# PROFESSIONAL CULTURE OF FUTURE SPECIALISTS WITHIN THE FRAMEWORK OF UKRAINE'S SUSTAINABLE DEVELOPMENT CONCEPT

## CULTURA PROFISSIONAL DE FUTUROS ESPECIALISTAS NO ÂMBITO DO CONCEITO DE DESENVOLVIMENTO SUSTENTÁVEL DA UCRÂNIA

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Abstract. In an increasingly globalized world, the imperative of sustainable development underscores the pivotal role of education and professional culture in nurturing sustainability-oriented mindsets and actions. This paper aims to explore the nexus between educational practices, professional culture, and sustainable development goals, particularly within the context of the Ukrainian national educational system and professional community. Through a comprehensive review of literature and empirical analysis, the study elucidates that the integration of sustainable development into educational curricula and professional ethos fosters heightened awareness and conscientious engagement with global environmental, economic, and social challenges. It underscores the significance of organizational cultures characterized by adaptability, innovation, and collaborative learning in advancing sustainable development agendas. However, effective implementation necessitates proactive strategies adaptable to evolving societal demands. The research advocates for the augmentation of interdisciplinary educational programs coupling theoretical insights with practical applications tailored to address realworld sustainable development challenges. Furthermore, it underscores the importance of incentivizing participation in sustainable development initiatives among educators and students alike, leveraging innovative learning technologies. Future research avenues should center on assessing the efficacy of such initiatives and devising methodologies for monitoring and evaluating their societal impact, thereby advancing sustainable development objectives.

**Keywords:** sustainable development, educational practices, professional culture, organizational culture, adaptability, collaborative learning.



Resumo. Em um mundo cada vez mais globalizado, o imperativo do desenvolvimento sustentável destaca o papel fundamental da educação e da cultura profissional no fomento de mentalidades e ações orientadas à sustentabilidade. Este artigo tem como objetivo explorar o nexo entre as práticas educativas, a cultura profissional e os objetivos de desenvolvimento sustentável, particularmente no contexto do sistema educacional nacional e da comunidade profissional da Ucrânia. Através de uma revisão abrangente da literatura e análise empírica, o estudo esclarece que a integração do desenvolvimento sustentável nos currículos educativos e na ética profissional promove uma maior conscientização e um compromisso diligente com os desafios ambientais, econômicos e sociais globais. Enfatiza a importância das culturas organizacionais caracterizadas pela adaptabilidade, inovação e aprendizado colaborativo no avanço das agendas de desenvolvimento sustentável. No entanto, uma implementação eficaz requer estratégias proativas que se adaptem às demandas sociais em evolução. A pesquisa defende o aumento de programas educacionais interdisciplinares que combinem conhecimentos teóricos com aplicações práticas projetadas para enfrentar os desafíos do desenvolvimento sustentável no mundo real. Além disso, destaca a importância de incentivar a participação em iniciativas de desenvolvimento sustentável entre educadores e estudantes, aproveitando tecnologias de aprendizado inovadoras. As futuras linhas de pesquisa devem se concentrar em avaliar a eficácia dessas iniciativas e desenhar metodologias para monitorar e avaliar seu impacto social, promovendo assim os objetivos de desenvolvimento sustentável.

**Palavras-chave:** desenvolvimento sustentável, práticas educativas, cultura profissional, cultura organizacional, adaptabilidade, aprendizado colaborativo.

## 1. INTRODUCTION

In the current context of global challenges and changes that require society to adapt to new conditions of existence, the issue of sustainable development is becoming particularly relevant. Considering this through the prism of the dialectic between individual consciousness and social structures, it is clear that education and professional culture are key mediators in shaping readiness for sustainable development. This research aims to analyze the interaction between educational practices, professional culture, and sustainable development goals, emphasizing how these elements are interconnected in shaping the consciousness of future professionals.

In the framework of this analysis, we assume that professional culture and educational practices reflect not only existing social norms but also actively shape the conditions for internalizing the values of sustainable development. Thus, education is not a neutral process of knowledge transfer but an active dialogue between participants in the educational process aimed at developing critical thinking, responsibility, and the ability to innovate.

At the same time, facing the difficulties of adapting to the rapidly changing conditions of our time, we need to consider the role of organizational culture in the process of integrating the principles of sustainable development. The present research proposes to explore how organizational structures can become a platform for change, fostering a new type of professional identity focused on sustainability.

Therefore, we are faced with the objective of identifying the existing barriers on the way to sustainable development and determining the potential of educational and organizational innovations in developing public consciousness capable of reflection and active participation in the processes of global change.

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The purpose of the research is to analyze and evaluate the role of professional culture and educational practices in shaping the readiness of future professionals for effective participation in the processes of sustainable development of Ukrainian society. The research will focus on identifying key aspects of professional training that contribute to understanding and implementing sustainable development concepts in various fields, with an emphasis on the education sector. This includes assessing innovative pedagogical approaches, methods of teacher professional development, as well as analyzing the influence of organizational culture and individual readiness for change on adaptation processes and the implementation of sustainable development principles. Special attention will be given to examining the impact of interdisciplinarity and collaborative learning communities as strategic resources for ensuring a comprehensive approach to sustainability in education and professional practice.

In order to accomplish the research goal, a thorough methodological approach will be used, incorporating systematic analysis and synthesis to guarantee a comprehensive and multidimensional comprehension of the function of educational practices and professional culture in forming preparedness for sustainable development.

### 2. THEORETICAL FRAMEWORK OR LITERATURE REVIEW

The wide range of literature on the chosen topic poses a difficult challenge for us to select only those materials without which it would be impossible or incomplete to fulfill the purpose of the present research. Let's start with the scientific work of Halkos & Gkampoura (2021). The study provides an overview of progress in achieving 17 Sustainable Development Goals (SDGs), which is fundamental to understanding the overall context of sustainable development. The authors analyze the current state of SDGs implementation and identify key challenges facing the global community. This study serves as a basis for further analysis of the specifics of implementing these goals in various areas, including education and vocational training.

The 2022 Sustainability Report by J. Sachs, K. Kroll, G. Lafortune, G. Fuller, and F. Woelm (2022) expands on this theme by providing a comprehensive analysis of achievements and gaps in the implementation of the SDGs. Analyzing data from different countries, the authors point to the need to integrate the principles of sustainable development into all aspects of social life, including education, which emphasizes the importance of forming a professional culture based on sustainability values.

A study by J.S. Griebeler, L.L. Brandli, A.L. Salvia, V. Leal Filho, and G. Reginatto (2022) focuses on the role of higher education institutions in achieving SDGs, offering a framework for the use of indicators of sustainable development. This study demonstrates how educational institutions can become key agents of change in fostering a professional culture that promotes sustainable development.

R.M. Auty and K. Brown (2021) provide an overview of approaches to sustainable development, highlighting a variety of theoretical and practical approaches. This makes it possible to better understand how the principles of sustainable development can be adapted and implemented in the specifics of training specialists in Ukraine, taking into account local conditions and needs.

The publication of S. Weiland, T. Hickmann, M. Lederer, J. Marquardt, and S. Schwindenhammer (2021) analyzes the 2030 Agenda for Sustainable Development, focusing on the transformative potential of the SDGs. The authors indicate the importance of an integrative approach to education, which includes the goals of sustainable development as a basis for training responsible and socially conscious specialists.

Finally, the work of J. Kirkby, P. O'Keefe, and L. Timberlake (2023) provides an introduction to sustainable development that serves as a foundation for understanding the broader context of the topic. The authors emphasize the need for deep theoretical knowledge and practical application of the principles of sustainable development in professional training.

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K. A. Ruggerio (2021) deepens this understanding, offering an overview of the principles and definitions of sustainability and sustainable development. This research is crucial to identifying the main concepts that should be integrated into the educational process and professional culture of future specialists, contributing to the development of society that meets the modernity's challenges and the requirements of sustainable development.

In his research, S. Martin (2008) emphasizes the importance of systems thinking for sustainable development and professional practice. The author argues that systemic thinking is critically important for understanding complex interrelationships in the context of sustainable development, which is directly related to the formation of the professional culture aimed at solving complex modern issues.

The study by K. Zwolińska, S. Lorenc, and R. Pomykała (2022) examines sustainable development in education from the students' perspective and analyzes the implementation of its principles in curricula. It has been revealed that the active involvement of students and the adaptation of courses to the needs of sustainable development can significantly increase the effectiveness of the educational process in this direction.

R.K. Keynejad, H.M. Yapa, and P. Ganguli (2021) emphasize the importance of investing in interdisciplinarity at early career stages to achieve the Sustainable Development Goals. They believe that early encouragement of interdisciplinary research and practice can contribute to the development of the competencies required to address global sustainability challenges.

M.R. Sanders, G. Divan, M. Singhal, K.M. Turner, R. Velleman, D. Michelson, & V. Patel (2022) argue that scaling up parenting interventions is critical to achieving the SDGs. This approach emphasizes the importance of the social component of sustainable development, in particular, the significance of supporting families and raising children in the spirit of sustainability.

The publication by W. Steele and L. Rickards (2021) explores the integration of the SDGs into higher education. The authors provide an overview of strategies and methods that higher education institutions can use to implement the principles of sustainable development in the educational process.

M. Bascopé, P. Perasso, and C. Reiss (2019) conduct a systematic review of education for sustainable development at the early stages, highlighting cornerstones and pedagogical approaches for teachers' professional development. This study emphasizes the importance of educational initiatives for sustainable development, particularly, at the early stages of education.

Finally, the research by S. Tulchynska, N. Shevchuk, A. Kleshchov, I. Kryshtopa, & Y. Zaburmekha (2021) explores the role of higher education institutions in the development of eco-industrial parks in the context of sustainable development. This scientific work highlights the potential of higher education institutions as centers of innovation and drivers of sustainable development in the region.

I. Mulà, D. Tilbury, A. Ryan, M. Mader, J. Dlouhá, K. Mader, et al. (2017) emphasize the role of professional development initiatives in catalyzing change in higher education for sustainable development. The review points out the importance of involving teachers in educational programs aimed at sustainable development, which contributes to the formation of effective pedagogy and the integration of these principles into the educational process.

M. Dzimińska, J. Fijałkowska, & L. Sulkowski (2020) propose a conceptual model in which universities act as agents of cultural change for sustainable development. The authors argue that universities have a unique opportunity to influence cultural change through education, research, and public engagement, opening up ways for integrating sustainable development into all aspects of university life.

V. Leo & Wickenberg (2015) examine professional norms that promote education for sustainable development at the school level. They reveal that there are common professional

norms that can serve as a basis for integrating education for sustainable development into the school curriculum, emphasizing the need for support on the part of teachers and administrators.

L. Kurylo, I. Kurylo, I. Shulga, & I. Horodetska (2020) study the role of environmental legal culture as a factor in ensuring sustainable development of society. The authors point to the importance of legal education in fostering awareness of the significance of sustainable development and environmental responsibility.

P. G. Havea and M. Mohanty (2020) analyze the role of professional development in achieving the Sustainable Development Goals. They emphasize the need to develop competencies and skills among professionals to implement sustainable development in various fields of activity.

P. Eagan, T. Cook, and E. Joeres (2002) emphasize the importance of culture and interdisciplinary education for sustainable development. They argue that the integration of cultural and interdisciplinary approaches can significantly increase the effectiveness of education for sustainable development.

D. Hogan and J. O'Flaherty (2022) explore the nature and culture of science as an academic discipline with implications for integrating education for sustainable development. They emphasize the need for deeper involvement of scientific disciplines in the process of education for sustainable development.

K. Mikołajczyk (2021) considers sustainable personal development as a result of mutual enrichment of professional and personal life. The author stresses the significance of a balanced approach to development taking into account both professional and personal aspects of an individual's life.

F. Alvino, A. Di Vaio, R. Hassan, & R. Palladino (2021) conduct a systematic review of the literature on intellectual capital and sustainable development. They explore the ways intellectual capital can contribute to the achievement of sustainable development goals, emphasizing the role of knowledge, innovation and creativity.

A. H. Olafsen, E. R. Nilsen, S. Smedsrud, & D. Kamaric (2021) investigate sustainability through commitment to organizational change, considering the influence of organizational culture and individual readiness for change. Their study emphasizes the importance of an adaptive organizational culture and the ability of employees to adapt quickly as key success factors in organizational change processes to achieve sustainable development.

E. Sugiarti, E. Finatariani and Y. T. Rahman (2021) consider the cultivation of cultural values as a strategic move to enhance employee productivity. They emphasize the significance of corporate culture, which values and supports employee development as a crucial element in ensuring their high productivity and contribution to the sustainable development of the organization.

M. Tomlinson and D. Jackson (2021) focus on professional identity formation in modern students of higher education. Their research demonstrates the way higher education influences the formation of professional identities, which is critically important for understanding how students prepare to contribute to the sustainable development of society through their future professions.

A. D. Dixon (2021) highlights the significance of the transition from performative professional development to real practice in the context of culturally relevant pedagogy. The author suggests that successfully implementing culturally relevant education necessitates teachers not only possessing knowledge but also actively engaging in its application within practical contexts.

Haiyan Q and Allan W. (2021) explore the establishment of conditions for professional learning communities (PLCs) in Chinese schools, focusing on the role of school principals. They emphasize the importance of leadership and support on the part of school administration

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for the successful formation and functioning of PLCs, which contributes to the sustainable development of education.

D. Mosse (2022) in his publication "Adventures in Aidland: Anthropology of Professionals in International Development" immerses readers into the world of international development from an anthropological perspective, highlighting the complexities and challenges faced by professionals in this field.

M. A. Griffiths, W. A. Goodyear, and K. M. Armour (2022) analyze the utilization of Massive Open Online Courses (MOOCs) for professional development, in particular, for physical education teachers and youth sports coaches. They point out the potential of MOOCs to meet the needs and expectations of this audience, which contributes to enhancing their professional competencies in the context of sustainable development.

The final part of the literature review highlights the significance of fostering professional learning communities, enhancing collective teachers' effectiveness, exploring innovative pedagogical approaches, examining the influence of professional and cultural backgrounds on students' identities within the IT sector, and considering the role of environmental education in promoting sustainable development in Central Europe.

J. Gore and B. Rosser (2022) explore the significance of shifting from content-centric professional development to robust professional learning facilitated by authentic learning communities comprising teachers across different grade levels and subjects. The authors highlight that this approach fosters more impactful teacher professional development and improves students' learning achievements.

T. Loughland and M. Ryan (2022) examine the factors that precede teachers' collective belief in their ability to positively impact professional learning. Their study underscores the significance of mutual objectives, trust, and cooperative efforts among educators in fostering a collective sense of efficacy, essential for effective professional conduct and the integration of innovative teaching practices.

J. M. Mansurdzhonovich (2022) focuses on the theoretical and practical aspects of developing the content of pedagogical activities for information technology teachers. The author emphasizes the necessity of integrating modern IT and pedagogical approaches to enhance the quality of education.

S. Lunn, M. Ross, Z. Hazari, M. A. Weiss, M. Georgiopoulos, and K. Christensen (2021) investigate the impact of technical conversations and other professional and cultural experiences on students' computer identity. The authors have revealed that such experiences significantly influence students' self-assessment and their perception of themselves as professionals in the IT field.

Z. Bohnyartz and H. B. Cohen (2022) edited a publication dedicated to studying environmental education and sustainable development in the new Central Europe. The authors emphasize the role of education in fostering environmental awareness and preparing citizens for active participation in the region's sustainable development.

These studies collectively illuminate a broad range of issues related to professional development, education for sustainable development, the influence of cultural and professional experiences on identity development, as well as the importance of collaboration and cooperation among teachers. They underscore the necessity of developing effective professional communities capable of adapting to change and integrating sustainable development into all aspects of educational practice.

## 3. METHODOLOGY

We use a thorough methodological approach in the present research to investigate the interrelationships between professional culture, educational practices, and sustainable development objectives. This approach incorporates systematic, structural-functional analysis

as well as methods of analysis and synthesis. This approach enables us to gain a deeper understanding of the internal logic and interrelationships within the education system and professional activities, as well as to identify the potential and limitations of existing structures in the context of sustainable development.

System analysis is applied to study the complex interaction among different elements of the educational and professional system. This makes it possible to consider education and professional culture as integrated systems, wherein changes in one segment may affect the functioning of the system as a whole. Such an approach helps identify key factors facilitating or hindering the achievement of sustainable development goals within these systems.

Investigating how structures within professional and educational systems perform particular tasks that have an impact on sustainable development is achieved through the use of structural-functional analysis. This methodology facilitates a critical evaluation of current educational methods and professional standards by highlighting the ways in which different system components either support or obstruct the attainment of sustainability.

Analytical and synthesis methods are utilized to break down intricate processes and phenomena into their constituent elements, which are subsequently combined to form a new whole. This enables us to deconstruct the system of professional culture and education into its most basic components for a greater understanding, as well as to rebuild a fresh understanding of the ways in which these components might support sustainable development.

By applying these methods, we are able to take a critical approach to the research and assess present systems not just as they stand today but also as they have the capacity to change to meet the demands of sustainable development. Such a comprehensive approach contributes to the development of recommendations that can facilitate the reevaluation and adaptation of educational and professional practices towards sustainable development.

### 4. RESULTS

Professional culture, comprising values, norms, beliefs, and practices shared within a specific profession or organization plays a crucial role in shaping the attitudes and behaviors of professionals. This section explores how professional culture can facilitate or hinder the integration of sustainable development principles into everyday professional practice, as well as how it influences the readiness and ability of specialists to actively work towards sustainable development.

Professional culture encompasses a wide range of aspects, including shared knowledge, ethical considerations, behavioral standards, working methods, as well as common goals and ambitions. It is shaped through socialization within educational programs, professional communities, and in the workplace.

Professional culture has the potential not only to foster understanding and acceptance of the sustainable development concept but also to actively implement its principles into practice. This may include the development and implementation of standards reflecting sustainability principles, the formation of ethical norms of behavior emphasizing the importance of environmental responsibility and social justice, as well as encouragement of permanent learning and innovation in this field.

The primary task in this context is the development and implementation of effective strategies for forming professional identity based on the principles of sustainable development. This includes integrating modules dedicated to sustainable development into educational programs, organizing trainings and workshops, developing interdisciplinary projects that allow students and young professionals to apply knowledge in real-life situations, as well as creating conducive environment for sharing experiences and best practices.

Educational initiatives serve as a critical tool for increasing awareness, developing knowledge, and fostering skills necessary to address contemporary environmental, economic,

and social challenges. The primary strategy for ensuring sustainable development is the integration of its principles into educational curricula at all levels of education. This includes the development and implementation of specialized courses covering key aspects of sustainable development, as well as the integration of these issues into traditional disciplines. The approaches applied may range from case-based to project-based learning, allowing students not only to acquire theoretical knowledge but also to apply it in practice.

Interdisciplinarity plays a crucial role in studying sustainable development since this concept encompasses a wide range of fields and requires a comprehensive approach to problem-solving. Programs engaging students from different disciplines in collaborative projects contribute to the development of skills in working together in multidisciplinary teams, critical thinking, and searching for innovative solutions.

Digital technologies and innovative educational tools, such as online platforms, virtual and augmented reality, open up new opportunities for learning about sustainable development. They enable the creation of interactive and immersive learning experiences that can enhance students' engagement and the effectiveness of teaching.

The development of sustainable collaborative projects and partnerships between universities, civil organizations, industry entities, and governmental structures is another important strategy. Such projects contribute to the real-world application of knowledge in the context of sustainable development as well as prepare students for future professional activities in this field.

Educational programs should not only provide knowledge but also raise students' awareness of global challenges in sustainable development and motivate them to actively participate in addressing them. This can be achieved through involving students in research projects, civic initiatives, and other forms of active civic engagement.

Organizational culture plays a crucial role in shaping employees' attitudes and behaviors, including their readiness to accept and implement changes related to sustainable development. In this context, it is worth exploring how cultural aspects such as values, beliefs, norms, and practices influence an organization's ability to adapt and respond to the challenges of sustainable development.

For instance, individual readiness for change is a key factor determining how effectively employees and students can adapt to new requirements and integrate principles of sustainable development into their work and learning. The analysis examines how personal characteristics such as flexibility, openness to new ideas, self-motivation, and perception influence individuals' capacity for change.

The organizational culture permeating the professional environment plays a crucial role in achieving sustainable development goals since it dictates the way sustainability is perceived and practiced within the organization. Cultural aspects such as values, beliefs, norms, and practices shape the behavior and attitudes of its members, influencing their readiness to implement and support sustainable development initiatives. When an organization emphasizes the importance of environmental consciousness, social justice, and economic stability, it stimulates the development of corresponding behaviors among employees and students.

On the other hand, the global and national sustainable development goals of Ukraine influence the formation of future specialists' professional culture, setting the direction for the development of educational programs, training strategies, and professional training. This creates a demand for new competencies, knowledge, and skills that reflect the growing need to integrate sustainability principles into various professional practices. Thus, sustainable development goals not only determine the direction of development of professional knowledge and skills but also prompt a rethinking and adaptation of existing professional identities and practices.

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The interaction between organizational culture and sustainable development goals is a dynamic process in which changes in one aspect can stimulate adaptation and development in another. Organizations and educational institutions actively working on integrating sustainable development into their cultural and educational practices create conditions for shaping a new generation of professionals. These experts will be prepared to support sustainable development's implementation through their professional endeavors in addition to being aware of its opportunities and limitations.

#### 5. DISCUSSION

In the context of exploring the interaction between professional culture and sustainable development goals, it is important to consider a range of discussions that illuminate various approaches and assessments in this field and to provide one's own evaluation of them.

Let's start with a discussion on the impact of organizational culture on sustainable development. In this context, it is often argued that a strong organizational culture, emphasizing traditional values and norms, may hinder the integration of sustainable development goals. According to this perspective, conservative cultural aspects may limit the innovation and flexibility necessary to adapt to new challenges of sustainable development. However, there is an opposing viewpoint suggesting that a strong organizational culture can contribute to sustainable development by providing a stable foundation for implementing new initiatives and goals. Supporters of this standpoint argue that organizations with a strong culture are able to effectively mobilize resources and employees to achieve common goals, including those related to sustainable development.

In our viewpoint, both positions have their merits; however, it is important to understand that the key factor is not the organizational culture itself but its orientation and readiness for change. Organizations actively working on developing a culture of adaptability and innovation will be more successful in implementing sustainable development.

Next, let's consider the role of education in shaping professional culture for sustainable development. There is a perception that traditional education focuses too much on theoretical knowledge and fails to provide students with the necessary skills and competencies to address real-life sustainable development issues. In contrast, it is argued that modern education increasingly integrates interdisciplinary approaches and practical learning, which fosters a deeper understanding of sustainable development and the development of relevant professional skills.

We believe that despite the challenges, modern education has the potential to become a powerful tool in shaping a professional culture oriented towards sustainable development. It is important to continue developing educational programs that combine theoretical knowledge with practical skills and interdisciplinary projects.

The final discussion we would like to explore pertains to the equilibrium between economic progress and environmental accountability. The scientific community has long been split into two camps in this regard. Representatives of the first camp believe that focusing on economic development inevitably leads to environmental problems since the pursuit of growth often ignores ecological constraints. Representatives of the second camp argue that economic development and environmental responsibility can coexist harmoniously if innovative approaches and technologies are used to achieve economic goals without harming the environment. Modern trends and innovations show that a balance between economic growth and ecological sustainability is possible. An important condition is the integration of sustainable development into strategic planning and the use of advanced technologies to reduce negative environmental impact.

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### 6. CONCLUSION

Organizational culture fostering adaptability and innovation is identified as a critical success factor in integrating sustainable development principles into professional practices.

Educational practices integrating interdisciplinarity, experiential learning, and innovative technologies have proven to be effective in preparing students to address complex sustainable development challenges. This underscores the importance of modern education as a tool for developing essential competencies and skills.

It has become clear that adapting to change and successfully implementing sustainable development efforts depend heavily on each individual's readiness for change. This requires individuals to demonstrate flexibility, openness to new ideas, and a readiness for learning and development.

Research findings indicate the need for further integration of sustainable development into organizational and educational structures. Significant attention should be given to the development of strategies that promote adaptability, innovation, and interdisciplinary collaboration.

Limitations identified during the research include resistance to change within organizational culture and the need for adequate resources to support innovative educational practices. These challenges require careful consideration and addressing by management structures and educational institutions.

Based on the obtained results, it is recommended to develop and implement comprehensive educational programs that promote a deep understanding of sustainable development and the formation of relevant skills. Further studies should focus on exploring the effectiveness of such programs and their impact on professional culture and practices as well as on developing assessment and monitoring tools to measure progress in this area.

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