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Soft Skills as a Basis for the Development of Multipotential Abilities of Future Teachers

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Abstract

Identification of future teacher training opportunities in the context of their multipotential abilities development in the process of training at university can provide good support for fulfilling students' full potential. The development of multipotential abilities of future teachers when studying at university is an understudied area of research. The present study has shown that multipotentials possess soft skills. Timely identification and development of additional skills beyond qualification requirements will allow the teacher training system to create a generation of creative teachers who are able to respond effectively to non-standard challenges that the education system face today. Tangible results in this area can be achieved by building a model for the development of multipotential abilities of future teachers, putting soft skills at the forefront. This paper presents the results of four surveys of 124 first-year master's degree students majoring in teacher education. The study confirmed that the respondents who received a bachelor's degree in another specialty, which indicates a tendency towards multipotentiality, have predominantly developed communication, creativity, cooperation and critical thinking skills. The study revealed that multipotentials have a high level of both hard and soft skills, which helps them in their professional activities. Thus, multipotential teachers can be nurtured by developing soft skills.

Keywords: higher education, students, teaching profession, multipotential abilities, soft skills.

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Introduction

The information age, digital technology, and mixed reality characterize the modern world that we live in. We can say that we are currently living in a rapidly changing world with a lot of complexities and uncertainties. Progress in science and technology affects absolutely all areas of society, which in turn leads to changes in traditional knowledge, their transformation and the creation of new knowledge.

Such a chaotic world has come to be called VUCA. It stands for: V - Volatility, U - Uncertainty, C - Complexity, A - Ambiguity. VUCA affects all social institutions. It is a world in which everything is subject to change. Sometimes people cannot control events that happen to them, but they can control their reaction and state, which means they can adapt.

In this case, timely identification and development of additional skills beyond the qualification requirements will allow the teacher training system to create a generation of teachers with developed multipotential abilities, capable of responding effectively to non-standard tasks arising in the education system today.

Purpose and objectives of the study

This paper contributes to the research on the role of soft skills in the development of future teachers' multipotential abilities. The purpose of this study is to prove that the development of multipotential abilities takes place only when favorable conditions for the development of future teachers' soft skills are created.

In connection with the set research aim the following objectives were formulated:

1. To reveal the pedagogical essence of the future teacher's multipotential abilities;
2. To identify the possibilities of future teacher's soft skills training in the development of multipotential abilities.

Literature review

Today a good specialist is not just a disciplined and responsible employee who graduated with honors from university and performs his/her professional duties well. It is a specialist with developed personal qualities, who is able to quickly find a solution to non-standard issues, easily adapt to changing conditions, quickly switch from one type of activity to another, work with a large volume of information and critically assess it. Thus, in order to be in demand on the labor market and build a career, professional skills alone are not enough. It is necessary to have a set of social qualities that help to find the best solutions in a wide range of daily professional tasks (Tsalikova & Pakhotina, 2019).

Modern employee skills can be divided into two types: professional skills or "hard skills", which are specific to a particular professional activity, and non-professional skills or "soft skills", which are universal to all professional fields. Lippman et al. (2015) believe that soft skills are a set of cross-cutting skills, not related to a specific subject area, responsible for successful participation in the work process and its productivity. These skills include ethics, resourcefulness, communication skills and independence, an ability to self-motivation, cooperation, energy and a constant desire to learn.

Andrews and Higson (2008) in their study identified significant flexible skills that graduates need for employment:

- Ability to think tactically and strategically;
- high degree of creativity;
- self-confidence;
- high level of self-regulation;
- ability for social interaction;
- time management skills;
- ability to work and interact effectively under conditions of uncertainty;
- ability to achieve goals and objectives, despite external influence from society and the environment;
- professionalism;
- highly developed verbal and non-verbal communication skills;
- desire for self-education;
- ability to take responsibility for their actions and life in general.

The importance of soft skills is also emphasized by the analysts of the World Economic Forum held in Davos, naming ten key skills of future specialists (Gray, 2016):

1. complex multilevel problem solving;
2. critical thinking;
3. creativity;
4. managing people;
5. cooperation with others;
6. emotional intelligence;
7. judgment and decision making;
8. customer orientation;
9. ability to negotiate;
10. cognitive flexibility.

Later these ten skills were summarized into four key skills and became known as “Four Cs” (Collaboration, Communication, Creativity, Critical thinking) (National Education Association, 2012). The model of flexible skills of a modern specialist “Four Cs” is shown in Figure 1.

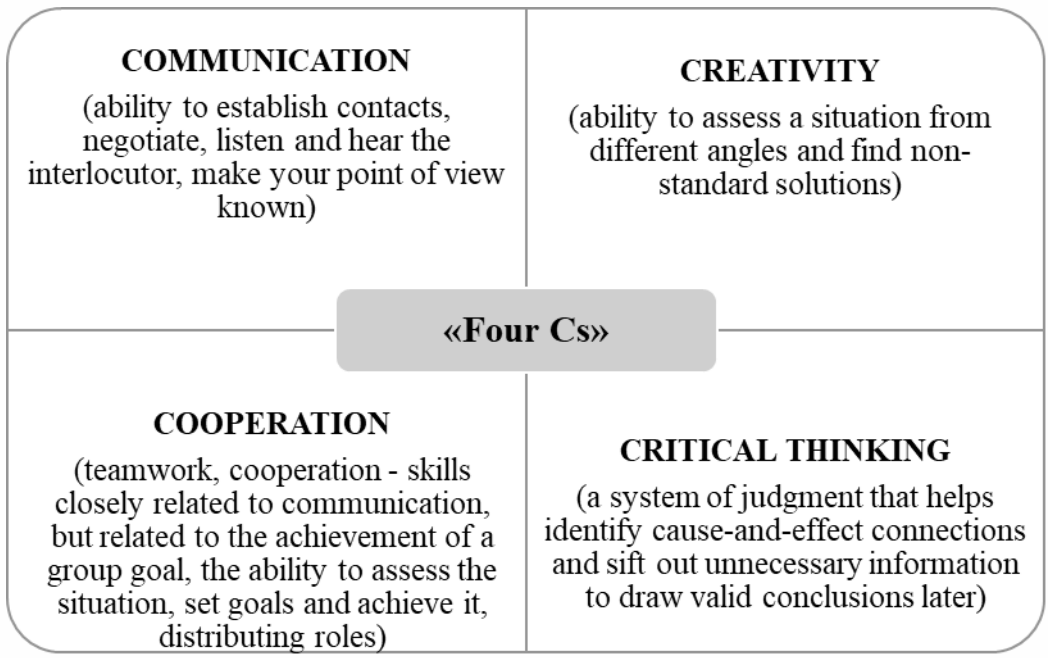

Figure 1. The Four Cs model of flexible skills for the modern specialist

Thus, in a highly competitive labor market, potential employees who are able to switch to different types of activities, work in a team, find non-standard solutions and critically evaluate incoming information, who have skills and experience in related areas, have clear advantages. It should be noted that the educational field, which has always been considered as stable and clear, is also under the influence of VUCA. Therefore, it is necessary to reconsider the training of teaching staff, because it is the teacher who organizes the cognitive activity of students.

The importance of designing and developing new educational paradigms is to increase the intellectual and creative capabilities of a person. The education system requires new conditions for the development of a universal graduate, a person whose intellectual abilities, interests and activities are not limited to one area of knowledge and the only field of their application.

The term “multipotentiality” is now widely used. Multipotentiality is an educational and psychological term referring to the ability and preference of a person, especially a person with a strong intellectual or artistic curiosity, to excel in two or more different fields (Fisher, 2010). The term can also be used to describe a

person whose interests encompass several areas rather than just one. Such abilities are called multipotential, while "multipotentials" has been proposed as a name for people with abilities in different areas.

A multipotential person was first defined by university professors of education Ronald Fredrickson and John Rothney in their book 'Recognizing and Assisting Multipotential Youth' (Fredrickson & Rothney, 1972). Researchers defined a multipotential person as someone who, "when provided with appropriate environments, can select and develop a number of competencies to a high level" (Fredrickson, 1979, p. 268). Many international education researchers, psychologists and sociologist explore issues of multipotential abilities development. Such concepts as multidisciplinarity, multipotentiality, multiskilling, cross-training and polymathing are examined by numerous scholars, coaches and thought leaders. These issues are covered both in scholarly (Araki, 2018; de Bono, 1994; Root-Bernstein & Root-Bernstein, 2011) and popular literature (Wapnick, 2017). Nevertheless, these themes often emerge disjointedly without a unified theoretical basis.

Barbara Kerr, a professor of counseling psychology, believes that multipotentiality is defined as the ability to choose and develop multiple professions (career options) due to a wide variety of interests, attitudes, talents, skills and abilities (Kerr, 1990). Tamara Fisher in her work "Multipotentiality" speaks about multipotentiality as a condition of a person possessing many exceptional talents, each of which or some of which can become a good career for this person (Fisher, 2010). According to Araki (2018), a multipotential individual strives for self-development with as much knowledge and experience as possible and to use their potential to improve and transform the world.

One of the most notable features of people with multipotential abilities is that they tend to develop in several areas (this can happen simultaneously or sequentially). The development of multipotential abilities expands the boundaries of knowledge in different areas, which allows them to apply them more freely in professional activities.

A psychologist Bernice Eiduson conducted a large-scale study in which she found that more than half of the Nobel Prize laureates in natural sciences were interested in at least one kind of art (Eiduson, 1962; Harford, 2015). Almost all laureates had hobbies. Some were into chess, drawing, others into music and singing, acting or dancing, practicing poetry or prose. The constant shifting between different practices helped them see things in their work that others did not see.

Based on the above, we can assume that multipotentials can easily switch to different activities, so they are able to work with large amounts of data, think outside the box, as well as critically evaluate incoming information. In this light, a question arises: "Do multipotentials really have soft skills at the same level as hard skills?"

Methodology

The research is based on the survey of students. We used an author's questionnaire, Bruner's Determination of Thinking Types and Creativity Level Questionnaire, Critical Thinking Skills Success (Starkey, 2004), The Team Role Inventory Test (Belbin Test) (PAPYRUS Project, n.d.), Michelson's Communication Ability (Test Free Psychological Tests, n.d.). Kazan Federal University was chosen as the experimental research site. The study involved 124 first-year masters majoring in Teacher Education.

Results

The study consisted of two stages. The first stage of the study was to identify among the respondents those who decided to continue their education in the same specialty that they had at the undergraduate level and those who received a bachelor's degree in another specialty, these would be our potential "multipotentials". In the second stage, the respondents with other majors were offered tasks to determine if they had soft skills.

At the first stage all respondents were asked to fill in a questionnaire consisting of 15 questions:

1. Your last name and first name.
2. Your age.
3. Your gender.
4. A major of undergraduate education.
5. Why did you decide to change your major in graduate school? (for those who received their undergraduate education in another major).
6. Do you work in the profession you have trained for?
7. Does the knowledge and experience of your first major help you in your job? (If the answer to item 6 is negative).
8. If you work in your profession, would you like to change your job and position?
9. Do you plan to work in your profession?
10. Would you like to learn a new profession in the future?
11. Is it difficult for you to switch to a new activity?
12. What are your interests and hobbies?
13. Have you wanted to find a job related to your hobby?
14. What is your dream job?
15. What do you think a modern employee should be like?

The answers were given randomly by the respondents. Having analyzed the questionnaire responses, it was revealed that 69 students out of 124 participants did not change their major. At the same time, 11 of them

would like to change their career path, 42 people plan to pursue the profession after obtaining a master's degree, 5 people do not want to practice the profession they have trained for, the remaining students have not made a decision. Fifty-five respondents received a bachelor's degree in another specialty and purposefully chose master's degree program in another field. It should be highlighted that 17 people would like to enter a new profession in the future, 28 people plan to pursue the profession obtained in the master's program, and 7 people would like to combine work with a hobby. Fourteen respondents mentioned that the knowledge acquired in previous studies would help them in another job.

In the second stage of the study, we worked with a group of respondents who received a bachelor's degree in another field. In our study we based our research on the Four Cs model of flexible skills of modern professionals. This model includes such basic soft skills as critical thinking, creative thinking, communication skills, and cooperation. In order to identify whether the selected students have soft skills, they were given four tests:

- Bruner's Determination of Thinking Types and Creativity Level Questionnaire;

- Critical Thinking Skills Success (Starkey Pre-test);

- The Team Role Inventory Test (Belbin Test);

- Michelson's Communication Ability Test.

Bruner's Determination of Thinking Types and Creativity Level Questionnaire is designed to identify the basic type of thinking and to measure creativity. Scholars distinguish four basic types of thinking, namely action-based, iconic, symbolic and figurative thinking. Each type has specific characteristics. The level of creativity and basic thinking type is divided into three intervals: low level, average level, high level. The results of Bruner's Determination of Thinking Types and Creativity Level Questionnaire are shown in Figure 2.

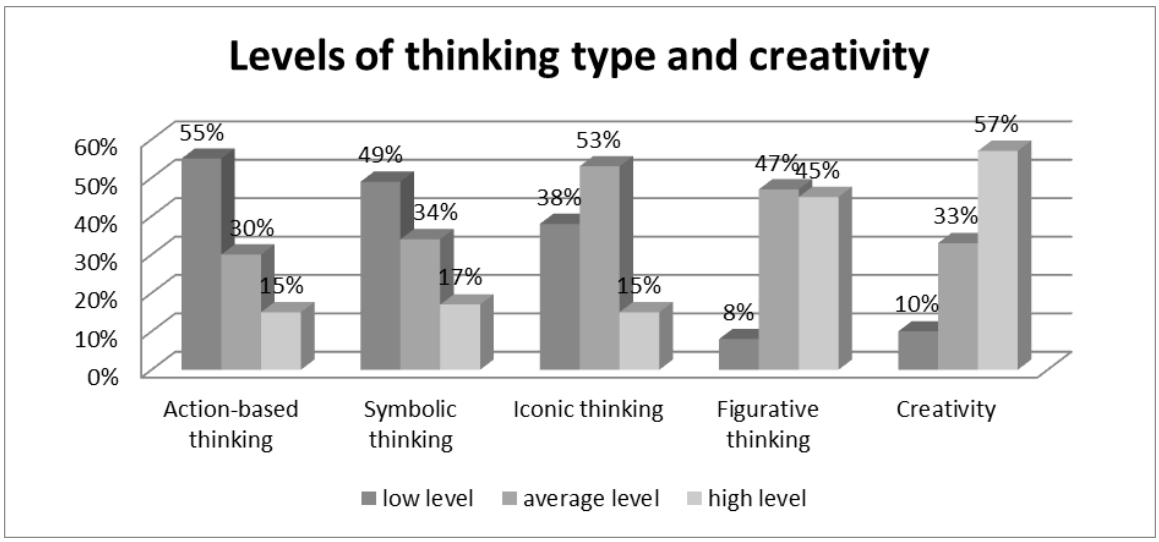

Figure 2. Results of Bruner's Determination of Thinking Types and Creativity Level Questionnaire

As Figure 2 indicates, the respondents have a high level of figurative thinking (45%). These are people with an artistic mindset and creative talents. The iconic thinking is determined at the average level (53%). Students with this type of thinking transform information with the help of inferences. The creativity indicator is found to be high (57%). Such people are ready to create new ideas. They are sensitive to a lack of knowledge and always need new information to create something new.

Critical thinking is a special kind of mental activity that allows a person to make a sound judgment about a proposed point of view or a behavior pattern. Critical Thinking Skills Success (Starkey Pre-test) assesses analytical abilities, an ability to arrive at correct conclusions and evaluates a person's thinking activity. Lauren Starkey identified 7 key skills important for the development of critical thinking: observing, searching for and selecting information, distinguishing fact from opinion, identifying problems, evaluating the validity of judgments and arguments, understanding logic and logical arguments, and making inferences.

The test contains 30 questions. One point was given for an answer to one question. The average critical thinking score was 24.78 out of 30, indicating a high level of critical thinking in the majority of students. The students analyzed the information carefully in order to solve complex issues. They were able to observe, resist manipulation, and draw logical conclusions.

The Team Role Inventory Test (Belbin Test) was used to determine a person's role in a team. According to Belbin's theory, an ideal employee is one who combines the advantages of all types of roles. The results are presented in Figure 3.

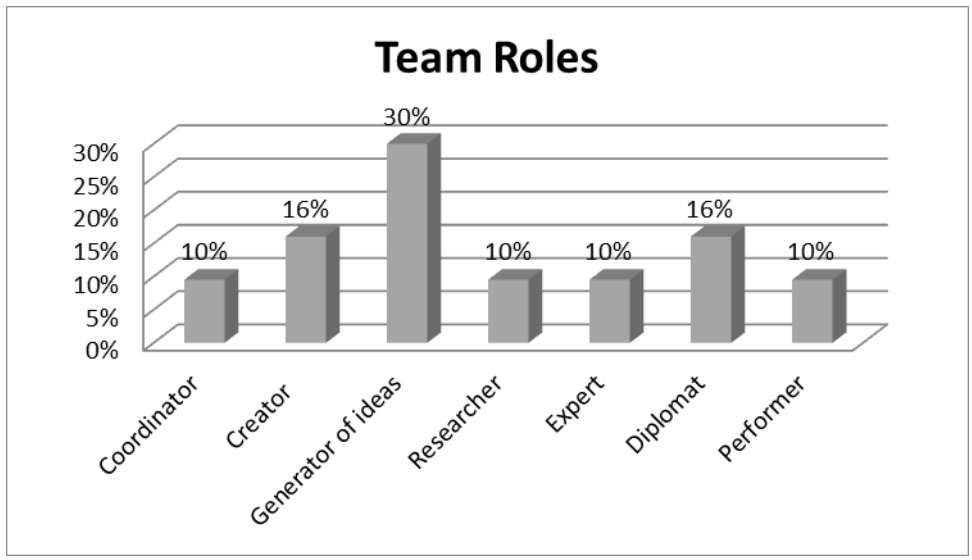

Figure 3. The Team Role Inventory Test (Belbin Test) Results

Having analyzed the test results, we can stress out that the role of "Generator of ideas" is predominant in 30% of the respondents. Such people have a vivid imagination with original ideas and are able to solve non-standard problems. The second place was shared by the roles of "Creator" and "Diplomat" (16%). Such people know how to listen, prevent conflicts among team members. They know how to push people, to encourage and motivate them. The other roles were evenly split at 10%. This suggests that such people are able to adapt to different roles in a team and perform them equally well.

Michelson's Communication Ability Test is designed to determine the level of communicative competence and the development of basic communicative skills. With the help of the test one can determine what ways of communication a respondent chooses: partner, dependent and aggressive. The test results are presented in Figure 4.

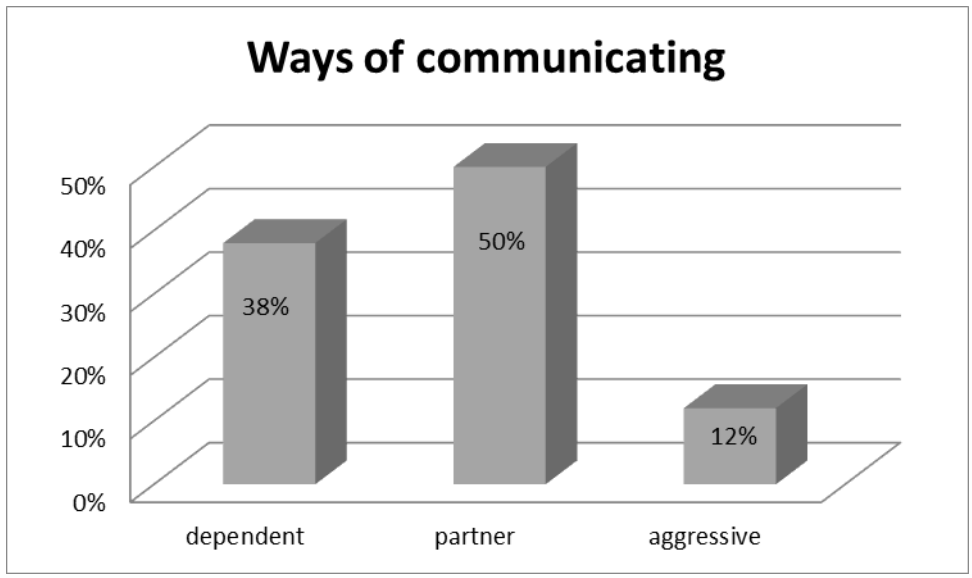

Figure 4. Results of the Michelson's Communication Ability Test

As Figure 4 shows, 38% of the students have a dependent way of communication. This means that the respondents are insecure and lost in some situations. They do not know how to behave with a interlocutor and are afraid to offend them. Moreover, they do not know how to refuse someone else's request and how to say "no". In the case of the aggressive stance, 12% of the respondents "suppress" the communication partner. They are not good at responding to criticism. They evaluate what their communication partner says from their personal emotional positions. A partner mode of communication is practiced by 50% of the students. Such people communicate on an equal footing. They are able to respond calmly to criticism and express their feelings openly and honestly. They share their thoughts and beliefs without infringing on the rights of others.

Discussion

The conducted research has shown that the respondents, who received a bachelor's degree in another field, have developed predominantly communication, creativity, cooperation and critical thinking skills.

The study findings are consistent with the work by Angela Cotellessa, who in her study "In Pursuit of Polymaths: Understanding Renaissance Persons of the 21st Century", contends that multipotentials are people with a high degree of openness to new experiences, people who are intellectuals with different areas of knowledge, multidisciplinary connoisseurs who want to be universal collaborators, people with multi-creative potential (Cotellessa (Meyers), 2020). According to Wapnick (2017), multipotentials are people who are creative, thirsty for new knowledge and have many interests. Therefore, we can conclude that for a

person to be a multipotential means to unlock a full potential of their capabilities. Such people possess soft skills that help them in their professional activities.

Conclusion

In a rapidly changing world training of a multipotential teacher is of great importance for education. The development of multipotential abilities of future teachers when studying at university is an understudied area of research. However, the present study has shown that multipotentials possess soft skills. This means that training of a multipotential teacher is possible with the development of students' soft skills. Our future research will explore this aspect in more detail.

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