

## The relevance and effectiveness of risk management systems to ensure the quality of education in the field of Soft Skills

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### ABSTRACT

The purpose of this study is to systematically review the effectiveness of risk management systems for ensuring the quality of education in the field of Soft Skills. The study used the PRISMA methodological approach, which contributed to ensuring transparency in conducting systematic reviews. This system was used to search, select and analyze scientific papers. In the results it is shown that risk management systems (ERM, ISO 31000, COSO ERM Framework and PMBOK) have great potential to improve the quality of the educational process and the effectiveness of soft skills development in students. Besides, these systems provide a wide-ranging approach to risk management. They also integrate it into all components of the organization. All of them have individual advantages and opportunities for integration into the modern innovative learning space. The conclusions indicate that the process of implementing effective risk management in the education system is important for ensuring high quality education and successful development of students. The risk management system allows not only to minimize potential problems, but also to increase the efficiency of management and ensure the stable development of educational programs.

**Keywords:** Education, Risk management, Innovation, Risks, Control, Soft skills.

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### 1. Introduction

The purpose of this study is to systematically review the effectiveness of risk management systems for ensuring the quality of education in the field of Soft Skills. The study used the PRISMA methodological approach, which contributed to ensuring transparency in conducting systematic reviews. In the results by modern scientists it is shown that risk management systems (ERM, ISO 31000, COSO ERM Framework and PMBOK) have great potential to improve the quality of the educational process and the effectiveness of soft skills development of students [1]. In particular, these systems provide a comprehensive approach to risk management. They also can integrate it into all components of the organization. All of them have individual advantages and opportunities for integration into the modern innovative learning space. The conclusions indicate that the process of implementing effective risk management in the education system is important for ensuring high quality education and successful development of students. Hence, the risk management system is important not only for minimizing potential problems, but also for increasing the efficiency of management.

The process of formation and development of soft skills (communication, emotional intelligence, creativity, ability to express opinions, quick adaptation to a changing society, and leadership) are becoming important in the modern education system, because they affect both professional growth and personal development. Modern

research also suggests that these developed skills influence effective teamwork, quick conflict resolution, and adaptation to transformative conditions [2].

However, despite the considerable attention to these skills, their development based on modern digital technologies is still a complex issue, as it is accompanied by numerous challenges [1], [2]. In general, modern scientists have characterized various issues of digitalization in the education system [3], [4], [5]. In particular, the results of N. Hrechanyk et al. digitalization is the main trend in modern education [4]. O. Dobrovolska et al. investigated the links between the creation, impact and dissemination of knowledge in higher education [6]. The authors analyzed how these processes interact and influence the quality of education and innovative practices at universities. G. Richards described the role of conceptual pedagogy in preparing students for the future. The author also focused on the importance of taking into account the cultural context in order to develop students' social skills [7].

R. Aljad identified current trends in the development and experience of using learning management systems and their impact on the development of professional skills [8]. N. Afanasieva described the basics of visualization tools in professional training and described their effectiveness and impact on the quality of education [9]. For this study, the works that describe the impact of digital technologies on education and soft skills development are also important [10], [11], [12]. Modern authors have also analyzed how the latest technologies change the educational process and affect the interaction between teachers and students, forming a high level of demanded skills in the latter [13], [14].

Some works also prove that the formation of social skills should be based on modern technologies and means of control and monitoring [15], [16]. Contemporary authors have also drawn attention to the challenges and opportunities associated with the introduction of digital technologies in teacher training [17], [18]. For this reason, the introduction of effective risk management systems plays an important role. The phenomenon of risk management in education is the process of identifying, defining and managing the main risks that may affect the quality of education and the formation of students. The issue of introducing risk management technologies into modern curricula aimed at developing Soft Skills is an urgent task that requires detailed study. This, in turn, will not only minimize possible negative consequences, but also ensure the functioning of stable and high-quality education.

Therefore, this paper will examine the relevance and effectiveness of risk management systems for ensuring the quality of education in the field of Soft Skills, which determines the purpose of this study. The main research objectives are to identify the main challenges faced by educational institutions in implementing these skills, characterize risk management approaches and formulate key recommendation solutions for their application. This study will be useful for both teachers and educational administrators, as well as curriculum developers seeking to improve the quality of education and ensure the successful development of their students.

## **2. Methodology**

### **2.1. Research Design**

This study is based on the search and analysis of scientific literature that describes the theoretical principles of using risk management systems. Therefore, the study is qualitative research.

### **2.2. Instruments and Procedures**

The study used the PRISMA approach to conduct a systematic review of the effectiveness of risk management systems to ensure the quality of education in the field of Soft Skills.

#### *Inclusion criteria*

- Type of research: various empirical studies, individual theoretical articles, and meta-analyses are taken into account.
- Period of publication: the emphasis is on the study of modern sources: 2016-2023.
- Geographical context: the emphasis is on attracting research from all over the world
- Target audience: studies related to students, teachers, managers are selected.
- Language of publication: English. If a study is not written in English but has great scientific potential, it is included only if there is an English-language abstract.

The search strategy involved the selection of the main scientific and metric databases. Thus, the authors of the article chose Scopus and Google Scholar, given that they present a variety of studies in this area. Later, the main keywords were formed: "risk management", "Soft Skills", "quality of education", "risk management in education", "educational systems".

The research selection procedure consisted of search and selection. The initial search was carried out using the above databases. This resulted in the selection of 320 studies. The first stage of selection involved the exclusion of 195 studies due to their duplication and inconsistency with the general topic, as these studies were not directly related to education or risk management systems. The second stage of selection consisted of a thorough analysis of abstracts. As a result, another 65 studies were screened out. After that, the third stage of selection consisted of analyzing the full texts. Thus, 31 studies were selected for inclusion in the study.

### 2.3. Data analysis

The process of data extraction was carried out manually from each study. For this purpose, special Microsoft Word spreadsheets were used for structured data collection. The data collected included the following information:

- Key insights and findings of the studies
- Description of methodologies and stages of data collection
- Risk management tools and systems used
- Conclusions on effectiveness

At the same time, each study was evaluated based on such criteria as the clarity of the research problem, the appropriateness of the methodology, and the reliability of the data obtained. After that, the results were synthesized. In particular, the authors of the article used a thematic analysis to summarize the data. The authors also used the comparison method to compare the data obtained with previous studies.

### 3. Results and Discussion

One of the most important aspects of education is teaching soft skills. Future employment trends are extremely difficult to anticipate; only short-term forecasts may be considered reasonable. In order to prepare young people for the workforce, educational programs should attempt to take into account potential future circumstances. Besides, as the future is frequently unpredictable, this is not always easy to do.

However, as soft skills are vital for daily living as well as for employment, educational institutions must concentrate on methods and strategies that will assist students in acquiring transversal competencies that will benefit them in any situation [19], [20]. Since "skills beget skills," early social and emotional skill interventions can effectively increase skills and lessen social, educational, and employment inequalities.

Soft skills and emotional intelligence are important for risk management in education. It is about the ability to make decisions in a fast and efficient way. Educators often find themselves in situations where there is a need for quick and effective decision-making for risk management, for example, regarding the safety of students, manifestations of conflict situations. Critical thinking, communication, adaptability and other soft skills enable educators to understand and manage their emotions, leading to more balanced and informed decisions. It is important to note that it is about establishing an effective level of cooperation between education seekers, teachers, administrators, and students. Such relevant elements of emotional intelligence as empathy and active listening form an atmosphere of trust in the team. Emotional intelligence is the ability to manage one's emotions, but at the same time understand the emotions of other people. Risk management at this stage is the organization of identifying, assessing and solving hidden and obvious problems.

Thus, to attain satisfaction in life, soft skills are crucial for everyone, not just those seeking employment. An important element in the formation of social skills is the development of emotional intelligence, which is especially important for confronting modern changing conditions [21]. Modern research has developed a special ladder that contains the main components of emotional intelligence that are necessary for the formation of a modern student. The metaphor of an ascending ladder with steps representing various Soft Skills that must be gradually gained throughout the growth process might be used to successfully address this challenge. The first step in the process is self-awareness, which serves as the foundation. After that, self-control, directed motivation, social awareness, and social influence can be attained (See Figure 1).

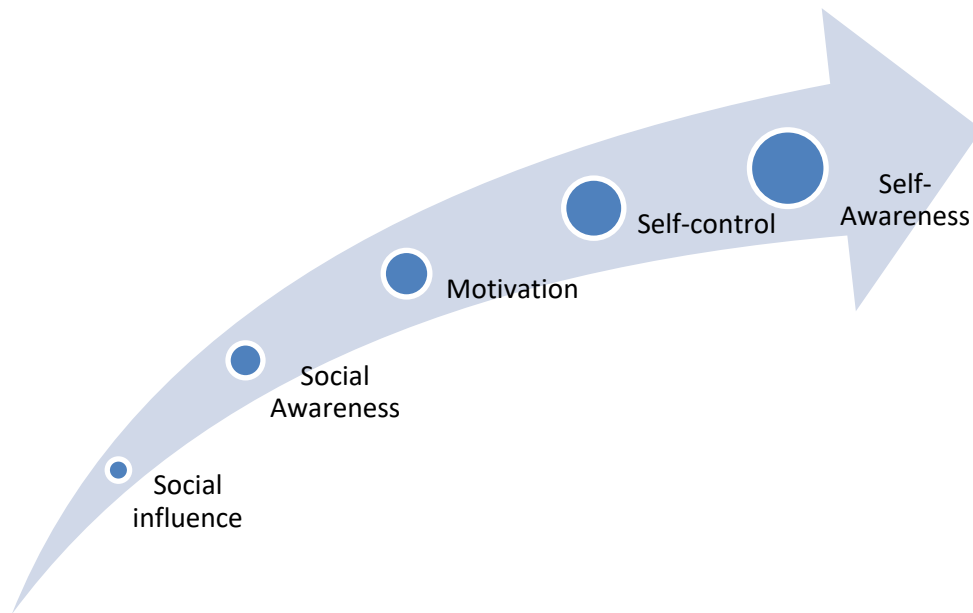


Figure 1. Steps of the development of soft skills (Source: Authors' development)

Besides, in the education system, the development of social skills is a complex task that may face several challenges that may affect the quality of the learning process and the quality of results. Hence, an important challenge may be the insufficient quality of educational material, which may affect the inconsistency of content and lack of practical orientation. Contemporary scholars have noted that not all training materials may not fully cover the necessary aspects of soft skills, and the materials provided may also be too theoretical, without enough practical tasks. This, in turn, will complicate the process of developing skills [22]. Another important risk, without which it is impossible to imagine an effective process of social skills development, is the low level of motivation of students. It can manifest itself in a lack of understanding of the importance of soft skills for their future professional development. This can be affected by the wrong presentation of the material. For this reason, modern scientists recommend making the learning process more interactive and using various digital tools.

Low motivation can also be affected using ineffective teaching methods. In this system, the risk of unpreparedness of teachers is noticeable. They may lack the competence and experience to effectively teach students soft skills [23], [24]. Another important problem is the failure to consider the individual needs of students by using unified approaches for all applicants. At the same time, there may also be an insufficient level of adaptation of teaching materials to specific groups of students. However, it is also worth paying attention to the lack of support from the management of the institution. In particular, the low level of financial resources and logistical support may affect the implementation of innovative teaching technologies.

At the same time, it is also worth paying attention to the low priority. Such an item as the development of soft skills may not be included in the core curriculum or may not receive sufficient attention from the administration of the educational institution. Therefore, these challenges and problems require a thorough and effective management system to ensure the quality of soft skills training and achieve significant results in student development. An important tool will be the introduction of effective risk management, which can help minimize these risks and create favorable conditions for the development of social skills in students [25]. The vulnerability of an educational institution to various risks must be identified, assessed and prioritized as part of the risk management process. Universities should create action plans to address the risks in a way they consider appropriate based on the risk analysis. procedures are considered standard risk management procedures.

Brief technical definitions should be provided. We are talking about ERM (Enterprise Risk Management) — a special system that forms an idea of all existing risks in the work of organizations and, accordingly, makes it possible to reduce the negative effect of their appearance. Another important element is ISO 31000, that is, an international standard that provides a description of the correct organization of the risk management process and the formation of relevant general recommendations. COSO is an established organization that has its own ideas about risk management and internal control. Specialists also use PMBOK (Project Management Body of Knowledge) – a formed list of knowledge, methods and sustainable practices that are used in project

management, taking into account such aspects as managing time, resources, risks and communications in the project.

However, studies have found that the scope of risk has gone beyond conventional problems and that various hazards can potentially affect them. therefore, began to holistically implement risk management procedures, understanding not only each one separately, but also how they are related to each other [26], [27]. The strategy, known as enterprise risk management, makes it possible to quantify and economically understand risks and communicate their consequences to all levels of the organization. Corporate risk management is added to traditional risk management, which is the essence of ERM. Besides, another important system is the ISO 31000 standard, which promotes risk management and sets out principles for maintaining effective management processes.

An important advantage of this standard is its unified approach. At the same time, the COSO ERM Framework serves as a risk management system that will help educational institutions to build risk management into their strategies and processes. The PMBOK Risk Management Framework serves as a standard in the field of educational project management. This framework reduces the risks associated with the implementation of educational programs [28]. Table 1 summarizes the main systems by such indicators as "information about the system", "use in education" and "benefits".

Table 1. The main systems of risk management in educational institutions

|                                         |                                                                                                                                                  |
|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Enterprise Risk Management – ERM</b> |                                                                                                                                                  |
| <i>General data</i>                     | Integrated risk management system that affects all components of the organization of work in the institution                                     |
| <i>Use in education</i>                 | Facilitates the identification, assessment, and management of risks that may relate to academic programs, finances, and the student environment. |
| <i>Advantages</i>                       | A comprehensive view of risks                                                                                                                    |
| <b>ISO 31000</b>                        |                                                                                                                                                  |
| <i>General information</i>              | Serves as an international standard for risk management, providing principles for process management                                             |
| <i>Use in education</i>                 | Serves as a framework for structuring the risk management process, assessing and responding to challenges                                        |
| <i>Advantages</i>                       | Can be used in different types of educational institutions.                                                                                      |
| <b>COSO ERM Framework</b>               |                                                                                                                                                  |
| <i>General data</i>                     | Serves as a general framework for risk management processes                                                                                      |
| <i>Use in education</i>                 | Can be used to formulate risk management strategies. The main focus is on the processing of educational programs                                 |
| <i>Advantages</i>                       | This system helps to ensure that risk management is integrated with the overall strategy of the institution                                      |
| <b>PMBOK risk management framework</b>  |                                                                                                                                                  |
| <i>General data</i>                     | Serves as a standard for project management, which includes the processing of risk management processes                                          |
| <i>Use in education</i>                 | Promotes effective management of educational projects and curricula.                                                                             |
| <i>Advantages</i>                       | Structured approach to risk management based on the processing of project activities                                                             |

Source: Authors' development

Thus, the introduction of these risk management systems in education is an important step towards ensuring high quality education and successful development of students. This allows minimizing risks, increasing management efficiency and ensuring the stable development of educational programs. Thus, risk management can be used to manage education to develop social skills. This can be done in stages. First, it is necessary to identify the risks associated with the development of soft skills. Risk management will help to identify potential problems that may affect the effectiveness of the process of developing social skills in students. This can be done by identifying preliminary risks such as low motivation, poor teaching materials, or insufficient qualifications of teachers. Risk management in educational institutions is based on several elements that differ in ensuring safety and efficiency of work. Thus, ERM takes into account all aspects of the activity of an

educational institution to form appropriate conclusions. ISO 31000 is a universal international standard. The COSO ERM Framework focuses on risk management for the overall strategy of an educational institution. The PMBOK enables you to structure risk management decisions and educational projects.

The second stage involves risk assessment and analysis. In particular, after identifying these challenges, a systematic assessment should be carried out to understand the main potential consequences and the likelihood of their occurrence. This, in turn, will allow to formulate the main strategies or directions for responding to these risks. This will minimize their impact on the process of social skills development. The next step is to plan and implement key risk management activities [29]. In particular, based on the assessment of the main risks, an action plan should be developed to address and manage them. This plan will require the development of specific measures and strategies to minimize negative results in enhancing soft skills [30]. These measures are quite broad, in particular, they may relate to improving the quality of education, developing programs with the involvement of stakeholders, developing students' motivation, improving curricula, and creating interactive programs using modern innovative teaching methods.

The next stage involves control and monitoring. It is about systematic monitoring of the implementation of the developed risk management strategies [31], [32]. This will allow us to detect major changes in a timely manner and take prompt action. This will contribute to the continuous improvement of the soft skills development process (see Table 2).

Table 2. Model of using risk management systems in soft skills education

| Stage                                          | Description of actions                                                                                                                                                | Examples of activities                                                                                           |
|------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| <b>Identification of risks</b>                 | Identify potential problems that may affect the development of soft skills: low motivation, poor quality teaching materials, insufficient qualifications of teachers. | Student motivation surveys, audit of teaching materials, assessment of teachers' professional competencies.      |
| <b>Risk assessment and analysis</b>            | Analyze the potential consequences and probability of problems. Identification of response strategies.                                                                | Probability and influence matrix, SWOT analysis of soft skills, identification of critical points of influence.  |
| <b>Planning and implementation of measures</b> | Creation of targeted plans and initiatives to reduce hazards<br>.                                                                                                     | Development of motivation programs, updating curricula, and implementation of interactive teaching methods.      |
| <b>Control and monitoring</b>                  | Methodical observation of risk management tactics being put into practice.                                                                                            | Regular checks on the success of programs, progress reporting, analysis of changes and correction of strategies. |

Source: Authors' development

The model of using risk management systems in educational institutions with the use of soft skills is quite productive. It combines the stages of risk identification, assessment and analysis of identified problems, planning of countermeasures, control and monitoring of implementation [33; 34]. So, the model of using risk management systems in educational institutions with the use of soft skills is quite productive. It combines the stages of risk identification, assessment and analysis of identified problems, planning of countermeasures, control and monitoring of implementation. Therefore, risk management can significantly improve the work of educational institutions, in particular through the use of soft skills. Among the specific cases, there is talk of improving the motivation of those seeking education [35]. For example, if low motivation to study is detected, there are special motivational programs, the use of the group project method, the organization of special workshops for the development of leadership skills. If the audit has shown that training and teaching materials are out of date, risk management will demonstrate a problem that can be solved by using updated training methods [36]. If it turns out that the teachers have a low level of effective provision of the educational process, a possible option is to conduct special trainings or additional training for them. The novelty of the proposed research consists in conducting a thorough analysis of existing generalizing works and the formation of the proposed using risk management systems in soft skills education, which is quite universal and will require

further refinement from the point of view of the formation of specific recommendations in solving all possible problems on the way to its implementation [37].

Thus, risk management can be a powerful tool for ensuring the quality of soft skills education for students through systematic analysis, planning and implementation of various measures aimed at reducing risks and increasing the efficiency of knowledge acquisition. Therefore, given the purpose of the study, the results demonstrated the importance of using risk management systems to manage soft skills education. However, the results first demonstrated the importance of developing social skills in the education system. At the same time, the paper outlines the main components of its formation. It has been determined that an important element of social skills development is the development of emotional intelligence, which is especially important for confronting modern changing conditions. This aspect is also emphasized by other authors [16].

Other works also identify the importance of integrating social skills in the system of sustainable education of the future, in particular, it is noticeable in the works of E. Sujová et al. [27]. The study also proves that the development of soft skills can face various risks. The authors of this article have proven that they can be minimized with the help of risk management systems. E. Zoto et al. also proved the importance of an integrated approach to control risk management [28]. At the same time, D. Harnesk, J. Lindström and S. Samuelsson confirmed the importance of using a socio-technical approach to risk management, which also partially coincides with this study [29].

R. Almonte also emphasized the importance of an integrated approach to soft skills training in the digital era, which coincides with our findings on the benefits of integrated risk management [21]. However, there are also some discrepancies in the studies. If R. Almonte focused more on digital tools, while this analysis covered a wider range of risk management approaches. S. Rosa, A. Carvalho, and P. Barja proved the importance of soft skills for professional development and the need for effective risk management in the educational process [22]. However, these authors focused more on pedagogical methods and less on the structural aspects of risk management, which was the key in this analysis. Other authors have also focused on different components of social skills development.

The results of the study also showed the important role of certain risk management systems that contribute to maintaining the quality of education within the framework of soft skills development, which coincides with a number of other works. In particular, M. M. d. Carvalho and R. Rabechini Junior have also confirmed the importance of risk management for successful project execution and efficiency, which is consistent with the findings of the Project Management Body of Knowledge (PMBOK) [23]. V.-A. Valavosiki, E. Stiakakis and A. Chatzigeorgiou confirmed the importance of developing a structured framework for assessing Soft Skills, which is in line with our findings on the importance of structured approaches (ISO 31000) [25]. The results also coincide with the findings of M. W. Barbosa, S. I. M. Carrasco and P. C. R. Abarca on the importance of risk management in preparing students for work [26]. Also in the study of E. A. Opabola and C. Galasso confirmed the importance of risk management for educational infrastructure [30]. However, while Opabola and Galasso focused more on risk management in the context of disasters, this analysis covered more general aspects of educational programs.

#### **4. Conclusions**

Thus, the implementation of soft skills education is a complex task, accompanied by a number of challenges that directly affect the quality of the educational process and the results obtained. The main risks are insufficient quality of educational material, low level of motivation of students, unpreparedness of teachers, etc. Besides, in the paper it is proved that the use of well-thought-out risk management can help minimize these risks and create favorable conditions for the development of social skills in students. Important risk management systems are ERM, ISO 31000, COSO ERM Framework and PMBOK. They differ somewhat in the principles of operation, but they are united by a common goal to identify, assess and manage risks related to curricula, finances and the student environment.

At the same time, the study determined that the use of risk management in the development of social skills should be implemented in stages first, it is necessary to identify challenges, then assess and analyze risks, plan and take measures, and finally control and monitor. Thus, risk management is a powerful tool for ensuring the quality of soft skills training for students through systematic analysis, planning and implementation of various measures aimed at reducing risks and increasing the efficiency of knowledge acquisition.

#### **Declaration of competing interest**

The authors declare that they have no known financial or non-financial competing interests in any material discussed in this paper.

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