

# Psychological Aspects of Professional Development: Through the Eyes of Students and Professors

Olesia STOLIARCHUK<sup>1</sup>,  
Olena KOKHANOVA<sup>2</sup>,  
Olena SOROKINA<sup>3</sup>,  
Oksana SERHIEIENKOVA<sup>4</sup>

<sup>1</sup> Borys Grinchenko Kyiv University,  
Bulvarno-Kudriavska st., 18/2, UA-04053  
Kyiv, Ukraine,

[o.stoliarchuk@kubg.edu.ua](mailto:o.stoliarchuk@kubg.edu.ua)

<sup>2</sup> Borys Grinchenko Kyiv University,  
Bulvarno-Kudriavska st., 18/2, UA-04053  
Kyiv, Ukraine,

[o.kokhanova@kubg.edu.ua](mailto:o.kokhanova@kubg.edu.ua)

<sup>3</sup> Borys Grinchenko Kyiv University,  
Bulvarno-Kudriavska st., 18/2, UA-04053  
Kyiv, Ukraine, [o.sorokina@kubg.edu.ua](mailto:o.sorokina@kubg.edu.ua)

<sup>4</sup> Borys Grinchenko Kyiv University,  
Bulvarno-Kudriavska st., 18/2, UA-04053  
Kyiv, Ukraine,

[o.serhieienkova@kubg.edu.ua](mailto:o.serhieienkova@kubg.edu.ua)

**Abstract:** The article reveals the psychological aspects of the professional development of a future specialist and presents the results of an empirical study. The empirical study is focused on the analysis of the content of reflection by professors and students of the psychological characteristics of the professional formation of a future specialist. The ascertaining study covered 589 Ukrainian students of course years from 1 to 6 (future psychologists, teachers, lawyers) and 487 Ukrainian professors. The following methods were used: survey, calculation of average values, ranking and comparative analysis. The content of the survey was identical for both samples of respondents and assumed the subsequent comparison and analysis of the answers of students and professors. The study made it possible to establish the similarity of reflection by professors and students of types and factors of professional formation of future specialists. At the same time, a number of differences were identified in matters of motivation for professional choice, priority areas for becoming a professional, determinants of success, and obstacles to the professional formation of future specialists. The identified differences in the reflection of professors and students of the psychological characteristics of the formation of a professional expressively indicate gaps in the awareness of higher education professors and the average level of their competence regarding this issue. The empirical data obtained, including questionnaires as an effective diagnostic tool, can be used to improve the psychological competence of professors in order to improve the quality of their support for the professional formation of students.

**Keywords:** *professional development; professional education; reflection; awareness; professor; student.*

**How to cite:** Stoliarchuk, O., Kokhanova, O., Sorokina, O., & Serhieienkova, O. (2022). Psychological Aspects of Professional Development: Through the Eyes of Students and Professors. *Revista Românească pentru Educație Multidimensională*, 14(3), 284-300.

<https://doi.org/10.18662/rrem/14.3/610>

## **Introduction**

The difficulties of the development of the economy and social sector that Ukraine experiences influence the employment of young professionals. The Ukrainian space of professionals needs personalities who are able to successfully and efficiently find themselves and their fulfillment in dynamic, contradictory socioeconomic conditions. Modern university graduates must possess such qualities as developed occupational mobility, flexibility, adaptivity as their basic personal attributes of competitive abilities. Students' systematic reflections on an educational process and results they obtain is of a particular importance when it comes to building and realization of a student's individual strategy of professional development. In the context of the student-centered paradigm of an educational interaction, an ability of professors to analyze psychological aspects of a formation of future specialists becomes especially important. Adjustment of the results on students' and professors' reflections foster an optimized way of their interaction and creates a base for an improvement of psychological and pedagogical guidance of a student's professional development. Thus, a problem of studying factors, mechanisms and conditions of an individual's professional training at a stage of professional education remains relevant due to the need to update the criteria for training a modern, promising professional.

The aim of the article is a theoretical substantiation of the leading psychological aspects of the professional formation of a future specialist and a presentation the results of an empirical study of the content of reflection by professors and students of these aspects.

## **Literature Review**

We consider professional development as a continuation of a general personal development but within a framework of a new specific interaction of an individual with a social environment, which is determined by conditions and content of a future professional activity. Professional development means a process of a progressive change of an individual as a result of social influences, professional activity and personal activity aimed at self-improvement and self-realization (Zeer, 2005). Formation necessarily supposes a need for a development and self-development, a possibility and reality of its satisfaction, as well as a need for professional self-protection. An important feature of professional training of a personality is its active character. It seems particularly appealing to us an interpretation presented by

the founders of humanistic psychology stating that formation is a process of development in which an individual takes responsibility for the fullest possible realization of their potential (Maslow, 1987).

Professional development of a personality has an integrated nature, covering a number of properties and qualities of a potential subject of labor. Russian psychologist L. Shnejder defines a process of an individual's becoming a professional as a formation of a professional orientation, competence, socially significant and professionally important qualities and their integration, readiness for constant personal and professional growth (Shnejder, 2004). Professional education can be considered as a starting platform for a formation of a professional's personality. It is reasonable to consider a future specialist's professional training as a process which depends on certain personal qualities. These qualities initially determine the final success of a student's formation as a professional, their professional readiness and, in the aggregate, determine its level. (Bodrov, 2001).

Professional training is not limited to a formation of a person's professional competence. Professional training is considered to be not just as a process of accumulating and processing information, but as one that involves students' building and coordination of meaning, problem solving, reflection and creativity. It is achieved by clarifying the role of a professor and developing a set of teaching methods that can help students develop reflection, collaboration, and creativity. (Djoub, 2017)

A promising vector of a student's education is a formation of their individual professional perspective, aimed at practical actions in order to increase the level of qualifications, performance, enrich professional and personal qualities and behavioral models. One of the most important factors in achieving success in training is self-organization, which is a conscious purposeful activity controlled by a person and which is closely related to the processes of professional self-development, self-realization, self-expression, self-understanding, self-improvement and self-education. Currently self-organization stands out as an independent supra-subject competence, since it includes not only knowledge and methods of action, but also personal qualities (Zeer et al., 2020).

The role of personal qualities in a process of professional development including at a stage of choosing a future career is emphasized in many studies. While studying the preferences of medical students in relation to their professional major and factors that influenced their decisions it was identified that internal factors prevailed. Among these factors are students' abilities matching their major and their perception of their choices as a "ground-breaking direction in medicine". Career advice

from friends and family also influenced their decision to become a future health professional (Guraya & Almaramhy, 2018).

These findings echo a study conducted by P. Cavenagh, C. Dewberry and P. Jones (2000), which revealed that medical students have greater commitments to chosen careers in comparison to law students. This is evidenced by a greater desire of medical students to continue their careers, and their greater satisfaction with their career choices. The researchers concluded that more medical students will persist in prolonged study of medicine than law students will reapply for further study of law. It has also been shown that medical students are twice as likely as law students to have a family member in this profession (Cavenagh et al., 2000).

Integration of internal and external factors of professional development of students, established in a number of studies, is obvious. When A. Rokach and S. Boulazreg studied the factors contributing to academic success at undergraduate, graduate and postgraduate levels of psychology major, it was found that students' high consciousness is the most consistent predictor of success. However, this link was proved to be reliable only in terms of an undergraduate level. Less reliable results included high compliance and low neuroticism as predictors of overall academic success at all levels of higher education. The researchers also draw attention to the importance of mentoring in mastering a psychological profession and the lack of its widespread use at an undergraduate level (Rokach & Boulazreg, 2020).

A significant role of students' reflections is emphasized when the internal factors of successful professional development were analyzed. Students' reflecting on the content, mechanisms and factors of the success of their professionalization contributes to a greater awareness of this process and the acceptance of responsibility for its results. Fostering reflective, socially responsible and action-oriented future professionals who can contribute to a better future remains a key challenge for higher education (Jackson & Trede, 2019).

Promoting students to master reflective practices is considered a valuable result of higher education (Bruno & Dell'Aversana, 2018). Teaching students in the context of activated reflection is especially useful for changing the basis of social images. Reflection can help students build a realistic image of both profession and professional identity (Falgares et al., 2017).

In their turn, professors should foster students' reflection process. The results of a research conducted by T. Bowen highlight the importance of reflection for students struggling to build their professional selves, as well

as the role of professors and academic staff in creating spaces for students to experiment and try on professional identities before graduation (Bowen, 2016).

Discourse analysis of faculty revealed a continued encouragement of active student participation through highly structured learning participation, sustained attention to interpreting students' personal experiences during teaching practice, and significant interventions aimed at linking to academic knowledge. (Cubero-Pérez et al., 2019).

Professional development is interpreted by us as an initial stage of a genesis of an individual's profession, based on their entry into a professional environment, learning professional experience, mastering standards and values of a professional community. An individual's professional development ensures further professional development and self-realization as a subject of professional activity. Professional formation actively develops during an individual's training in a higher education institution. Professional development of a person occurs under the influence of external and internal factors, with the latter playing the leading role. An important external factor at a stage of professional training is the nature of pedagogical influence of a professor, who implements strategic and tactical functions of a professionalization of a future professional personality. Professors' knowledge and understanding of psychological aspects of students' professional development is a key to a successful interaction between them.

In the presence of a number of scientific publications covering the topic of professional competence of professors, there are actually no presentations of empirical studies of their awareness of the leading aspects of the professional formation of future specialists, especially in comparison with the results of a survey of the students themselves.

We assume that an empirical study of the awareness of the subjects of the educational process of the university regarding the psychological characteristics of the formation of a future specialist will make it possible to draw significant conclusions about the competence of professors in this matter, as well as use the research results obtained to improve the professional training of a person at the stage of their professional training.

## **Materials and Methods**

The ascertaining research, conducted on the basis of Borys Grinchenko Kyiv University and The Classic Private University of Zaporozhye, covered 589 students of course years from 1 to 6, who are future professionals in the socionomic sector (psychologists, teachers and lawyers), as well as 487 professors.

The target research goal was achieved through consistent accomplishment of a number of tasks:

1) studying students' reflections on the motives of their professional choice, priority areas, types, factors and obstacles to becoming a professional at the stage of education in higher education institutions;

2) identifying the awareness of university professors about students' motives of professional choice, priority areas, types, factors and obstacles to becoming a professional at the stage of education in higher education institutions;

3) a comparative analysis of the reflections of both sample groups to determine the level of competence of professors in psychological aspects of students' professional formation.

Questionnaire survey methods with multiple choice questions were used to calculate average values, as well as ranking and comparative analysis. A questionnaire that was identical for both sample groups (and contained 7 questions) suggested that the respondents could choose several answer options. Comparison of the answers of students and professors made it possible to find out a degree of professors' competence in key psychological aspects of professional development of future specialists.

The study was carried out in accordance with the ethical standards of the Declaration of Helsinki (WMA, 2013), was conducted in compliance with the ethical code of the psychologist and the moral criteria for empirical research. All respondents, both professors and students, were informed in advance about the purpose of the study, the confidentiality of the collection of empirical data, the anonymity of responses, and the possibility to terminate participation in it at any time without negative consequences. Both professors and students voluntarily agreed to participate in the study.

## **Results and Discussions**

The basis for a successful adaptation of freshmen and a formation of an adequate motivation for their educational and professional activities are the motives for choosing a profession. They, in turn, influence the formation of motives for learning and motives for future professional activity, as was established via a correlation analysis (Stoliarchuk, 2015). The first question of the questionnaire had an aim to identify the views of the respondents on the leading motives of professional choice made earlier by students. Comparison of the answers of students and professors to this question showed significant differences. According to the answers of the surveyed students, the leading motives of their professional choice is a triad of professionally oriented aspects: chosen profession matches their skills,

interest in working with people, and also desire to deepen their knowledge in the subject of their major (table 1). A pragmatic motive to get a degree is of a secondary importance in professional determination according to students' opinions. Also, future professionals do not consider a vocation and parting words of other people to be significant motives for choosing a future career.

**Table 1.** Reflection on the motives for choosing a profession by future specialists

Motives \ Respondents	Professors		Students	
	Was chosen (%)	Ranking position	Was chosen (%)	Ranking position
Vocation	21	6	23	6
Chosen profession matches skills	47	4	47	1
Desire to deepen knowledge in the subject of the major	16	7	32	3
Parting words from loved ones (parents, friends, teachers)	64	2	22	7
Interest in working with people (children, adults)	58	3	36	2
Prestige of the chosen profession	26	5	31	4
Longing for getting a degree	68	1	30	5

Source: Authors' own conception

Surveyed professors' opinions significantly differ from the students' opinions on this issue. In their answers the first positions are held by external motives for a choice of a profession by young people, namely, getting a degree and parting words from loved ones. Also, professors consider the interest in working with people and the correspondence of a chosen profession to skills to be significant motives for students' professional choice. At the same time, professors tend to devalue students' interest in a subject of their major, since this motive scored the last one in the ranking. Both groups of respondents see no reason to talk about vocation as a motive for professional choice, as evidenced by the insignificant number of choices of this motive and its lower position in the rating.

The second question examined the viewpoints of the respondents regarding the priority areas of professional formation. Processing the results of the questionnaire, a similarity of the priorities of the respondents regarding the key areas of professional development was revealed (table 2). The ranking of answers to the second question of the questionnaire is headed by three leading vectors of professional development of a future specialist, which coincided in both sample groups. Both students and professors believe that the most important for the formation of a professional is an enrichment of their professional competence and applied skills, which expressively reflects the dominance of the competence-based approach in higher education. Significant, in the opinion of the respondents, is the development of a desire for professional self-realization and skills of self-education, as well as the professional motivation and identity of a future professional. However, in professors' opinions, the task of forming professional flexibility and mobility in the process of professional development looks much more important (the second position in the ranking) than for students (the sixth position). The professors also see the formation of competitiveness and the development of entrepreneurial skills to be more significant. In turn, the interviewed students would like to develop the foundations of polyprofessionalism and universalism due to the domestic labor market instability. At the same time, they underestimate the importance of the flexibility and mobility of a professional (the sixth position in the ranking). The development of leadership skills and motivation for social service is considered an urgent task of professional training only by professors. The interviewed students practically ignore this vector of a personal professionalization.

**Table 2.** Reflection on the priority directions of a professional development

Respondents Direction	Professors		Students	
	Waschose n (%)	Rankingpositio n	Waschose n (%)	Rankingpositio n
Formation of competitiveness with developed entrepreneurial skills	37	4	33	5
Formation of professional flexibility and mobility	53	2	30	6

Development of professional motivation and identity	47	3	45	3
Enrichment of professional competence and applied skills	63	1	68	1
Laying the foundations of polyprofessionalism and universalism	21	6	37	4
Development of the desire for professional self-realization and self-education skills	53	2	59	2
Development of leadership qualities and motivation for social service	32	5	10	7

Source: Authors' own conception

In the third question, the respondents were asked to identify the prevailing type of professional formation of students. When analyzing the answers, it was found that the opinions of both sample groups practically coincide (table 3). The same distribution of ranking positions was recorded in the answers of professors and students, with a predominance of contradictory, successful and crisis types. The percentage of choices of professional formation of future specialists appeared to be the same. But the number of choices of a successful type of professional formation is alarming and requires attention; it scored only 37%. Critical attitude of professors nevertheless manifested itself in the fact that they more often chose problem types of professional development of students, especially controversial and crisis ones.

**Table 3.** Designation of the type of a professional development of future specialists

Respondents Type	Professors		Students	
	Waschosen (%)	Rankingposition	Waschosen (%)	Rankingposition
Successful	37	2	37	2
Controversial	84	1	52	1
Unfavorable	11	4	5	4
Crisis	21	3	8	3
False	5	5	3	5

Source: Authors' own conception

The fourth question of the questionnaire revealed significant, in the respondents' vision, factors of professional development at a stage of mastering a profession. It was found that in general professors' reflection on the factors of professional formation of future specialists is correct, since the answers of both groups of respondents coincided in assessing the priority role of motivation for mastering a profession and ideas about it. (table 4). Also, both sample groups of respondents do not lay much emphasis on the media factor (the sixth position) and the influence of fellow students (the seventh ranking place).

**Table 4.** Reflection on the factors of a professional development of future specialists

Respondents Factor	Professors		Students	
	Waschosen (%)	Rankingposition	Waschosen (%)	Rankingposition
Requirements and grades from professors	47	4	48	3
Own ideas about a profession	63	2	66	2
Motivation for mastering a profession	68	1	71	1
Dominant attitudes among fellow students	4	7	12	7
Examples of work experience	53	3	30	4

of acquainted professionals				
Current state of the labor market	32	5	24	5
Role models of professionals presented in media	5	6	16	6

Source: Authors' own conception

The difference concerns only the ratio of pedagogical and applied factors: professors consider examples of work experience of acquainted professionals to be more significant, whereas students put more significance into the requirements and grades from professors. It is significant that students attach more importance to the influence of professors on their professional development than professors of higher education institutions themselves (the third and the fourth positions in the ratings, respectively).

The fifth question of the questionnaire was aimed to identify the respondents' views on the determinants of the success of professional development in the context of university education. When ranking the determinants of the success of the professional formation of future professionals, a number of differences were recorded. For students, personal qualities such as self-confidence, willpower and self-esteem were of the most significance. They were followed by the level of professional competence of professors, whereas self-education and self-development took the third place (table 5). The importance of self-education and self-development is also recognized by professors, who put this determinant in the second place in the ranking. But the predominant factor in their answers is the motivation for mastering a profession by future specialists, which the students themselves do not consider a leading determinant of the success of their professional development (the fifth position). Instead, the surveyed students consider the competence of professors to be important (the second place in the ranking) as well as the consequences of its impact - the level of their academic performance (the fourth position).

**Table 5.** Reflection on the determinants of the success of a professional development of future specialists

Respondents \ Determinant	Professors		Students	
	Waschos en (%)	Rankingpositi on	Waschos en (%)	Rankingpositi on
Academicperformance	21	5	39	4
Motivation for mastering a profession	95	1	31	5
The level of professors' professional competence	63	3	50	2
Self-education and self-development	84	2	47	3
Self-confidence, willpower and self-esteem	32	4	65	1
Degreeofadministrationcontrol	5	6	4	6

Source: Authors' own conception

The predominance of internal determinants of success of professional development of future specialists naturally pushes the control of administration into the background, which can be traced in the answers of both groups of respondents.

The two next questions of the questionnaire covered the respondents' reflection on obstacles to becoming a professional at a stage of studying at a university. In general, professors critically assess the importance of their own professional level for the development of students' professionalism, as evidenced by the second and the third ranking positions of the answers (table 6). Analyzing the external obstacles of the professional formation of future specialists, professors expressed a complex vision of the problem, choosing several answer options. On the other hand, students most often pointed to one or two obstacles. In general, the rating distribution of the two sample groups matched.

The confirmation of the "classical" contradiction of pedagogical interaction within the university was indicative: professors consider themselves too loyal to students, while students see professors to be overly demanding. But the number of professors choosing this obstacle significantly exceeds the percentage of students choosing (47% and 19%, respectively) it, which shows the discrepancy between the views of the surveyed groups on the degree of exactingness of professors. Perhaps, there

is pseudo-compensation by professors of their insufficient competence due to the increased demands on students' performance.

**Table 6.** Reflection on external obstacles to a professional development of future specialists

Respondents \ Obstacle	Professors		Students	
	Was chosen (%)	Ranking position	Was chosen (%)	Ranking position
Professors' incompetence	53	2	41	2
Excessive loyalty / professors' exactingness*	47	3	19	3
Unfriendly fellow students	16	5	17	4
Unfavorable technical and living conditions of educational process	26	4	16	5
Poorly organized internship	58	1	45	1

\* for students, a variant of the answer was formulated as “professors' exactingness”, for professors - “the loyalty of professors”

Source: Authors' own conception

The wrong choice of profession is seen by professors as the main internal obstacle to a professional development of future specialists. According to professors of higher education institutions this problem is aggravated by unfavorable personal qualities of students such as laziness, low self-esteem and high levels of anxiety (table 7).

**Table 7.** Reflection on internal obstacles to a professional development of future specialists

Respondents \ Obstacle	Professors		Students	
	Was chosen (%)	Ranking position	Was chosen (%)	Ranking position
Mistakenly chosen profession	84	1	31	3
Low self-esteem and high levels of anxiety	37	3	32	2

Laziness, lackofwillpower	68	2	57	1
Excessive self- exactingness and workaholism	5	5	14	5
Concentration on personal (family) life	16	4	28	4

Source: Authors' own conception

Lack of willpower and self-doubt as dominant internal obstacles to professional development are recognized by the students themselves (the first and the second positions in the ranking). But the wrong profession choice as their problem is recognized by much fewer students surveyed (31%) than they are attributed to professors (84%). We assume that professors are inclined to identify various problems of a professional development of students with the wrong choice of profession; at the same time, not all future specialists realize the possibility of this wrong choice. The opinions of both sample groups coincide regarding the weak influence of a personal life as a distraction to a professional formation of students (the fourth position in the ranking), as well as the low prevalence of workaholism among them (the fifth position in the ranking).

Of course, our research limited by the dominance of the subjective method of diagnosis - questionnaires, and the composition of the sample, which covers only future professionals in the socioeconomic sector (psychologists, teachers and lawyers). Apparently, students who master these professions show a greater tendency to understand and analyze different aspects of their professional development. Undoubtedly, this impacted the results of the study. In this regard, it is appropriate to conduct future research with students of other majors.

We also overlooked gender differences in the study, which may be a promising prospect for a further study. It is also important to know the impact of the situation with a pandemic on the professional development of future specialists.

Thus, the optimization of the professional formation of students provides for their effective interaction with professors. Its condition is the understanding and consideration by higher school professors of the basic psychological aspects of the professionalization of future specialists. Our ascertaining study identified both a number of similarities and differences in the reflection of professors and students of these aspects.

The practical significance of our article at the level of the international scientific community lies in the fact that the procedure and content of the survey, including the formulated questions and answer options, are of a universal nature, not tied to training programs for specialists of a particular major, year of study or educational level. We consider the algorithm we have tested for studying and comparing the positions of professors and students regarding the leading psychological aspects of the professional formation of a future specialist to be quite appropriate for widespread use by psychologists and professors in the field of higher education.

## Conclusions

1. A theoretical analysis of the content of the problem and the leading psychological aspects of students' professionalization have been carried out. Professional formation is interpreted as the initial stage of a person's *professiogenesis*, based on their entry into the professional environment, the assimilation of professional experience, mastering the standards and values of the professional community.

2. It is proved that the professional formation of a person occurs under the influence of external and internal factors with the leading role of the latter. An important external factor is the competence of a modern professor in matters of the psychological characteristics of a student's professional formation as a guarantee of their successful interaction.

3. The similarity of reflection by professors and students of the types and factors of professional formation of future specialists, as well as a number of differences in the motivation of professional choice, priority areas for becoming a professional, determinants of success, external and internal obstacles to the professional formation of future specialists, have been established.

4. The identified differences in the reflection by professors and students of the psychological characteristics of the formation of a professional expressively indicate the gaps in the awareness of higher school professors and the average level of their competence regarding this issue.

5. The obtained empirical data, including surveying as an effective diagnostic tool, should be used to improve the psychological competence of professors in order to improve the quality of their support for the professional formation of students.

---

## References

---

- Bodrov, V. A. (2001). *Psihologiya professionalnoy prigodnosti* [Psychology of professional suitability]. PER SE.
- Bowen, T. (2016). Becoming professional: examining how WIL students learn to construct and perform their professional identities. *Studies in Higher Education, 43*(7), 1148-1159. <https://doi.org/10.1080/03075079.2016.1231803>
- Bruno, A., & Dell'Aversana, G. (2018). Reflective practicum in higher education: The influence of the learning environment on the quality of learning. *Assessment and Evaluation in Higher Education, 43*(3), 348–358. <https://doi.org/10.1080/02602938.2017.1344823>
- Cavenagh, P., Dewberry C., & Jones, P. (2000). Becoming professional: when and how does it start? A comparative study of first-year medical and law students in the UK. *Medical Education, 34*(11), 897-902. <https://doi.org/10.1046/j.1365-2923.2000.00680.x>
- Cubero-Pérez, R., Cubero, M., & Bascón, M. J. (2019). The reflective practicum in the process of becoming a teacher: The tutor's discursive support. *Education Sciences, 9*(2), 96-114. <https://doi.org/10.3390/educsci9020096>
- Djoub, Z. (2017). Supporting Student-Driven Learning: Enhancing Their Reflection, Collaboration, and Creativity. *Student-Driven Learning Strategies for the 21st Century Classroom*, 331-351. <https://doi.org/10.4018/978-1-5225-1689-7.ch021/>
- Falgares, G., Venza, G., & Guarnaccia, C. (2017). Learning Psychology and Becoming Psychologists: Developing Professional Identity through Group Experiential Learning. *Psychology Learning and Teaching, 16*(2), 232-247. <https://journals.sagepub.com/doi/pdf/10.1177/1475725717695148>
- Guraya, S. Y., & Almaramhy, H. H. (2018). Mapping the factors that influence the career specialty preferences by the undergraduate medical students. *Saudi Journal of Biological Sciences, 25*(6), 1096-1101. <https://doi.org/10.1016/j.sjbs.2017.03.019>
- Jackson, D., & Trede, F. (2020). The Role of Reflection After Placement Experiences to Develop Self-Authorship Among Higher Education Students. In S. Billett, J. Orrell, D. Jackson, F. Valencia-Forrester (eds.), *Enriching Higher Education Students' Learning through Post-work Placement Interventions*. Professional and Practice-based Learning, 28, 304. Springer, Cham. [https://doi.org/10.1007/978-3-030-48062-2\\_11](https://doi.org/10.1007/978-3-030-48062-2_11)
- Maslow, A. H. (1987). *Motivation and personality* (3<sup>rd</sup> ed). Harter and Row.
- Rokach, A., & Boulazreg, S. (2020). The Road to Becoming a Psychologist: Indicators of Success and Hardship during the University Years. *Journal of*

- Psychology*, 154(8), 632-661.  
<https://doi.org/10.1080/00223980.2020.1771538>
- Shneider, L. B. (2004). *Professionalnaya identichnost: teoriya, eksperiment, trening* [Professional identity: theory, experiment, training]. Publishing of the Moscow Psychological and Social Institute, Voronezh, Publishing of the NPO MODEX.
- Stoliarchuk, O. A. (2015). Korrelyatsionnyiy analiz vstupitelnoy, uchebnoy i professionalno orientirovannoy motivatsii studentov [Correlation analysis of introductory, educational and professionally oriented motivation of students]. *Bulletin of Kharkiv National Pedagogical University named after GS Skovoroda: Psychology*, 51, 221-228. <https://oaji.net/articles/2015/983-1445257730.pdf>
- Zeer, E. F. (2005). *Psibologiya professiy* [Psychology of professions]. Akademicheskii Proekt, Fond Mir.
- Zeer, E. F., Tretyakova, V. S., & Zinnatova, M. V. (2020). Innovative Model of Socio-Professional Development of a Student's Personality. *The Education and science journal*, 22(3), 83–115. <https://doi.org/10.17853/1994-5639-2020-3-83-115>
- World Medical Association (WMA). (2013, November 27). World Medical Association Declaration of Helsinki. Ethical Principles for Medical Research Involving Human Subjects. *JAMA*, 310(20), 2191-2194. <https://doi.org/10.1001/jama.2013.281053>