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THE MAIN FACTORS OF FUTURE HANDICRAFT AND TECHNOLOGY TEACHERS' TRAINING FOR PEDAGOGICAL INTERACTION

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Introduction

The improvement of teacher training that would comply with social requirements and ensure future specialists' effective professional performance is of great importance nowadays. Various researches performed are aimed at enhancing teacher training efficiency as well as quality of the education process. One of such research directions reveals the study of handicraft and technology teachers' training for pedagogical interaction. Those educational results that handicraft and technology teachers should be striving for presuppose constructive pedagogical interaction among all the participants. So, there appears the need for defining the main factors of handicraft and technology teachers' training for pedagogical interaction in their professional activity as certain driving force, essential causes or circumstances that influence the efficiency of such training.

Analysis of approaches and a group of factors

The analysis of scientific literature has allowed stating that there is no single approach to defining the main groups of factors of teacher training. Thus, V. Andrieiev, V. Hafforova, B. Yermoshenko, N. Zhytnyk divide all the factors into organizational, methodical and technological. V. Saphonova believes that these classifications consist of such factors that influence quality and effective indicators that characterize higher education quality. O. Voliarska singles out three groups of factors in professional education, namely, organizational, personal, social and pedagogical (Волярська, 2015). Slightly similar approach to defining the groups of factors is applied by O. Volkov who divides them into organizational, methodical and technological (Волков, Віткін, Хімічева, 2006). H. Dehtiarova indicates that effective training of future teachers oriented toward

realizing pedagogical interaction in their professional activity depends on the following pedagogical factors: their comprehending didactic and psychological difficulties in professional activity; formed culture of pedagogical interaction; creating a favourable learning environment; professional interaction between pedagogues and psychologists in an educational establishment. The scholar distinctly defines the teacher's orientation toward pedagogical interaction as well as psychological aspect of its efficiency.

So, we would like to emphasize the fact that there are certain objective and subjective indicators that scholars associate with psychological difficulties of pedagogical interaction. In particular, N. Kuzmina singles out four groups of causes that provoke difficulties in pedagogical activity, namely, 1) objective difficulties that are directly connected with professional activity and do not depend on teacher; 2) objective difficulties that are connected with living conditions and everyday life of teachers; 3) subjective-objective difficulties that are caused by teachers (insufficient experience, professional training etc.); 4) subjective difficulties that appear when teachers are not devoted to their profession or lack necessary organizational skills (Кузьмина, 1990). Based on the approach mentioned above, it is reasonable to divide factors into two groups: those factors that contribute to successful training of specialists and those that decrease its efficiency. However, such division is rather relative as depending on teacher personality and learning environment any factor may be positive or negative.

Of our great interest is V. Zinchenko's approach that divides all the factors of effective professional training into three groups: 1) those that define the content of professional training, its peculiarities of organization and realization; 2) those that are directly revealed during the education process in a higher education institution; 3) those that define results of the educational process (Зінченко, 2013). V. Saphonova agrees with it and relatively divides these factors into input, internal and output (Сафонова, 2011).

There is a range of researches that presuppose two groups of factors, namely, external (international, national and regional conditions) and internal (an environment in a higher education institution). This approach is supported by O. Saphronova, Yu. Zhydetskyi and I. Pashkutskyi. Yu. Zhydetskyi states that external factors encompass relations with students; relations with the teaching staff; the specificity of a higher education institution; the specificity of research fellows' activities; the need for research activity; tutoring; subject; psychological

climate. Internal factors include interest in the profession; motivation; striving for self-realization; gaining authority; mutual assistance; creativity; self-development; self-discipline; self-criticism; reflection of one's own behaviour (Жидецький, 2013).

It should be mentioned that not all the scholars agree with the group-based division of factors, in particular, I. Sokolianskyi believes that the education process is defined by three factors, namely, teacher, environment, childhood. The scholar believes that defining a leading factor is rather subjective as it depends only on the beliefs of the researcher and the nature of the education process has not been scientifically justified yet.

Thus, based on theoretical and practical researches we can conclude that there is a variety of approaches to defining factors of effective teacher training. It must be noted that those factors that influence teacher training efficiency may change depending on pedagogical conditions. That is why it is important to define factors that influence the efficiency of future handicraft and technology teachers' training for pedagogical interaction taking into account the main trends in education, pedagogical conditions of future specialists' training and learning environment.

The aim of the study is to define the factors of future handicraft and technology teachers' effective training for pedagogical interaction in order to enhance the efficiency of their professional training. To achieve the aim we have used such methods as the study of psychological and pedagogical information sources, observation, oral and written survey (poll), rank analysis, Isikawa's Cause and Effect Diagram, Pareto Chart, mathematical methods of data processing.

The efficiency of future handicraft and technology teachers' training for pedagogical interaction should be viewed as the result of diversified influence of a range of factors. It should be noted that we consider factors to be certain driving force, essential causes or circumstances that influence the efficiency of future teachers' training for pedagogical interaction and affect academic achievements and future development of specialists.

We would like to try to define specific psychological difficulties of pedagogical activity for handicraft and technology teachers personally. For this matter we have conducted a survey among Secondary Education (014.10 Handicraft and Technology) students. To thoroughly study the outlined problem we have interviewed students of Khmelnytskyi National University, P. Tychyna

Uman State Pedagogical University, M. P. Drahomanov National Pedagogical University, I. Franko Grohobych State Pedagogical University, V. H. Korolenko Poltava National Pedagogical University.

According to the survey results, respondents believe that their professional choice and readiness to interact are defined by such factors as a low social status of the profession of handicraft and technology teacher (75,6 %); stereotypes about handicraft and technology teacher personality (45,6 %); psychological pressure as for performing professional duties (31,5 %). Apart from psychological difficulties, there are some didactic ones, namely, the absence of material and technical basis (29,7 %), methodical materials (25,9 %); parents and pupils' treating handicraft as something unimportant (25,7 %). These factors form negative attitude towards teaching profession in general and handicraft in particular and create certain difficulties during pedagogical interaction.

When defining factors of future handicraft and technology teachers' training for pedagogical interaction, it is necessary to take into account the fact that pedagogical interaction means the combination of pedagogical influence and pupil's activity that is revealed in relevant conceptions or those that indirectly influence teacher and pupil (self-upbringing). Pedagogical interaction requires an appropriate organization of communication among the participants of the education process: relations of cooperation and mutual assistance, wide exchange of new information among the participants of the education process, feedback, pupils' acceptance of teacher's actions, empathy in cognition, participation in solving issues and cognitive tasks, striving for assistance. So, it is important to take into account a level of professional competency, pedagogical mastery and personal qualities of students.

From the other hand, teachers can creatively cooperate on the subject-subject basis as they have a high level of culture, pedagogical ethics, tact and are able to reflex. Confident personality is proud of their professional activity and results, feels support and respect of society and state and is socially secured. They strive for professional development, self-improvement. So, it is essential to take into account personal qualities of teacher and social significance of the profession.

Based on the analysis of scientific literature and results of the survey conducted, we have outlined three groups of factors of future handicraft and technology teachers' training for pedagogical interaction: social and economic,

personal and organizational and pedagogical. We would like to present a more detailed characteristic of each group within this paper.

The social and economic group of factors reveals social significance of the profession and has such indicators, namely, the amount of salary (67,2 %), social status (prestigiousness) of the profession (43,5 %) and working conditions (27,5 %). The majority of respondents have indicated that the amount of salary is the dominating factor as it defines students' need for further employment regardless of the degree obtained. The reflection of this factor's influence can be observed in further employment of Secondary Education (Handicraft and Technology) students. Thus, only 11,6 % of respondents pursue employment in the obtained profession. Other students are not ready to work as handicraft and technology teachers because of the amount of salary and prestigiousness of the profession. To sum up, we can state that the essence of this group of factors can be revealed through the question "What role does my profession play in society"?

The organizational and methodical group of factors reveals the peculiarities of the education process (the training content, learning technologies, organizational forms and methods of learning, the peculiarities of results diagnostics and orientation towards the subject-subject interaction) and the peculiarities of the teaching staff involved in future handicraft and technology teachers' training for pedagogical interaction (personal and professional values of teachers, their level of pedagogical mastery and professional competency).

It must be noted that students have preferred those factors associated with the peculiarities of the teaching staff. Their personal and professional values (58,6 %) define further students' need for pedagogical interaction and their level of pedagogical mastery (43,6 %) and professional competency (39,9 %). Secondary are the peculiarities of the education process in a higher education institution. It is interesting that first of all students wanted to know "Who will teach them" and then "How will they be taught"?

The third group includes personal factors that reveal student personality: a level of culture, personal values, organizational and creative skills and motivation towards self-development. We would like to add that efficiency of future handicraft and technology teachers' training depends on their personal qualities. However, motivation towards pedagogical interaction and the need for cooperation are important indicators that orient students to reflection and self-education. This

group of factors can be revealed in such a question as "Who am I as a participant of pedagogical interaction?"

In order to reveal and study the most prominent factors that influence future handicraft and technology teachers' training, we have created Ishikawa's Cause and Effect Diagram (fig. 1).

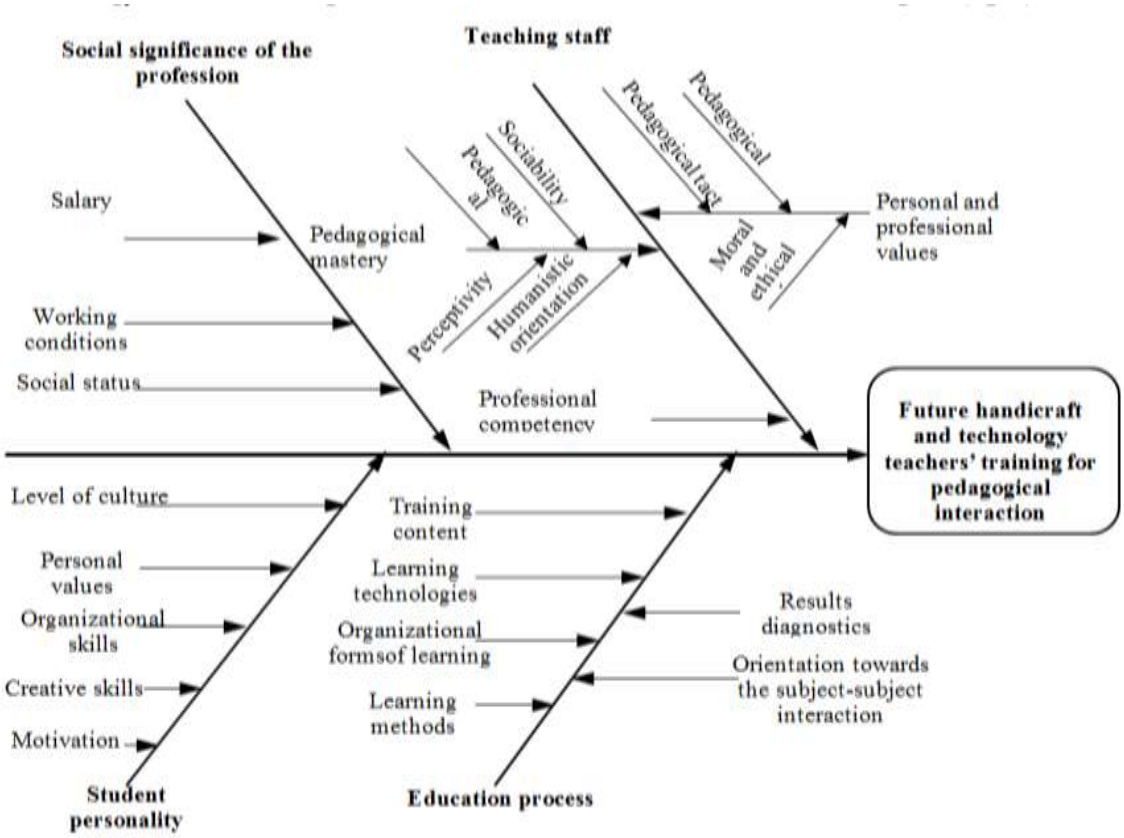

Figure 1. Ishikawa's Cause and Effect Diagram of Factors of Future Handicraft and Technology Teachers' Training

Therefore, a logical and structural analysis of the factors of future handicraft and technology teachers' training for pedagogical interaction has been conducted in order to establish causal relationships. The following sequence of actions has been established: 1) justification of the problem being studied; 2) determination of the factors influencing solution of this problem, which was carried out by means of analysis of research findings; questioning students, instructors and handicraft and technology teachers; brainstorming among expert groups; 3) classification of the outlined factors, their systematization and grouping, establishment of the hierarchy of causal relationships; 4) identification and classification of effects of the factors of future handicraft and technology teachers' training for pedagogical interaction at different levels: at the state level, the effects of the group of "social professional significance" factors should be eliminated; at the level of higher education

institutions – a group of such factors as “pedagogical staff”, “education process”, “student personality”; 5) establishment of the causal diagram to reflect relationships between the outlined factors.

The presented diagram allows revealing key interconnections between different factors and more precisely understand the process under study. In addition, it distinctly illustrates those factors that significantly influence professional training of future handicraft and technology teachers as well as helps to prevent or eliminate the effects of negative factors.

Based on the defined range of factors that are divided into four subgroups, namely, the teaching staff, the education process, social significance of the profession, student personality, we have created Pareto chart (fig. 2). This chart reveals factors of future handicraft and technology teachers’ training for pedagogical interaction and their influence on the efficiency of this process realization.

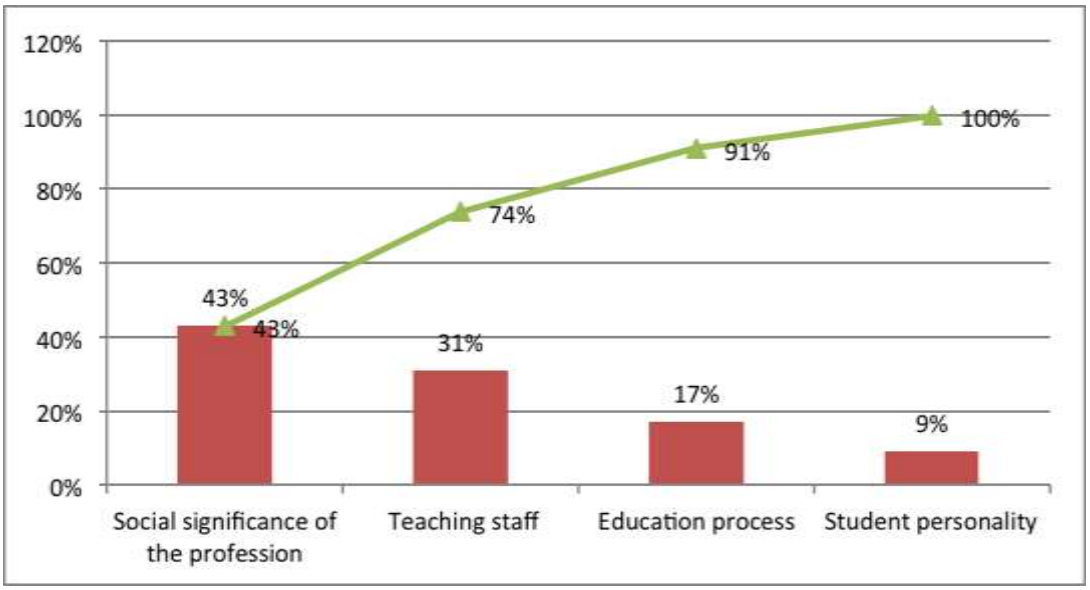

Figure 2. Pareto Diagram

In the diagram above we can see how the process of students’ training for pedagogical interaction depends on a range of factors, namely, social significance of the profession (43 %), the teaching staff (17 %), the education process (17 %) and student personality (9 %). Pareto diagram distinctly demonstrates that those factors that reveal social significance of the profession are dominating in future specialists’ training for pedagogical interaction. So, first of all, it is necessary to enhance the status of profession of handicraft and technology teacher in society. Secondary are those factors that characterize the teaching staff that proves the need

for reconsideration of the role of teacher as well as requirements to their professional level of training and personal qualities. The peculiarities of the education process are not so important. So, we can conclude about the dominating role of teacher rather as a subject of pedagogical interaction than a means of its realization. Personal qualities of students have gained the smallest amount of points. Thus, we can state that students are ready for interaction based on the survey results during the first and last years of study.

After primary adaptation first year students try to actively collaborate with other subjects of the educational process to assert themselves before their classmates, gain their teachers' authority. Last year students feel certain support from their teachers, potential colleagues that allows to positively prepare them for cooperation. However, a low level of teachers' readiness for pedagogical interaction and insufficient use of educational technologies cause certain barriers in the organization of mutual activity of the participants of the education process during the years of study. Thus, revealing such factors can help to define directions to improve future handicraft and technology teachers' professional training for pedagogical interaction in their professional activity.

Summary

So, having analyzed the main approaches to defining factors of future handicraft and technology teachers' professional training for pedagogical interaction, we can outline the following:

– there is no single approach to defining effective factors of teacher training;

– defining these factors depends on pedagogical conditions where professional training of future specialists is carried out;

– factors are certain driving force, essential causes or circumstances that influence the efficiency of future teachers' training for pedagogical interaction and affect academic achievements and future development of specialists;

– main groups of factors of future handicraft and technology teachers' professional training for pedagogical interaction are social and economic (that reveals social significance of the profession and has such indicators as the amount of salary, social status (prestigiousness) of the profession and working conditions; organizational and pedagogical (that includes the peculiarities of the education process as well as the teaching staff involved in future handicraft and technology teachers' training for pedagogical interaction); personal (that reflects student

personality: a level of culture, personal values, organizational and creative skills and motivation toward self-development).

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