BG Pulse Journal USA
ISSN:1947-2536 http://www.bgpulseusa.com/index.php/bg
BG PULSE JOURNAL

DATA-DRIVEN DECISION-MAKING TECHNOLOGY IN THE MANAGEMENT OF INCLUSIVE EDUCATION

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doi:https://doi.org/10.5281/zenodo.23883297

Abstract: Data-driven decision-making is becoming an important approach to improving the management of inclusive education. It enables educational institutions to make informed decisions based on reliable information about students' needs and learning progress. Effective inclusive education requires continuous monitoring, appropriate resource allocation, and cooperation among educational professionals. In Uzbekistan, the development of inclusive education has created new demands for improving school management practices. This article examines the role of data collection, analysis, and digital monitoring in managing inclusive educational environments. Particular attention is given to identifying educational barriers and improving institutional decision-making. The study is based on the analysis of national legislative documents and theoretical research methods. The proposed approach emphasizes the importance of integrating educational information into administrative activities. The findings suggest that systematic data use can contribute to educational accessibility, transparency, and institutional effectiveness. The article concludes that evidence-based management is an important condition for sustainable inclusive education.

Keywords: inclusive education, data-driven decision-making, educational management, digital technologies, educational monitoring, individual needs, Uzbekistan.

INTRODUCTION

Inclusive education is an important principle of modern educational development, ensuring equal learning opportunities for all students. It focuses on creating an educational environment in which individual differences are respected and supported. The effectiveness of inclusive education depends not only on teaching methods but also on the quality of institutional management. School administrators must make decisions concerning educational resources, accessibility, teacher competencies, and individual student support. These decisions require accurate and regularly updated information. Traditional management approaches based mainly on personal experience may not always reveal the actual needs of students. Data-driven decision-making provides opportunities to improve this process through systematic information collection and analysis. Educational data can help identify learning barriers, evaluate institutional performance, and determine areas requiring improvement. In Uzbekistan, inclusive education has become an important priority of national educational policy. The Law of the Republic of Uzbekistan "On Education" establishes the legal foundations for inclusive educational opportunities [1]. Presidential Resolution No. PQ-4860 also emphasizes the development of inclusive education and the improvement of educational conditions for children with special educational needs [2]. These legislative initiatives require effective organizational and management mechanisms. Digital technologies can support educational institutions in collecting, processing, and interpreting relevant information. Therefore, the integration of data-driven technologies into inclusive education

management is particularly relevant. The purpose of this article is to examine how evidence-based decision-making can improve the organization and effectiveness of inclusive education.

MATERIALS AND METHODS

The study employed theoretical analysis, document analysis, comparison, and generalization. Its methodological foundation consisted of national legislative documents regulating inclusive education in Uzbekistan. The Law No. O‘RQ-637 of September 23, 2020, was examined as the primary legal source [1]. Presidential Resolution No. PQ-4860 of October 13, 2020, was analyzed to identify national priorities for inclusive education development [2]. Cabinet of Ministers Resolution No. 638 of October 12, 2021, was also considered in relation to the organization of inclusive educational services [3]. These documents provided a foundation for examining institutional responsibilities and management requirements. The research focused on the relationship between educational information and administrative decision-making. Particular attention was paid to student assessment, accessibility monitoring, and institutional resource management. The systems approach was used to examine the connections between data collection, analysis, implementation, and evaluation. Theoretical generalization helped identify practical opportunities for applying digital monitoring technologies in schools. The research also considered the importance of cooperation between teachers, administrators, specialists, and parents. Based on the analysis, a conceptual approach to data-driven inclusive education management was developed. This approach includes the identification of educational needs and the evaluation of support measures. The study is conceptual and analytical rather than experimental. Therefore, it does not present statistical results from an independently conducted field study.

RESULTS AND DISCUSSION

The analysis demonstrates that data-driven decision-making can improve inclusive education management in several important areas. First, educational data help institutions identify students' individual learning needs. Information about attendance, academic progress, classroom participation, and communication can provide a broader understanding of student development. Teachers and specialists can use this information to prepare appropriate educational support plans. Second, digital monitoring can help administrators evaluate the accessibility of school facilities and learning materials. It can also identify shortages of specialists, assistive technologies, and adapted educational resources. Third, data analysis supports more effective allocation of institutional resources. School leaders can prioritize financial and organizational support according to identified educational needs. Fourth, monitoring information can reveal areas in which teachers require additional professional development. Targeted training can then be organized to improve differentiated instruction and inclusive teaching practices. Fifth, regular evaluation helps determine whether adopted management decisions are producing the expected improvements. A practical management framework can therefore include five stages: data collection, data analysis, decision-making, implementation, and evaluation. These stages should operate as a continuous process rather than separate administrative activities. However, the effectiveness of this approach depends on the accuracy and relevance of collected information. Personal data concerning students must be protected through appropriate confidentiality measures. Quantitative indicators should also be complemented by feedback from parents, teachers, and students. Consequently, data-driven management should combine digital technologies with professional judgment and a student-centered approach.

CONCLUSION

Data-driven decision-making represents a promising approach to improving the management of inclusive education in Uzbekistan. It enables educational institutions to identify individual needs and respond to existing learning barriers. Systematic data collection provides school leaders with a stronger foundation for administrative decisions. Digital monitoring can improve the assessment of accessibility and educational resources. Evidence-based resource allocation may help institutions organize support more effectively. Educational information can also contribute to identifying teachers' professional development needs. Regular evaluation allows administrators to review the effectiveness of implemented measures. Nevertheless, successful implementation requires appropriate digital infrastructure and qualified personnel. Educational institutions should develop consistent procedures for collecting and analyzing relevant information. Particular attention must be given to the confidentiality and responsible use of student data. Cooperation between school leaders, teachers, specialists, and families remains essential. The proposed approach connects information management with the practical objectives of inclusive education. Its application can strengthen institutional transparency and improve educational planning. Ultimately, the effective use of educational data can support equal opportunities, meaningful participation, and individual student development. Thus, data-driven management should be considered an important component of a sustainable and inclusive education system.

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