

An Integrative Approach to Creating Educational Content Using AI and the Case Method

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Abstract: The article analyzes the opportunities and challenges associated with the use of artificial intelligence in developing case studies for disciplines within the field of study 38.03.02 "Management," in the context of the transformation of the Russian higher education system driven by the implementation of national development goals until 2030. The emphasis is on enhancing the practice-oriented nature of learning, integrating digital technologies, and developing student competencies demanded by the modern labor market. Based on a review of Russian and international scientific literature, as well as an empirical study conducted among management students at KNRTU and faculty members, key limitations of AI-generated cases were identified: their lack of realism, stereotypical nature, absence of student emotional engagement in solving them, weak connection to current economic and socio-cultural conditions, and insufficient depth of assignments. At the same time, the potential of AI as an auxiliary tool for the teacher is emphasized, provided there is expert refinement, methodological support, and adherence to ethical standards. The authors justify the need for a hybrid model of case development, in which AI performs auxiliary functions (idea generation, structuring), while the teacher retains the key role as a methodologist, expert, and bearer of professional experience. The article also points to an acute shortage of methodological recommendations and standards for integrating AI into the educational process, making this issue particularly relevant for modern management pedagogy.


1 INTRODUCTION

The transition of the Russian education system to a new level starting in 2026 is being carried out on the basis of the Decree of the President of the Russian Federation dated May 7, 2024, No. 309 "On National Development Goals of the Russian Federation for the Period until 2030 and for the Future until 2036." This document defines the goals of ensuring access to quality education that meets the challenges of the time, the needs of the individual, society, and the state, as well as the "advanced development of the educational environment." Higher education institutions must transition to a new qualitative level, strengthening the practice-oriented approach and technological changes in the educational system. Universities remain with a two-tier model, preserving bachelor's and master's levels, with a focus on real

professional tasks. Employer opinions are considered in shaping educational programs and assessing the level of training in accordance with them. Integration of universities with industrial enterprises and science is taking place-professional clusters are being created. The stated changes take into account the previous experience of Russian universities in accordance with the Bologna Declaration-the practice-oriented nature of curricula considering the current state of the labor market. Modern conditions of digitalization of the educational system allow for a transition to a new qualitative level. The introduction of unified digital educational platforms (e.g., "Digital Educational Environment") defines priorities for the use of artificial intelligence, adaptive learning systems, and virtual and augmented realities in education. The methodological principles of the competency-based approach include the formation of digital competencies and digital thinking in every

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educational program. The purpose of the article is, in connection with the transition to the new education system and digitalization, to identify problems related to the introduction of AI into the educational process.

In connection with the above, we come to the question of methodological updating of the content of curricula. This primarily concerns the training of specialists in the economic field. The demand from employers to strengthen modules on project management, entrepreneurship, and digital transformation of enterprises defines priority tasks for methodologies. New requirements are imposed on teachers: increasing the proportion of practicing teachers-specialists from the real sector of the economy; mandatory professional development of faculty using digital platforms; participation in research and innovation activities.

The ability of university graduates to adapt quickly and effectively to future conditions and make a significant contribution to achieving state priorities is formed through the application of practice-oriented approaches and the solving of case assignments in the educational process. This becomes especially important in the training of bachelor's degree managers, who during their studies must acquire the ability to make decisions under uncertainty, work with people and resources, and adapt to a rapidly changing business environment.

2 MATERIALS AND METHODS

The traditional case method, dating back to the Harvard Business School, remains one of the key tools of practice-oriented learning in management. Christensen et al. (1991) emphasize that an effective case should stimulate discussion, not provide ready-made answers. In the Russian context, E.A. Berezovskaya and I.V. Latfullina (2018) note the growing need for localized cases reflecting the specifics of Russian business. In scientific literature, AI is presented as a tool for generating educational content. Zawacki-Richter et al. (2019), in a review of 193 studies, showed that AI is actively used in education, but its application in creating cases remains understudied. In recent years, works dedicated specifically to case generation have appeared: for example, Wang & Lin (2023) studied how GPT-4 can create cases on business ethics but noted their superficiality and lack of ethical depth. A number of studies have identified main problem areas related to the use of AI in learning; for instance, it has been determined that AI is incapable of replacing the teacher in designing complex learning situations.

Holmes et al. (2022) emphasize that AI can reproduce stereotypes and simplify multifaceted problems. In Russian literature, A.V. Baranov (2024) notes that AI cases often do not consider the cultural-institutional context of Russian organizations, which reduces their educational value. We especially note issues of ethics and law related to AI. This current problematic touches upon issues of academic honesty and responsibility. M.S. Kuznetsov and D.A. Petrov (2025) in the domestic scientific school proposed methodological recommendations for the ethical use of AI in higher education, including mandatory attribution and expert review. The integration of AI and the traditional approach to creating educational content holds promise. In this vein, the teacher becomes the central figure of learning, and AI is used for solving local tasks. This is confirmed by the works of Luckin (2022) and Russian research by T.N. Smirnova (2024), where a model of "AI as a co-author" in developing educational cases for management disciplines is proposed.

Summarizing scientific sources, we reveal the problem field of introducing AI into the creation of educational content: weak pedagogical adaptation of cases to learning tasks considering cognitive characteristics or learning goals; the problem of creating low-quality or false content, using outdated material for analysis, or inconsistency with real business conditions in Russia; the creation of cases with superficial, unidirectional tasks, absence of multi-level cases; weak integration with the socio-cultural characteristics of the student audience; issues of copyright and ethics; teacher readiness to use AI, insufficient digital literacy and knowledge of digital technologies; lack of methodology for using AI for educational purposes.

In recent years, teachers from leading world universities (USA, Canada, UK, Australia, Singapore) have begun actively experimenting with the use of generative AI-primarily models such as GPT-4, Claude, Gemini-for developing case studies in management, business ethics, strategy, and organizational behavior. Below is a generalized experience based on publications, conferences (e.g., Academy of Management, AACSB), reports from centers for pedagogical innovation, and interviews with teachers. The main areas of AI use included:

- Draft Generation: AI helps quickly create a basic case structure on a given topic.
- Audience Adaptation: Teachers use AI to localize cases (e.g., adaptation to the Southeast Asian or Latin American market).

- **Creation of Variable Scenarios:** AI generates alternative endings or "branching" for interactive cases.

- **Supporting Inclusivity:** Some teachers (e.g., from the University of Michigan) use AI to create cases with diverse characters (by gender, ethnicity, age) to avoid stereotypes.

Research (Cotton et al., 2023; Wang & Lin, 2023; Kuhail et al., 2023) and student surveys in the USA, Canada, and Europe have identified the following key problems students encounter when working with AI-generated cases:

1. **Unrealistic Situations.** Students note that AI cases often ignore organizational politics, emotional intelligence, and the influence of corporate culture.

2. **Absence of "Gray Areas."** AI rarely creates situations where all solution options have serious costs (such cases are most valuable in management).

3. **Weak Engagement.** AI cases often do not evoke an emotional response, do not encourage discussion, and do not create a sense of subjective participation.

4. **Repetitiveness and Stereotyping.** Students notice repetitive structures: problem - analysis - solution - moral. This lowers the cognitive level of perception of the educational material.

5. **Lack of Depth in Discussion Questions.** Often, questions generated by AI are descriptive, not analytical or evaluative in nature.

6. **Doubts about Credibility.** Students are increasingly asking questions about the origin of data, especially when the case references "research" or "market reports" without sources.

International experience in using AI in classes shows that AI becomes a useful tool in the arsenal of a management teacher, but its effectiveness directly depends on the depth of pedagogical reflection and expert refinement. Students value cases that reflect the complexity of real managerial work.

Cases and practice-oriented assignments allow students to apply theoretical knowledge to real situations. At the same time, working with cases forms key managerial competencies in students: analytical thinking, strategic planning skills, communication and teamwork skills, and conflict management within an organization.

The content of case assignments should be based on the real experience of enterprises and solving current professional tasks. Practice-oriented teaching methods allow for modeling work situations. Students acquire competencies that will enhance their future competitiveness in the labor market. Cases based on specific business situations generate greater interest among students, which increases learning

motivation and promotes deep assimilation of the material. Cases involve the inclusion of critical and analytical thinking, responsible attitude, and participation in teamwork.

Practice-oriented learning and case methods do not simply supplement the educational process; they are becoming relevant technologies in training modern managers capable of acting effectively in a complex and dynamic business environment.

This makes the problem of developing cases for classes highly relevant. In this regard, digital technologies and big data analysis using AI come to the teacher's aid. Developing high-quality cases is a labor-intensive, resource-demanding process requiring expert participation. In this context, artificial intelligence is considered a promising tool for creating educational cases.

Due to increasing demands on learning, teachers are increasingly turning to chatbots and creating prompts related to real circumstances of enterprise activities. It is necessary to consider that the use of AI in developing management cases generates a number of acute problems, making this topic particularly relevant. Firstly, AI does not understand real organizational problems at a professional level and often simplifies solution scenarios. Secondly, cases do not always reflect real learning tasks, do not correspond to the students' level of preparation and initial knowledge, and do not align with the logic of presenting theoretical material on the topic. Thirdly, there are difficulties in verifying the authenticity and reliability of data presented in the case. Also, writing cases using AI touches upon issues of ethics and copyright, problems related to the digital divide. We believe that the main problem or root cause lies in the absence of methodological recommendations and standards for integrating AI into the case development process in the field of management.

Let's focus on the main distinctive features of developing cases in the traditional way, i.e., by university teachers in the discipline "Management," and using AI.

Thus, cases developed by teachers have a high degree of compatibility with educational goals, are written based on in-depth analysis of real enterprise cases, which is especially important for the field of "Management," where not only knowledge but also the ability to analyze complex management situations plays a key role in learning. Cases created with the help of AI can undoubtedly be used, but only on the condition of their methodological refinement and mandatory expert verification.

No.	Features of Cases Developed by Teachers (Traditional Method)	Features of Cases Developed Using AI
1	Personal experience, professional competencies, knowledge of the curriculum.	Generalization of a database without reliance on specific management situations.
2	Creation of educational material for the discipline considering previously studied disciplines in accordance with the curriculum.	Lack of pedagogical appropriateness in applying the case; the language of the case does not correspond to the socio-cultural characteristics of the region.
3	Development of assignments of varying complexity.	The case assumes a single solution.
4	Cases are based on critical analysis and in-depth processing of source material.	The case does not touch upon important events in the country and the world, narrowing the processes of the external environment.
5	Uses fresh data, real companies, current legislative and market conditions (e.g., sanctions risks, digital transformation in the Russian Federation).	Generates fictional or outdated scenarios. May refer to outdated regulations or use implausible financial data.
6	Adapts the case to a specific field of student training (e.g., Strategic Management or Marketing).	Cases of a universal nature.
7	The teacher is responsible for writing the case.	Responsibility is absent; there are risks of violating academic integrity.

Thus, the most effective model appears to be a hybrid one: AI as a support tool (idea generation, structuring, formatting), and the teacher performs the role of methodologist and expert, responsible for the quality of educational content.

3 RESULTS AND DISCUSSION

In the modern economic conditions of higher education transformation, requirements are imposed on the professional competencies of future managers, the formation of which is only possible through the application of modern teaching methods, which

include practice-oriented methods, in particular, the case method. The method involves creating models of real management situations in classes. The case method has a number of advantages, in particular, it forms critical thinking, decision-making skills, and teamwork. But developing high-quality cases requires knowledge not only of the methodology for their creation, awareness of economic processes, a certain worldview, and resources. Under such conditions, many teachers view AI as a promising tool for analyzing big data to create educational cases.

A study was conducted at KNRTU aimed at understanding students' perceptions of the distinctive features of cases written by a teacher and by AI. This study revealed key differences based on the criteria: alignment with the learning task, alignment with the real economic situation in the country, the ethical component of the case, and motivation to solve it. The sample consisted of 60 third-year bachelor's degree students in the field of "Management." During a class, students analyzed two cases on the same topic, compiled by a professional in teaching management disciplines and by artificial intelligence (GPT-4, with a prompt including the learning goal, level of preparation, and topic). In conclusion, focus groups were conducted discussing questions about the realism of the case task, its alignment with the learning task, complexity and motivation to solve it, readiness to work in a team on the case and discuss the solution, and the presence of an ethical dilemma.

Student opinions regarding the case assignment written by the teacher contained the following information: the case was written in simple language but contained complex, multi-level tasks that corresponded to the learning goals and competencies being formed in the class, unlike the case created by AI, which was simply structured, contained extra information, and was overloaded with events. The teacher is well-informed about the current economic situation, so the case contains external environment factors defined as relevant and among the top risk groups. The case made them think, to choose from many solutions those that correspond to classical theories and real circumstances. The case written by AI is not emotional enough, which hinders emotional involvement in its solution. The solution is found quite quickly and usually requires a basic level of topic knowledge. "Dry," template formulations are used, and the real situation is not described, "as if a robot wrote it, which it actually did."

Cases developed by teachers are perceived by students as realistic, based on the real economic situation, and incorporating the socio-cultural characteristics of the region. The case is written in

"living" language, has an emotional connection, the emotional anchors within the case are clear, and specific stakeholders are considered. The cultural and political context is always traceable.

AI cases are assessed as simple and emotionally neutral; case solutions are simplified and usually offer a single solution without engaging in-depth analysis and critical thinking. Overload with events described as "dry" does not evoke emotions and, accordingly, is not supported by a motivational mechanism. Hence the question about the role of such a case (developed with the help of AI) in studying the topic.

An expert survey of teachers who use AI for educational purposes showed that AI is used for performing routine operations; weak alignment of the content of the case performed with AI with pedagogical tasks was noted; the necessity of expert verification of data provided by AI was also noted. It is necessary to rework cases, saturate them with context, consider external environment factors, and current economic and managerial information. The role of AI is that of an auxiliary tool, not the "author" of cases. Teachers note that AI cannot work with real management situations; they are artificially created and often do not correspond to modern conditions. Social and economic institutions, which are specific to different countries or regions, are considered as context. There is a problem area related to the publication of cases or the preparation of methodological literature. At the same time, all cases are assembled in a template-like manner or written in a universal language, without the specifics of the scientific field or professional activity.

4 CONCLUSION

The transition of the Russian higher education system to a new qualitative level, outlined by the 2024 Presidential Decree, requires strengthening the practice-oriented approach, digitalization, and close integration with the real sector of the economy. Under these conditions, the case method remains one of the most effective tools for forming the professional competencies of future managers, as it develops critical thinking, the ability to make decisions under uncertainty, and teamwork skills.

Artificial intelligence has significant potential as an auxiliary tool in developing educational cases: it accelerates idea generation, helps adapt materials for different audiences, and formats content. However, empirical data and analysis of scientific literature show that AI-generated cases often suffer from lack of realism, stereotypical nature, lack of depth,

emotional engagement, and connection to current socio-economic realities, especially in the Russian context.

A key conclusion of the study is the necessity of preserving the leading role of the teacher as a methodologist, expert, and bearer of professional experience. The most promising model appears to be a hybrid one, in which AI acts as a co-author at the draft preparation stage, and the final content of the case is formed and verified by the teacher, taking into account learning goals, the students' level of preparation, and the specifics of the national business environment.

For the sustainable and ethical integration of AI into the educational process, the development of methodological standards, improvement of teachers' digital literacy, and the formation of clear rules of academic integrity are required. Only with such an approach can high quality of practice-oriented learning be ensured and competitive specialists capable of acting effectively in the complex and dynamic business environment of the future be trained. Thus, despite the obvious potential of AI as a support tool for teachers, its use in creating educational cases requires thorough pedagogical preparation, methodological justification, and legal regulation.

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