PROBLEMS OF APPLYING MODERN DIGITIZATION PROCESSES IN ALGORITHM IN MODERN EDUCATION

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Abstract: The digitization of education has brought many benefits, such as increased access to information, improved communication, and personalized learning experiences. However, the algorithmic application of modern digitization processes, such as the use of artificial intelligence and machine learning, has also created several problems. This article will discuss some of the key issues related to algorithmic application in education.

Keywords: algorithmic application, digitization, education, artificial intelligence, technology, student outcomes, teacher roles.

One major concern is the potential impact on student outcomes. While AI and other technologies can provide valuable insights into student progress, they can also reinforce existing biases and limit opportunities for students who do not fit within predetermined parameters. Additionally, the use of algorithmic systems can lead to a reduction in the role of teachers, who may feel that they are being replaced by machines. This can have a negative impact on the learning experience, as teachers are essential in providing personalized feedback and support to students. Digitization processes involve the conversion of analog information into digital format, and this has revolutionized many aspects of our lives, including education. Algorithms, which are sets of instructions for solving a particular problem, can be used to analyze, process, and interpret the large amounts of data that are generated in digital education environments. However, there are several challenges associated with the algorithmic application of digitization processes in education.

One of the main problems is the potential for bias and discrimination in algorithmic decision-making. Algorithms are designed to identify patterns in data, but if the data that is used to train them is biased or incomplete, then the resulting algorithms may also be biased. This can result in unfair outcomes for certain groups of students, particularly those who are historically marginalized. For example, an algorithm used to select students for a particular program may unintentionally discriminate against students from low-income backgrounds, because they may not have access to the same resources as wealthier students.

Another challenge is the complexity of developing algorithms that can accurately capture the nuances of the educational context. Education is a complex and multifaceted domain, and it can be difficult to develop algorithms that can capture all of the relevant variables. For example, an algorithm designed to predict student outcomes may not take into account factors such as teacher effectiveness or social-emotional learning, which can also have a significant impact on student success. Furthermore, there is a risk that the algorithmic application of digitization processes could lead to a dehumanization of education. Education is not just about the transmission of information, but also about the development of critical thinking skills, creativity, and interpersonal relationships. If algorithms are used to replace human interaction and feedback, then students may not develop these important skills.

In addition, there are concerns around data privacy and security when using algorithms in education. The use of algorithms requires the collection and storage of large amounts of data, including sensitive information such as student performance, behavior, and personal characteristics. There is a risk that this data could be misused or hacked, leading to serious consequences for students and educational institutions.
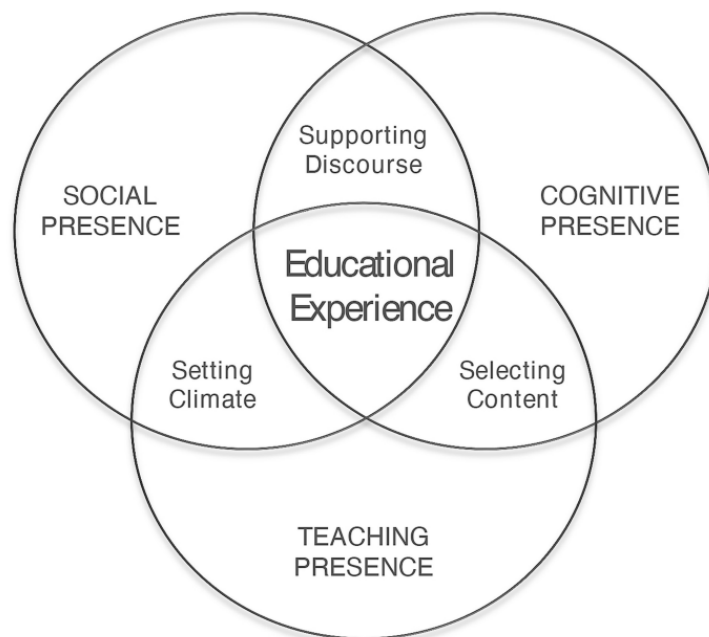
Another challenge is the ethical implications of algorithmic decision-making. AI algorithms may make decisions based on incomplete or biased data, leading to unfair outcomes for certain students. Additionally, the use of AI can raise questions about data privacy and security, as well as the potential for misuse of student data. In conclusion, while the algorithmic application of modern digitization processes has the potential to transform education, it is important to consider the potential challenges and limitations of these technologies. Educators, policymakers, and other stakeholders must work together to ensure that these technologies are used in ways that support

positive student outcomes, uphold ethical standards, and promote equity and access for all students.

Overall, the algorithmic application of digitization processes in education has the potential to bring many benefits, but it is important to be aware of the potential challenges and limitations. Educators, policymakers, and technology developers must work together to ensure that algorithms are developed and used in ways that support positive student outcomes, uphold ethical standards, and promote equity and access for all students.

Finally, the rapid pace of technological change can make it difficult for educators to keep up with new developments and effectively integrate them into their teaching practices. This can lead to a divide between those who have access to the latest technologies and those who do not, exacerbating existing inequalities in education.

LITERATURE:

1. Khodjayeva, N., & Sodikov, S. (2023). Methods and Advantages of Using Cloud Technologies in Practical Lessons. Pioneer: Journal of Advanced Research and Scientific Progress, 2(3), 77-82.

2. Raximov S. D. Ma'lumotlar tuzilishi va python dasturlash tilida algoritmik fikrlash jarayonlari //so 'ngi ilmiy tadqiqotlar nazariyasi. – 2023. – т. 6. – №. 3. – с. 27-33.

3. Raximov, S. D., & Sodiqov, S. S. (2022, november). Texnik soha mutaxassislari o 'quv fanlarini o'qitish tayyorgarlik jarayonida c++ dasturidan foydalanish zarurati. in international conference: problems and scientific solutions. (vol. 1, no. 7, pp. 115-118).

4. Alabi, O. T. (2021). Artificial intelligence in education: A review of current applications and future prospects. Education and Information Technologies, 26(3), 3053-3072.

5. Нам А. Л., Рахимов С. Необходимость использования системы matlab в преподавании учебных дисциплин при подготовке специалистов технических направлений //central asian journal of theoretical and applied science. – 2021. – т. 2. – №. 5. – с. 160-164.