
Strategic Management Models for Digital Universities in the New Economy

Submitted 20/06/24, 1st revision 15/07/24, 2nd revision 16/08/24, accepted 30/09/24

Natalia Bobro¹

Abstract:

Purpose: *The research aims to develop strategic models for managing digital universities, helping them adapt to the challenges of the new economy and improve the efficiency of management processes in the context of digital transformation.*

Design/Methodology/Approach: *A comprehensive approach is employed, including the analysis of existing economic models, identification of management challenges, and determination of key parameters for strategy formation. Special attention is given to integrating economic and management decisions into the digital transformation process of the university. The model developed considers various stages of strategic planning and result monitoring.*

Findings: *The proposed management models enhance the sustainability of digital universities by ensuring effective resource planning, strategy implementation, and improving mechanisms for control and adaptation to the new challenges of the digital economy.*

Practical Implications: *Implementing the developed models will enable universities to better adapt to digital transformation, optimize management processes, and enhance competitiveness. The models will also improve stakeholder engagement and promote sustainable development.*

Originality/Value: *The study contributes significantly to the development of management approaches for digital universities, offering innovative solutions for integrating economic and strategic models in the new economy.*

Keywords: *Digital universities, strategic management, economy, digitalization, digital transformation, economic models.*

JEL Classification: *O31, M51, R4, I31, O14.*

Paper type: *Research article.*

¹*The European University, “NooLab & AI” scientific laboratory of the European University nataliabobro787@gmail.com;*

1. Introduction

In today's environment, digital transformation is a crucial factor driving the development of all socio-economic spheres, reshaping governance and interaction paradigms within society. The digitalization of educational institutions, particularly universities, is of significant importance as they are forced to adapt to the challenges of the new economy.

Shifts in technological and economic conditions are prompting a rethinking of traditional management models and the creation of new strategic approaches for managing digital universities. As key centers of knowledge and innovation, universities must not only meet modern requirements but also actively contribute to the development of the digital economy by introducing new models of education, training and research.

Digital technologies and their integration into the educational process play an important role in the formation of strategic models for managing digital universities. Researchers Kolodinska *et al.* (2022) analyze the practical aspects of using digital services to develop innovative business ideas, which emphasizes the need for universities to adapt to new economic challenges by implementing digital solutions (Kolodinska, Skliarenko, and Nikolaievskiy, 2022)

In addition Yahodzinski (2015) emphasizes the importance of global information networks within the socio-cultural context, which also affects management strategies in the context of digital transformation.

This confirms that universities, as socio-cultural institutions, should develop new management models adapted to the challenges of the digital economy. This underscores the necessity for universities, as socio-cultural institutions, to develop new management models that address the challenges of the digital economy.

Further research confirms the importance of digital technologies for enhancing the efficiency of management processes within higher education institutions. In their work, Skliarenko *et al.* (2024) considered interactive technologies as an integral part of the modern educational process, which contributes to increasing student engagement and learning efficiency (Skliarenko, Yahodzinskyi, Nikolaievskiy, and Nevzorov, 2024)

Khomenko *et al.* (2024) emphasize the impact of these technologies on student development and their integration into the educational framework (Khomenko, Paustovska, and Onyshchuk, 2024). This approach to the use of digital technologies allows universities not only to improve educational processes, but also to enhance managerial sustainability in the new economy.

Thus, contemporary research underscores the relevance of integrating digital technologies into university management strategies. This integration not only boosts the efficiency of educational and administrative processes but also enhances the competitiveness of educational institutions amid global digital transformation.

2. Research Methodology

To achieve the objectives of the study, a comprehensive approach was employed, encompassing the analysis of existing economic and strategic management models in universities and the identification of challenges related to digital transformation.

The study analyzed literature sources, statistical data, and innovative digital management practices. In addition, a theoretical model for strategic management of digital universities was developed integrating economic indicators and management decisions. The main emphasis was placed on establishing economic parameters and implementing modern monitoring and control tools based on Business Intelligence technologies.

3. Research Results and Discussion

In the context of the digital transformation of universities, the availability of an economic model is becoming a mandatory element of any strategic or project initiative. This model helps define key parameters such as revenue volume and structure, investments, surplus, and the timeframe for achieving a deficit-free budget.

It enables universities to plan resources effectively and adapt to the challenges of the new economy, which requires flexible and sustainable management solutions. In the context of digital universities, the formation of economic parameters should be integrated into the process of strategic goal-setting, covering both the entire institution and individual projects.

One of the key aspects of effective strategic management for digital universities is thorough preparation for strategy development and implementation. Often, university administrations overlook the preliminary stages of strategic planning due to concerns about potential delays and the perceived high costs in time and resources.

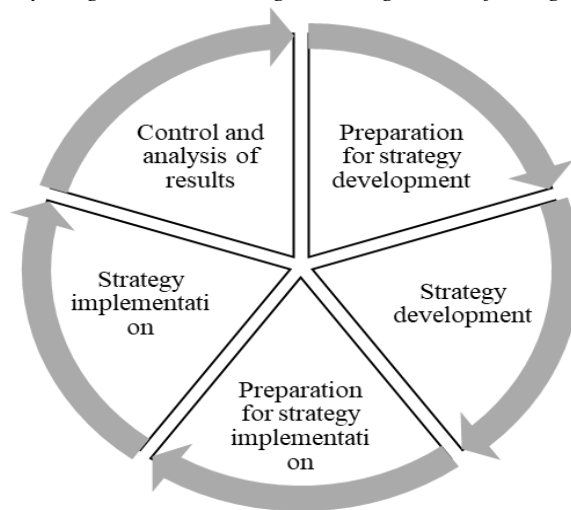
At the same time, the specifics of teaching activities, which tend to focus on theoretical discussions, can impede the transition to practical implementation. This approach reduces the effectiveness of further stages of strategy implementation, which can lead to inefficient use of resources and loss of competitiveness.

In the context of digital university management, the preparatory stages can be divided into two key phases: the first is “preparation of the strategic cycle”, which

involves forming a strategic vision and defining the main goals; the second is “preparation of the university for strategy implementation”, which focuses on developing mechanisms for implementing and adapting the institution to new management challenges. These phases will ensure the stability and sustainability of management processes in digital universities in the new economy.

The preparatory stages in the strategic management of a digital university are illustrated in Figure 1.

Figure 1. Preparatory stages in the strategic management of a digital university



Source: Developed by the author.

The specifics of the final stage, ‘Control and Analysis’, also referred to in the literature as ‘Monitoring and/or Control’, warrant special attention. While existing literature often emphasizes the experience of applying general corporate practices, it does not always address the unique aspects of universities (Huk and Skliarenko, 2022).

For universities, the uniqueness of this stage is influenced by the multiple entities involved in overseeing the implementation of development programs and the variety of indicators specified in regulatory documents.

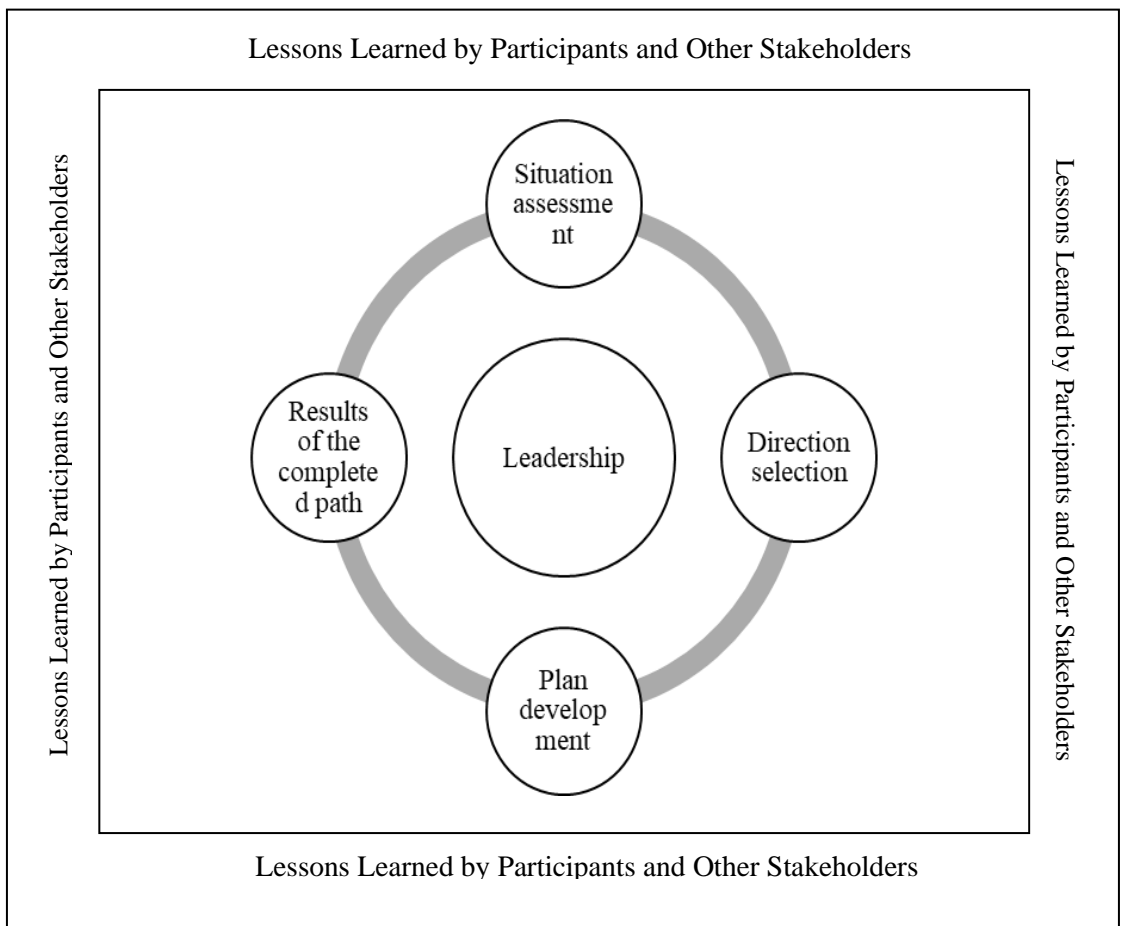
Aligned with the broader trend of digitalization, information systems are increasingly used for both internal and external control, aiming to streamline the monitoring process. However, differences in stakeholder goals and requirements, coupled with a lack of coordination and limitations on requests, can increase the resource intensity of both external and internal monitoring.

Usually, part of the responsibility for interaction with regulatory authorities, in

particular in the area of reporting, is delegated to various management and support services that operate independently, creating significant regulatory risks. Those responsible for strategy must consider these factors. Our approach offers an organizational and technological solution: a strategic controlling system distributed across time and organizational structures, leveraging Business Intelligence analytical systems.

An important aspect that is often overlooked in the specialized literature on the management of higher education institutions is the issue of leadership (Figure 2).

Figure 2. Strategy Cycle in a Dynamic Culture Focused on Stakeholder Engagement

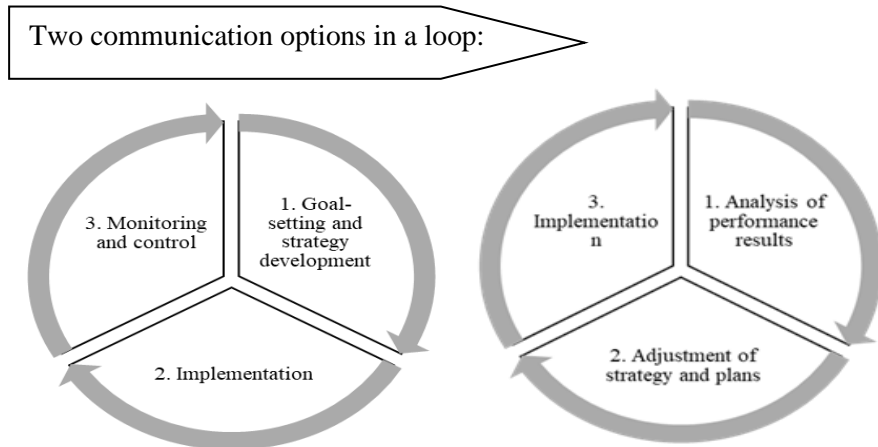


Source: Developed by the author.

It is worth noting that the task of establishing the relationship between strategic and financial planning is extremely important at this stage. The choice of feedback type in the strategic management cycle, as schematically shown in Figure 3, involves addressing a key question: should the focus be on analyzing the results achieved, or

should attention be directed towards the desired future, potentially overlooking past periods and their lessons?

Figure 3. Direct and Feedback Loops in the Strategic Management Cycle of a Digital University



Source: Developed by the author.

As illustrated, the feedback cycle is more powerful but also more conflictual. It involves identifying those who have achieved results versus those who have not, making personnel decisions, adjusting priorities, and reallocating resources within the university. In other words, it presents a significant political choice: whether to utilize a feedback loop focused on radical solutions or to adopt a forward loop if maintaining the status quo is preferred.

Thus, we can formulate the following methodological solutions to address the limitations in organizing the strategic management framework of a digital university (Table 1).

In Table 1, we have systematized the limitations and mandatory tools in accordance with the developed methodological solutions. These solutions include involving strategic partners and independent experts during the university's preparation for strategy development, forming key economic parameters for the university and major projects during goal setting, and distributing strategic controlling activities across time and organizational structure.

Enhancing the leadership function through the involvement of strategic partners and active stakeholders, along with separating the procedures for summarizing the previous strategy and analyzing the achieved potential, are key solutions that contribute to the effectiveness of strategic management of a digital university.

Table 1. Methodological Solutions for Addressing the Limitations in Organizing the Strategic Management Framework

Limitations	Methodological solutions	Stages (Rational Planning)	Tools
Lack of an economic model	Formation of the main economic parameters for the digital university as a whole and for key projects	Defining the objective	Flowchart for developing a sustainable economic model
The difficulty of forming a constructive, developmental leadership of a digital university	Focusing on customer experience and involving stakeholders in university processes at every stage of the cycle		Scheme of interaction with stakeholders
Bias of internal experts. Lack of meaningful dialog with the academic community when designing development programs	Institutionalized competitiveness and organization of effective expert review of project initiatives and projects, including with the involvement of external experts	Analysis and forecast	Organization of independent expertise of project initiatives and projects. Strategic controlling distributed over time and across organizational structure
Lack of interconnection between strategic and financial planning	Selection of benchmarks and analysis of possible contribution to regional development	Formulating a strategy	Flowchart of the relationship between strategic and financial plan development
The speed of transformation of Russian universities implementing long-term development programs	A combination of balanced scorecard and emergent approach		Combining policies in knowledge management, administration, economics, and other areas
Reduced efficiency of the strategy implementation stage	Full implementation of the preparatory stage	Implementation of the strategy	Including preparatory stages in the strategic planning cycle: preparing the digital university for strategy development and preparing the university for strategy implementation
Poor discipline in the implementation of plans	Competitiveness and additional powers backed by economic autonomy		Strategic controlling distributed over time and across organizational structure
Increased resource intensity of external and internal monitoring	An organizational and technological solution of the Business Intelligence class		

Source: Developed by the author.

4. Conclusion

The developed strategic models for managing digital universities offer significant sustainability and adaptability to the challenges of the new economy. They facilitate efficient resource use, the integration of digital technologies, and the implementation of innovative solutions in management processes.

Additionally, these models enhance stakeholder engagement and help universities maintain competitiveness amid global digital transformation. Further implementation of these strategies is crucial for ensuring the sustainable development of universities in the digital economy

Conflict of interest statement: The author states that there is no conflict of interest.

Declaration of interests: The author declares that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper. Additionally, there is no funding for this work.

References:

- Bobro, N.S. 2024. Tsyfrova platforma yak suchasna orhanizatsiina innovatsiia (Digital platform as a modern organizational innovation). *Investytsii: praktyka ta dosvid*, no. 1, pp. 63-66. DOI: <https://doi.org/10.32702/2306-6814.2024.1.63> (in Ukrainian).
- Bobro, N.S. 2024. Key aspects of digital economy development. *Mizhnarodna naukovo-praktychna konferentsiia «Finansovo-ekonomichna systema natsionalnoi ekonomiky: stan ta perspektyvy rozvytku»*, pp. 11-14. <https://doi.org/10.36059/978-966-397-392-0-2>.
- Filosofiia osvity: navchalnyi posibnyk (Philosophy of education)*. 2021. Kyiv: Vyd-vo NPU imeni M.P. Drahomanova, 348 p. (in Ukrainian).
- Huk, P.V., Skliarenko, O.V. 2022. Ekonomichna dotsilnist modernizatsii pidpriemstv z vykorystanniam avtomatyzovanykh system (Economic feasibility of modernization of enterprises using automated systems). *Ekonomika i upravlinnia*, no. 2. s. 103-112. DOI: <https://doi.org/10.36919/2312-7812.2.2022.103> (in Ukrainian).
- Khomenko, O.O., Paustovska, M.V., Onyshchuk, I.A. 2024. Vplyv interaktyvnykh tekhnolohii na protses navchannia i rozvytok zdobuvachiv vyshchoi osvity. (The influence of interactive technologies on the learning process and the development of higher education students). *Naukovi innovatsii ta peredovi tekhnolohii*, no. 5(33). pp. 1222-1231. [https://doi.org/10.52058/2786-5274-2024-5\(33\)-1222-1231](https://doi.org/10.52058/2786-5274-2024-5(33)-1222-1231) (in Ukrainian).
- Kolodinska, Ya.O., Skliarenko, O.V., Nikolaievskiy, O.Iu. 2022. Praktychni aspekty rozrobky innovatsiinykh biznes idei z vykorystanniam tsyfrovnykh servisiv (Practical aspects of developing innovative business ideas using digital services). *Ekonomika i upravlinnia*, no. 4, pp. 53-60 (in Ukrainian).
- Kozhyna, A. 2022. Reducing Poverty, Inequality and Social Exclusion in European Countries. Based on Inclusive Approaches to Economic Development. *Economics and Management of the National Economy, The Crisis of National*

Models of Economic System, pp. 29-32. DOI: <https://doi.org/10.30525/978-9934-26-269-2-7>,

Lopuschnyak, H.N., Chala, O. Poplavska. 2021. Socio-economic determinants of the ecosystem of sustainable development of Ukraine. IOP Conf. Series: Earth and Environmental Science, no. 1. pp. 1-9. <https://doi.org/10.1088/1755-1315/915/1/012019>.

Skliarenko, O.V., Yahodzinskyi, S.M., Nikolaievskyi, O.Iu., Nevzorov, A.V. 2024. Tsyfrovii interaktyvni tekhnolohii navchannia yak nevidiemna skladova suchasnoho osvithnoho protsesu (Digital interactive learning technologies as an integral part of the modern educational process). Innovatsiina pedahohika, no. 68(2), pp. 51-55. <https://doi.org/10.32782/2663-6085/2024/68.2.51> (in Ukrainian).

Yahodzinskyi, S.M. 2015. Hlobalni informatsiini merezhi u sotsiokulturnii perspektyvi: monohrafiia. (Global information networks in a sociocultural perspective). K. Ahrar Media Hrup, 276 p. (in Ukrainian).