A SYSTEMATIC REVIEW OF EQUITY ISSUES IN EDUCATION AFTER COVID 19: CAN AI HELP BRIDGE THE LEARNING AND MENTAL HEALTH SUPPORT GAP FOR UNDERPRIVILEGED STUDENTS

Juyel Ali
Research Scholar and College Teacher
Department of Education
University of Calcutta
Kolkata, West Bengal, India.

Abstract: Education plays an eminent role for the overall development of an individual. Higher education systems not only upbringing the education system in a diverse way but also provide an important strategy to improve the system of teaching and learning. In India, during the COVID 19 pandemic, people acknowledged the importance of artificial intelligence for educational purposes. In the 21st century, the demand of AI in the educational field has increased globally. Through the use of AI, students can learn easily. The major objectives of this review study is to find out the perception of educators and students regarding the usefulness of AI in bridging educational gaps after COVID 19 pandemic, to identify the perception of parents regarding the usefulness of AI in bridging psychological gaps after COVID 19 pandemic situation and find out the learning gaps that experienced by the underprivileged learners in the post pandemic educational context. In this review study, 50 undergraduate educators, 30 parents and 50 undergraduate learners are selected as sample. The data was collected from 6 undergraduate colleges of north 24 parganas. Data was collected by a structured questionnaire. The collected data was analysed and represented by the percentage method and bar diagram. The findings revealed that 73.3% educators showed positive opinion and 26.7% educators showed negative opinions where 51.7% students showed positive opinion and 48.3% students showed negative opinions regarding the usefulness of AI in bridging educational gaps after the COVID 19 pandemic. The study opined that 76.3% parents expressed positive opinion and 23.7% parents expressed negative opinions regarding the usefulness of AI in bridging psychological gaps after the COVID 19 pandemic. The study also revealed that the underprivileged learners experienced several learning gaps in the post pandemic educational context such as interaction gaps, mental health challenges, severe inequality in educational outcomes, high dropout rate, unequal access to e learning, reduce basic skills of the learners, reduce motivation and students engagement.

Key Words: Equity issues, COVID 19, AI, Learning support, Mental health support, Underprivileged students.

Introduction

Education is a primary tool for preparing individuals for their future roles through interactive learning. Through the formal education system, students learn to communicate, cooperate, and group activities. Education plays an integral role for the modification of behavioural changes of an individual. In 2020, a pandemic situation will arrive. In this time period, every human being has been affected by its rigorous effects. COVID not only damaged the physical strength but also poses a negative effect on the mental health of human beings. According to WHO, coronavirus disease (COVID 19) is an infectious disease caused by the SARS- COVID - 2 virus. Most of the people were infected with the virus and experienced mild to moderate illness. During the pandemic, AI and online learning became more effective strategies in the teaching learning system. Several AI tools replace the traditional chalk and board system with online interactive learning. Artificial intelligence helps in making administrative tasks, curriculum design, evaluation system, and teaching learning strategies. Through the use of AI, educators can plan personalized

learning, automated grading, accessibility with tools for diverse learners, student engagement and fostering critical thinking skills. Rao et al. (2024) in their study Perceptions and challenges of online teaching and learning amidst the COVID 19 pandemic in India: a cross-sectional study with dental students and teachers, examined the perception and challenges experienced by students and teachers in the context of online education during the COVID 19 pandemic. The data was collected from 491 dental students and 132 teachers. The cross-sectional research design was used in this study. The study revealed that internet accessibility emerged as a major impediment for students, with online instructions providing more effective for theoretical subjects compared to practical ones. The study also stated that most of the teachers expressed comfort with online teaching, Sharma et al. (2024) in their study Artificial intelligence in Indian higher education institutions: a quantitative study on adoption and perceptions, investigated the role of AI in higher education in Indian universities, explored factors influencing the adoption of AI applications by stakeholders in the higher education system. The data was collected from students, academics and management staff in different higher educational institutions. The study revealed that a significant relationship between various factors, including artificial intelligence, self-efficacy, behavioral intention to adopt AI, AI adoption in higher education, perceived usefulness, perceived effectiveness, perceived organizational support, and perceived risk, Kumar et al. (2023) in their study A study on teachers' perception towards e learning adoption in higher educational institutions in India during the COVID 19 pandemic, examined the determinants of teachers' perception towards adoption of e learning in higher educational institutions in India during the pandemic. The data was collected from 1111 teachers of different higher educational institutions in India. Purposive sampling technique was used. The data was analysed by PLS-SEM (Performing Partial Least Squares Structural Equation Modelling. The study opined that perceived usefulness followed by institutional support, perceived ease of use and teacher student interaction positively and significantly impacted teachers' satisfaction, attitude, Jain et al. (2022) in their study Stimulating CSR learning collaboration by the mentor universities with digital tools and technologies - an empirical study during the COVID 19 pandemic, measured the effectiveness of collaborative learning exchanges transpired through digital tools and technologies employed by the mentor universities during COVID 19 pandemic. The data was collected through the questionnaire. Structural Equation Modelling was used to validate the model and perform regression analysis. The study revealed that the IT infrastructure support, virtual collaborative tools and future oriented technologies have a significant impact on the CSR learning outcomes of undergraduate students, Bordoloi et al. (2021) in their study Perception towards online/blended learning at the time of COVID 19 pandemic: an academic analytics in the Indian context, find out the prospects and challenges of providing online/blended learning in a country like India during and post COVID 19 situations. In this study, the academic analytics approach was used. The data was collected through a structured questionnaire from different universities and colleges regarding online/blended services. The collected data was analysed by a simple statistical tool viz percentage. The study revealed that blended learning is the only solution for providing education in the context of the 21st Century India. The extensive uses of massive open online courses, social media, online platforms during the COVID 19 pandemic, has largely opened up the minds of the information seeking people and enabling them to receive the necessary educational inputs, training and skills.

Need of the Study

The Indian higher education system is enriched with diverse curriculum design. Higher education not only brings new approaches to learning but also poses challenges such as ethical concern. In the time period of the COVID 19 pandemic, the education system has largely impacted around the world. During the pandemic, the Indian education system has experienced vigorous changes viz education system is shifted from conventional to online blended learning platforms, modified teaching learning strategies etc. In this time period around 1.3 billion learners are at risk of falling behind. Therefore, so many children around the world particularly those from financial disabled families do not have access to the computer, smartphone, internet for the educational purposes, that creates learning inequalities among them. However, many people never go back to school, that reduce educational enrolment around the world. The Indian traditional knowledge-based education system plays an eminent role in reshaping the education system globally. During the COVID 19 pandemic, the usefulness of AI was on top. Artificial intelligence plays an important role in administrative tasks, personalized learning strategies, accessibility, data driven insights etc. The rapid shift from traditional to online learning during the COVID 19 pandemic highlighted AI's practical usefulness. The perception of educators, students, and parents regarding the usefulness of AI in education

has changed during and after the COVID 19 pandemic. There have been several studies that are conducted on artificial intelligence, but what are the issues in education after COVID 19 to bridge the learning and mental health support gap for underprivileged students have not yet explored. To fulfil these gaps, the present study is needed to explore. The present study examines the perception of educators, parents and students regarding the usefulness of AI in bridging the educational and psychological gaps after the COVID 19 pandemic and find out the learning gaps experienced by underprivileged learners in the post-pandemic educational context.

Statement of the Problem

What are the equity issues in education after COVID 19: can AI help bridge the learning and mental health support gap for underprivileged students.

Research Questions

(1) What is the perception of educators and students regarding the usefulness of AI in bridging educational gaps after the COVID 19 pandemic?

(2) What is the perception of parents regarding the usefulness of AI in bridging psychological gaps after the COVID 19 pandemic?

(3) What are the learning gaps experienced by the underprivileged learners in the post pandemic educational context?

Objectives

(1) To find out the perception of educators and students regarding the usefulness of AI in bridging educational gaps after the COVID 19 pandemic.

(2) To identify the perception of parents regarding the usefulness of AI in bridging psychological gaps after the COVID 19 pandemic.

(3) To find out the learning gaps experienced by the underprivileged learners in the post pandemic educational context.

Delimitations of the Study

(1) The present review study delimits with only AI is chosen for this study.

(2) The study delimits with only mental health and learning gaps is selected for this study.

(3) The study delimits with only underprivileged students and COVID-19 is selected for this study.

(4) The study delimits with only perceptions of educators, parents, and students is selected for this study.

Methodology

Population: Several educators and learners from different undergraduate colleges of north 24 parganas were selected as population.

Sample: 50 undergraduate college educators, 50 learners and 30 parents from 6 undergraduate colleges of north 24 parganas were considered as sample of the study.

Sampling technique: Random sampling technique was used to the selection of the sample.

Tools: Data was collected through a structured questionnaire that contained 20 positive and 9 negative statements.

Data analysis: Collected data are analysed through a simple percentage method and the data illustrated by the bar diagram.

Findings of the Study

The perception of educators and students regarding the usefulness of AI in bridging educational gaps after COVID 19 pandemic

Fig: 1

The perception of educators and students regarding the usefulness of AI in bridging educational gaps after COVID-19 pandemic
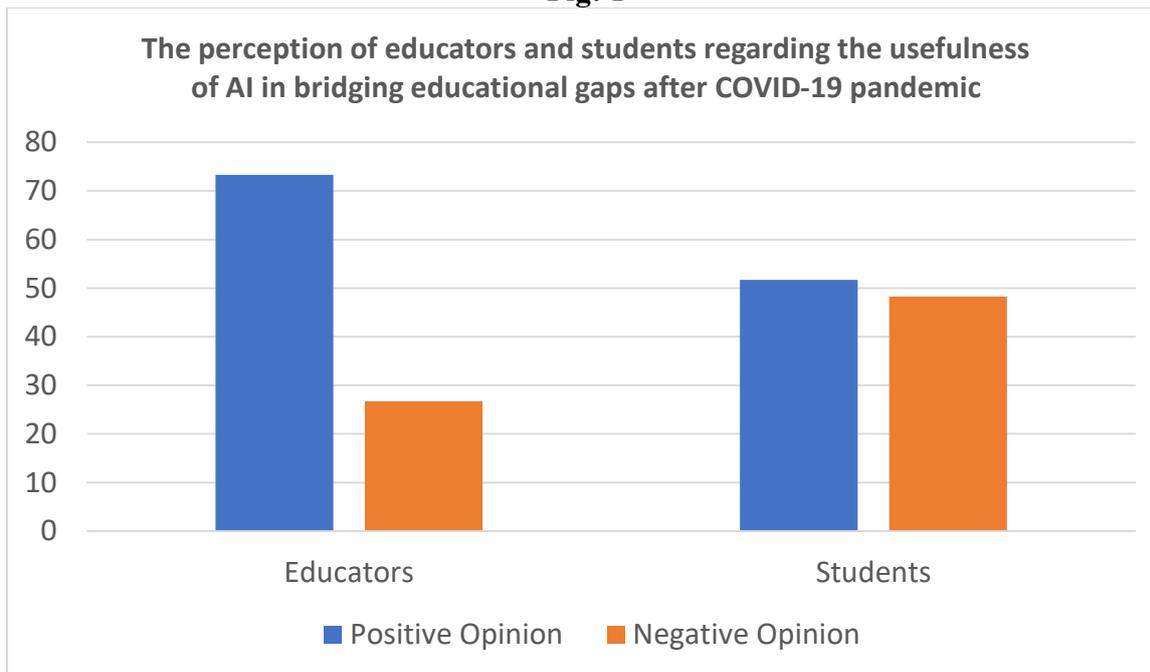
Fig:1 Shows the perception of educators and students regarding the usefulness of AI in bridging educational gaps after the COVID 19 pandemic. The data revealed that 73.3% educators express positive opinion and 26.7% educators express negative opinions regarding the usefulness of AI. 51.7% students expressed positive opinion and 48.3% students expressed negative opinions regarding the usefulness of AI in bridging educational gaps after the COVID 19 pandemic.

The perception of parents regarding the usefulness of AI in bridging psychological gaps after COVID 19 pandemic

Fig: 2

The perception of parents regarding the usefulness of AI in bridging psychological gaps after COVID 19 pandemic.

The perception of parentss regarding the usefulness of AI in bridging psychological gaps after COVID-19 pandemic
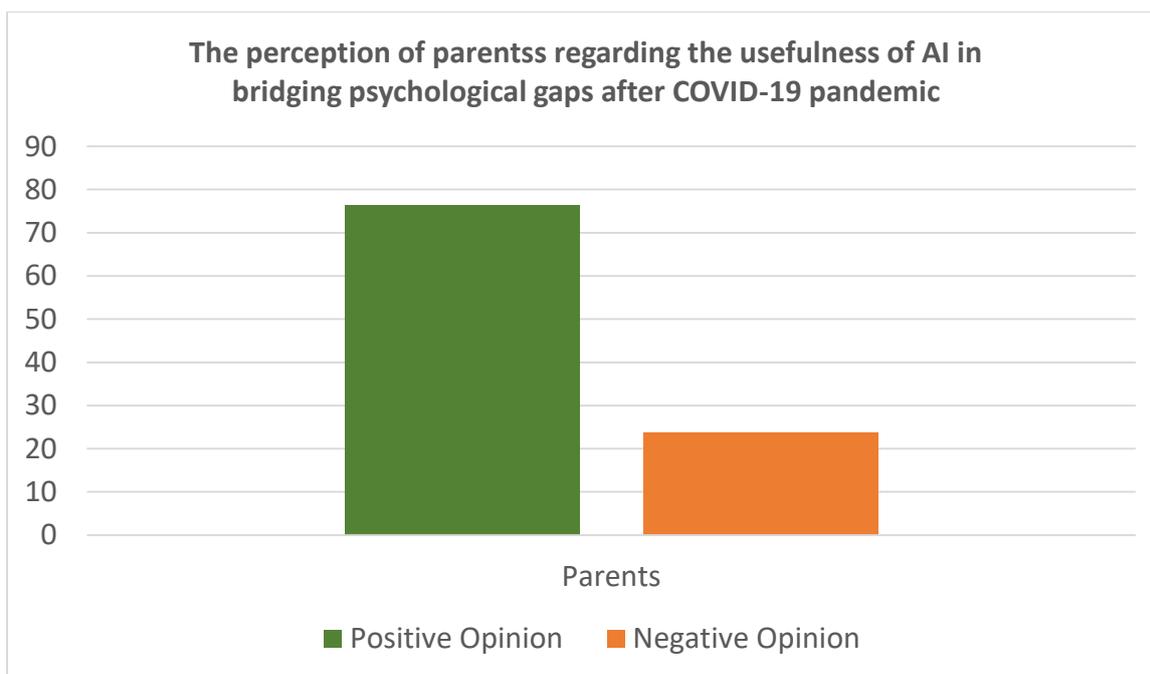
Fig:2 Shows the perception of parents regarding the usefulness of AI in bridging psychological gaps after the COVID 19 pandemic. The data revealed that 76.3% parents express positive opinion and 23.7% parents express negative opinions regarding the usefulness of AI in bridging psychological gaps after the COVID 19 pandemic.

Learning gaps that experienced by the underprivileged learners in the post pandemic educational context

Severe inequality in educational outcomes: In both pandemic and post pandemic period, the students particularly the underprivileged learners faced severe inequality in the educational context. The significant effects of these inequality lead to low transition to higher education, poor academic achievements, and intergenerational poverty. Severe inequality also damaged the social and economic rights of the underprivileged learners.

Interaction gaps: During the pandemic, students are unable to connect offline classes where teachers and students interact very well. Interaction plays an important role in motivating both teachers and learners in an effective manner. In the post pandemic period, after reopening of educational institutions, teachers and underprivileged learners faced critical challenges. Due to lack of time, many teachers fail to provide individual attention to the learners that impact the underprivileged learners to catch-up the subject matter.

Mental health challenges: In the post pandemic period, underprivileged learners experienced several mental health challenges such as loss of family members, financial challenges, prolonged isolation, unavailability of food, that lead to anxiety, depression, decease self-confidence, class participation and also reduced motivation and engagement in education. Mental health issues directly affect memory functions of underprivileged learners and reduced academic outcomes.

High dropout rate: During the pandemic, economic distress of the underprivileged learners forced to not attend educational institutions regularly, loss of interest to studies and increased high dropout rate. The underprivileged learners performed as child labour, domestic responsibilities, and various informal works for their basic needs.

Unequal access to e learning: During the pandemic period, the education system shifted from traditional to online learning. Therefore, many families, particularly the underprivileged people had no smartphones, internet data, that creates a digital gap and inequality to access in e learning. Inequality to access in learning directly reduces their motivation and increases the high dropout rate in education.

Reduce the basic skills of the learners: One of the major critical gaps that experienced by the underprivileged learners is loss of basic skills and loss of foundational literacy and numeracy. During the pandemic situation, learners promoted to higher classes without clearing exams continuously that leading to academic failure. Severe lack of offline face to face interactive classroom learning reduces the foundational skills of the learners such as lackness to perform basic arithmetic, lackness in structured a simple sentence etc. Most of the online classes conducted in english or hindi language, that creates challenges for underprivileged learners in the post pandemic situation.

Reduce motivation and student engagement: Long breaks from the traditional communicative educational environment and lack of peer interaction decreased learners' motivation and engagement in teaching learning system. In the offline learning environment, students are actively participating that also allow students to explore and make learning more meaningful and experimental. Lack of offline learning reduce motivation and student engagement in education system. Interactions with peers appeared to be the strongest element for motivating learners. The underprivileged learners experienced severe learning gaps during and post pandemic.

Conclusion

In the digitalized 21st century, the education system has been enriched by the AI, which makes the education system stronger. The usefulness of AI has increased day by day globally. There are several benefits enjoyed by both learners and educators but AI can't replace the teacher. The parents, teachers, and learners expressed their positive opinion regarding the usefulness of AI in bridging educational and psychological gaps after the COVID 19 pandemic situation. In the educational context, through the help of several strategies of AI, educators, administrators, office staff, and students make their educational or administrative tasks more easily and effectively.

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