

# Professional orientation of adolescents – representatives of indigenous population of the Russian Far North

Natalia Flotskaya  
Higher School of Psychology,  
Pedagogy and Physical Education  
Northern (Arctic) Federal University  
named after M.V. Lomonosov  
Arkhangelsk, Russia  
n.flotskaya@narfu.ru

Svetlana Bulanova  
Higher School of Psychology,  
Pedagogy and Physical Education  
Northern (Arctic) Federal University  
named after M.V. Lomonosov  
Arkhangelsk, Russia  
s.bulanova@narfu.ru

Maria Ponomareva  
Higher School of Psychology,  
Pedagogy and Physical Education  
Northern (Arctic) Federal University  
named after M.V. Lomonosov  
Arkhangelsk, Russia  
m.ponomareva@narfu.ru

**Abstract—** At present, the Arctic is a strategic region, to a large extent ensuring political and energy security of Russia. Development and effective use of the Arctic territories require professional personnel ready to work in extreme natural conditions. Indigenous peoples of the Far North, living in the Arctic, are a natural human resource for preserving and developing the Arctic territories. In view of this, it is important to be aware of professional orientation of senior adolescents – representatives of indigenous peoples of the Far North of Russia, and their readiness to work in the Arctic. We have conducted an empirical research aimed at identifying personal professional orientation of senior adolescents – representatives of indigenous population of the Far North of Russia. To study professional orientation of senior indigenous adolescents living in the Far North of Russia we used the following methods: “Questionnaire of professional readiness” by L.N. Kabardova “Methods for identifying main motives for career choice” by E. M. Pavlyutenkov. As a result of the study, we have identified professional orientation of Nenets adolescents – boys and girls aged 15–16 years, towards the following professional spheres: man, technical equipment, nature, sign, imagery. We have analyzed the components of professional readiness: perceived skills, emotional attitude, readiness for performing successfully in a certain area. The correlation of motives for career choice (social, moral, aesthetic, cognitive, creative, related to the content of work, financial, prestige, utilitarian) was established. The obtained results provide a better understanding of professional orientation of senior adolescents – representatives of indigenous peoples of the Russian Far North, and their readiness to work in the Arctic.

**Keywords—** Professional orientation, adolescents, indigenous population of the Far North of Russia.

## I. INTRODUCTION

Political and energy security of the Russian Federation at the present stage of development is to a great extent determined by the state of a region of strategic importance – the Arctic. Development and effective use of the Arctic territories are becoming one of the state priorities. This requires professional personnel ready to work in extreme natural conditions. Considering the fact that indigenous peoples of the Far

North live in the Arctic, it is rational to use this natural human resource for preservation and development of the Arctic territories. Priorities for future professional activity, career preferences and professional identity shape gradually in the course of personality development, the most important stage of which is adolescence. When constructing a strategy for human resourcing of the Arctic territories it is necessary to take into account the potential of this age period. In view of this, it is important to have an understanding of professional orientation of senior adolescents – representatives of indigenous peoples of the Far North of Russia, and the degree of their readiness to work in the Arctic.

In psychological science, professional orientation of a personality is viewed as one of the sub-varieties of general personality orientation. It is emphasized that professional orientation has specific content and characteristics. Researchers who have studied this psychological phenomenon define it as an integrative characteristic of professional activity motivation, determined by all the drives in the motivational sphere and expressed through interests, relationships, focused efforts, etc. [1]. Professional orientation, along with professional competence and emotional flexibility, is considered to be a psychological basis for all forms of professional activities [2]. Professional orientation components are: interests, motives, values-based orientations, professional position, socio-professional status, etc [3, 4, 5, 6].

Senior adolescence is the period when time perception undergoes transformation: teenagers become aware of the time perspective. School students begin to think about their future, which allows to suggest an increase in the importance of the social prognosis factor for their professional orientation. Intellectualization of perception develops actively, creative imagination forms, construction of the self-conception completes. At this age, the “hormonal storm” is responsible for instability of the emotional sphere, memory, and concentration. Such “loosening” apparently contributes to the subsequent concentration

of attention on the dominant goals of personal identity formation: educational and professional [7]. Senior adolescence is characterized by the need for active creative cognition, which contributes to the increase of awareness in the sphere of professional interests, perception of the necessity to make a career choice and perform professional activities in general [8]. Increased concreteness in education facilitates differentiation of professional interests of senior school students [9]. Researchers characterize this period as a period of professional intentions formation and choosing a path for professional education and development [10]. Readiness to make a career choice can be interpreted as an active-effective state of an individual, with personality focusing on a certain type of behavior, mobilizing to perform tasks in the context of socialized transition [11].

In contemporary Russian psychological science there is a number of works dedicated to professional orientation of adolescents [12, 13, 14, 15, 16, 17, 18].

However, there is still a significant lack of knowledge about the process of professional orientation formation of adolescents, its general trends, differences and specific features. Very little data is available on indigenous adolescents living in the Subarctic regions of Russia.

## II. MATERIALS AND METHODS

To identify personal professional orientation of senior indigenous adolescents living in the Far North of Russia, we have conducted an empirical study. Our research group went on an expedition to the Nenets Autonomous District of the Arkhangelsk Region of the Russian Federation to collect empirical data. Representatives of the indigenous Nenets people live in this district. 79 respondents aged 15–16 years: 35 boys and 44 girls were selected for the study. All adolescents identified themselves as ethnic Nenets. The study was initiated by a group of scientists from the Northern (Arctic) Federal University named after M.V. Lomonosov.

At the organizational stage the research group prepared a package of documents, including a research justification, a description of its purpose, objectives and stages, a description of experimental techniques. This package of documents was submitted to the Department of Education, Culture and Sports of the Nenets Autonomous District. The research group received a permission to conduct the study. General schools in the Nenets Autonomous District served as bases for research. The purpose, the objectives, and the procedure of the study were presented at organizational meetings with school authorities, certain classes were selected for the study. Parents or legal representatives of school students gave their written consent for adolescents to participate in the research. The collection of empirical data was carried out in groups of respondents consisting of 10 – 12 people. Before testing, boys and girls indicated their age and ethnicity in written form. During testing, following the instructions, voiced by the researchers, the respondents

filled in the answer forms. In case of questions, the researchers approached students and provided necessary explanations individually to each of the respondents.

To study personal professional orientation of senior adolescents – representatives of indigenous population of the Russian Far North, we used the following methods: “Questionnaire of professional readiness” by L.N. Kabardova, “Methods for identifying main motives for career choice” by E.M. Pavlyutenkov, and a questionnaire of professional preferences. “Questionnaire of professional readiness” by L.N. Kabardova reflected students’ assessment of their own skills in various spheres, emotional attitude formed by personal experience towards the activities described in the questionnaire, preference or unwillingness to make the assessed activities part of their future professional life. The respondents were asked to assess (0 to 2 points) the degree of manifestation of skills, emotional attitude, readiness for successful performing of activities in various spheres: “man – sign system”, “man – technical equipment”, “man – nature”, “man – imagery”, “man – man”. Analysis of the number of points and their combinations allowed to come to a conclusion about professional orientation of adolescents. “Methods for identifying main motives for career choice” by E.M. Pavlyutenkov allowed to identify the role of certain motives in career choice made by each of the respondents. Each respondent was provided with a questionnaire containing 18 statements about occupation. The task was to rate each statement on a scale from 1 to 5 depending on the degree of agreement. These statements reflected the 9 groups of motives for career choice: social, moral, aesthetic, cognitive, creative, related to the content of work, financial, prestige, utilitarian. The sum of points for each of the 9 groups made it possible to reveal the prevailing motives for choice of a profession. The questionnaire of professional preferences, developed by the researchers, contained 6 questions to reveal determination in choosing a future profession, willingness to stay in the home region or desire to leave it, reasons for this choice, degree of attractiveness of traditional activities in the Arctic territories, willingness to choose such a traditional occupation and reasons for this choice. Analysis of the results was carried out on the basis of non-statistical comparison, by comparing the results obtained for different parameters of professional orientation.

## III. RESULTS AND DISCUSSION

Analysis of the results of the study of professional orientation of adolescents – representatives of indigenous peoples of the Russian Far North has shown that the majority of adolescents aged 15 – 16 years have decided on their future career (67%). Among Nenets boys the percentage of those who have made a career choice is 71.4%, and among Nenets girls – 63.6%. Analysis of the professional orientation components allowed us to get an idea of perceived skills, emotional attitude and readiness for work in such professional spheres as “man – sign system”,

“man – technical equipment”, “man – nature”, “man – imagery”, “man – man” (Table 1).

Table 1. Professional orientation of Nenets boys and girls aged 15 – 16 years.

Professional spheres		Males, n=35	Females, n=44
Man – sign system	skills	8,09±0,87	8,48±0,54
	attitude	6,09±0,82	5,89±0,56
	readiness for work	5,46±0,74	4,48±0,51
Man – technical equipment	skills	10,11±0,76	6,20±0,48
	attitude	9,00±0,67	4,89±0,56
	readiness for work	8,23±0,74	3,52±0,46
Man – nature	skills	5,97±0,73	8,058±0,73
	attitude	4,71±0,59	7,14±0,77
	readiness for work	4,57±0,60	5,61±0,71
Man – imagery	skills	7,49±0,82	8,07±0,59
	attitude	5,89±0,72	7,70±0,68
	readiness for work	5,74±0,68	6,20±0,64
Man – man	skills	10,46±0,61	11,59±0,56
	attitude	7,77±0,58	9,05±0,56
	readiness for work	7,03±0,57	8,00±0,59

Nenets boys aged 15–16 years rate their people skills (10.46±0.61) and technical skills (10.11±0.76) high. The lowest rates are recorded in the assessment of interaction with nature (5.97±0.73). This fact attracts attention since the study was conducted among representatives of indigenous peoples living in the Far North. For them, the Arctic is an ancestral habitat. Nenets culture, lifestyle and traditional activities are related to the Arctic environment. However, modern Nenets boys assess their skills in the sphere of interaction with nature rather low. The analysis of the emotional attitude of adolescent boys towards different professional spheres shows that there exists a clear interest in occupations within the “man – technical equipment” sphere (9.00±0.67). Boys aged 15 – 16 years demonstrate more willingness to work in this professional sphere in future (8.23±0.74). Interest in technology is quite typical for adolescent boys. The survey results of Nenets boys aged 15 – 16 years shows that technical occupations prevail among chosen by them: motor mechanic, electrician, welder, etc. (48%). Occupations in the spheres “man – man” (20%), “man – imagery” (16%), “man – sign system” (12%), “man – nature” (4%) are presented in a significantly lesser degree in the Nenets boys’ preferences. Male predominance in technical professions is traditional for Russia.

Nenets girls aged 15 – 16 years rate their people skills most high (11.59±0.56). The lowest rates are recorded in the assessment of technical skills (6.20±0.48). The analysis of the emotional attitude of adolescent girls towards different professional spheres has shown that there exists a clear interest in occupations within the “man – man” sphere (9.05±0.56). Girls aged 15 – 16 years are more willing to work in this professional sphere in future (8.00±0.59). We can make a conclusion that interaction with other people is a sphere of priority for Nenets girls

aged 15 – 16 years. They rank their skills in this sphere high, show interest and willingness to work in it. The survey results of Nenets girls aged 15 – 16 years shows that “man – man” professions prevail among the chosen occupations: doctor, teacher, lawyer, nurse, etc. (64%). Professions in the spheres “man – imagery” (14%), “man – sign system” (11%), “man – nature” (7%), “man – technical equipment” (4%) are presented in a significantly lesser degree in the Nenets girls’ preferences. The data obtained as a result of the study allow us to conclude that the indicators of skills, attitudes and readiness to work in different professional spheres are consistent in Nenets boys and Nenets girls. At the same time, it should be noted that 15–16-year-old Nenets adolescents rate their skills in all professional spheres higher than their own interest towards those spheres, and rate their interest towards those spheres slightly higher than their readiness to work in them.

The revealed specific features in the correlation of professional orientation components can be related to the general age characteristics of the adolescence period such as crystallization and differentiation of professional interests, awareness of the necessity to make a career choice and perform professional activities in general [8, 9].

Since career and professional sphere choice is based on certain motivation, the structure of our study of professional orientation included identification and analysis of motives for career choice among adolescents – representatives of indigenous peoples of the Russian Far North (Table 2).

Table 2. Motives for career choice among Nenets boys and girls aged 15–16 years.

Motives for career choice	Males, n=35	Females, n=44
Social	6,97±0,29	7,72±0,28
Moral	6,70±0,38	7,09±0,24
Aesthetic	7,39±0,26	7,53±0,25
Cognitive	8,18±0,28	8,14±0,25
Creative	7,03±0,41	6,88±0,32
Related to the content of work	7,70±0,34	6,95±0,24
Financial	7,79±0,27	7,77±0,26
Prestige	7,15±0,24	7,19±0,24
Utilitarian	7,91±0,32	8,79±0,21

Cognitive motives prevail among Nenets boys aged 15 – 16 years in their choice of profession (8.18±0.28). Somewhat less significant are utilitarian motives (7.91±0.32), financial motives (7.79±0.27), and motives related to the content of work (7.70±0.34). Moral motives are the least pronounced in career choice (6.70±0.38). Thus, we can conclude that willingness to gain specific expertise, learn about the content of a particular occupation is significant for Nenets boys aged 15 – 16 years. It should be noted that these adolescents are guided by working conditions and job content, are oriented towards receiving certain benefits.

Utilitarian motives prevail among Nenets girls aged 15 – 16 years in their choice of profession (8.79±0.21). Cognitive motives (8.14±0.25), financial motives (7.77±0.26) and social motives (7.72±0.28) are

somewhat less significant. Creative motives are the least pronounced in career choice ( $6.88 \pm 0.32$ ). Thus, we can conclude that comfortable working conditions are significant for Nenets girls aged 15 – 16 years. It should be noted that girls aged 15 – 16 years making career choices aim at gaining specific expertise and receiving certain benefits, but social focus of their future professional activities is important for them as well.

In general, the leading motives in choice of profession are the same in Nenets boys and girls aged 15 – 16 years: cognitive, utilitarian, and financial motives. At the same time, the content of work is significant for Nenets boys, while for Nenets girls it is the social focus of their future occupation. Among the least significant motives in career choice we should note moral motives in boys and creative motives in girls. This shows that spiritual and moral development opportunities in the course of professional life are less important for Nenets boys, while opportunities for creativity and originality of professional activities are less important for Nenets girls.

Interesting facts were revealed by the survey of adolescents – representatives of indigenous peoples of the Russian Far North. The majority of adolescents answered the question whether they want to stay in their home region in future positively (59.5%). Among boys it is the overwhelming majority (71.4%), and among girls approximately a half (47.7%). A small number of adolescents aged 15 – 16 years have not yet decided whether they want to stay in their home region (2.9% of boys and 6.8% of girls). These results show that the majority of Nenets adolescents are potentially oriented towards working in the Arctic, although this trend is less pronounced among girls.

Answering the question about the reasons for their willingness to stay and work in their home region, the majority of Nenets adolescents aged 15 – 16 years explain that they are more accustomed to living on their home grounds, they feel more calm there, and their relatives and friends live there (80% of boys, 85.7% of girls). The answers of some adolescents (12% of boys, 9.5% of girls) reflect a certain degree of social responsibility (“I want to develop my native land”, “I want to prove useful at home”, etc.). Those Nenets adolescents who would like to leave their home grounds, explain it by the lack of opportunities, lack of interesting jobs and low wages.

In the Far North of Russia, indigenous population is engaged in a range of traditional activities such as reindeer herding, hunting, chum-keeping, fishing, etc. In the course of the survey it became clear whether such occupations attracted Nenets adolescents. Analysis of the results shows that traditional activities are attractive for 40% of Nenets male respondents aged 15 – 16 years and only for 4.5% of Nenets female respondents aged 15 – 16 years. Even fewer Nenets adolescents would like to choose one of these professions for themselves: 25.7% of boys and 2.3% of girls. Answering the question why they do not plan to choose these professions the respondents pointed at their lack of interest in such professions, traditional

occupations being old-fashioned with hard working conditions and low wages. Those of the Nenets adolescents who are going to choose one of the traditional occupations explain that such professions are necessary and interesting.

We should highlight the fact that there is a certain contradiction in Nenets girls between the willingness to stay and work in their home region and the lack of interest in traditional activities. This contradiction is less pronounced in Nenets boys. This is probably due to the fact that traditional activities provide more opportunities for realization of personal potential for boys, and are much less diverse and attractive for girls.

#### IV. CONCLUSIONS

The results of our study have important theoretical and practical corollaries. In the theoretical aspect, the results of the study expand and enrich the understanding of specific features of professional orientation of adolescents – representatives of indigenous peoples of the Russian Far North. Analysis of the research results has shown the following:

- Nenets boys making career choices are more oriented towards the “man – technical equipment” sphere, while Nenets girls towards the “man – man” sphere;
- cognitive, utilitarian and financial motives prevail among Nenets adolescents making career choices;
- the majority of Nenets adolescents would like to stay in their home region;
- interest in traditional activities among Nenets boys is relatively low, and among Nenets girls almost non-existent.

In the practical aspect, the results of the study help to further define the lines of development of the Arctic territories:

- organization of special career guidance among adolescents – representatives of indigenous peoples of the Russian Far North;
- consideration of the specific character of the Nenets youth professional orientation when preparing programmes of social and infrastructural development of the Arctic territories;
- consideration of indigenous human capacity in the Far North when creating a strategy for development and industrial exploitation of the Arctic territories.

#### V. FUNDING

The research was supported by financing project of RFBR (Russian Foundation for Basic Research) # 18-013-00546 “The teenagers’ personal identity research with representatives of indigenous peoples of Arctic territories in the European North of Russia in modern social and education environment”.

#### REFERENCES

- [1] A. K. Markova, “Psychology of Professional Competence”. Moscow: Knowledge International Humanitarian Fund, 1996, pp. 24 – 32.
- [2] L. M. Mitina, “Psychology of professional development of a teacher”. Moscow: Flinta, 1998, pp. 18 – 74.
- [3] N. I. Konyukhov, V. N. Seleznev, V. V. Sysoev, “Professional orientation of a person: theoretical approaches to the study”. Moscow

State Regional University Bulletin, Psychological Sciences Series, 2012, 2, p. 165.

[4] N. D. Levitov, "Child and Educational Psychology". Moscow: Unity-Dana, 2000, pp. 244- 373.

[5] V. K. Makarov, E. A. Borisova, "Main approaches to studying professional orientation of high school students in Russian and foreign literature". St. Petersburg State University Bulletin, Ser. 12, 2010, 4, pp. 45-50.

[6] E. F. Zeer, "Psychology of Professions". Moscow: World Fund, 2006, pp. 118 – 142.

[7] Yu. A. Afonkina, "Formation of professional orientation in development of an individual". Murmansk: Murmansk State Pedagogical Institute, 2001, pp. 64 – 228.

[8] I. M. Kondakov, "Diagnostics of professional attitudes of adolescents". Psychology Issues, 1997, 2, pp. 122-131.

[9] O. A. Artemyeva, M. N. Makeeva, "The system of professional orientation training role plays: monograph". Tambov: Tambov State Technical University Publishings, 2007, p. 7.

[10] E. F. Zeer, A. M. Pavlova, N. S. Sadovnikova, "Basics of Career Guidance: Textbook for higher educational establishments". Moscow: High School, 2005, pp. 34 – 97.

[11] A. O. Luchinina, "Formation of readiness for personal and professional identity formation among high school students in the context of an interschool educational complex. Dissertation for the degree of Candidate of pedagogical sciences". Kirov, 2010, pp. 76 – 158.

[12] L. B. Cherepanova, "Pedagogical assistance to professional identity formation of adolescents in small town. Abstract of a dissertation for the degree of Candidate of Pedagogical sciences". Magnitogorsk: Magnitogorsk State University, 2004, pp. 6 – 17.

[13] M. V. Danilova, "Pedagogical identity of adolescents in connection with intellectual and personality characteristics and social and family situation. Abstract of a dissertation for the degree of Candidate of pedagogical sciences". St. Petersburg: St. Petersburg State University, 2009, pp. 5 – 14.

[14] M. V. Naumenko, "Interrelation of professional self-determination and professional representations of teenagers with various type of gender identity". World of Science, 2016, vol. 4, No. 5, p. 29

[15] E. I. Ilyin, "Differential psychology of professional activities". St. Petersburg: Piter, 2008, pp. 224 – 296.

[16] E. O. Filippova, L. O. Marchenko, S. N. Levich, "The relations between personality factors and professional identity of adolescents", XXII Tsarskoye Selo Readings. Proceedings of the int. sc. conf. St. Petersburg: Leningrad State University n.a. A.S. Pushkin, 2018, pp. 195-199.

[17] M. S. Demytyeva, "The study of personal professional orientation in modern adolescents and high school students". Current Issues and Prospects of Modern Psychology Development, 2017, 1, pp. 106 –111.

[18] O. V. Korolkova, I. V. Chernov, "A study of professional preferences among school students of ninth grade". The Young Scientist, 2016, 17, pp. 297-300.