care while using these technologies, depending on the various sorts of students.

Shalini Garg and Shipra Sharma (2020) Investigated the Impact of Artificial Intelligence in Special Need Education to Promote Inclusive Pedagogy, A study examined the effects of AI on special education students. Based on qualitative study employing targeted interviews with educators and kids with special needs, the data was gathered. The information was also gathered from publications found in newspapers, journals, blogs, and academic databases such as Web of Science, Scopus, and Science Direct that were owned by EBSCO. Content analysis was used to examine the responses that were received. The study specifically looked at whether or not the topic of examining how AI affects (a) special needs education and (b) how AI supports teachers in promoting special needs education was discussed in the literature. Based on targeted interviews, the study also attempted to suggest a framework for an inclusive special need's education in the future.

III. RESEARCH METHODOLOGY

3.1 RESEARCH DESIGN

The survey method was adopted for this present study. The study used a representative sample from the population to draw conclusions based on data analysis.

3.2 POPULATION

The population of the study covered all the 300 Teacher Educators of the college of education for women, Coimbatore.

3.3 SAMPLE AND SAMPLING TECHNIQUE

Simple random sampling technique was used to select 30 teacher educators from 5 private college of

education, namely; Kasturi college of education, Dr. N G P college of education, Bishop Appasamy college of education, PPG college of education, Micheal job college of education. This created a total sample size of 150 responses. The simple random sampling procedure was used to ensure that every participant had an equal and independent chance of being selected.

3.4 RESEARCH INSTRUMENT

Impact of artificial intelligence tools questionnaire for Teacher educators in college of education. The research instrument was weighted on a five-point Likert scale of Strongly agree (4), Agree (3), Disagree (2) and Strongly Disagree (1). To determine the reliability of the instrument, it was pilot tested by administering it to 60 Teacher educators who were not part of the selected sample. The Cronbach alpha reliability method was used to ascertain the reliability of the instrument, and a reliability coefficient of 0.81 was obtained. This value was high for the instrument to be considered reliable.

3.5 METHOD OF DATA COLLECTION

Impact of artificial intelligence tools questionnaire used to collect the data from 150 teacher educators.

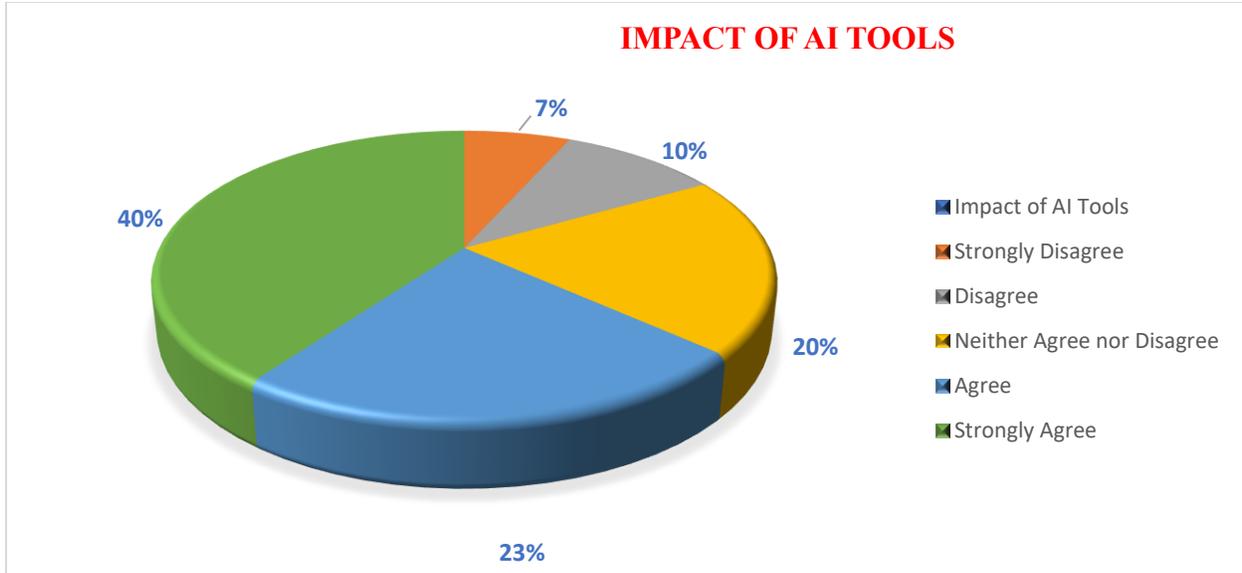
3.6 DATA ANALYSIS

Descriptive statistics means, standard deviations, frequencies, and percentages, were used for data analysis.

IV. RESULTS

The major findings of this present study are determined by the major research questions and dimensions that emerged from the data analysis.

Artificial intelligence tools application in classroom fosters student engagement and self-esteem in an inclusive environment. Utilizing interactive AI-driven tools such as chatbots and virtual assistants in inclusive settings ensure student participation and motivation. The present study highlighted that these tools made learning more interactive and accessible in teaching-learning. Survey responses highlighted that these tools made learning more interactive and accessible, particularly for adult learners balancing education with other responsibilities (Smith & Anderson, 2019).



V. DISCUSSION OF FINDINGS

The results of this study provide significant insights on how artificial intelligence (AI) will affect the long-term viability of flexible education. AI's ability to improve accessibility, personalize learning experiences, and increase engagement has been demonstrated to improve the educational outcomes of learners. In answering the research questions, these findings show how AI may revolutionize distant learning by offering individualized learning experiences that adjust to each student's requirements and preferences. To maximize AI integration, more work and legislative action are required in certain areas, as indicated by the difficulties mentioned, such as technical difficulties and privacy issues.

Real-World Effects For politicians, organizations, and educators, this study has important practical ramifications. By using AI tools, educators may improve student results by designing more individualized and engaging learning environments. To properly use new technologies, institutions should invest in AI infrastructure and train staff members. For AI to be integrated into educational settings in a fair and efficient manner, policymakers must address the ethical and technological issues surrounding it, such as data protection and technology access. Furthermore, the results imply that AI can be crucial in encouraging lifelong learning, which is necessary for education to expand sustainably. The results of the Council of

Europe's "Two clicks forward and one click back" study (Lundy et al. 2019) show that children with disabilities experience significant challenges when using digital technologies, regardless of their specific disabilities. However, there is a growing use of AI to assist students. The Stanford Encyclopedia of Philosophy (2018) includes an entry on John Dewey discussing how artificial intelligence is currently used to diagnose dyslexia (Kohli and Prasad 2010), attention deficit hyperactivity disorder (ADHD) (Anuradha et al. 2010), autism spectrum disorder (Stevens et al. 2019), and to support the inclusion of children with neurodiversity (Porayska-Pomsta et al. 2018).

VI. CONCLUSION

The present study revealed that the results elaborated a significant impact of artificial intelligence tools in an inclusive environment for flexible education. Teacher educators' use of artificial intelligence tools and strategies in an inclusive environment fosters flexibility and self-esteem as well as positive behaviour and intentions in students' academic activities. Flexibility in education strengthens the collaborative, interactive classroom climate in inclusive educational environment.

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