

ISMGE 2020**II International Scientific and Practical conference "Individual and Society in the Modern Geopolitical Environment"****SOFT-SKILLS MODEL OF UNIVERSITY GRADUATE: OPINIONS OF STUDENTS AND TEACHERS**

Dmitry Ermakov (a)*, Zhuldyz Amantay (a)

*Corresponding author

(a) Peoples Friendship University of Russia (RUDN University), 6 Miklukho-Maklaya Street, Moscow, 117198, Russia, ermakov-ds@rudn.ru

Abstract

In the contemporary unstable and rapidly changing world with vocational, subject-specific skills (hard skills) specialized, professional, universal qualities (soft skills) became critically important. A special role in their formation belongs to tertiary education. The generally accepted definition and agreed list of soft skills are missing, the corresponding classifications and lists, approaches to their classification are very diverse. In this regard, it seems appropriate to create a unified model on the basis of complex theoretical and empirical research. As the results of the survey of 272 students and 175 teachers from Russian universities, not all of them (especially the students) are acquainted with the concept of soft skills, although awareness is gradually increasing. The main sources of information are colleagues at school / work, media, training courses. The most important for the formation of soft skills are senior secondary schools, secondary vocational and higher education. The subjects of the educational process are expected to a deeper development of soft skills than there is. The most popular communicating, collaborating and coordinating with others, the least which service orientation, retraining, work in conditions of uncertainty. Among the effective ways of learning are practice and internships; workshops, games, case studies; educational projects. The results will be the basis for the model development of soft skills of the graduate of the modern Russian University in the international context which will serve as a tool of management of educational process and improve its quality in accordance with modern requirements.

2357-1330 © 2020 Published by European Publisher.

Keywords: Model, questionnaire, soft skills, student, teacher.

1. Introduction

The modern world, which is commonly called VUCA (by the abbreviation of its characteristics – Volatility, Uncertainty, Complexity, Ambiguity (Bennett & Lemoine, 2014), is developing in the context of the transition to a new technological structure, the knowledge-based economy. Today nobody can say exactly what it is worth of teaching children and learning for themselves which professional skills will be important tomorrow (Robles, 2016). In this regard, non-specialized, supra-professional, universal qualities, denoted by the term soft skills, are becoming increasingly important (in contrast to professional competencies associated with specific objects, areas of activity based on subject knowledge and skills – hard skills).

In our opinion, as in the opinion of the majority of researchers, soft skills are just as necessary as hard skills (while the productivity of the latter is significantly related to their combination with the former (Cimatti, 2016; Succi & Wieandt, 2019), and may be the basis for constructing a new model of educational content (Ermakov, 2020). However, in many countries of the world, attention to the development of soft skills is not paid enough (Balcar, 2016). A special role in solving this problem belongs to higher education (Cornalli, 2018).

2. Problem Statement

Despite the best efforts of scientists (Tsalikova & Pakhotina, 2019) and practitioners («Bloomberg research», «The Graduate management admission council research», «The Association of MBAs or AMBA's employers forum» and others (Andrews, 2015), there are a number of issues that require further study and solution in the considered area. The generally accepted definite list of soft skills currently do not exist (Matteson et al., 2016; Tran, 2020). For example, we are talking about socio-psychological skills (communicative, leadership, «intellectual», etc.), on universal competencies (sociability, creativity, ability to work in a team, etc.), uniformal skills and personal qualities that promote efficiency and interaction with others, both internal (focused on the man, his ability to control his sensual and emotional sphere) and external (the ability to interact with other people and control them) (Ermakov & Amantay, 2020). In many contexts, soft skills used as a synonym of such concepts as employability skills, people skills, non-professional skills, key skills, life skills, skills for social progress (Raitskaya & Tikhonova, 2018). It is also proposed that the rejection of the term «soft skills», and its replacement by CORE (competence in organizational and relational effectiveness), reflects an importance for a successful career (Parlamis & Monnot, 2019).

With the obvious and unanimous assessment of the importance of soft skills as components of the content of higher education, practical training of graduates, relevant classifications and lists (for example, specialist model, science-based renewal model, project-based integrative model, the model of networked culture (Jaaskela et al., 2018), approaches to their description and systematization is very diverse (Bennett et al., 1999; Khaouja et al., 2019). It seems appropriate to create a unified model of soft skills based on integrated theoretical and empirical studies. Although soft skills encompass a variety of activities and applications, they can take different characteristics and require overriding in different cultural and national contexts (including in Russian universities), in connection with the study of different contexts

can be a source of useful information. It should also be borne in mind the need to avoid the risk of reductionism, that is, to consider not only the requirements of the labour market but the importance of soft skills for overall personality development, social solidarity and civic engagement, individual health and family well-being, overall life satisfaction (Cornalli, 2018).

3. Research Questions

In the course of implementation of this study, the following questions were studied:

- How familiar are students and teachers of Russian universities with the concept of soft skills and how they assess the need for their formation at different levels of education;
- At which degree soft skills are being formed at present and what are the wishes of the subjects of the educational process;
- The usage of which forms and methods of training is most effective in terms of the development of soft skills in the higher education system.

4. Purpose of the Study

The aim of this work substantiates the soft skills model of a modern Russian university graduate in an international context, which can be used in practice to transform the educational process and increase its effectiveness.

5. Research Methods

The methodology is based on a combination of theoretical and empirical approaches. In the course of the literature analysis, the main directions of modern domestic and foreign theoretical research and practical developments in the field of soft skills and their formation in University students are identified. Modelling allowed us to get idealized ideas about the object of the study, also study the essential properties of soft skills as an innovative component of the content of higher education and develop a pedagogical model of soft skills. Data on the attitude of subjects of the educational process to the formation of soft skills (both in General and specific individual skills), relevant methods and forms of learning are obtained through questionnaires.

The survey was conducted in the 2019/2020 academic year. It was attended by 272 bachelor's, specialist's and master's students (including men 39.6 %, women 60.4 %; age of participants was from 17 to 49 years, with an average value 21.2 years) and 175 teachers (including men 42.1 %, women 57.9 %; age from 19 to 88 years, average value 35.0 years; teaching experience from 0 to 66 years, average value 9.4 years) in Peoples Friendship University of Russia and partner universities (Moscow, Russian Federation).

6. Findings

Table 01 shows the results of the survey with some special questions «Were you familiar with the concept of soft skills before? If so, where did you find information about it?».

Table 01. Soft skills awareness and information sources (%)

The response options	Students	Teachers
Yes	56.1	74.3
No	43.9	25.7
Information sources (% of «Yes»):		
from official documents	10.8	11.5
from the administration, management of the University	8.4	18.5
from colleagues (for study / work)	27.7	36.2
in advanced training courses	8.4	30.0
from pedagogical publications	15.7	26.2
from mass media	31.3	27.7

Students' awareness is generally lower (56.1 %) than teachers (74.3%). The relationship with age (correlation coefficient 0.024 and 0.18, respectively) and teaching experience (0.16) is not expressed. The main sources of information for students are the mass media (31.3 %) and fellow students (27.7 %), for teachers are also colleagues at work (36.2 %) and advanced training courses (30.0 %). Attention is drawn to the relatively low activity of the University administration, especially in relation to informing students (8.4 %).

Answers to the question «How do you assess the need of formation of students' soft skills at various levels and stages of education?» (difficult to answer – 0; no need to – 1; you need specific to students (upon request) – 2; requires certain categories of students (gifted, non-adaptive, etc) – 3; you need all – 4) are given in table 02.

Table 02. Evaluating the need for creating soft skills (%)

Levels and stages of education	Students					Teachers				
	0	1	2	3	4	0	1	2	3	4
Pre-primary education	11.5	18.5	13.3	13.7	43.0	9.6	21.0	16.2	13.8	39.5
Elementary general education	6.3	11.5	16.0	16.4	49.8	5.4	15.1	15.1	10.2	54.2
Basic education	3.4	5.3	12.4	16.2	62.8	3.6	9.0	11.4	8.4	67.7
Secondary general education	3.0	6.3	15.3	15.3	60.1	2.4	4.2	8.9	11.9	72.6
Additional education of children	4.9	6.0	22.8	28.0	38.4	4.7	7.1	15.4	15.4	57.4
Vocational secondary education	3.4	7.5	17.2	15.7	56.2	4.0	3.5	7.5	11.0	74.0
Higher education	3.3	4.4	16.3	12.6	63.3	2.9	1.7	4.6	7.5	83.3
Continuing professional education	8.5	7.4	21.7	15.9	46.5	5.2	2.9	14.5	9.3	68.0

In accordance with the average grades on the above scale, teachers consider higher (3.67), secondary general (3.48) and secondary professional (3.47) education, students basic (3.30) and secondary (3.23) general, as well as higher (3.28) education as the most significant stages of education. The specifics of training in professional colleges may not be familiar to University students. According to respondents, the potential for developing soft skills in the system of additional education (both for children and adults) is insignificant.

To determine the degree of formation of certain specific soft skills in an educational organization on study / working place, respondents were offered a list compiled on the basis of models developed by international organizations (World Economic Forum, 2016; Trilling & Fadel, 2009) and Russian experts

(Loshkareva et al., 2018). Table 03 shows the obtained ratings for the real and desirable state of Affairs (on a 3-point scale: not specifically formed / not formed – 1; partially – 2; deeply – 3).

Table 03. Assessment of the degree of formation of soft skills (score)

Soft skills	Students		Teachers	
	Really	Desirable	Really	Preferably
An adequate perception of criticism is really desirable	1.83	2.66	1.75	2.75
Negotiation	1.91	2.61	1.83	2.64
Service orientation	1.70	2.36	1.81	2.42
Cognitive flexibility	2.00	2.58	2.02	2.65
Communicating	2.16	2.71	2.33	2.83
Collaborating	2.11	2.66	2.14	2.80
Coordinating with others	2.02	2.66	1.89	2.76
Creativity	1.85	2.51	1.95	2.60
Critical thinking	1.80	2.58	1.84	2.75
Motivating, training and developing others	1.80	2.51	1.92	2.64
Retrain	1.80	2.21	1.63	2.27
Judgment and decision making	2.04	2.71	1.94	2.68
Risk taking	1.85	2.53	1.80	2.51
Working under uncertainty	1.88	2.43	1.87	2.47
Complex problem solving	2.02	2.65	2.05	2.63
Social responsibility	1.93	2.62	2.11	2.73
Time management	1.80	2.58	1.72	2.68
People management	1.72	2.45	1.74	2.51
Resource management	1.81	2.53	1.63	2.54
Stress management	1.72	2.57	1.58	2.66
Forming your own opinion	2.00	2.63	1.98	2.77
Emotional intelligence	1.76	2.50	1.66	2.61

Students and teachers evaluate both the real and desired situation almost equally (average scores are 1.89 and 1.87; 2.56 and 2.63, respectively). In general, we expect more intensive development of soft skills in the educational process than we have now. Opinions about specific skills are also similar. The most popular are communicating, collaborating and coordinating etc... It is related to the implementation of joint activities with other people which consistent with the concept of "4 C" (Trilling & Fadel, 2009). The lowest priorities are service orientation, retraining and working under conditions of uncertainty. It should be noted that it is the latter qualities that, according to experts, should be in demand in the conditions of VUCA (Loshkareva et al., 2018) this is probably not fully understood by the participants of the educational process yet.

It is known that the formation of soft skills in the educational process is more influenced by the teaching methodology than by the specifics of the discipline being studied. At the same time, practical and interactive methods are more effective than traditional lectures, seminars, aimed mainly at mastering subject knowledge and competencies (Nikitina & Furuoka, 2012; Raitskaya & Tikkhonova, 2018). In this regard, respondents were asked to evaluate (on a five – point scale: not effective at all – 1; not very effective – 2; very effective – 3; very effective – 4; most effective – 5) the effectiveness of forms and methods of training in which the formation of soft skills can be implemented (table 04).

Table 04. Evaluation of the effectiveness of forms and methods of forming soft skills (%)

Forms and methods of training	Students					Teachers				
	1	2	3	4	5	1	2	3	4	5
Individual (special) discipline	5.1	18.8	33.5	27.2	15.4	4.6	16.7	32.2	27.0	19.5
Separate tasks in different subjects	5.5	21.8	31.7	25.8	15.1	4.0	13.8	37.4	27.0	17.8
Single topics / modules in different disciplines	5.5	24.0	32.1	22.1	16.2	1.7	20.0	35.4	24.6	18.3
Contests Olympics	15.2	25.3	34.6	16.7	8.2	15.8	18.7	40.4	16.4	8.8
Multimedia training	7.4	22.1	39.1	21.8	9.6	8.0	28.2	41.4	14.9	7.5
Testing	13.2	27.9	26.5	20.6	11.8	23.4	29.1	26.9	12.6	8.0
Workshops, games, case studies	3.0	12.2	26.7	33.3	24.8	1.7	8.0	25.1	36.6	28.6
Learning projects	5.2	13.7	30.6	30.3	20.3	1.7	8.1	28.5	34.3	27.3
E-learning, virtual learning	7.4	28.0	29.2	22.9	12.5	7.5	19.5	37.4	20.1	15.5

Methods of organizing training in the form of separate (special) disciplines, individual tasks, as well as individual topics / modules in different disciplines are approximately equally attractive for both students and teachers (average scores on the above scale of 3.2–3.4). Among the specific methods, practices, internships, trainings, games, cases prevail; educational projects (3.91 and 3.98; 3.65 and 3.82; 3.47 and 3.77, respectively), the least significant are competitions, Olympiads and testing (2.77 and 2.84; 2.90 and 2.53, respectively).

7. Conclusion

The obtained theoretical and empirical results allow us to formulate the following conclusions. In general soft skills should be considered as an innovative component of educational content. The formation of soft skills (along with hard skills) is necessary not only for successful academic and professional activities, therefore for the comprehensive development of the individual, improving the quality of life in General. Not all teachers and (to a lesser extent) students are familiar with the concept of soft skills, although the level of awareness compared to previously obtained data (Raitskaya & Tikkhonova, 2018) is gradually increasing. The main sources of information are colleagues at school / work, mass-media, professional development courses. The most important stages of soft skills formation are high school, secondary vocational and higher education. Subjects of the educational process are expected to develop soft skills in more depth than currently available. The most important is communicating, collaborating and coordinating with others are the most popular others while service orientation, retraining, and working under conditions of uncertainty are the least popular. Practical trainings and internships; trainings, games, cases; training projects are among the most effective ways of learning.

The started researches will be continued, and developed model of soft skills will serve as management instrument by an educational process in the direction of upgrading of preparation of graduating students in accordance with modern needs.

Acknowledgments

The publication has been prepared with the support of the “RUDN University Program 5-100”.

References

- Andrews, M. (2015). What skills do employers want most? *University World News*, 372. <http://www.universityworldnews.com/article.php?story=20150616130747880/>
- Balcar, J. (2016). Is it better to invest in hard or soft skills? *Economic and labour relations review*, 27, 453–470.
- Bennett, N., & Lemoine, G. J. (2014). What a difference a word makes: understanding threats to performance in a VUCA world. *Business horizons*, 57, 311–317.
- Bennett, N., Dunne, E., & Carre, C. (1999). Patterns of core and generic skill provision in higher education. *Higher education*, 37, 71–93.
- Cimatti, B. (2016). Definition, development, assessment of soft skills and their role for the quality of organizations and enterprises. *International journal for quality research*, 10, 97–129.
- Cornalli, F. (2018). Training and developing soft skills in higher education. In *4th International conference on higher education advances* (pp. 961–967). Polytechnic University of Valencia.
- Ermakov, D. S. (2020). Personalized model of education: development of soft skills. *Educational policy*, 1, 104–112.
- Ermakov, D. S., & Amantay Zh. A. (2020). Study and development of soft skills skills as a psychological and pedagogical problem. In *International scientific and practical conference “Education and the psychological and pedagogical science: systematic, continuity, innovativeness”* (pp. 18–20). Kazakh University.
- Jaaskela, P., Nykanen, S., & Tynjala, P. (2018). Models for the development of generic skills in Finnish higher education. *Journal of further and higher education*, 42, 130–142.
- Khaouja, I., Mezzour, G., Carley, K. M., & Kassou, I. (2019). Building a soft skill taxonomy from job openings. *Social network analysis and mining*, 9, 43.
- Loshkareva, E., Luksha, P., Ninenko, I., Smagin, I., & Sudakov, D. (2018). *Skills of the future. What you need to know and be able to do in a new complex world*. Global Education Futures.
- Matteson, M. L., Anderson, L., & Boyden, C. (2016). “Soft skills”: a phrase in search of meaning. *Portal: libraries and the academy*, 16, 71–88.
- Nikitina, L., & Furuoka, F. (2012). Sharp focus on soft skills: a case study of Malaysian university students' educational expectations. *Educational research for policy and practice*, 11, 207–224.
- Parlami, J., & Monnot, M. J. (2019). Getting to the CORE: putting an end to the term “soft skills”. *Journal of management inquiry*, 28, 225–227.
- Raitskaya, L. K., & Tikhonova, E. V. (2018). Perceptions of soft skills by Russia's university lecturers and students in the context of the world experience. *RUDN Journal of psychology and pedagogics*, 15, 350–363.
- Robles, M. M. (2016). Executive perceptions of the top 10 soft skills needed in today's workplace. *Business communication quarterly*, 75, 453–465.
- Succi, C., & Wieandt, M. (2019). Walk the talk: soft skills' assessment of graduates. *European journal of management and business economics*, 28, 114–125.
- Tran, L. H. N. (2020). Soft-skills implementation. A literature review. In *Building soft skills for employability: challenges and practices in Vietnam* (pp. 18–40). Routledge.
- Trilling, B., & Fadel, C. (2009) *21st century skills: learning for life in our times*. Jossey-Bass; John Wiley & Sons, 2009.
- Tsalikova, I. K., & Pakhotina, S. V. (2019). Scientific research on the issue of soft skills development (review of the data in international databases of Scopus, Web of Science). *Education and science*, 21, 187–207.
- World Economic Forum (2016). *The future of jobs. Employment, skills and workforce strategy for the fourth industrial revolution: global challenge insight report*. World Economic Forum.