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THE PECULIARITIES OF SELF-DETERMINATION OF FUTURE ENGINEERS WITH DIFFERENT CAREER ORIENTATION

This article deals with the main approaches in home and foreign psychology which are connected with the problem of life and professional self-determination. The notion of "life self-determination" and "professional self-determination" have been analyzed in the approaches of leading home and foreign investigators. The interconnection between life and professional self-determination of future engineers in the process of studying at higher educational institutions has been analyzed.

Keywords: *career, life self-determination, professional self-determination, hierarchy of life values.*

Formulation of the problem and actuality of its investigation: Under conditions of rapid changes in life there is an increasing interest in a specialist capable of self-realization, self-expression and self-development, who would be professionally competent and could think and act on his own. Nowadays the needs of our society leave behind the level of graduates' training achieved by the higher school. The vital and professional self-determination of a personality is a complicated scientific problem which has psychological, pedagogical and social aspects. During the professional formation there arises a problem of the life goals of a personality as a future professional because the properly set goals contribute to the success of the future career the choice of which greatly influences the future life of a personality. The analysis of the state of home and foreign investigations witnesses that the problems of professional self-determination of the young generation is actual but the aspect of professional self-determination of future engineers with different career orientation is investigated insufficiently. This problem will need a more detailed investigation because at the elder youth age, during his or her studies at a higher educational institution, the personality passes some stages of vital and professional self-determination.

The task of this article is:

- to analyze the theoretical material related to this problem;
- to reveal the peculiarities of the hierarchy of life goals as to personalities having well-defined and poorly defined professional and career orientations.

The theoretical analysis of the problem investigations. Lately, the ever-growing number of investigators associate the processes of professional self-determination with the choice of the way of life, a personality's self-determination. Indeed, while choosing the profession the personality plans the way of existence as to his or her future status and way of life which prefers the values connected with the purpose of life, correlates his or her past, future and present within the framework of integrated and casually mediated spiritual integrity of his or her Ego (K.O. Abulchanova-Slavskaya, M.R. Ginzburg, S.I. Golovacha, I.S. Kon, M. Pryazhnikovect [8, p. 218].

Every person, during his or her life, carries out different kinds of self-determination: personal (determines himself or herself as a personality), professional (determines himself or herself as a professional), etc. As these kinds of determination are closely connected and at the highest levels of their manifestation have a lot in common and even penetrate one another, it is necessary to separate them [9, p.6].

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For more detailed analysis of the interrelation between peculiarities of life goals of future engineers with different career orientation let's consider the notions of "life self-determination" and "professional self-determination".

According to I.S. Kon, the realized plan of life in the exact sense of the word can appear only when the subject matter of thoughts is not only the ultimate result but also the methods of its achievement, the direction which the personality is going to follow and those objective and subjective resources which will be necessary for it. Unlike the dream which can be both active and passive, the plan of life is the plan of activity [6, p.153].

From the point of view of K.O.Abulchanova-Slavskaya, self-determination is the personality's realization of his or her position which is formed in the middle of the coordinates in the system of attitudes. And in this case she emphasizes that a personality's self-determination and social activity depend on how the system of attitudes (to the collective subject, to one's place in a collective body) forms [10, p. 9].

M.P.Ginzburg considers the problem of self-determination from the point of view of time prospects: the personality's attitude to the psychological present and psychological future [3, p.44].

P.G.Schedrovitsky states that life self-determination is the determination of oneself as to the criteria of the meaning of life common to all mankind and self-realization based on this self-determination, the personality's ability to create himself or herself, his or her individual history, the ability to continually re-interpret his or her own nature [9, p. 10].

S.L. Rubinstein's methodological approach to the problem of a personality's activity and his or her self-consciousness in relation to self-determination is noteworthy. S.L. Rubinstein often noted that the sense of determinism lies in accentuating the role of inner moment in self-determination, being true to oneself, ambiguity of subordination to external surroundings [10, p.26].

According to V.F.Safin, self-determination is one of the substantial manifestations of a social person, the indicator of his or her sovereignty in the main spheres of vital activity. The measure for a personality's self-determination can be initiative, independence and competence in making crucial decisions, realization of oneself, one's civil and class interests, the ability to determine one's place in life, society, lead a personally responsible life [10, p.3].

From A.D. Petrovsky's point of view, a personality's self-determination in a group is the personality's realization of freedom to act according to the values of this group and in the conditions of relative independence from the action of the group pressure [10, p.8].

We can consider interesting those investigations, where self-determination is realized through the notions which are close to it or where the authors enumerate the notions the whole complex of which allows to find out the content of self-determination. In this respect we can appreciate P.P. Sobol's approach to the determination of the given notion which notes the closeness of the notion "self-determination" to such notions as "self-control", "self-regulation", "self-perfection" etc. Self-determination is considered to be the kind of self-realization [10, p.10].

One of the problems for investigators, who study professional self-determination, is the lack of definite bounds of this process.

In respect to psychology, the closest to the understanding of a personality's professional self-determination are the works by A.M. Kucharchuck and A.B. Tcentsiper. According to these authors' point of view "... the independent choice of a profession made as a result of the analysis of one's inner resources including one's own abilities, and their correlation

with the demands of the profession should be called professional self-determination” [10, p.9].

The problem of professional self-determination has been studied by M.S.Pryazhnikov and D.A. Leontjev. These authors consider professional self-determination as a complicated dynamic process of forming by a personality his or her system of basic attitudes to professional and labour environment, the development and self-realization of spiritual and physical possibilities, forming adequate professional intentions and plans, one’s realistic image as a professional, and also finding sense in the process of self-determination itself [9, p.10].

E.A. Klimov understands professional self-determination “... as an important manifestation of psychical development, as active search of possibilities of development, formation of oneself as a full-fledged member of the community “leaders” something useful, professional community” [7, p.26].

From the standpoint of A. Derkach the most important criterion of awareness and performance of professional formation of personality is his ability to find personal meaning in his professional work, independently design his professional life, and responsibly make decisions on choice of professions, specialty and jobs [4, p. 65].

Within the theory of career guidance and career choices, this concept is regarded by A.V. Filippov and L.L. Kondratiev, who understand self-determination as one of the forms of personality socialization associated with awareness of his capabilities. The authors, though, talk about the importance of understanding the personality, his available skills and capabilities, take into account the needs of the economy in the profession, regard them as a condition, but not the essence of self-identity [10, p. 9].

In the practice of career guidance approaches for understanding the structure professional identity are used. P. Chistyakov, I. N. Zakharov indicate that the professional identity includes professional orientation, professional self-awareness, professional self-regulation, professionally important qualities [11, p.29].

A.V. Mudrik comes to the definition of “professional identity” from another point of view. The author has no clear definition of this concept, it is of interest considered psychological mechanisms of self-determination (identification - separation), the levels of separation: group, team, within peer groups, within collectives and groups [10, p. 9].

E.F. Zyeyer identifies the following stages of professional formation of forming professional intentions, training, professionalization and skills [5, p. 154].

In foreign psychology the problem of determination is presented in the concept of professional self development A. Maslow, decision making theories of D. Tideman and O'Hara, typological career choice theory of J. Holland, theory of D. Syuperetc.

A. Maslow proposed the concept of professional development and identified as a central concept - self-actualization as the desire of the individual to cultivate, express, manifest himself in meaningful for him case. A. Maslow believes that self-actualization manifests itself “through enthusiasm of meaningful work” [9, p. 10].

In the decision making theory proposed by D.Tideman and O'Hara, central component of this theory is the idea of professional destiny, determined by the sequence of selected professional positions [8, p. 217].

J. Holland in his typological theory identifies personality types and types of occupations and suggests the possibility of relatively unambiguous accordance of personality and profession [8, p.212].

In the theory of D.Syuper professional development is understood by him as the development and implementation of "self-concept" personality. According to the theory of

D.Syuper, professional choice, as the process consists of a series of events has several predictable patterns and is lengthy, spread out over several years and included in the professional biography of the person. D.Syuper calls career as “a chain of events that make up life”, sequence of professional occupations and roles, which are elected in accordance with the model of self-identity [8, p. 206].

From the standpoint of A. Vorobyov career can be understood in a broad sense as a general sequence of stages of human development in key areas of life as a process, which is constantly changing and evolving. In a narrow sense, career is connected with labor activities of a person, with his professional life [2, p.15].

According to A. Verbitsky professional self-identity faster career choice most fully carried out in conditions of higher education institution, which is the main point of reproduction of social intelligence, staff training and retraining, receiving and spreading of new knowledge [1, p. 87].

Thus, theoretical analysis of the material carried out on this issue showed that the aspect of professional identity of future engineers with different career direction is not enough studied, that caused the need for conducting research in order to identify the hierarchy of life goals, and the relationship between life and professional identity in the future engineers with different career direction.

The purpose of this study:

- ◆ to determine the direction of career orientations in the future engineers;
- ◆ to determine the hierarchy of life goals in the future engineers;
- ◆ to analyze the relationship in the development of life and professional self-determination of future engineers with different career direction in the learning process .

In order to determine the vocational and career orientation of students, we conducted an empirical study. In research 146 students took part (boys and girls aged 18-20 years) who are studying in NTU “KPI”, the faculty “Computer-informational technologies”.

Methods of research. As diagnostic tools the following methods were used:

- ◇ theoretical: analysis, generalization and systematization of scientific data;
- ◇ empirical: 1. questionnaire “Anchors of career” (E.Sheyn), 2. questioning of students` professional identity;
- ◇ statistical: a method of arithmetic means, t - Student`s criterion.

Methods “Anchors of career” is designed to identify the direction of valuable orientations in career: professional competence, management, autonomy, stability, service, challenge, integrating lifestyle, entrepreneurship. Following the results of methods, we have determined the leading career orientation of students - future engineers.

As a result of methods E. Shane “Anchors of career”, all surveyed were divided into 4 groups: 1) a group of persons whose predominant focus is “professional competence” (P), 2) a group of persons whose predominant focus is “management” (M), 3) a group of people, whose predominant are two directions simultaneously –“professional competence” and “management” (P + M), and 4) the uncertain part of students (U).

Using survey we have identified the hierarchy of life goals among each group of surveyed the following values: family, professional activity, healthy lifestyle, material wealth, spiritual development, athletic achievement, participation in political life.

The results are presented in Table 1.

Letters marked with values: F - family, PA - professional activity, MW - material wealth, HL - healthy lifestyle, SD - spiritual development, SA - sporting achievements, PL - participation in political life.

Average rank of life goals in engineers from different career direction ($X \pm \delta$)

Life goals	P (N=26)		M(N=54)		P+M (N=39)		U(N=27)	
F	2,115±1,499	1	2,092±1,443	1	2,487±1,780	1	2,555±1,868	1
PA	2,692±1,287	2	3,018±1,340	3	2,846±1,593	3	3,555±1,503	3
MW	3,192±1,385	3	2,537±1,286	2	2,743±1,353	2	2,925±1,516	2
HL	3,384±1,295	4	3,907±1,265	4	3,333±1,557	4	3,703±1,324	5
SD	4,346±1,777	5	4,888±1,749	5	4,205±1,343	5	3,666±1,980	4
SA	5,461±1,305	6	5,333±1,374	6	5,615±1,002	6	5,185±1,359	6
PL	6,423±1,270	7	6,092±1,377	7	6,461±1,058	7	6,185±1,593	7

Thus in all groups of surveyed in the hierarchy of life goals dominates such value as “family”, which shows the relevance of having a family in this age. In the group with predominance of orientation – “professional competence” the 2nd place won the value of “professional activity”, that speaks about the importance of need realization of his capabilities in professional development, 3rd place – “material well-being”. In groups of students, in which the dominant focus is “management” as well as in groups, whose predominant are two directions simultaneously: “professional competence” and “management” in an unspecified part of the students dominates the value of “material wealth”, which got the 2nd place, indicating that the greatest significance of the need with respect to the needs of professional activity, which got the 3rd place. In the group of surveyed with an uncertain career orientation the value “spiritual development” is more important relative to all other groups. In all groups of surveyed the 6th and 7th places has matched.

Based on the research, it is possible to approve that life goals, which has a personality, influence on the formation of professional self-determination. In the groups of students with the advantage of the direction of “management”, with the advantage of two directions simultaneously: “professional competence” and “management” and in the uncertain part of students, the value “material wealth” exceeds, that therefore requires further adjustments in the learning process with the aim of self-determination.

Table 2

Evaluation of reliability differences between groups of surveyed (for t - Student's criterion)

	t(P-M)	t(P-P+M)	t(P-U)	t(M-P+M)	t(M-U)	t(P+M-U)
F	0,078	0,986	1,060	1,420	1,446	0,166
PA	1,225	0,462	2,516*	0,677	1,917	2,025*
MW	2,471*	1,462	0,750	0,895	1,416	0,568
HL	2,043*	0,155	0,996	2,352*	0,790	1,121
SD	1,529	0,407	1,475	2,446*	3,324**	1,471
SA	0,478	0,590	0,858	1,302	0,545	1,647
PL	1,222	0,155	0,679	1,689	0,308	0,958

Note: * - $p \leq 0,05$; ** - $p \leq 0,01$; *** - $p \leq 0,001$ - a measure of the reliability of differences by t - Student's criterion.

Table 2 reflects the evaluation of the reliability of differences between groups of surveyed (for t - Student's criterion).

Statistical analysis showed no probable differences between the groups of surveyed for value of “family”, “sports achievements” and “political participation”, but for other values differences were defined.

Thus, we can make the following **conclusions**:

- the types of self-determination, which is divided into living self-determination, professional identity, personal self-determination were analyzed;
- the concept of “professional identity”, which is considered in terms of structure, mechanisms, relationships of the individual to a professional environment, development opportunities was analyzed;
- significant differences in the hierarchy of life goals of students with different career direction were found;
- in people with predominant orientation of “professional competence” exceed professional values, in individuals with predominant orientation of “management”, controversial persons (two directions simultaneously) and uncertain career orientation exceed tangibles.

Due to the severity of self-determination, students can linger at certain stages of professional development. The process of professional self-determination requires an adjustment in the period of study in high school. In order to facilitate professional identity, arrangements for the course on formation of professional future of students are needed.

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ОСОБЛИВОСТІ САМОВИЗНАЧЕННЯ МАЙБУТНІХ ІНЖЕНЕРІВ ІЗ РІЗНОЮ КАР'ЄРНОЮ СПРЯМОВАНІСТЮ

В даній статті розглянуто основні підходи у вітчизняній і зарубіжній психології, пов'язані з проблемою життєвого і професійного самовизначення особистості. Проаналізовано та уточнено поняття “життєве самовизначення” і “професійне самовизначення” в підходах провідних вітчизняних і зарубіжних дослідників. Проаналізовано взаємозв'язок життєвого та професійного самовизначення майбутніх інженерів у процесі навчання у ВНЗ.

Ключові слова: кар'єра, життєве самовизначення, професійне самовизначення, ієрархія життєвих цілей.

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ОСОБЕННОСТИ САМООПРЕДЕЛЕНИЯ БУДУЩИХ ИНЖЕНЕРОВ С РАЗНОЙ КАРЬЕРНОЙ НАПРАВЛЕННОСТЬЮ

В данной статье рассмотрены основные подходы в отечественной и зарубежной психологии, связанные с проблемой жизненного и профессионального самоопределения личности. Проанализированы и уточнены понятия “жизненное самоопределение” и “профессиональное самоопределение” в подходах ведущих отечественных и зарубежных исследователей. Проанализирована взаимосвязь жизненного и профессионального самоопределения у будущих инженеров в процессе обучения в вузе.

Ключевые слова: карьера, жизненное самоопределение, профессиональное самоопределение, иерархия жизненных целей.

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