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Innovative Method of Developing Professional Ideas of High School Students

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Abstract--- *The paper presents data on the features of professional ideas of high school students. The specific characteristics of professional ideas are revealed in interaction with professional orientations of a personality. In the authors' opinion, researching the professional ideas of high school students is an indispensable condition for forming the adequate self-determination and choice of profession in accordance with the personal components of an individual. The authors thoroughly selected the methodological tools and designed an innovative program aimed at developing, actualizing and correcting the professional ideas of high school students. As a result of the research and analysis of data, the authors identified the features of professional ideas of high school students, revealed the qualitative specificity of the characteristics of professional ideas of high school students in interaction with various professional orientations of a personality. It is marked that the obtained results can be used to increase the efficiency of educational process. The conclusion is made that there is qualitative specificity of professional ideas of high school students belonging to various groups of professional orientation.*

Keywords--- *High School Students, Professional Ideas, Program, Methodology, Methodological Development.*

I. INTRODUCTION

The process of professional self-determination takes place in the young age corresponding to studying in high school. The topicality of researching the development of professional ideas of high school students is due to the interdependence between the ideas about a profession and the development of a professionally successful personality, i.e., the choice of profession and the professional training are the starting point determining the opportunity for self-implementation of a future specialist (Affrunti et al., 2018; Chen et al., 2017; Galassi et al., 1986; Gaponova & Martynova, 2003); Kelsen & Liang, 2018).

The research objective is to study the features of development of professional ideas with the help of an innovative program designed by the authors. The research tasks are: to research the ideas of high school students about the content of professional activity; to design an innovative program aimed at developing ideas about professional activity; to analyze the content of professional ideas after implementation of the innovative program developing the ideas about profession.

V. Halamish, L. Borovoi and N. Liberman in their work "The antecedents and consequences of a beyond-choice view of decision situations: A construal level theory perspective" marked that estimating and comparing the alternatives is an indispensable part of decision-making process in the situation of choosing a profession (Halamish et al., 2017). Based on the provisions of construal level theory, the authors state that "beyond-choice" considerations result in the high level of constructive comprehension of the situation and decision-making.

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The western psychological theories focus on a personality choosing professional sphere (Bachmann & Sikka, 2005; Barnhardt & Ginns, 2017; Knapp & Michael, 2001; Mccabe et al., 1999). The most important constituents in choosing profession are ideas of a personality about oneself and one's position in the world, i.e., ideas of the self-concept. At the same time, a personality's orientation is formed on the basis of information about the world of professions. By D. Super, the self-concepts of high school students, after they process information about various professions, become oriented towards certain professions. Thus, interest to the future career should reflect one's life pattern (Bong & Skaalvik, 2003; Brush & Schoenfeldt, 2009; Burke, 1982).

The ideas of high school students about professional activity are viewed as a systemic category, determined by a set of activity-oriented interconnected features and properties of a personality, which facilitate the formation of structural-functional characteristics of the subject of labor (Raymond et al., 2011). In their research devoted to the personal characteristics of high school students, H.S. Vitulić and M. Zupančič (2014) proved that successful learning and future professionalization depend directly on personality traits. In the authors' opinion, it is appropriate to view the ideas of a personality as a systemic property having its own hierarchy of indicators. Its backbone factors are the parameters of the degree of aptitude to fulfil certain professional tasks with the set level of efficiency, while the subject measure is satisfaction with the process and the result of professional activity (Wentzel & Wigfield, 1998; Xiong, 2018).

Analysis of psychological-pedagogical sources showed that practical psychology and acmeology possess techniques allowing to solve the problems related to negative states and to actualize the opportunities for further professional growth and development (Dolan, 2003; Gargallo et al., 2015; Poropat, 2011). These techniques are most productive when applied within the process of acmeological guidance and consulting in the sphere of professional orientation (Edwards & Waters, 1981; Pintrich, 2010). J.R. Magnus and A.A. Peresetsky (2018) also revealed an interaction between learning progress, self-esteem and ideas of high school students; their results show that it is necessary to take these factors into account when considering the issue of professional ideas. That is, when elaborating a new method aimed at developing adequate professional ideas it is necessary to take into account the personality traits of high school students, their level of self-estimation, learning progress, trends for conformism or non-conformism.

II. MATERIALS AND METHODS

The research plan was the following:

1. The high school students were differentiated by professional orientations.
2. The high school students' ideas about the object and result of their future professional activity were identified.
3. An innovative program was implemented, which is aimed at developing ideas about a profession.
4. The high school students' ideas about the object and result of their future professional activity were repeatedly diagnosed.
5. The validity of the innovative program was confirmed with statistical analysis methods; to identify the differences, we used nonparametric T-criterion by Wilcoxon, nonparametric H-criterion by Kruskal-Wallis, and the method of empirical analysis of the obtained data.

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The authors designed a diagnostic program for revealing the level of professional ideas and professional orientations of high school students, which included a psycho-diagnostic technique aimed at differentiating the students by professional orientations. The technique allowed identifying five groups of high school students by professional orientations, implying interaction with nature phenomena, technologies, other people, sign systems, and artistic images.

In the identified groups, the authors applied the technique aimed at revealing ideas about the object and the result of the future professional activity to determine the content and its correspondence to the professional orientations and primary professional ideas of high school students. This psycho-diagnostic technique consists of two parts; the first part suggests the respondents answering open questions aimed at revealing their ideas about the object of the future professional activity; the second part is based on the system of semantic differential expressed in quantitative and qualitative indexing of values with two-pole scales set by a pair of antonymic adjectives.

To specify and clarify the revealed professional ideas, the authors designed an innovative program of professional guidance based on coaching techniques. The program was designed using reflection of high school students about their personality traits and analysis of their self-estimation of preparedness for the future profession based on the formed ideas. In general, the innovative program is aimed at increasing the level and quality of professional ideas of high school students in order to objectively and adequately choose the future profession.

The authors chose to base the innovative program on coaching principles, as coaching implies unbiased working of high school students with their potential abilities and properties; it facilitates self-actualization, self-implementation and professional and personal development in order to achieve high professional standards.

The innovative program comprises six techniques designed by the authors. The first techniques are aimed at self-analysis of the primary preparedness for the chosen professional sphere and exercises to analyze the qualities and skills necessary for the chosen profession, as well as reflection of the professionally significant personal properties and skills which are already present in the personality. Also, to strengthen the motivation to researching and projecting their own professional activity through the lens of other people's success, we designed and successfully implemented the technique aimed at studying the histories of outstanding people in the chosen profession. Besides, the program includes a special technique intended for sorting and collating information about the world of professions and for making one's own list of the most interesting professions within the chosen domains. The key technique intended for integrating the results is the high school students describing their professional life after a certain period. This technique is aimed at creating positive spirit when choosing the professional sphere and at optimizing the professional ideas. After completion of all techniques, the results of each high school student are critically analyzed with the method of content analysis. To reveal the differences between the high school students' ideas before and after the innovative program implementation, the authors repeated the technique showing the content of ideas about the object and the results of the future professional activity.

The respondents in this research were high school students of Rostov-on-Don city. To confirm the validity of the program, the authors applied the methods of statistical analysis. To reveal the differences, we used nonparametric T-criterion by Wilcoxon, nonparametric H-criterion by Kruskal-Wallis, and the method of comparative analysis of the obtained empirical data, which prove the efficiency of the innovative program designed by the authors and provide

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the qualitatively new understanding of organizing the system of professional guidance and developing the professional ideas in high school students.

III. RESULTS

In order to reveal the qualitative differences between the groups of high school students with different professional orientations according to their ideas about the object and the content of work, the authors used the nonparametric H-criterion by Kruskal-Wallis. This statistical criterion showed no significant differences in the indicators before implementing the innovative program. After completion of the innovative program, the nonparametric H-criterion by Kruskal-Wallis showed significant differences in the indicators of high school students' ideas about their future profession by all criteria. In compliance with the research methodology, the object of work was estimated by the factors of assessment, strength, activity, and clarity. The high school students oriented towards working with natural phenomena accept their object of work to a larger degree; they are apt to perceive it as a carrier of positive, socially desirable characteristics (H=11.673, at r=0.020). The high school students oriented towards working with sign systems and artistic images the object of their work, perceiving it as pleasant to work with (H=9.931, at r=0.042). Confidence, independence, inclination to rely on oneself in difficult situations are the qualities demonstrated by the high school students oriented towards working with artistic images, while the high school students with other professional orientations demonstrate insufficient self-control, inability to adhere to the set line of conduct, dependence upon external circumstances and estimations, inability to deliver on the desired, control the situation and insist on one's way (H=19.932, at r=0.001; H=34.164, at r=0.000; H=20.784, at r=0.000; H=20.620, at r=0.000). Introversion, certain passiveness, calm emotional reactions, reticence and reserve towards the object of work were demonstrated by the high school students oriented towards working with natural phenomena and sign systems (H=18.261, at r=0.001; H=11.553, at r=0.021). The object of work appears to be more distinct, contrasting, adequate and bright in the mind of the high school students oriented towards working with technologies and with other people (H=19.111, at r=0.001; H=17.704, at r=0.001; H=19.666, at r=0.001; H=29.277, at r=0.001).

The statistical analysis was also applied to the indicators of the high school students' ideas about their future activity. The high school students oriented towards working with technologies and with other people perceive their future professional activity as socially significant and approved of; they are positive towards this activity (H=36.953, at r=0.000; H=14.705, at r=0.005; H=35.429, at r=0.000; H=26.908, at r=0.000). They consider their professional activity to be rather easy and simple, they feel confident in the process of its implementation, are ready to make non-standard decisions and bear responsibility for them (H=27.964, at r=0.000; H=30.361, at r=0.000; H=21.354, at r=0.000; H=17.363, at r=0.002). The high school students planning to work with technologies or artistic images are ready for larger activity, initiative, and emotional response in their profession, compared to other groups (H=15.504, at r=0.004; H=15.140, at r=0.004; H=15.379, at r=0.004).

IV. DISCUSSION

Having researched the efficiency of the innovative program aimed at development, actualization and correction of professional ideas, we identified the specific features of high school students' professional ideas in interaction with their professional orientations.

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Thus, statistical analysis of the data with non-parametric H-criterion by Kruskal-Wallis after completion of the innovative program showed reliable changes in all groups of professional orientations of high school students, which proves the efficiency of the designed program.

In order to reveal the differences in the indicators of professional ideas of high school students in each group of professional orientation, the authors used the nonparametric T-criterion by Wilcoxon. Positive changes were found for all criteria of ideas about professional activity in high school students. Having analyzed the obtained results with nonparametric statistical T-criterion by Wilcoxon, one may make a conclusion about the significant increase in the level of preparedness to professional activity in high school students with various professional orientations after the implemented innovative programs.

V. CONCLUSION

Having summarized all the available data, obtained as a result of analysis after implementing the innovative program aimed at estimating the high school students' ideas about their future professional activity, the authors come to the following conclusions:

- The group of high school students with professional orientation implying interaction with natural phenomena consider the opportunity for self-actualization to be most important in profession. After the innovative program, this group of respondents increased level of their ideas about the object of the future profession.
- For the group of high school students with professional orientation implying interaction with technical devices, material consideration was an important indicator of professionalism. After completion of the innovative program, the respondents developed their ideas about the chosen professional sphere.
- The high school students with professional orientation implying interaction with other people consider the opportunity for self-actualization to be important in profession. After completion of the innovative program, the respondents showed significant increase in the level of professional ideas.
- The group of respondents with professional orientation related to sign systems think that an advantage of their future profession is demand for it in the labor market. Their ideas developed most significantly.
- The high school students with professional orientation implying interaction with artistic images consider it important to engage in their favorite occupation at professional level. After the implemented innovative program, the level of their professional ideas increased.

Thus, the authors revealed reliable features of development of professional ideas in high school students with different professional orientations after implementation of the innovative program. That is, the innovative program designed by the authors facilitates the development of professional ideas in all groups of professional orientations, while the highest results were achieved in the groups of professional orientations aimed at interaction with other people and with artistic images.

Thus, one may conclude that a great role in the structure of professional ideas belongs to convictions, reflecting not only knowledge about the reality but also the intellectual, emotional and will manifestations of a personality as the basis of unity of idea and action.

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The results obtained in the present research can be used to reveal the insufficient adequacy of the content of professional ideas, thus facilitating the duly correction of high school students' ideas about professions. Working with professional ideas is an indispensable condition for forming the professionally successful personality, as well as for forming a more complete image of the future activity.

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