



# The Role of Flexible Culture in Improving the Adaptability of Higher Education Institutions

Aynur Akhundlu<sup>1</sup>  

<sup>1</sup>Department of Marketing and Management, Western Caspian University, Baku, Azerbaijan

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## Abstract

This article examines the role of Agile culture in improving the adaptability of higher education institutions. Although the core principles of the Agile approach were initially formed in the field of project management, over time it has become widespread as a flexible management model that is not limited to IT projects and is applicable to various fields of activity. A modern university must be not only an institution for the transfer of knowledge, but also an adaptive organization capable of adapting to a changing external environment, establishing interactions with stakeholders, and being open to innovation. This transformation does not happen randomly, but requires the application of mechanisms that prepare the organization for change, strengthen the team culture, and make management processes more flexible. The article analyzes the benefits of agile culture in universities in terms of internal coordination, decision-making, knowledge management and increasing student-centeredness in the educational process, and discusses the opportunities and potential challenges associated with the transition to an agile organizational model.

**Keywords:** Agile culture, Agile management, university, adaptive organization, knowledge management.

## 1.Introduction

Accelerating economic, technological and social transformations on a global scale are having a profound impact on the models of higher education institutions and forcing them to move away from traditional management frameworks. Based on the latest data, the average graduate turnover in the international labor market has been lessened to 2–3 years (World Economic Forum, 2020, p. 5–7; Li, 2022, p. 570; Pencheva, 2022, p. 247), which indicates that the higher education system is fighting to keep face with the rapidly changing environment and that highlighting a need for more flexible, adaptive strategies.

While the traditional bureaucratic management model is effective in stable conditions, it fails to ensure agile decision-making, operational coordination, and more active participation of stakeholders amid the substantial uncertainty of the modern era.

The governance structures in universities are still multi-tiered, formal and slow, which delay realization of innovative initiatives and make the issue regarding the adaptability gap of higher education institutions is more evident.

A contemporary university shouldn't merely transmit knowledge; but also be a dynamic organization with strategic flexibility that addresses promptly to the environmental changes, deals with various stakeholders. The agile culture which has been increasingly applied in management science recently presents a practical framework for this transformation, allowing for strengthening the adaptive potential of universities with principles such as transparent communication, continuous decision-making processes, team collaboration, and continuous development. In this context, the main question answered by the study is formulated as follows:

Through what mechanisms does an agile culture increase the management flexibility and adaptability of higher education institutions?

The aim of the article is to identify the theoretical foundations of the application of the “agile” culture in higher education institutions, to analyze the impact of this approach on management, coordination, knowledge management and the teaching process, and to assess the potential opportunities and risks of the transition to an agile organizational model. The hypothesis of the study is that the application of “agile” principles significantly increases the strategic adaptability of universities, the operability of decision-making and the effectiveness of cooperation with stakeholders. Existing scientific literature shows that the application of agile methodologies in the educational sphere increases institutional flexibility, but universities can face personnel resistance, structural inertia, and communication barriers in the transition to this culture.

Agile culture is a philosophical and methodological framework in management theory that promotes an agile approach to the implementation of projects and processes. The grouping of human activities into two main categories as processes and projects has created an important theoretical basis for the formation of the Agile concept. The changing business environment since the second half of the 20th century has increased the need for management models that are more flexible, adaptive, and based on periodic improvement (Rigby, Sutherland & Takeuchi, 2016, p. 45–47). As a result of this need, the "Agile Manifesto" was developed by software professionals in 2001 and the fundamental values of agile management were systematized.

Although the Manifesto was originally intended for the IT sector, the principles it presented — iterative learning, team collaboration, continuous improvement, user-centeredness, and openness to change — have subsequently been transferred to various fields of activity (Denning, 2018, p. 33–52). This has enabled the Agile culture to be widely applied not only in technology projects, but also in operational management, business models, strategic planning, and the activities of social organizations. Thus, Agile has begun to be perceived not as a methodology, but as a new form of management thinking in conditions of continuous change.

Agile methodology is inherently based on an iterative and incremental development model. The team develops a minimum viable product (MVP) early on, which brings the product to an initial working state, and improves the solution based on user feedback in subsequent iterations (Ries, 2011, pp. 60–85). This model allows you to put the most important principles of agile management — operational value creation, customer focus, and agile planning — into practice.

Agile projects are usually organized in sprints, which have a short timeframe. Sprints are carried out over a two- to four-week period, and each iteration focuses on a specific goal — the completion of a specific functional part of the product or service. At each stage, “user stories” define product value from the user's perspective and attaches special attention to meeting user needs rather than the final result. Agile approach aims to simplify complex requirements and implement them in sections. In reality, overcomplicated requirements endanger project risks, leading to inefficient resource management, and delaying outcomes. Agile management avoids these situations by creating incremental value dividing large goals into small, realistic, and functional tasks (Highsmith, 2002, pp. 55–60).

All these factors make Agile culture not only a technological innovation, but also a management culture, which is relevant for all organizations operating in a changing environment. (Rigby et al., 2016, pp. 48–50).



*Figure 1.*

Figure 1. illustrates the analogy, which defines one of the core principles of the Agile methodology: explaining requirements in the simplest and most functional form. The goal of the Agile approach is to deliver a working, functional version of the product (Minimum Viable Product — MVP) at the initial stage and collect operational feedback from the user or customer. Based on this feedback, the product is gradually improved in subsequent iterations, and ultimately the solution is brought into a form that is more suitable for real needs. This explanation is also broadly described in the Lean Startup concept (Ries, 2011, p. 60–85). The wheel hanging from a rope shown in the picture is a symbolic representation of this approach — that is, the functional minimum. Agile methodology is a management model based on iterative and time-bound processes, in which iterations are usually implemented in two-week sprints, relying on project characteristics. Each period can be extended to three or four weeks. In each sprint, the team prioritizes key features providing real value to the customer; that are formalized in the form of “user stories.” “Iteration” and “sprint” are often used synonymously in Agile environments, both referring to a time period allocated for completing specific tasks.

The principles such as agile decision-making, strengthened team cooperation, continuous feedback, transparent communication, and willingness to change constitute the basis of Agile culture. Considering these principles raises the question how to apply the Agile approach in the educational system.

A major advantage of Agile methodology is its ability to incorporate the requirements and changes through iterative processes. The team assesses the outcomes reached at the end of each iteration and adjusts decisions regarding the next phases, which allow stakeholders — business customers or users — to impact the duration of the project throughout the entire process. (Highsmith, 2002, pp. 55–60).

In a university environment, the idea of "customer" can be understood as students, faculty, and other academic staff involved in the educational process. Introducing Agile method enables students to be more active during classes and project activities, considering their opinions more promptly, and proposals to be carried out within the lesson process.

Agile management does not emphasize rigid and fixed roles among team members. Instead, it adopts a flexible, collaborative team structure, which can support different functions as needed, allowing team members to create shared value through complementary roles.

The knowledge management strategy attaches particular importance to improve the efficiency of processes within the university and increase overall efficiency. Owing to the investment made in the development of information technologies in the last few years, the efforts have been directed on centralizing, systematizing, and effectively sharing codified knowledge. This approach aims to facilitate reapplication of knowledge, preserve institutional memory, and ensure the stability of organizational processes (Nonaka & Takeuchi, 1995, pp. 8–25).

The concept put forward by Hansen and colleagues (1999, pp. 106–116), mentions two main directions of knowledge management:

1. Documenting codified knowledge involves collecting, structuring, and sharing data in electronic systems and via digital platforms;
2. Transferring tacit knowledge — the dissemination of knowledge as a result of human interaction through collaboration, discussions, meetings, and exchange of experiences.

This, in turn, enables the flow of knowledge to be fast, transparent, and continuous, as required by the Agile philosophy. Thus, both enhanced technological infrastructure and expanded academic collaboration support the transformation of universities into more agile, adaptive, and innovative organizations.

*Table 1. Two approaches to knowledge management*

Category	Open Knowledge – “People-to-Document” Approach	Non-Open Knowledge – “People-to-People” Approach
Descriptive Feature	High-quality, reliable, and fast information systems are developed; access to codified knowledge is ensured, enabling its reuse.	Conditions are created for mobilizing individual experience and organizing creative consultations on strategic issues.
Main Focus	Systematization and storage of electronic documents, databases, and codified knowledge.	Promotion of knowledge exchange among individuals; strengthening social networks and collaboration channels.
Implementation Mechanism	Digitization, structuring, and systematic collection of knowledge within document-based databases.	Knowledge sharing through interpersonal communication, mentoring, meetings, and corporate communities.
Strategic Priority	Significant investment in information technologies; primary goal – maximizing the codification and reuse of knowledge.	Moderate investment; primary goal – increasing the sharing of individual knowledge and experience among team members.
Application Examples	Databases, digital archives, document management systems.	Seminars, experience-sharing events, expert networks, and communities of practice.

*Source: Hansen, M. T., Nohria, N., & Tierney, T. (1999). What is your strategy for managing knowledge? Harvard Business Review, 77(2), 106–116*



The transition to the era of fast internet and intensive development of information technologies makes the application of the "iterative" model even more necessary. Modern educational centers, especially universities, are forced to use flexible systems to adapt to this increasing pace. As a result of this process, a more adaptive environment is formed and the quality of teaching activities increases. Both the "people-document" and "people-people" approaches presented in the table above are of great importance for adaptive institutions, and the combination of these two models creates the optimal form of knowledge management in universities (Hansen et al., 1999, pp. 106–116)

When making strategic decisions, university administrations should seek the opinions of departments, deans, and faculty members and take their suggestions into account. This approach is fully consistent with the management logic of the Agile methodology. This principle is also consistent with one of the classic models of management science, the "Carnegie model" (political model). The model in question considers it important to involve all stakeholders of the organization — teachers, students, and even parents — in the decision-making process. If universities take into account the opinions of not only internal but also external stakeholders — employers, government agencies, and public organizations — when conducting strategic planning, they can formulate more effective and targeted strategies aimed at developing the country's human capital.

The successful implementation of the mentioned recommendations is primarily determined by management skills and leadership skills of the university administration. Agile leadership is a more adaptive, transparent, and collaborative approach than traditional management models. In this leadership model, the rectorate prioritizes responding quickly to changes, managing risks in a measured manner, and using modern methods in decision-making. Thus, agility becomes a strategic advantage for the university (Uhl-Bien, M., & Arena, M. (2018), 1–10).

The implementation of an agile culture in universities is primarily closely related to the activities of key personnel potential - namely, teachers. The quality of the teaching process is determined by the methodology chosen by the teacher, the form of presentation of the lesson, and the extent to which it adapts to the characteristics of the audience. Factors such as the level of comprehension of the audience, the active participation of students, and the orientation of knowledge to application directly shape the effectiveness of the lesson. In this regard, the Agile approach can serve as a practical and effective tool for teachers (De Sousa, 2023, pp. 14–18).

In traditional teaching practices, methods predetermined in syllabus and programs are applied to all groups in the same manner. However, a flexible teaching approach allows the teacher to dynamically select methods after getting to know the students, observing the characteristics of the audience, and receiving feedback during the lesson. This creates the opportunity to adapt the form of the lesson situationally, right in the learning process itself.

It is proposed that instructors divide courses into several stages based on a modular approach and assess each stage iteratively. Organizing the following steps according to the results acquired after each iteration makes the teaching process more flexible and gives the opportunity for dynamic revising of the syllabus when necessary. This approach reinforces student-centeredness and makes continuous development as a core principle of teaching.

The execution phase alone is not enough in project management terminology, so involvement of control and monitoring processes in parallel is also necessary. Applied agile methods should be regularly assessed, controlled via KPIs and other evaluation criteria, and amendments should be made in following iterations if any deviations are detected. This method makes the teaching process more transparent, assessable, and systematically improved.

## 2. Conclusion

The study explains that the Agile approach can lead to fundamental changes in the management of universities. This methodology is accelerating decision-making processes, enhancing internal communication channels, as a result establishes a more flexible collaborative environment between faculty and students. Applying Agile principles helps universities avoid from the traditional hierarchical and bureaucratic management model towards a team-based, participatory, and agile organizational culture.

According to the study results, agile culture does not merely change management processes in higher education institutions, but also the teaching approach. The agile approach makes teaching student-centered, allowing teachers to adapt teaching methods to the real needs, learning pace, and individual characteristics of students. Applying agile culture also opens up new opportunities in the knowledge management. Universities can develop digital and social knowledge systems as well, with the help of codified knowledge bases and strengthening mechanisms for the exchange of “human-human” experience. When these two approaches combined, it creates favorable conditions to form more sustainable, flexible and adaptive integration model in higher education institutions.

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