Influence of educational environment on the formation of skills among future professionals

Вплив освітнього середовища на формування вмінь і навичок майбутніх фахівців

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Abstract

This research aims to explore the impact of educational environment factors within higher education institutions on the process of shaping professional (Hard Skills) and social competencies (Soft Skills) of future professionals. The proposed study falls within the realm of mixed-method scientific inquiry, as it encompasses the synthesis of theoretical analysis of scholarly concepts relevant to the article's core ideas, a factor analysis of empirical data collected to quantify the influence of external and internal educational environment factors, as well as qualitative generalizations drawn from the results of the factor analysis. Empirical data collection was conducted through the observation of a student group (n = 925) utilizing methods such as surveys, questionnaires, testing, and interviews. The findings of this research are valuable for informing the implementation of models for graduates of higher education institutions. The

Анотація

Проблемою дослідження є визначення впливовості факторів едукаційного середовища закладу вищої освіти на процес формування професійних (Hard Skills) і соціальних компетентностей (Soft Skills) майбутніх фахівців. Дослідження, що пропонується, належить до наукових розвідок змішаного типу, оскільки містить узагальнення, засновані на теоретичному аналізі наукових положень щодо сутності ключових понять статті, факторний аналіз емпіричних даних, які виміряні для кількісної характеристики впливу чинників зовнішнього та внутрішнього освітнього середовища, якісні узагальнення результатів факторного аналізу. Збір емпіричних даних здійснювався у процесі спостереження за групою студентів (n = 925): опитування, анкетування, тестування, інтерв'ювання. Результати дослідження доцільно врахувати у процесі реалізації моделі випускників закладів вищої освіти.

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study revealed that future professionals are expected to have not only hard skills but also develop soft skills, the formation of which should occur in parallel.

Keywords: higher education institution, professional, educational environment, factor, competence, professional competence, social competence.

Дослідження показало, що майбутні фахівці повинні володіти не тільки професійними навичками, а й розвивати м'які навички, формування яких має відбуватися паралельно.

Ключові слова: заклад вищої освіти, фахівець, освітнє середовище, фактор, компетентність, професійна, соціальна компетентність.

Introduction

The social environment plays a crucial role in determining an individual's system of values, personal orientation, behavioural norms, and serves as a source of acquiring both professional and social experience. The educational environment within educational institutions is considered a subsystem of the broader social environment. It exerts both regular, organized, and spontaneous, often unpredictable influences on educational actors due to a multitude of diverse material and immaterial factors (Budnyk & Sydoriv, 2019).

In its general characteristics, the educational environment can be defined as a set of specific conditions that facilitate the realization of an individual's right to education (Article 59 of the Ukrainian Constitution).

The purpose of this article is to clarify the essence, structure, and potential of the educational environment within higher education institutions concerning the development of specific social and professional competencies of future professionals, the acquisition of which ensures their professional readiness to perform their functions.

The formulated objective outlines the tasks related to:

1) refining the model of a higher education institution graduate as a combination of social and professional competencies;
2) defining the essential characteristics of the educational environment within higher education institutions;
3) investigating the structure of the educational environment within higher education institutions;
4) identifying the resources within the educational environment as a systemic whole and a collection of individual components in the context of shaping the professional competency of a future professional.

The content of a professional's skills (Hard Skills) and social characteristics (Soft Skills) depends on the profile of their professional training. For instance, Hard Skills encompass abilities such as typing on a computer, driving a vehicle, technical operation of machinery, reading, arithmetic calculations, algebraic transformations, mathematical presentations, technical translation, and the use of computer programs, among others. Hard Skills are subject to measurement through valid diagnostic procedures, enabling the determination of a specialist's qualifications.

Irrespective of the training profile and field of activity, we believe the following Soft Skills are pertinent:

– critical thinking, defined as the capacity to make appropriate decisions based on the analysis of available information;
– effective communication, which involves articulating thoughts clearly and coherently to audiences of any nature;
– emotional intelligence, encompassing the understanding of others' emotions and feelings, managing one's own emotions, and influencing the emotions of others;
– social intelligence, referring to the system of norms regarding one's relationship with the world and others, the ability to form attitudes towards oneself, anticipate the consequences of actions, and understand one's own behavior and that of others;
– problem-solving ability, involving the capacity to identify solutions, opportunities, and resources;
– inquisitiveness, characterized by an interest in seeking answers to pertinent and significant questions;
– business acumen, denoting determination in pursuing problem resolution.

These traits are more challenging to formalize and are subject to quantitative measurement. Expert assessment and methodologies such as

Emotional Intelligence (N. Hall), Social Intelligence (J. Guilford), and others are commonly used to determine the level of their development.

Theoretical framework

The pedagogical significance of the environment has been recognized by international pedagogical thinkers throughout different eras, including figures such as K. Comenius, J. Locke, I. Pestalozzi, J. J. Rousseau, J. Dewey, C. Rogers, P. Freire, E. Carlton Parsons, D. Moore, and M. Fabri. In domestic pedagogy, the understanding of the educational environment has evolved from a rigid social determinism approach, as exemplified by A. Makarenko, to one that emphasizes the promotion of individual freedom and self-development, as advocated by O. Zakharenko and V. Sukhomlynsky.

In contemporary pedagogical thought, the concept of the "educational environment" is used as a composite category that represents a structural component of a particular socio-pedagogical system (O. Harkovych, R. Hurevych, L. Ibragimova, V. Ilyina, M. Karpenko, etc.). They conceive the educational environment as:

1) a collection of historical conditions and circumstances;
2) a subsystem of the socio-cultural environment;
3) a sub-space within the broader socio-informational context;
4) an integrated, specifically organized pedagogical system for socialization and personality development.

In its broadest sense, the educational environment encompasses a diverse, multilayered world that surrounds individuals, shaping their perceptions of the world, attitudes towards people, nature, and their surroundings. As aptly noted by L. Necheporenko, environmentalism (from the English "environment") is the entire world: earth, atmosphere, biosphere, and noosphere. In a narrower sense, it refers to the local environment of an educational institution, integrating the educational process, the content of educational materials, and the interaction of educational actors within a specific pedagogical space. The educational environment of higher education institutions serves as a microcosm that "remains one of the few opportunities to glimpse into the vast universe of humanity, which must learn to build new solidarity among its members" (Juszczyk, 2007).

It is important to note that the pedagogical potential of the educational environment in higher education lies in its ability to transform external influences into the internal structure of the individual. It creates favourable conditions for comprehensive personal development and self-improvement, instils ethical and aesthetic values in educational actors, facilitates the dissemination of new professional, cultural, and corporate values, stimulates group interests, enhances interpersonal relationships, and assists in the acquisition of social experience and the development of qualities necessary for life and professional activities.

The educational environment in higher education institutions provides students with the opportunity to acquire both general (key) and professional competencies in humanities, social sciences, natural sciences, and engineering and technology fields, essential for professional practice and their intellectual, moral, spiritual, aesthetic, and physical development.

Methodology

Research Background

The research methodology is grounded in the theoretical analysis of scientific works relevant to the addressed problem, synthesis, generalization, modelling, and formalization to formulate theoretical conclusions and predictive propositions. It also involves empirical investigations and the processing of their results, as factor analysis to ascertain the significance of identified factors within the educational environment of higher education institutions in shaping specific socio-professional phenomena in future professionals.

The factor-analytic method is based on the notion of the comprehensive nature of the phenomenon under study, as manifested in the relationships among its characteristics. The goal of factor analysis is to transform the initial information, initially presented in the form of a data array, into a concentrated set of the most essential characteristics, which are the factors.

The primary results of factor analysis are expressed in factor loadings, factor fields, factor weights, and eigenvalues of the factors. Factor loadings represent the correlation coefficients between each of the analyzed variables and each of the extracted factors. The closer the

connection between a variable and a factor, the higher its factor loading. A positive sign of a factor loading indicates a direct relationship with the factor, while a negative sign indicates an inverse one. Factor loadings are presented in the form of a table with rows equal to the number of analyzed variables (columns in the original data matrix) and columns equal to the number of extracted factors. From a matrix algebra perspective, the matrix of factor loadings is transposed to the original data matrix.

The extraction of factors can be carried out based on the study of a factor analysis outcome called factor weights. Factor weights are quantitative values representing the connection between the extracted factors and the objects. Objects with higher factor weights are characterized by a higher level of manifestation of the properties of the extracted factor (a stronger connection with the factor). Positive factor weights correspond to objects with a level of manifestation of the factor's properties above average, while negative factor weights correspond to objects with a level below average. The table of factor weights contains rows equal to the number of objects under study and columns equal to the number of extracted factors.

To determine the social characteristics of future professionals in the study, methods such as "Emotional Intelligence" (N. Hall), "Social Intelligence" (J. Guilford), "Level of Subjective Control", "Value Compatibility and Accessibility", "Color Test of Attitudes" (E.F. Bazhin, O.M. Etkind), and others were utilized.

The research has established that the educational environment within higher education institutions should serve as the organizational and methodological support for the development of specific components of social and professional competence of future professionals. It constitutes a set of conditions and resources for the education and upbringing of education seekers, as well as the sphere of realization of the professional activities of pedagogical and scientific-pedagogical staff.

As a local microcosm, the educational environment within higher education institutions possesses the following characteristics:

‒ encompasses the socio-economic system to which the education seekers belong;
‒ education seekers, while having the status of temporary members of the higher education institution, constitute its variable contingent;

‒ the scientific-pedagogical staff is also deprived of a permanent status since they hold positions on a competitive basis;
‒ the higher education institution is an accountable structure with its activity goals determined by qualitative and quantitative parameters of the social-state order, and its content is represented by educational and professional programs implemented in educational complexes of academic disciplines;
‒ the outcomes of the higher education institution's activity have a remote nature, as the results can be evaluated some time after the completion of education;
‒ the educational process within higher education institutions involves a multitude of contradictions and paradoxes, including the real autonomy of higher education institutions as institutions, as stipulated by the (Law of Ukraine No. 2145-VIII) "On Education" (2017), and the limited autonomy of educators in choosing the content of education in terms of scope and structure of educational information;
‒ a characteristic feature of the educational environment is a system of opportunities, a variety of individual forms, and trajectories of education seekers.

Summarizing the views of researchers Bondar, Kovalenko, & Petrenko, (2023); Franiok, (2021); Kasáčová & Kosova, (2007); Baartman, & Bruijn, (2011); Yu et al., (2014), Prokopenko, (2020); the model of a graduate of a higher education institution has been characterized as a structure of personality in the form of needs and abilities, values, orientations, attitudes, necessary qualities, interests, and social attitudes. Among the essential characteristics of the graduate model, social and professional competencies were included, which encompass knowledge, skills, ways of action, life experience, predicted qualities of personality, ensuring readiness for future activities, quick adaptation to specific conditions, responsibility, initiative, a striving for improvement, self-realization, and a healthy lifestyle.

In the scientific and pedagogical discourse, the professional competence of a specialist is commonly characterized as an integral personality-professional formation, combining social-personal and special (general scientific, engineering, etc.) competencies.

The article defines the professional and socio-personal traits of future professionals, which form the basis of such an integrative formation as professional-social competence. The professional competence (Hard Skills) of a specialist will be based on the formula of the American scientist G. Lasswell: $P = p \ d \ r \ f$, (1)

Where:

P – professional competence of a specialist;
p – personal motives;
d – projection onto the object of professional activity;
r – rationalization of actions as a manifestation of professional interest;

f – transformation processes.

From the provided formula, it follows that the professional competence of a specialist is ensured by the presence of personal motives and professional interest directed towards acquiring the necessary knowledge.

These motives will be transferred to the object of professional activity in the future through transformational processes (Bathan, 2021). The special competencies of professionals of different profiles have been presented in the Table 1.

Table 1.
General Professional Competencies of Specialists

Competency Components	Knowledge	Skills	Communication	Autonomy and Responsibility
General Scientific Competencies				
Ability to apply knowledge of fundamental principles of natural-mathematical disciplines in practical activities	Knowledge of fundamental principles of higher mathematics, physical theories and laws, methods of researching physical phenomena, basics of engineering and computer graphics, basics of standardization and metrology	Ability to apply fundamental principles of higher mathematics and natural sciences when mastering the content of specialized educational disciplines in the specialization and speciality	Ability to present the results of educational, educational-research, and scientific-research activities, use software tools and skills for working in computer networks, create databases, and use Internet resources	Independent assimilation of new knowledge under conditions of innovative development
Engineering and Technical Competencies				
Mastery of technical principles of design, operation of machinery, and equipment	Knowledge of the theoretical foundations of thermodynamics, technical mechanics, and other scientific disciplines that make up the scientific basis of the respective industry, comprehensive knowledge of its component base	Ability to measure parameters of various devices, automation of control of machinery and equipment samples	Ability to interact in carrying out educational-research tasks related to the study and development of the component base, measurement of performance parameters	Independent assimilation of new knowledge under conditions of innovative development

Sourse: (Bathan, 2021)

It is important to note that the content of an integrated competency of a specialist depends on the profile of their professional training. For instance, in Table 2, examples of professional competencies for an engineering profile specialist have been provided, whereas for a future humanitarian specialist, this set will be different. The social competencies of a specialist have been presented in Table 2.

Table 2.
Social Competencies of a Specialist

Components of Competency	Knowledge	Skills	Communication	Autonomy and Responsibility
Social Competence Ability to participate in the activities of democratic institutions of society	Knowledge of current legislation, regulatory framework, political literacy	Ability to advocate one's position, correct mistakes, and understand the flow of political information	Ability to participate in the activities of democratic institutions of the society	Adequate assessment and responsibility for one's health, the lives and health of subordinates, and peaceful citizens
Ability to exist in a social environment	Knowledge of scientific principles of decision-making theory, current legislation, regulatory acts, philosophy, sociology, political science, economic theory, Ukrainian and foreign languages, history of Ukraine, knowledge and observance of the rights and freedoms of a Ukrainian citizen, rights and duties of an official	Ability to make managerial decisions in standard and non-standard situations, manage engineering and technical, economic activities, conduct individual and group educational work, actions to strengthen labour discipline and law and order, unite production teams, predict and resolve interpersonal conflicts	Communicativeness, the ability to organize functional-role and interpersonal interaction, tolerance, the ability to criticize and engage in self-criticism, systematic problem-solving, ability to communicate with people: oral, written, in the form of dialogue and conversation, ability to predict the development of interpersonal relations in production teams	Competencies related to the individual as a personality, a subject of activity: understanding of ethical norms of behaviour, ability to learn, carry out personal and professional self-development, and improvement. Competencies related to the social interaction of the specialist with the social sphere, and production team: ability to carry out effective professional activities in the position of manager and subordinate

Sourse: (grouped by the authors)

The social qualities of a professional can be presented as the result of the combined manifestation of such professionally important moral-ethical and emotional-volitional qualities of an individual, including:

1) empathy (the ability to empathize, share feelings, sense a person's mood, and understand their inner world);
2) tactfulness, delicacy, and attentiveness to the service recipient (paying attention to the client's mood, their well-being, adhering to the principle of "do not harm");
3) tolerance (respect for the interests, beliefs, ideals, needs, and habits of other people, accepting a person as they are, with their right to choose their way of life);
4) patience and self-control (maintaining control over one's own emotions in response to provocations such as irritability and aggressiveness);
5) high spiritual culture and morality, ethical behaviour, compassion, sensitivity, and selflessness (oriented toward the interests, needs, and protection of a client's human dignity, a willingness to help, and sympathy for others);

6) honesty (truthfulness in explaining the client's situation, possible solutions to their problems, and potential difficulties);
7) objectivity and fairness (treating clients equally, regardless of personal preferences, providing an adequate assessment of their problems);
8) moral integrity in professional matters, confidentiality (the ability to keep secrets that do not pose a threat to others);
9) integrity and responsibility (moral responsibility for one's behaviour and the consequences of one's actions);
10) positive emotional attitude towards people: friendliness, kindness, love for people, optimism (the ability to perceive a person as valuable, instilling positive feelings toward them, inspiring hope for the better).

As a rule, indicators of the level of development of these qualities are difficult to formalize or not entirely formalizable and do not lend themselves to mathematical processing or the derivation of universal laws.

For example, attempts to derive regularities in the ways of human existence that define the

general parameters of life, sensory-mental experiences of an individual, determined by the existential nature of human existence, the free choice of personality, influenced by a complex of external and internal environmental factors, can be represented by the formula of "personal identity" (E. Erikson), "self-actualization" (A. Maslow), "authentic expression" (A. Waterman), "personal expression" (M. Seligman):

$$O = I + L + V, (2)$$ where I – factors that determine the individualized range of comfortable perception of the surrounding environment (at least at the level of 50%), genetically determined and relatively stable throughout life;
L – life circumstances that determine the self-realization of a person by 10%;
V – factors determined by conscious actions, requiring effort, subject to volitional control, make up about 40%.

The research provides the "health formula" proposed by the author's team (Skúpa et al., 2021).

$$H = (ES + PA + TH + RN + OF) / (D + SM + A + OHH), (3)$$ where H – health; ES – emotional stability; PA – physical activity; TH – thermal hardening; RN – rational nutrition; OF – other favorable factors; D – diseases; SM – smoking; A – alcohol; OHH – other harmful habits.

According to the "health formula," a person's health is directly proportional to a healthy lifestyle, possible with favourable conditions for life, education, and professional activities. Conversely, a person's health deteriorates if they have harmful habits or are in unfavourable conditions.

The above highlights the research aspects of shaping the educational environment in higher education institutions (HEIs), such as somatic (human body conditions), valeological, ecological, and ergonomic factors, taking into account which contributes to the formation of a future professional's personality through the development of functional and adaptive reserves of their organism in the educational environment.

Therefore, the professional competence of a specialist is a multifunctional concept, the formation of which, as researchers, including Y. Shapran, (Porubský et al., 2014), who associates with the creation of an appropriate educational environment. This environment allows for the modelling of various real educational and professional situations, providing an effective means of monitoring the educational activities of students in this environment. This emphasizes the characteristics of competence, such as polyfunctionality, cross-disciplinarity, and multidimensionality, the presence of which significantly expands the scope of personality development.

In the context of research on the impact of factors within the educational environment of higher education institutions (HEIs) on the development of social and professional competencies of professionals, it is pertinent to define competence as a dissipative structure of personality that expends energy in the educational and professional environment, utilizing available resources and systematically replenishing them through the renewal of knowledge, acquisition of new information, and improvement of skills and methods of activity. This perspective is echoed by O. Hura (Kozlovska et al., 2021), who notes that competence cannot be isolated from the specific conditions of its realization. The study of the educational environment is a relevant direction in contemporary research conducted by both domestic and foreign psychologists and educators.

As evidenced by the analysis of the provided "formulas," the formation of both professional and social characteristics of a professional depends significantly on the conditions of both the internal (psychological) and external (educational) environment. Scientific literature offers numerous proposals for structuring the educational environment of HEIs. Based on the research results of V. Ilyina (Antera, 2021), Donnikova, & Kovban, (2020), and our work (Kovalenko et al., 2020), we can distinguish several components within the educational environment:

1. Organizational and managerial component: This component ensures effective management of the educational-professional process, the participation of educational actors in the work of educational-methodological, educational-scientific training, scientific, socio-humanitarian, educational, and social-psychological activities, international cooperation, staffing, postgraduate education, creative teams, implementation of educational, cultural, and scientific cooperation programs with other HEIs and institutions. It involves forms and methods of organizing educational activities that facilitate the practice of applying professional skills, including independent research with

subsequent presentation of results to a group, time management skills, conflict resolution, cultural matters, and self-actualization.

2. Content and procedural component: This component primarily ensures the formation of professional competencies prescribed by educational-professional programs for specific specialities and specializations. The development of social skills is facilitated through in-depth study of foreign languages, socio-humanitarian disciplines, psychology, pedagogy, and others. Relevant educational disciplines should be included in the educational-professional programs, with a focus on teaching methods that emphasize the development of higher education seekers as competitive graduates. This component also involves expanding the worldview of students through attending classes in relevant courses and electives, as well as reading professional and literary literature.

The research demonstrates that the formation of professional and social competencies is intrinsically tied to the educational environment of HEIs. Therefore, the effective structuring and management of this environment play a crucial role in the development of competent professionals.

The communicative component of the educational environment in higher education institutions (HEIs) is oriented towards creating a comfortable moral and psychological atmosphere through the coordination of formal and interpersonal interactions based on the principles of the rule of law, mutual respect, tolerance, and the organization of student self-government and parliament. It also involves engaging students in active civic and volunteer activities, and participation in sports competitions, which primarily contribute to the development of social skills. Additionally, it entails educators imparting to students an understanding of the importance and benefits of possessing social interaction skills (Verdugo-Perona et al., 2017).

To complement the outlined structure of the educational environment in HEIs, a technological component can be introduced. This component involves the organization of an information field in which computer-based management of educational activities is carried out using a person-centered approach (Marrero-Sánchez & Vergara-Romero, 2023), (Sulym et al., 2023). This is achieved by creating a database that corresponds to each student's educational trajectory. In a mode of flexible, transparent, standardized dialogue with computers, users acquire skills in productive information search and gathering, logical and critical thinking, independent decision-making, creativity, and self-organization.

Sample

In this study, empirical data were utilized, which were obtained within the framework of the research by Borysov R. I. Motivation of educational activity as a factor of formation of educational practices of Ukrainian and Polish students: a comparative analysis. A sociological study, conducted jointly by V. N. Karazin Kharkiv National University (Kharkiv, Ukraine) and Zelenogursk University (Zelena Gura, Poland), encompassed 925 Ukrainian and Polish students.

The random nature of the sample ensures its representativeness. Dominant socio-demographic characteristics of the respondents include orientation toward future professional activity, and the financial status of young individuals, which either necessitates working to pay for education or relies on financial support from their families or the possibility of receiving additional income in the form of scholarships.

Instruments and procedures

To analyze the significance of factors related to the educational environment in shaping professional and social competence, the following indicators were investigated: the cumulative percentage of factor variance, which determines how well our dataset was described using the identified factors – the higher this indicator, the greater the portion of the dataset that was factorized; the percentage of total variance indicates the significance of the factor – the higher the percentage of variance it explains, the more significant it is, and the more variables it includes.

Thus, factor analysis was employed to determine which educational factors are the most significant, for which the analysis of factor eigenvalues was utilized. Eigenvalues represent variances explained by the factors.

Before conducting this analysis, an examination of empirical data was performed using Kaiser-Meyer-Olkin criteria (in this case, the criterion equals 0.652) and Bartlett's test of sphericity (in this case, it equals 0.00), indicating the acceptability of using this method.

Data analysis

In order to investigate the interrelations between the "drivers" of professionalism and the conditions of the internal and external educational environment of higher education institutions (HEIs) more comprehensively, we employed the data from a factor analysis conducted by Hans Heijke et al., (2003).

Based on the results of the analysis, four factors were identified, explaining 73% of the variance. The first factor (explaining 22% of the variance) encompasses a group of factors related to the HEI's educational environment that are associated with students' orientation toward future activities. These factors include aspirations to ensure a professional career, better preparation for future activities, becoming a highly qualified specialist, and considering success in the job placement process.

The second factor (also explaining 22% of the variance) consists of factors associated with the external aspects of the HEI's educational environment, such as the logic and coercion of family-related factors (parental control, a desire not to stand out in terms of success among peers) and economic factors (tuition fees). This factor is linked to the development of future professionals' ability for effective social communication.

The third factor, explaining 14% of the variance, combines motives related to quality control of education and coercion in the form of an orientation towards the accumulation of success "capital." This includes considerations during the allocation of scholarships and job placement.

The least significant among the mentioned factors (approximately 14% of the variance) is the one that integrates factors most homogeneous to the HEI's educational environment, namely, interest in academic disciplines and the demands of instructors. This factor specifically determines the observed convergence of aspirations regarding the incorporation of cultural capital, along with its subsequent institutionalization.

Results and discussion

The research results indicate that the orientation toward future professional activity is not determined by any ascriptive status of higher education students (such as gender, place of residence before entering higher education, parental education, or family financial status).

Among students whose motivation is characterized by the first factor, clear professional status aspirations are discernible, as they are more likely to plan engagement in practical activities related to their specialization after completing their education (correlation coefficient is significant, with a strength of association $\rho=0.275$). Alternatively, they may pursue research activities (significant correlation, with a strength of association $\rho=0.199$) or teaching positions (significant correlation, with a strength of association $\rho=0.187$). Such students invest a considerable amount of time in preparing for daily classes (significant correlation, with a strength of association $\rho=0.201$) and examinations (significant correlation, with a strength of association $\rho=0.217$). They demonstrate high academic performance (significant correlation, with a strength of association $\rho=0.339$).

Students motivated by external control within the educational environment, based on the research findings, tend to come from families with a higher income level (significant correlation, with a strength of association $\rho=0.101$). The objective cultural capital of their families, represented by a home library, is lower than that of their peers (significant correlation, with a strength of association $\rho=-0.153$). After completing their education, these students are more inclined to seek high administrative and managerial positions compared to their colleagues. However, it is worth noting that their relatively high level of professional-status aspirations is not reflected in intensive academic practices, a desire to acquire foreign language proficiency or the outcomes of their academic performance.

Higher education students motivated by the desire to achieve high academic success are often from families with limited financial resources (significant correlation, with a strength of association $\rho=0.141$) and reside in smaller towns or rural areas (significant correlation, with a strength of association $\rho=0.155$). These individuals strive to allocate more time for study preparation compared to students whose motivation is primarily driven by external non-academic factors. The authors of the research emphasize that quantitatively, these practices result in relatively high grades. However, their academic performance is comparatively lower than that of students oriented towards successful professional activities.

According to the research findings, motivation characterized by an interest in academic disciplines and the demands of instructors

influences the inclination towards pedagogical activities and contributes to achieving reasonably high academic success. The research results are presented in Table 3.

Table 3.
Factor Loadings of Higher Education Students' Professional Motivation

	Factors			
	1	2	3	4
Desire to secure a professional career	0,866	0,140	-0,035	0,040
Desire to better prepare for professional activity and become highly qualified	0,863	-0,042	-0,101	0,150
Parental control	0,088	0,817	0,115	-0,086
Desire not to stand out among peers due to success	0,071	0,805	-0,026	0,092
Tuition fee	0,093	0,701	-0,472	-0,046
Consideration of grades in scholarship allocation	-0,004	-0,072	0,894	0,102
Instructor's demands	-0,062	0,213	0,208	0,809
Interest in academic disciplines	0,263	-0,263	-0,086	0,725

Therefore, through the means of factor analysis, it has been established that the determining factors influencing the impact of the educational environment on the formation of future professionals are orientation towards future specialized activity and external control over academic performance by non-institutional entities. Unfortunately, the second factor reduces the academic success of higher education students, leading to the formation of their perception of the educational process as a compulsory activity and the educational environment as an alien space in which subjectivity is lost.

Conclusions

The study delves into the multifaceted nature of the educational environment, emphasizing its role as a social space where educational and professional activities take place, fostering formal and interpersonal interactions between learners and educators. This environment serves not merely as a set of conditions but also as a means to achieve educational objectives.

Employing factor analysis, the study identifies the most influential factors shaping professional and social competencies within the educational environment. Quantitative indicators, specifically variance, rank the significance of these factors as follows: 1) students' orientation towards future activities (22% of variance); 2) external aspects of higher education institutions' educational environments (22% of variance); 3) material interest factors (14% of variance); and 4) factors closely aligned with the educational environment of higher education institutions (14% of variance).

The research emphasizes the simultaneous cultivation of both hard and soft skills among future professionals within modern higher education institutions. It advocates against compartmentalizing Hard Skills and Soft Skills, asserting that professionals must possess not only technical proficiency but also strong communication abilities, negotiation skills, and writing proficiency. These foundational skills should be nurtured within the educational environment of higher education institutions.

Furthermore, the study underscores the importance of creating enriching learning environments conducive to holistic skill development. Educators are encouraged to go beyond traditional knowledge dissemination methods, emphasizing active engagement, critical thinking, and problem-solving. Practical experiences, such as internships and real-world projects, are recommended to help students acquire the necessary technical competencies and interpersonal skills demanded by employers.

Continuous assessment and evaluation of educational programs are deemed essential to ensure their efficacy in preparing students for the contemporary workforce. Employers are urged to recognize the value of candidates with well-rounded skill sets, comprising both technical proficiencies and soft skills such as communication and adaptability.

However, the study acknowledges the need for further research to tailor findings to specific specialties within the realm of future professionals, given the diverse range of disciplines involved.

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