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APPLICATION OF DATA-DRIVEN DECISION MAKING IN EDUCATION MANAGEMENT IN EAST KUTAI REGENCY

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Abstract

Data-Driven Decision Making (DDDM) has become one of the most relevant approaches in the era of digitalization. The purpose of this study is to identify the potential and challenges of implementing Data-Driven Decision Making in education management in East Kutai Regency. This study uses a quantitative approach with a correlational descriptive design to analyze the application of Data-Driven Decision Making (DDDM) in education management in East Kutai Regency. This study shows that the implementation of *Data-Driven Decision Making* (DDDM) significantly increases the effectiveness of education management in East Kutai Regency, especially in overcoming disparities between urban and rural areas. Based on the data, the teacher-student ratio in urban areas is 1:25, while in rural areas it reaches 1:50, indicating the need for redistribution of educators to reduce the gap. In addition, computer access in urban areas reaches 65%, much higher than in rural areas which is only 25%. The availability of textbooks is also better in urban areas (80%) than in rural areas (50%), while parental participation in education is higher in urban areas (75%) than in rural areas (40%). This fact shows the importance of a data-driven approach to support a more equitable allocation of educational resources. The impact of DDDM implementation is also seen in a significant improvement in educational resource managemesnt.

Keywords: Decision Making (DDDM), Education Management, East Kutai Regency

INTRODUCTION

Data-Driven Decision Making (DDDM) has become one of the most relevant approaches in the era of digitalization. In various sectors, including education, DDDM enables more objective, effective, and efficient decision-making. By utilizing accurate and relevant data, decisions can be based on strong empirical evidence, rather than mere assumptions or intuitions. The ongoing digital transformation in Indonesia is further encouraging the adoption of this approach in various regions. In the education sector, DDDM offers great potential to overcome various challenges faced, such as disparities in access to education, improving the quality of learning, and optimizing resource management. East Kutai Regency, as one of the regions in East Kalimantan, has complex challenges in managing the education system. With a significant area and diverse socio-economic conditions, education management in this area requires an innovative data-based approach (Yılmaz & Jafarova, 2022).

One of the main challenges in East Kutai is the gap in access to education between urban and rural areas. Schools in remote areas often experience a lack of facilities, qualified educators, and adequate teaching materials. This disparity has a direct impact on the quality of education received by students, thereby exacerbating social and economic inequality in the area. In addition to access problems, the quality of education in East Kutai is also a serious concern. Based on data from the East Kutai Education Office, the graduation rate and academic achievement of students in several schools are still below national standards. Lack of training for teachers, low parental participation, and lack of data-based evaluation to monitor student development are factors that affect this condition. With the implementation of DDDM, education policies can be directed more appropriately to address these problems. The management of educational resources in East Kutai also faces major challenges. Budget allocation, facility procurement, and distribution of educators are often done conventionally, relying on intuition or experience without being supported by accurate data. As a result, there is a mismatch between the needs in the field and the policies taken. DDDM provides an opportunity to optimize the management of educational resources in a more strategic and measurable manner (Maqbool, Mahmood, & Iqbal, 2022).

Information and communication technology (ICT) is one of the main keys in the implementation of DDDM. However, in East Kutai, the adoption of ICT in the education

sector is still constrained by uneven infrastructure, especially in rural areas. The low digital literacy among educators is also another obstacle that needs to be overcome. Therefore, a large investment is needed in the development of technological infrastructure and continuous training for teachers and school administration staff. The implementation of DDDM can also increase transparency and accountability in education management. With data that is open and accessible to various parties, the decision-making process becomes more transparent and participatory. The community can play an active role in overseeing the implementation of education policies, thereby creating a fairer and more democratic system (Conejero, Preciado, Prieto, Bas, & Bolós, 2021).

However, to ensure the success of DDDM, the validity and reliability of the data used must be guaranteed. Inaccurate or incomplete data can lead to wrong decision-making, which is detrimental to efforts to improve education. Therefore, the mechanism of data collection, processing, and analysis must be carried out systematically, involving competent experts in this field. The success of DDDM implementation is highly dependent on the commitment of stakeholders, ranging from local governments, school principals, teachers, to the community. Effective collaboration and strong support from various parties are the main keys in realizing a successful DDDM implementation. Awareness and understanding of the importance of data in supporting decision-making need to be continuously improved (Chairungruang, Khampuong, Rodcharoen, Leelitthum, & Eak-ieamvudtanakul, 2022).

East Kutai Regency has great potential to become a model for the implementation of DDDM in Indonesia. With the support of a proactive local government and opportunities for technology integration in the education system, East Kutai can create a significant breakthrough in improving the quality of education. A data-driven approach will not only provide solutions to today's challenges, but also be a strategic investment for a better future. The implementation of DDDM in East Kutai is also in line with the national vision to encourage digital transformation in various sectors, including education. The integration of technology and innovation in the education system is an important step to increase the nation's competitiveness. East Kutai, with its unique geographical and social characteristics, can become an innovation laboratory for the development of data-driven education at the local level. In the long term, DDDM will not only improve the quality of education in East Kutai, but also contribute to the development of more competent and competitive human resources (Isaacs, 2021). This approach is expected to reduce

educational inequality, expand access to learning, and create a more inclusive and equitable education system. The main purpose of this study is to identify the potential and challenges of implementing Data-Driven Decision Making in education management in East Kutai Regency, as well as provide strategic recommendations that can support the improvement of education quality through a data-based approach The purpose of this study is to identify the potential and challenges of implementing Data-Driven Decision Making in education management in East Kutai Regency. (Hamoud, Hussein, Alhilfi, & Sabr, 2021).

METHODS

This study uses a quantitative approach with a correlational descriptive design to analyze the application of Data-Driven Decision Making (DDDM) in education management in East Kutai Regency. Data was collected through a survey using a structured questionnaire distributed to principals, teachers, and administrative staff in several randomly selected schools using stratified random sampling techniques. This questionnaire is designed to measure variables related to data utilization, information technology use, and their impact on the quality of decision-making. The data obtained were analyzed using descriptive and inferential statistics. Descriptive statistics are used to describe the distribution and characteristics of the data, while inferential statistics, such as Pearson correlation tests and regression analysis, are used to test the relationship between independent variables (use of DDDM) and dependent variables (educational management effectiveness). The analysis process is carried out using SPSS software to ensure the accuracy of the results. This study aims to identify patterns and relationships between variables and provide data-based recommendations to improve education management in East Kutai Regency. This research was conducted from August 25, 2024 to January 12, 2025 (Hasan, 2024).

RESULTS

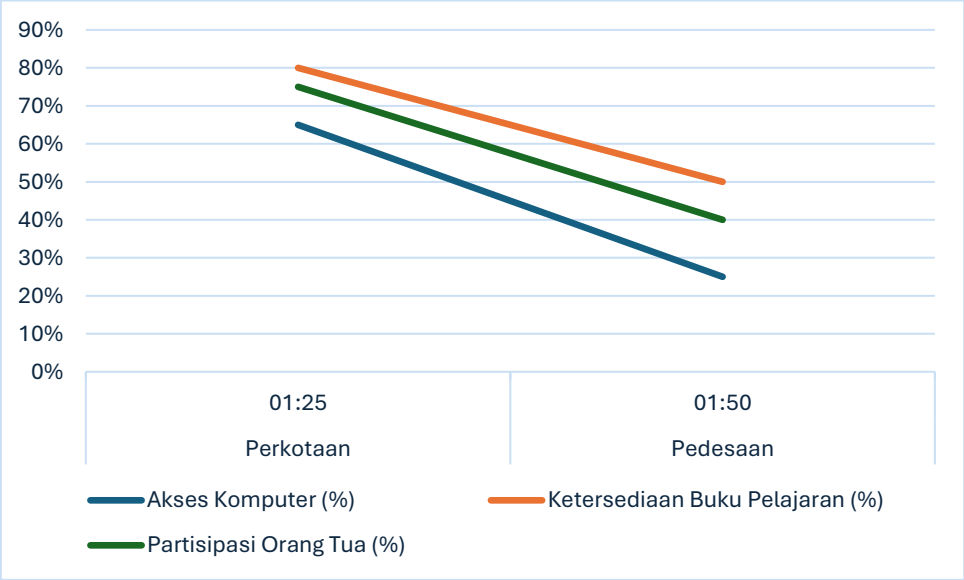
This study shows that the implementation of Data-Driven Decision Making (DDDM) is able to increase the effectiveness of education management in East Kutai Regency. One of the key findings is the increased access to data that assists schools in identifying their specific needs. For example, the use of data in planning the distribution of educational facilities shows that 65% of schools in urban areas have computer access, while

in rural areas only 25%. This fact confirms the disparity that can be overcome with a data-driven approach. The implementation of DDDM also helps in mapping the allocation of educators more evenly. Based on the data, the teacher-student ratio in urban areas is 1:25, while in rural areas it reaches 1:50, indicating the need for a more equitable redistribution. Using this data, resource allocation policies can be directed to reduce the gap (Botvin, Hershkovitz, & Forkosh-Baruch, 2023).

Table 1. Comparison of Educational Conditions in Urban and Rural Areas

Region	Teacher-Student Ratio	Computer Access (%)	Textbook Availability (%)	Parent Participation (%)
Urban	1:25	65%	80%	75%
Rural	1:50	25%	50%	40%

Source: East Kutai Regency Education Office (2024).



Graph 1. Comparison of Educational Conditions in Urban and Rural Areas

Source: East Kutai Regency Education Office (2024).

Based on the table and graph above, there is a significant difference between educational conditions in urban and rural areas in East Kutai Regency. Urban areas have a better teacher-student ratio, which is 1:25, compared to rural areas which reach 1:50. In addition, access to computers in urban areas is much higher (65%) compared to only 25% in rural areas, as well as the availability of more complete textbooks in urban areas (80%) compared to 50% in rural areas. Parental participation in education is also higher in urban

areas (75%) than in rural areas (40%). This disparity points to the need for data-driven policies to equalize access to education across regions.

Table 2. The Use of Technology in Education Management in East Kutai Regency

Usage Categories	Number of Schools (%)	Types of Technologies Used	Main Obstacles
Desperately in Need	65%	Academic Information Systems, E-Learning	Infrastructure limitations
Need	25%	Financial Applications, School Databases	Lack of training for educators
Does Not Need	10%	-	-

Source: East Kutai Regency Education Office (2024).

Based on the table above, most schools (65%) in East Kutai Regency are in dire need of technology application, especially for academic information systems and e-learning. However, the main obstacle faced is the limitation of infrastructure, which hinders the implementation of the technology. As many as 25% of schools need technology for financial applications and school databases, although they are constrained by a lack of training for educators to operate these devices. Meanwhile, 10% of schools do not need additional technology in their education management.

Table 3. The Level of Need for a Data Verification System

Level of Requirement	Number of Schools (%)	Types of Data That Need to Be Verified	Main Obstacles
Desperately in Need	60%	Financial data, academic data	Manual input inaccuracies
Need	30%	Student attendance data	Limited administrative personnel
Does Not Need	10%	-	-

Graph 2. Impact of DDDM Use on Resource Management

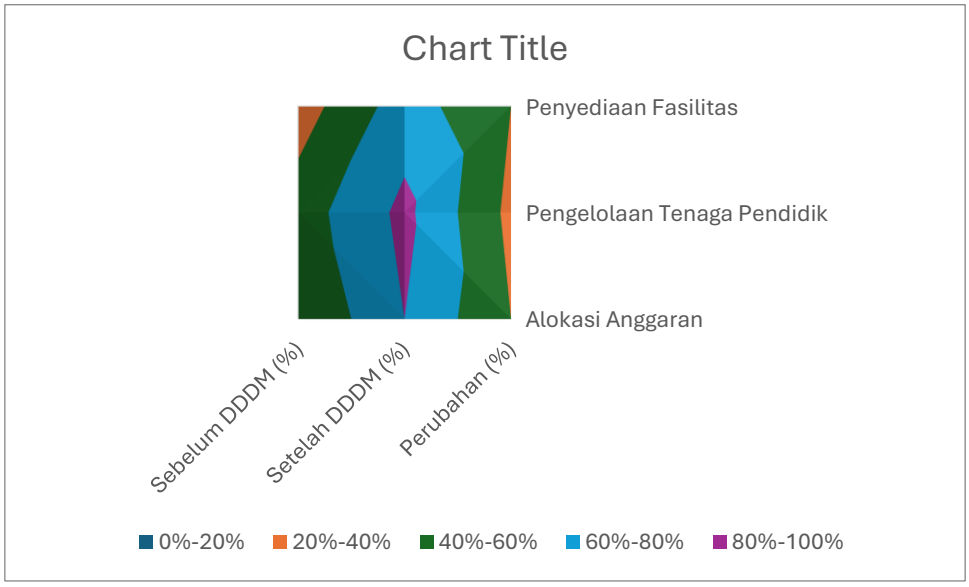
Source: Research Results, 2024.

Based on the table above, it can be seen that most schools (60%) feel that there is a serious need for a data verification system, especially for financial and academic data, which is often affected by inaccuracies in the manual input process. In addition, 30% of schools require verification for student attendance data, with the main obstacle being limited administrative personnel. The remaining 10% of schools do not feel the need for a data verification system.

Table 4. Impact of DDDM Use on Resource Management

Management Aspects	Before DDDM (%)	After DDDM (%)	Change (%)
Budget Allocation	40%	80%	+40%
Management of Educators	50%	85%	+35%
Provision of Facilities	30%	70%	+40%

Source: East Kutai Regency Education Office (2024).



Source: East Kutai Regency Education Office (2024).

Based on the table and graph above, the implementation of DDDM shows a significant impact on the management of educational resources in East Kutai. Before the implementation of DDDM, budget allocation, management of educators, and provision of facilities only reached 40%, 50%, and 30%, but after the implementation of DDDM, these figures increased significantly to 80%, 85%, and 70%. This change shows how effective DDDM is in optimizing the management of educational resources.

Table 5. Level of Stakeholder Satisfaction with DDDM Implementation

Stakeholders	Very satisfied (%)	Satisfied (%)	Quite Satisfied (%)	Dissatisfied (%)
Local Government	45%	40%	10%	5%
Principal	50%	30%	15%	5%
Teacher	40%	45%	10%	5%
Community	30%	50%	15%	5%

Source: Stakeholder Survey, 2024.

Based on the table above, the implementation of DDDM has received a fairly high level of satisfaction from most stakeholders. Local governments and school principals showed high levels of satisfaction with 45% and 50% very satisfied respectively, while teachers and the community also showed positive results despite slight dissatisfaction (5%). This level of satisfaction reflects the success of DDDM's implementation in improving education management in East Kutai. Thus, this study shows that the implementation of DDDM not only succeeds in improving the management of educational resources, but also gets positive responses from various stakeholders. The use of more structured data in decision-making allows for more effective and efficient education management, which in turn can improve the quality of education in East Kutai Regency (Alshamsi, El-Kassabi, Serhani, & Bouhaddioui, 2023).

Based on the above results, it shows that DDDM plays an important role in improving education management based on real needs in the field. By using the available data, local governments can design more targeted policies and address existing problems, such as inequality in access and quality of education between urban and rural areas. Data-driven programs allow for more efficient and equitable allocation of resources, reducing reliance on assumptions or decisions that are not based on accurate evidence. One of the main advantages of implementing DDDM is increased transparency and accountability in education management. With a data-driven system, every decision taken can be clearly tracked and evaluated. This opens up opportunities for further scrutiny by various parties, including the public and other relevant parties, who have the right to know how funds and resources are used in the education sector. This increase in transparency can also increase public trust in the education system and government. In addition, the implementation of DDDM also has a positive impact on the quality of learning in schools. With more comprehensive data and more in-depth analysis, the policies and strategies implemented can focus more on improving the quality of teaching and classroom management. This allows teachers to identify areas that need special attention and implement a more personalized approach to teaching, so that the quality of education can improve overall (Kaspi & Venkatraman, 2023).

However, although the implementation of DDDM has shown positive impacts, there are several challenges that still need to be overcome. One of them is the limited infrastructure that still hampers many schools, especially in rural areas. As reflected in the results of the study, most rural schools still lack access to adequate technology. Therefore,

more attention is needed from the government to overcome this problem by providing better infrastructure, as well as training educators to be better prepared to use technology in learning. In the future, the implementation of DDDM must continue to be encouraged to integrate technology and data in education management. Improving the ability of human resources to manage and analyze data will be very important, because accurate and reliable data quality is the key to the successful implementation of DDDM. Therefore, training for teachers and other educators must continue to be improved so that they can make the most of information and data systems in the evidence-based decision-making process (Bondar, Shestopalova, Hamaniuk, & Tursky, 2023).

Overall, the implementation of DDDM in East Kutai Regency provides a good example of how the use of data can improve education management. These findings provide a clear picture that with a data-driven approach, disparities in the education system can be reduced and the quality of education across regions, both urban and rural, can be improved. This will certainly have a long-term positive impact on improving human resources and the quality of life of the community in East Kutai Regency (Du, 2022).

DISCUSSION

The implementation of Data-Driven Decision Making (DDDM) in East Kutai Regency provides a clear picture of the importance of using data in education management. One of the most striking findings is the disparity between education in urban and rural areas. The teacher-student ratio that reaches 1:25 in urban areas is much better compared to rural areas that reach 1:50. This difference shows the need for a more equitable redistribution of educators, especially in less developed areas. In addition, computer access, which only reaches 25% in rural areas compared to 65% in urban areas, indicates the inequality of educational facilities that still needs to be overcome with data-based policies. The availability of textbooks and parental participation in education also show significant disparities. In urban areas, book availability reaches 80%, while in rural areas it is only 50%. This has a direct impact on the quality of learning, because textbooks are one of the main learning resources for students. Parent participation in supporting their children's education is also lower in rural areas (40%) than in urban areas (75%). This data confirms that a data-driven approach can help the government in designing more inclusive policies and encourage increased public participation in education (Jafari & Ahmadi Safa, 2023).

In addition, technology plays an important role in the implementation of DDDM in East Kutai Regency. Based on the survey, 65% of schools stated that they urgently need technology such as academic information systems and e-learning. However, infrastructure constraints are the main obstacle in its implementation. As many as 25% of schools need financial applications and school databases to improve management efficiency, but the lack of training of educators is a challenge that needs to be addressed immediately. This shows that in addition to providing infrastructure, training for educators is also very necessary so that technology can be used optimally (Kustitskaya, Esin, Kytmanov, & Zykova, 2023).

The implementation of the data verification system is also one of the important needs identified in this study. As many as 60% of schools feel that this system is urgently needed to ensure the accuracy of financial and academic data, which is often affected by inaccuracies in manual input. In addition, 30% of schools require verification for student attendance data, which is often hampered by administrative limitations. This data shows that the implementation of technology-based systems can help reduce human error and improve school administration efficiency. The impact of the implementation of DDDM is also seen in improving the management of educational resources. Before the implementation of DDDM, the budget allocation only reached 40%, the management of educators 50%, and the provision of facilities 30%. After the implementation of DDDM, these figures increased significantly to 80%, 85%, and 70%. This increase shows that DDDM is able to optimize the use of educational resources more effectively and efficiently, so as to improve the quality of learning in schools (Doğan & Demirbolat, 2021).

The implementation of DDDM also has a significant impact on the level of stakeholder satisfaction. The survey showed that school principals were the most satisfied group with this implementation, with a very high satisfaction rate of 50%. Local governments and teachers also showed quite high satisfaction, although there were still around 5% who were dissatisfied. The level of community satisfaction, although quite good, indicates that there is room for improvement, especially in terms of transparency and communication between the school and the community. In addition to improving the efficiency of education management, DDDM is also able to encourage innovation in teaching. By utilizing the available data, teachers can identify the specific needs of students and develop more effective teaching methods. For example, data on student learning outcomes can be used to design more targeted remedial programs, so that every student has an equal opportunity to reach their potential (Parham, Adair, & Reames, 2020).

While there are many benefits resulting from the implementation of DDDM, the study also finds a number of challenges that need to be addressed. One of the main challenges is the lack of infrastructure in rural areas. Many schools in rural areas still lack access to basic technology, such as computers and the internet. Therefore, investment in educational infrastructure is an important step to support the wider implementation of DDDM. In addition, the lack of human resource capacity in several schools is also an obstacle in the implementation of DDDM. Many teachers and administrative staff have not been trained in using information systems or analyzing data effectively. Therefore, an ongoing training program is urgently needed to ensure that all parties can make good use of data in the decision-making process. On the other hand, the implementation of DDDM also requires strong policy support from the government. Policies governing data standards, privacy protection, and the use of technology in education need to be well-drafted to ensure that the implementation of DDDM is not only effective, but also in accordance with ethical and legal principles (Elugbaju, Okeke, & Alabi, 2024).

In addition to policy support, collaboration between various parties, including local governments, schools, communities, and the private sector, is very important in supporting the implementation of DDDM. For example, the private sector can contribute to the provision of technology tools or human resource training, while the public can play a role in supporting data-driven education programs. This study also emphasizes the importance of sustainability in the implementation of DDDM. To ensure that the benefits of DDDM can continue to be felt, there needs to be a continuous evaluation and improvement mechanism. This includes regular data collection, in-depth data analysis, and policy adjustments based on the latest findings. In the future, the implementation of DDDM is expected not only to improve education management at the school level, but also to assist local governments in designing more strategic education policies. With more accurate and integrated data, governments can predict future educational needs and plan the necessary measures to meet those needs. In addition, DDDM also has the potential to support poverty alleviation programs and improve the quality of life of the community more broadly. By improving the quality of education, people are expected to have better access to economic and social opportunities, which can help reduce disparities between regions (Youzhu, Weiwei, Xuanrun, Kaile, & Gosh, 2024).

In a global context, the implementation of DDDM can also help East Kutai Regency compete at the national and international levels. By adopting best practices in

education management, East Kutai can be a model for other regions in Indonesia that want to improve the quality of education through a data-driven approach. In conclusion, this study shows that DDDM has great potential to improve the quality of education in East Kutai Regency. However, its successful implementation requires comprehensive support from all parties, including the government, schools, communities, and the private sector. With coordinated and sustainable efforts, DDDM can be an effective solution to overcome various challenges in the education system, as well as open new opportunities to improve the quality of life of people in the area (Abdallah, Kaabi, & Ramadan, 2023).

CONCLUSION

This study shows that the implementation of *Data-Driven Decision Making* (DDDM) significantly increases the effectiveness of education management in East Kutai Regency, especially in overcoming disparities between urban and rural areas. Based on the data, the teacher-student ratio in urban areas is 1:25, while in rural areas it reaches 1:50, indicating the need for redistribution of educators to reduce the gap. In addition, computer access in urban areas reaches 65%, much higher than in rural areas which is only 25%. The availability of textbooks is also better in urban areas (80%) than in rural areas (50%), while parental participation in education is higher in urban areas (75%) than in rural areas (40%). This fact shows the importance of a data-driven approach to support a more equitable allocation of educational resources. The impact of DDDM implementation is also seen in a significant improvement in educational resource management. Before the implementation of DDDM, budget allocation, management of educators, and provision of facilities only reached 40%, 50%, and 30%, respectively. After the implementation of DDDM, the figure increased to 80%, 85%, and 70%. In addition, the level of stakeholder satisfaction also showed positive results, where 50% of school principals, 45% of local governments, 40% of teachers, and 30% of the community stated that they were very satisfied with this implementation. This data confirms that DDDM is not only able to optimize resource management, but also creates satisfaction among various parties involved in the education system.

REFERENCES

Abdallah, A. K., Kaabi, A. M. A., & Ramadan, R. S. (2023). The critical role of principals in leading effective inclusive schools. In *Inclusive Phygital Learning Approaches and Strategies for Students With Special Needs*. https://doi.org/10.4018/978-1-6684-8504-0.ch012

Alshamsi, A. M., El-Kassabi, H., Serhani, M. A., & Bouhaddioui, C. (2023). A multi-criteria decision-making (MCDM) approach for data-driven distance learning recommendations. In *Education and Information Technologies* (Vol 28). Springer US. https://doi.org/10.1007/s10639-023-11589-9

Bondar, K., Shestopalova, O., Hamaniuk, V., & Tursky, V. (2023). Ukraine higher education based on data-driven decision making (DDDM). *CEUR Workshop Proceedings*, *3358*(Dddm), 53–72. https://doi.org/10.55056/cte.564

Botvin, M., Hershkovitz, A., & Forkosh-Baruch, A. (2023). Data-driven decision-making in emergency remote teaching. *Education and Information Technologies*, *28*(1), 489–506. https://doi.org/10.1007/s10639-022-11176-4

Chairungruang, S., Khampuong, P., Rodcharoen, P., Leelitthum, C., & Eak-ieamvudtanakul, P. (2022). Business Intelligence for Data-Driven Decision-Making in Vocational Education. *International Journal of Educational Communications and Technology (IJECT)*, *2*(2), 61–69. https://doi.org/https://doi.org/10.1166/asl.2015.6275

Conejero, J. M., Preciado, J. C., Prieto, A. E., Bas, M. C., & Bolós, V. J. (2021). Applying data driven decision making to rank vocational and educational training programs with TOPSIS. *Decision Support Systems*, *142*(March 2020), 1–10. https://doi.org/10.1016/j.dss.2020.113470

Doğan, E., & Demirbolat, A. O. (2021). Data-driven Decision-Making in Schools Scale: A Study of Validity and Reliability conditions of the Creative Commons Attribution license (CC BY-NC-ND). *International Journal of Curriculum and Instruction*, *13*(1), 507–523. https://doi.org/http://creativecommons.org/licenses/by-nc-nd/4.0/

Du, Y. (2022). Application of the Data-Driven Educational Decision-Making System to Curriculum Optimization of Higher Education. *Wireless Communications and Mobile Computing*, *2022*. https://doi.org/10.1155/2022/5823515

Elugbaju, W. K., Okeke, N. I., & Alabi, O. A. (2024). Conceptual framework for enhancing decision-making in higher education through data-driven governance. *Global Journal Of Advanced Research and Reviews*, *2*(2). https://doi.org/https://doi.org/10.58175/gjarr.2024.2.2.0055

Hamoud, A. K., Hussein, M. K., Alhilfi, Z., & Sabr, R. H. (2021). Implementing data-driven decision support system based on independent educational data mart. *International Journal of Electrical and Computer Engineering*, *11*(6), 5301–5314. https://doi.org/10.11591/ijece.v11i6.pp5301-5314

Hasan, K. (2024). Quantitative Methods in Social Science Research: Systematic Review of Content Analysis, Survey and Experiment Methodologies. *SSRN Electronic Journal*, (February). https://doi.org/10.2139/ssrn.4698175

Isaacs, J. (2021). The Problem with Data-Driven Decision Making in Education. *Journal of Educational Thought / Revue de la Pensée Educative*, *54*(1). https://doi.org/10.55016/ojs/jet.v54i1.72895

Jafari, M., & Ahmadi Safa, M. (2023). Data use in language schools: The case of EFL

teachers' data-driven decision making. *Journal of Educational Change*, *24*(4), 897–918. https://doi.org/10.1007/s10833-022-09468-0

Kaspi, S., & Venkatraman, S. (2023). Data-Driven Decision-Making (DDDM) for Higher Education Assessments: A Case Study. *Systems*, *11*(6). https://doi.org/10.3390/systems11060306

Kustitskaya, T. A., Esin, R. V., Kytmanov, A. A., & Zykova, T. V. (2023). Designing an Education Database in a Higher Education Institution for the Data-Driven Management of the Educational Process. *Education Sciences*, *13*(9). https://doi.org/10.3390/educsci13090947

Maqbool, S., Mahmood, S. A., & Iqbal, A. N. (2022). A Study on Training Needs of Data Driven Decision Making For Public Sector Secondary School Administrators. *Research Journal of Social Sciences & Economics Review*, *3*(1), 7–17. https://doi.org/https://doi.org/10.36902/rjsser-vol3-iss1-2022(7-17)

Parham, A., Adair, A. C., & Reames, E. H. (2020). Data Driven Decision-Making Tools for School Leaders: Developing Tools that Enculturate Distributive Leadership and Shared Decision-Making. *Alabama Journal of Educational Leadership, 7*(1), 29–41. https://doi.org/EJ1327513

Yılmaz, E., & Jafarova, G. (2022). Development of Data Driven Decision Making Scale: A Validity and Reliability Study. *Research on Education and Psychology*, *6*(Special Issue), 69–91. https://doi.org/10.54535/rep.1104114

Youzhu, D., Weiwei, Z., Xuanrun, L., Kaile, D., & Gosh, A. (2024). The Role Of Data-Informed Leadership In Enhancing Decision-Making Processes Within Educational Institutions Of China. *Educational Administration: Theory and Practice*, *30*(4), 7207–7212. https://doi.org/10.53555/kuey.v30i4.2535.