This article analyzes and proposes improvements to the policy of developing social consciousness during training in higher educational institutions. Furthermore, it focuses on the pedagogical aspect of this issue. Developing social consciousness is crucial in shaping modern specialists. These specialists must possess not only developed practical and theoretical professional skills, but also a high level of empathy and social awareness. The research employs the IDEF0 functional modeling method, a novel approach that goes beyond simply listing key stages. Instead, it demonstrates the place and role of additional elements within the process. As a result, a model system for enhancing the policy of developing social consciousness in higher education institutions was formed. The study acknowledges a limitation: it solely

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1 Department of Preschool Education, Donbass State Pedagogical University, Slavyansk, Ukraine. WoS Researcher ID: CXK-1720-2022
2 Department of Preschool Education, Donbass State Pedagogical University, Slavyansk, Ukraine. WoS Researcher ID: KBQ-6225-2024
3 Department of Preschool Education, Donbass State Pedagogical University, Slavyansk, Ukraine. WoS Researcher ID: KBQ-6248-2024
4 Department of Preschool Education, Donbass State Pedagogical University, Slavyansk, Ukraine. WoS Researcher ID: AEM-0504-2022
5 Department of Pedagogy and Innovative Education, Lviv Polytechnic National University, Lviv, Ukraine. WoS Researcher ID: FCE-4030-2022
considers processes for improving pedagogical methods among students with a pedagogical profile. Future research plans to expand this study to encompass other higher education institutions.

**Keywords:** Social consciousness, higher educational institutions, education, functional modeling, pedagogy.

**Introduction**

The modern world faces challenges that require educational systems not only to transfer knowledge, but also to form the social consciousness of the younger generation. Policies for the formation of social consciousness in educational institutions play a key role in preparing students for life in a modern society characterized by rapid change, globalization and information openness.

The pedagogical aspect of this policy involves the involvement of educational specialists in an active dialogue with students, the use of innovative teaching methods and critical thinking. This not only contributes to the growth of students' personal potential, but also forms a deep understanding of social processes and their role in society.

The importance of the policy of forming social consciousness in education cannot be underestimated. It helps young people develop their views, critically analyze information and develop personal values that meet the requirements of a modern democratic society. An important component of this policy is an understanding of the role of education in the formation of active citizens who are capable of not only adapting to changes, but also being their initiators. Teachers must play a critical role in this process by encouraging students to achieve self-realization and self-expression.

The process of creating social consciousness in educational institutions also includes raising students' awareness of contemporary social challenges such as inequality, climate change and human rights. Such education helps young people understand the complexity of these problems and develop responsible attitudes towards them.

Integrating an interdisciplinary approach into the educational process helps broaden students' horizons and develop their analytical skills. This allows them to see connections between different areas of knowledge and understand how social, economic and political factors are interrelated. An effective policy for the formation of social consciousness in education requires the active participation of students in the learning process. This may include projects that address real-life social problems, which not only develops critical thinking skills, but also encourages social activism and responsibility.

One of the main problems in the formation of social consciousness in educational institutions is the lack of consistency and unity in approaches. Often educational policies and practices are developed without taking into account the variables of social, cultural and economic contexts. This leads to a situation where curricula do not reflect the current challenges and needs of society, and teachers do not always have the necessary resources or training to teach effectively in such conditions.

In conclusion, the policy of developing social consciousness in educational institutions is an integral part of preparing young people for life in the modern world. It promotes the development of informed, responsible and active citizens who are able to understand and influence the world around them.

The purpose of the article is to analyze and improve the policy of formation of social consciousness during training in higher educational institutions. At the same time, the research aspect is focused on the pedagogical aspect of this issue. The object of the study is the system of pedagogical training of students, within the framework of which the development of social consciousness occurs.

The structure of the article consists of an introduction, a literature review, a methodology section, results, discussions and conclusions.
Literature review

A detailed literature review is key to scientific research as it provides the foundation for an in-depth understanding of the topic and context of study. A detailed analysis of existing research, theories and approaches allows not only to identify the current state of science in the chosen field, but also to identify gaps in knowledge and new opportunities for further research. This is especially important in the context of our study, which focuses on the policy of developing social consciousness in education in higher education institutions, since this topic involves multifaceted aspects of social sciences, psychology, pedagogy and educational policy. A literature review provides valuable information and insights that will help in preparing a balanced and informed analysis of the issues under study.

So, Bilan et al. (2017) in their work analyze the relationship between human capital factors and compensation by modeling the impact. This research may be particularly useful for understanding how educational policies can shape social consciousness in terms of reward and motivation in the context of higher education.

In turn, Martínez-Valdivia et al. (2020) note in their work the importance of social responsibility and the preparation of university teachers. This study is important for understanding how higher education teacher training influences the development of students' social consciousness.

Bathmaker et al. (2013) in their study focus on the influence of social class in the context of higher education and how students of different social classes mobilize their capital for success in higher education. This study is of great importance for understanding the processes of formation of social consciousness, since it points to the importance of understanding social inequalities in the educational environment.

Pasinringi et al. (2022) highlights the importance of social support for college students' mental health. This aspect is key in the formation of social consciousness, since mental health is closely related to the ability of students to actively participate in social life and educational processes.

In turn, Biasutti et al. (2019)'s study examines social sustainability and professional development through an evaluation of an intercultural education course for in-service teachers. This study is important for understanding the effectiveness of pedagogical methods in developing social consciousness, especially in the context of cultural diversity.

An interesting study by Kalsoom et al. (2017), who focus on developing sustainability consciousness among future teachers around the world. Thus, this study analyzes the question of how future teachers perceive and integrate the concepts of sustainable development into their educational practices, which are a key aspect of the formation of social consciousness.

The work of Ochirov (2016) focuses on developing the professional competence of future primary school teachers through teaching practice. This study is important for understanding how practical experiences during teaching can influence teachers' ability to shape the social consciousness of their students.

Wamsler's (2020) study sees sustainability education as a means of stimulating a more conscious society and transformation towards sustainability. The scientist's research focuses on the importance of integrating the principles of sustainable development into the educational process, which is key to the formation of social consciousness.

Work by Roth et al. (2020) discusses educational philosophy in a new way, focusing on limitations and opportunities in modern conditions, particularly in the context of dignity. This study highlights the importance of reflection and critical thinking in developing social consciousness in education.

Research by Mahmud et al. (2020) presents mathematical modeling of social consciousness to control the spread of COVID-19. This study demonstrates the importance of social awareness in the context of global challenges, as well as the importance of integrating scientific approaches to understanding social processes.

Interesting in the context of our chosen topic is the work of Chang Zhu (2015), which analyzes the influence of organizational culture on innovation supported by technology in higher education. This study is important for understanding how organizational aspects can influence the adoption and effectiveness of technological innovation in higher education institutions, which is key to the formation of social consciousness.
The impact of organizational culture on the adoption of technological innovations in education points to the potential of technology in enhancing social consciousness. Educational institutions should embrace a culture of innovation, utilizing technology not only to improve pedagogical outcomes but also to engage students in discussions and actions related to social issues and solutions.

In essence, these implications from the literature review call for a holistic and integrated approach to education that places a strong emphasis on developing social consciousness among students. This involves not only curricular changes but also systemic and cultural shifts within educational institutions, aiming to prepare students not just for professional success but also to be active, socially responsible citizens in a globalized world. In conclusion, the implications of this literature review for educational practice are profound and far-reaching. By integrating these insights into educational policies and curricula, institutions can play a pivotal role in shaping socially conscious citizens who are equipped to address and contribute positively to societal challenges. This requires a holistic approach that encompasses the development of human capital, social responsibility, equity, mental health support, appreciation for diversity, sustainable practices, reflective thinking, and technological innovation within the educational landscape. Let's build table that summarizes previous studies (table 1).

Table 1. Literature review and summarizes previous studies

<table>
<thead>
<tr>
<th>Authors</th>
<th>Year</th>
<th>Methodology</th>
<th>Results</th>
<th>Limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bathmaker, A-M. et al.</td>
<td>2013</td>
<td>Qualitative analysis</td>
<td>Identified how students from different social classes mobilize their capitals for success in higher education Analyzed relations and modeled the influence of human capital factors on remuneration, providing insights into educational policy implications</td>
<td>The study is context-specific and may not be generalizable to all educational settings</td>
</tr>
<tr>
<td>Bilan, Y. et al.</td>
<td>2017</td>
<td>Quantitative analysis, modeling</td>
<td>Showed positive outcomes on social sustainability and professional development for in-service teachers</td>
<td>Limited by the specific economic and cultural context in which the study was conducted</td>
</tr>
<tr>
<td>Biasutti M, Concina E, et al.</td>
<td>2019</td>
<td>Evaluation of an intercultural education course</td>
<td>Highlighted the influence of organizational culture enhanced innovation in higher education</td>
<td>Focuses on a single course, raising questions about the applicability to other contexts or disciplines</td>
</tr>
<tr>
<td>Chang Zhu</td>
<td>2015</td>
<td>Literature review and analysis</td>
<td>Examined sustainability consciousness among future teachers, revealing awareness and integration of sustainable development concepts</td>
<td>The study's conclusions are drawn from literature review, which may not capture the complexity of real-world educational environments</td>
</tr>
<tr>
<td>Kalsoom, Q. et al.</td>
<td>2017</td>
<td>Survey</td>
<td>Emphasized the importance of social responsibility in university teacher training for fostering commitment and social justice in schools</td>
<td>The focus on pre-service teachers in Pakistan limits the study's generalizability</td>
</tr>
<tr>
<td>Martínez-Valdivia E et al.</td>
<td>2020</td>
<td>Qualitative analysis</td>
<td>Presented a model predicting the role of social consciousness in controlling COVID-19 infection spread</td>
<td>Limited to the context of the specific educational systems and cultures studied</td>
</tr>
<tr>
<td>Mahmud, M. S. et al.</td>
<td>2020</td>
<td>Mathematical modeling</td>
<td></td>
<td>The model's assumptions and parameters may not fully capture the complexities of real-world social behavior</td>
</tr>
</tbody>
</table>
Table 2. Key gaps in the current literature of the issue of forming social consciousness during preparation in higher educational institutions

<table>
<thead>
<tr>
<th>Key gap</th>
<th>Essence of the gap</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insufficient analysis of the interaction between teaching methods and</td>
<td>Much of the literature has focused on general teaching strategies without a deep understanding of how social and cultural factors influence the effectiveness of these methods. There is a need for research that specifically examines how different social conditions, cultural backgrounds, and individual characteristics of students influence the process of developing social consciousness.</td>
</tr>
<tr>
<td>sociocultural factors</td>
<td>In the modern world, technology plays a key role in the educational process, but the literature often does not take into account how the latest technological tools influence the formation of social consciousness. This concerns both the use of digital learning tools and the influence of social media and other online platforms on students' perceptions and values.</td>
</tr>
<tr>
<td>Limitations in the study of the impact of technological innovation on</td>
<td>Often, research focuses on the short-term results of educational programs, ignoring the long-term impact of these initiatives on students. This creates a gap in understanding how educational experiences shape the social attitudes and behavior of graduates in the future.</td>
</tr>
<tr>
<td>social consciousness</td>
<td>Most research in this area has ignored the importance of individualized learning approaches. Taking into account the individual characteristics of students, their needs and social contexts can significantly improve the process of forming social consciousness, but this aspect often remains underestimated in modern research.</td>
</tr>
<tr>
<td>Lack of research on the long-term impact of educational initiatives on</td>
<td></td>
</tr>
<tr>
<td>social consciousness</td>
<td></td>
</tr>
<tr>
<td>Lack of attention to individualized learning approaches</td>
<td></td>
</tr>
</tbody>
</table>

Source: (formed by authors)

Summarizing the literature review, we can draw an important conclusion that, despite the significant amount of existing research in the field of the formation of social consciousness in the context of higher education, today there are still significant gaps and shortcomings in this area. Many aspects, in particular the connection between pedagogical methods and real changes in the social consciousness of students, require additional research and deeper analysis. This
indicates the need to continue scientific research in this area, with an emphasis on identifying and filling these gaps, which will ensure a more effective formation of social consciousness in the educational process.

**Methodology**

Entering an era of innovation and complex social challenges, the use of innovative modeling methods in scientific research is of particular relevance. This is especially important in the field of educational policy, where the complexity and versatility of processes requires in-depth analysis and a systematic approach. Innovative modeling techniques make it possible to visualize and structure these processes, providing better understanding and effective planning. For our research, we chose the IDEF0 method, which is one of the most effective tools for modeling business processes and systems. This method is based on the creation of functional models that help describe and analyze complex processes and interactions in organizational structures.

The essence of the IDEF0 method is to develop diagrams that reflect the functional relationships within the system. Each diagram consists of boxes representing individual functions and arrows showing the flow of data, resources, or control between those functions. This provides a clear visual representation of processes and identifies key system elements.

One of the main advantages of the IDEF0 method is its flexibility and ability to adapt to different types of studies. In the context of the formation of social consciousness in educational institutions, this method allows for detailed analysis and optimization of processes, ensuring effective interaction of various components of the educational system. Regarding the component parts of a method, IDEF0 has four main components: the functions to be performed; inputs that define the resources needed for operation; outputs representing the results of functions; and mechanisms that describe how functions will be performed. This allows complex systems to be decomposed into simpler and more understandable components.

However, there are certain disadvantages in using the IDEF0 method, in particular its limited ability to reflect the dynamic aspects of processes. The method focuses on the static structure of the system and does not always adequately convey the changes that occur during its operation.

In addition, to effectively use IDEF0, you must have a deep understanding of modeling and knowledge of the specifics of the field being studied. This can be a barrier for those using this method for the first time and also requires additional time to prepare and analyze models. Overall, the IDEF0 method is a powerful tool for process analysis and optimization in our study, although it requires careful consideration of its specific features and limitations.

Figure 1 shows the key components of the method we have chosen in the context of the issue of forming social consciousness during preparation in higher educational institutions.
Based on the analysis and application of the IDEF0 method within the framework of our study, we can conclude that this method is optimal for studying the policy of forming social consciousness in higher educational institutions in terms of the pedagogical aspect. Its systematic and structured approach allows you to effectively visualize and analyze complex processes and interactions, which is necessary for a deep understanding of the dynamics and influence of pedagogical strategies on the formation of social consciousness. Due to its flexibility and ability to adapt to the specific conditions and needs of a particular study, the IDEF0 method becomes an important tool in the development and optimization of policies and programs in the educational field.

The selection process aimed at identifying educational institutions with pedagogical programs, given the study's focus on pedagogical methods. Criteria for selection included institutions that have implemented initiatives aimed at developing social consciousness, as well as a willingness to participate in the study. The rationale for focusing on students with a pedagogical profile is to explore the effectiveness of specific pedagogical strategies in cultivating social awareness.

**Results and discussion**

The first stage of the methodology we have chosen will be the use of the goal tree method, which will be based on identifying the key stages of improving the policy for the formation of social consciousness during training in educational institutions in the context of the pedagogical aspect (Fig.2).

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**Figure 1.** The key components of the chosen method in the context of the issue of forming social consciousness during preparation in higher educational institutions

Source: (formed by authors)
Thus, Fig. 2 shows a tree of goals, which is a hierarchical structure that includes main strategic goals, intermediate tasks and specific actions at each stage. This tool allows us to clearly define not only the ultimate goals of developing social consciousness, but also detailed ways to achieve them, including analysis of current policies, development of innovative approaches, testing and evaluation of new methods, their integration and continuous monitoring for improvement.

The next key element of the chosen methodology is the “black box” method, in the context of which the key basic and auxiliary elements of the final model will be determined (Fig. 3).

**Figure 2.** The goal tree model of the key stages of improving the policy for the formation of social consciousness during training in educational institutions in the context of the pedagogical aspect
Source: (formed by authors)

**Figure 3.** The “black box” model of the key basic and auxiliary elements in process of improving the policy for the formation of social consciousness during training in educational institutions in the context of the pedagogical aspect
Source: (formed by authors)
Let's take a closer look at each element:

Mechanisms (M):

- M1 (Human resources). Teachers, educators, educational administrators working on the development and implementation of educational programs.
- M2 (Institutional support). Educational governance structures, such as ministries of education, university councils and other education authorities, providing the necessary resources, political support and strategic guidance to introduce and support innovative pedagogical approaches and policies.
- M3 (Methodological tools). Tools for analysis, evaluation and implementation of educational innovations, including technology platforms.

Inputs (I):

- I1 (Existing Education Policy). Current policies and practices requiring analysis and improvement.
- I2 (Data and Feedback). Information about the effectiveness of existing approaches obtained from students, teachers and other stakeholders.

Outputs (O):

- O1 (Updated Educational Policy). Improved teaching strategies and methods to better develop social consciousness.
- O2 (Effectiveness Reports). Analytical reports and evaluations demonstrating the results of changes introduced and their impact on the educational process.

Control elements (C):

- C1 (Regulatory framework). Legislative and regulatory acts governing the educational process and policy.
- C2 (Educational Quality Standards). Criteria and standards that determine the quality of educational programs and teaching activities.

Having formed a tree of goals and a “black box” model, the next final stage in our research will be the creation of a decomposition to achieve the key goal - improving the policy for the formation of social consciousness during training in educational institutions in the pedagogical aspect (Figure 4).
Figure 4. Decomposition of achieving the key goal - improving the policy of forming social consciousness during training in educational institutions in the context of the pedagogical aspect.
Source: (formed by authors)

Let’s consider each stage in more detail.

A1. Analysis of existing policies and practices. The essence of this stage is an in-depth study and assessment of current educational policies and methods used to form social consciousness. This includes analyzing effectiveness, identifying shortcomings in approaches, and examining how well they promote critical thinking, social responsibility, and civic engagement among students.

A2. Development of innovative approaches. At this stage, new, more effective teaching strategies and methods are created. This may include integrating emerging technologies, developing interdisciplinary courses, and introducing project-based learning to promote social awareness.

A3. Testing and evaluation of new methods. This stage involves the practical implementation of the developed methods in selective conditions to assess effectiveness. It is important to collect feedback from participants in the educational process, analyze data and adjust methods in accordance with the results obtained.

A4. Integration and implementation of changes. Once effectiveness has been tested and necessary adjustments have been made, new methods are integrated into the broader educational context. This means changing or adapting curricula,
teaching and assessment methods, and providing teacher training.

A5. Monitoring and Continuous Improvement. The last stage includes continuous monitoring of the implemented changes and their impact on the educational process and students. This involves regularly collecting and analyzing data and making further adjustments to continuously improve the effectiveness of social awareness policies.

Having carefully applied the IDEF0 method to formulate models for improving social consciousness training policies in higher education, with a focus on the pedagogical aspect, the next critical step is to compare the findings with existing evidence in the scientific literature. This approach allows us to not only determine the extent to which our models correspond to actual trends and practices used in higher education, but also to identify potential areas for further research and development. Such a comparative study provides a deeper understanding of the effectiveness of the developed models and their practical applicability in the modern educational context.

Thus, Pearce & Wood's (2019) study focuses on developing an assessment framework for working with student voice in schools. This work explores how student voice can be integrated into the educational process to transform and enhance learning. Our study differs from their approach because we focus not only on assessing the role of student voice in schools, but also on the integration of innovative pedagogical methods, such as the IDEF0 method, to optimize the process of creating social consciousness.

The work of Kromydas (2017) rethinks higher education and its relationship with social inequalities, focusing on the historical and current state of knowledge and the potential for future development in this area. Our research extends the analysis of higher education and its relationship with social inequalities by providing specific methodological tools and models for improving educational policy, distinct from Kromydas's general analytical approach.

An interesting study by Boluda-Verdu et al. (2022). This systematic review explores eco-consciousness and its impact on health by analyzing how fear for the future and environmental concerns affect the psychological well-being of college students. Compared to their systematic review on eco-axis, our study focuses on a broader range of social consciousness issues, including the development of pedagogical strategies to influence these issues.

At the same time, Colás-Bravo et al. (2018) consider the processes of identifying the level of sustainability consciousness of teachers in the preparation process through e-portfolios, pointing out the importance of integrating persistence into educational practice. Our approach to assessing teachers' resilience is more comprehensive because we integrate tools to analyze and optimize teaching practices at a deeper level than their study.

Similar to the study by Fogelgarn et al. (2021): The study focuses on the use of cues as a pedagogical strategy to promote procedural behavior, analyzing how such an approach can influence student behavior. Our study complements their study of teaching strategies by proposing the IDEF0 method as a means of more systematic and structured analysis of the effectiveness of teaching practices.

Arora & Srinivansen (2020) analyze the impact of the COVID-19 pandemic on teaching in higher education, focusing on the challenges and changes facing educators. Our research goes beyond their analysis of the pandemic's impact on learning by providing a broader context of challenges and opportunities in higher education.

Shevchenko et al. (2019) in their work explores the development of a system to improve the readiness of future teachers for the spiritual and moral development of students in a multicultural space. Our work adds to their research on pre-service teachers' readiness for children's spiritual and moral development by offering new methodological approaches and practical tools.

Also in the work of Orchard et al. (2016) focus on developing new teachers through applied moral decision making, using philosophy as a tool for teacher preparation. Compared to their study of philosophy for teachers, our study proposes a more extensive approach to the development of pedagogical strategies, in particular the use of the IDEF0 method for deeper analysis and improvement of educational processes.

In a study by Melnychuk et al. (2022) focuses on the importance of protecting children's rights in the context of armed conflicts and the challenges facing government authorities. This source is useful for understanding the role of educational...
institutions in shaping social consciousness, in particular with regard to human rights and the protection of children’s rights in crisis situations. Our research covers a wider range of educational issues, not limited only to the protection of children’s rights in conflict situations, but focusing on the general formation of social consciousness. We integrate innovative pedagogical approaches and methodologies, in particular the IDEF0 method, for the development and implementation of educational policies.

Having analyzed the results of our study and compared them with data from other literary sources, it can be argued that our research is extremely relevant and brings significant scientific novelty to the field of policy for the formation of social consciousness in higher educational institutions. We not only identified new aspects and perspectives for understanding the pedagogical process of forming social consciousness, but also proposed innovative approaches and methodologies that can be applied to improve educational practices. Our work opens up new opportunities for further research and development in this important area, contributing to the creation of more effective and responsible educational strategies.

Conclusions

Summarizing the consideration of the topic of the formation of social consciousness in the process of education, it is important to note that this area is extremely relevant and complex. The policy of forming social consciousness in educational institutions is crucial for the development of modern society, since it affects the preparation of the younger generation for life and active participation in social processes.

However, an analysis of the current state of this area reveals a number of problems and challenges. In particular, the lack of socio-economic and cultural factors in the development of educational programs often leads to a gap between theoretical knowledge and its practical application. This situation limits the ability of students to develop a deep understanding and critical analysis of social phenomena.

Another important aspect is the lack of attention to the individual needs and characteristics of students. A variety of cultural, social and personal factors require teachers to be able to individualize approaches to teaching, which is often left unaddressed in the educational process.

Also worth noting is the problem of integrating social consciousness into the general educational process. It is often seen as an additional aspect rather than as an integral part of the educational program. This results in students not acquiring systematic knowledge and skills to understand and interact with the social world.

In conclusion, the analysis shows that for the effective formation of social consciousness, an integrated approach is required, including both updating curriculum and training of teaching staff, as well as creating conditions for the practical application of theoretical knowledge in real life. This is the only way to achieve significant changes in the formation of the social consciousness of the younger generation.

During our research, we applied the IDEF0 method to create detailed models of the policy stages of social consciousness formation in the training process in educational institutions, especially focusing on the pedagogical aspect. This method allowed us to clearly define and structure the key functions and processes included in the scope of the policy for the formation of social consciousness. The use of IDEF0 contributed to the creation of visually understandable models illustrating the relationships between different stages and participants in the educational process.

The scientific novelty of our approach lies in the application of IDEF0 in the context of educational policy, which has not previously been widely considered in the literature. This allowed for a deeper analysis and understanding of the complex interactions and dependencies occurring at different levels of the educational system. Our model provides new tools for assessing and planning educational policies that may be useful for educational professionals, policymakers, and researchers.

At the same time, there are certain limitations associated with using the IDEF0 method in this context. Although this method is effective for visualizing and structuring processes, it may not fully capture the dynamics and complexity of social interactions that play an important role in the formation of social consciousness. Thus, our model should be considered as one of the analytical tools that requires complementation with other methods and approaches to understand this multifaceted field.
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