

PERSONALIZED LEARNING AND DIGITAL DIVIDE: A REVIEW OF RESEARCH

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Abstract

Today's era of information technology, major changes are taking place in the field of education. With the help of digital tools, personalized learning is provided according to the needs, abilities and learning pace of students. However, due to the lack of equal access to technology for all students, a digital divide is created. The purpose of this research review is to study the concept of personalized learning, its benefits and the educational inequality created due to the digital divide. This topic has been analyzed based on various research articles, reports and books. The review finds that personalized learning is effective for the educational progress of students, but the digital divide creates differences in educational opportunities between rural and urban, economically capable and weak students. Therefore, it is essential to increase the equal availability of digital tools and digital literacy.

Keywords: Personalized Learning, Digital Divide, Educational Inequality, Digital Tools, Digital Literacy.

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Introduction:

The rapid development of technology has brought about major changes in the field of education. The use of digital tools such as the Internet, computers and smartphones has made education more accessible, flexible and student-centered. In particular, the use of online education, e-learning platforms and artificial intelligence (AI) based learning methods is increasing. Against this background, the concept of providing education according to the individual needs, abilities, interests and learning pace of students is as follows. Personalized Learning is. This method helps to provide students with a more effective and meaningful learning experience. However, a digital divide is emerging in society due to the lack of equal access to the internet, computers or smartphones for all students. This unequal access to digital tools can create differences in students' educational opportunities and thus increase the possibility of inequality in education.

Review of Literature:

Numerous scholars have examined the subject of individualized learning and the gap in digital access. The incorporation of digital technology into today's education system has led to significant transformations in learning methods. Nevertheless, unequal access to technology can lead to disparities in education. This research review is significant in this context.

Pane, Steiner, Baird, and Hamilton (2015) examined the effects of personalized learning. This research involved approximately 11,000 students from 62 different schools. The research indicated

that learners employing personalized learning approaches advanced further in mathematics and reading compared to those who experienced conventional education. The researchers observed that the more time students spend in personalized learning, the more significant their academic advancement.

Schmid, Pauli, and Petko (2023) examined the role of digital technology in facilitating personalized learning within educational institutions. Their study utilized data from students attending secondary schools in Switzerland. This research indicates that digital technology enables learners to progress at their own speed and facilitates teachers in monitoring student advancement.

St-Hilaire et al. (2022) researched learning systems that utilize artificial intelligence. This research revealed that personalized learning systems powered by AI greatly enhance student achievement. The research indicated that tailored feedback and adaptive learning technologies enhance student involvement and course completion levels.

Ishaq and Alvi (2023) performed a systematic review of literature focused on personalized and gamified learning approaches. Following the examination of 81 studies, they determined that personalized learning enhances student motivation, involvement, and academic results. The success of this approach is contingent on the traits of the students and the technology employed.

A significant of research has been conducted on the digital divide. **Van Dijk** (2020) noted that the digital divide pertains not solely to technology access, but also to the proficiency in utilizing it and to socio-economic conditions. As per their view, disparity

Applications:

To effectively implement personalized learning and reduce the digital divide, measures need to be taken at various levels. Equal access to technology, development of digital skills and expansion of educational infrastructure can reduce inequalities in education.

1. Providing internet facilities to all students

Internet is a very important requirement for digital learning. Many students in rural and remote areas still do not have access to fixed internet facilities. Therefore, the government and telecom companies need to focus on increasing broadband and mobile internet facilities in rural areas. Providing free or low-cost internet facilities in schools, colleges and public places will enable more students to take advantage of online learning.

2. Increasing digital literacy

Although digital tools are available, digital literacy is required to use them effectively. Along with students, teachers and parents also need to be trained on how to use computers, the internet and various educational digital platforms. Organizing special training programs to develop digital skills in schools will increase the technical capabilities of students and enable them to use personalized learning more effectively.

3. Increasing ICT facilities in schools

It is necessary to increase the availability of computer laboratories, projectors, smart boards and other information and communication technology (ICT) devices in schools. This will enable teachers to teach students in a more engaging and effective manner using modern technology. ICT facilities also provide students with the opportunity to pursue self-sufficient and personalized learning using online educational tools.

4. Effective implementation of the government's digital education schemes

The government has launched various schemes to reduce the digital divide. For example, quality educational content is made available to students through e-learning platforms, digital libraries and online education programs. If these schemes are implemented effectively, especially rural and

economically weaker students can benefit from digital education. Also, schools and teachers need to make maximum use of these schemes to reach digital education to students.

Conclusion:

Personalized learning plays an important role in the modern education system. It helps in providing education according to the capabilities of the students. But due to the digital divide, not all students get equal opportunities. Therefore, it is necessary to increase the availability of digital tools and develop digital literacy.

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