

Educational Opportunities for Young People of Indigenous Minorities of the North: Social and Spatial Discourse



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Abstract. The relevance of the problem considered in this article is due to the need to provide qualified personnel for investment megaprojects in the Arctic region, while preserving the traditional culture, language, and life values of indigenous peoples of the North. We use qualitative and quantitative methods

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of the sociological research we conducted in 2016–2017 on the territory of Yamalo-Nenets Autonomous Okrug of the Tyumen region of Russia: mass surveys of northerners, highlighting among them the indigenous peoples of the North, in-depth interviews of experts and so on. The analysis of scientific domestic and foreign literature on the subject of the study, including the study of Russian and foreign educational practices of different levels in the Arctic regions, allows us to assess the current level of training of qualified personnel for the Arctic. We substantiate possible ways to improve the system of ethno-regional education, assess the satisfaction of representatives of aboriginal ethnic groups with the system of general and professional education and its compliance with the desired future for their children. According to the results of the study, we make the following conclusions. General and professional ethno-regional education for different levels of the Arctic Zone of Russia needs long-term state and non-state support, including corporate and non-governmental support associated with the prospective modernization of its entire system. It is necessary to strengthen the interaction of universities and other educational organizations with companies that participate in neo-industrial development of the Arctic with the aim of expanding the training of specialists in the industries related to the traditional life of indigenous Northern ethnic groups. Ethno-regional education in the Arctic region should be considered on the basis of the standards adopted by UNESCO for minority groups as an inclusive education having a status different from other educational organizations, taking into account the smallness of the majority of schools in Arctic settlements and nomad camps. At the same time, it is necessary to expand the range of educational opportunities for young people who belong to the indigenous peoples of the North.

Key words: Arctic, indigenous peoples of the North, professional and ethno-regional education, levels of education, traditions, social changes, sociological diagnostics.

Introduction

Sociological diagnosis of the educational system, which is the most important element of human capital and potential, conducted by us in the Arctic circumpolar region on the basis of Yamalo-Nenets Autonomous Okrug (YNAO), situated in the Tyumen Oblast of the Russian Federation, demanded special attention for two of its subsystems: vocational secondary, higher education for the development of the largest hydrocarbon (oil and gas) resources and ethno-regional preschool, primary, secondary general education for children of northern indigenous peoples. In this paper, we rely on the 8-level classification of the Russian educational system in the format of the UNESCO international standard classification of education (ISCED) [1]. Levels 0–7 of ISCED 2013 are analyzed in detail.

The primary goals of this research are as follows: to substantiate the areas of ethno-regional educational system's improvement, to assess satisfaction of aboriginal ethnic groups' members with the system of general, professional education, and to assess the system's compliance with people's desired future for their children.

The relevance of this problem is caused by the necessity, on the one hand, to provide qualified personnel for this Arctic region's investment mega-projects and, on the other hand, to create environment for preserving traditional culture, language, life values of minor indigenous peoples of the North (SIPN). At the same time, it is necessary to extend the range of educational trajectories of young people who belong to indigenous people of the North.

Until 2014, oil and gas companies, participating in the Arctic projects, actively involved foreign specialists, who were ready to work in the exotic (for them) environment of the Far North, with the help of high salaries and additional social packages with low tax deductions. However, after the adoption of international restrictions, many of them were made to leave Russia. A task of training domestic specialists became relevant. At the same time, importance of getting qualitative primary, basic, secondary general, vocational secondary and higher education by native northerners, while keeping the culture and language of their peoples, increased. We analyzed different foreign and Russian educational practices in the Arctic regions, conducted field sociological studies in YNAO, which allowed creating the bank of empirical information, necessary for finding a solution to this problem, conducting its sociological diagnostics, and suggesting some recommendations for power structures of YNAO and other stakeholders, which may be of interest to other Arctic regions.

It is worth mentioning that all the levels of education are open for SIPN representatives. However, its implementation on the scale necessary for the region faces several objective and subjective barriers. Objective ones are the attachment of SIPN to their traditional way of living; weak orientation of these peoples' representatives toward mastering industrial professions, entrepreneurship, etc.; Arctic companies, engaged in the extraction of raw materials, are poorly involved in professional orientation (industrial aspect) of SIPN. The main subjective barrier is that older generations of SIPN want to keep their identity. That is why they do not always want their children to be involved in new spheres of labor ("large world of professions"): they often do not come back to their families, to "minor world" of their people.

Literature overview

Current scientific publications on this topic are primarily devoted to the foreign practices' analysis of children's preschool, primary, and general education: they belong to minor indigenous northern ethnic groups. There was a number of comprehensive works on different aspects of ethno-regional education within industrial development of the Russian Arctic territories in recent years. They included an important area of SIPN education – the formation of competence in the sphere of the indigenous peoples' efficient self-government as a promising and important factor of the Arctic territories' development strategy [2–6]. The analysis shows that foreign educational practices are primarily identical to the Russian ones. Meanwhile, the existing experience in the implementation of certain educational and social technologies might be useful in the environment of the Russian Arctic territories.

Global community acknowledges not only indigenous northern peoples' general rights to education, guaranteed by the constitutions of the Arctic states but also additional ones, in accordance with the United Nation's Declaration on the Rights of Indigenous Peoples, adopted in 2007, which include:

- the right to establish and control one's educational systems and educational institutions by providing education in native language;
- the right to preserve, control and develop one's cultural heritage and traditional knowledge;
- the right not to be subjected to forced assimilation and influence, undertaken in order to destroy ethnic culture [7].

This Declaration is not a legally binding document, it is not an international treaty, and Russia did not sign it. However, the Russian Federation, in regard to SIPN problems, needs to implement Declaration's provisions in full.

In order to do this, it is possible to use Article 27 of “International Covenant on Civil and Political Rights”, which says that “in those States in which ethnic, religious or linguistic minorities exist, persons belonging to such minorities shall not be denied the right, in community with the other members of their group, to enjoy their own culture, to profess and practice their own religion, or to use their own language” [8].

These problems, such as the clash of cultures and teaching practices of industrial and archaic societies, are thoroughly examined in the works of P. Berger and his colleagues [9].

The analysis of these rights’ implementation and the specifics of different Arctic States’ educational systems, aimed at children from the Arctic regions, showed that many problems are similar, but the technologies of their solution are quite different [10; 11]. Thus, in Finland, teaching of the Sami language and other subjects, studied in it, has been conducted since the early 1970s in a number of municipalities of Sami administrative districts. However, 75% of Sami children currently live outside these areas, and they can study their language only two hours a week. The main problem here is the absence of educational materials written in the Sami language [12]. Meanwhile, there is the Sami Education Institute, which provides bachelor’s degrees in northerners’ modern (industrial engineering, information and communications technologies, restaurant business and catering, tourism, etc.) and traditional industries (reindeer husbandry, Sami language and culture, entrepreneurship in Sami folk crafts, etc.), in the Sami district [13].

In Norway, teaching in the Sami language is more common. Even pre-school education in Sami municipal kindergartens is conducted in the native language, and a visiting teacher conducts several hours of such classes in Norwegian kindergartens every week.

Pedagogical personnel for Sami schools is trained in the Sami Education Institute, Center for Sami Studies, Pioneers Indigenous Studies, Nordic Institute, and Arctic Indigenous Peoples Centre. Thus, there are faculties of Sami music, pre-school pedagogics; Sami school education, Sami language and literature, reindeer husbandry, crafts, traditional knowledge, social sciences, journalism in the Sami Education Institute [14].

In Greenland, 90% of its population is Inuit, and mandatory education for people from 7 to 16 years of age is conducted in the Inuit language there. It is possible to get free higher education with scholarship in Greenland and Denmark. The main problem of Greenland’s education is the duality of the requirements to the structure of the educational process. On the one hand, the program should be based on the intensive study of the Inuit language and culture. On the other hand, students must obtain sufficient knowledge to be able to continue their studies in Denmark’s universities [15]. Increased attention to traditional Inuit culture reduces the level of Inuit-graduates’ competitiveness, in comparison with their Dutch peers, in the process of getting higher education and job. The most important problem in Greenland is that many educated Greenlanders do not speak their native language, and other people, after receiving higher education in Denmark, do not return home.

Canada’s government had not interfered with Inuit’s education until 1955, when the agreement on its federal administration and partial funding was made. Ottawa’s overcoming of the assimilation policy in the educational sphere and the recognition of Inuktitut as the official language of Nunavut allowed keeping a significant part of the Inuit who speak the native language. At the same time, social Inuit’s issues (unemployment, rising cost

of living in the Arctic), which keep the Inuit from getting quality education, remain. Thus, according to the Canada's national statistical agency, 71% of the Inuit aged from 25 to 64 do not have secondary education, while only 15% of other Canada's peoples of the same age do not have secondary education. On average, 15% of Canada's population above 15 years old have bachelor's degree, while only 3.6% of Inuit people have it [16]. In fact, Nunavut Arctic College is the only university in the Arctic part of Canada. The development of the Inuit's education strategy, including higher education, was supervised by the University of the Arctic [17]. In particular, one of recent studies showed that traditional language, if taught since grade school, contributes to its preservation, but complicates the transition to English communication in high school [18]. Thus, the transition from native language to English in the 3rd grade was associated with a significant decrease of personal self-esteem [19].

The fundamental problem of the Arctic aboriginal education is that it does not have training programs which would satisfy all the northern indigenous peoples, train successful graduates on par with secondary schools, and devote enough hours to learning and keeping traditional skills and culture. Anyway, it is necessary to make a choice and sacrifice something. This situation exists not only when parents or students select the place of education or educational program, but also when methodologists and teachers develop educational programs [20]. Aspiration to keep identity, traditional knowledge, habitat, and folk crafts is understandable. However, it is impossible to deny the right of these communities' members to make their own choice in favor of the development and opportunities to completely implement their human and social potential.

The experience of Alaska is interesting: the state government there provided all rural settlements with secondary schools for bilingual education [21]. At the same time, the University of Alaska Fairbanks has six educational programs and nine separate courses in Alaska's indigenous peoples' languages. Most aboriginal languages and their dialects belong to the Eskimo–Aleut and Athabaskan–Eyak–Tlingit language macro-families. However, more than 2/3 of Alaska's indigenous peoples speak English at home and outside it. It is illustrative that in 2014 the Alaska Parliament approved the Alaska Native Languages Bill, which gave the status of state languages to 20 Alaska native languages, along with English [22].

However, this law was repealed in court on the federal level. It should be noted that 17 (out of 20) languages of Alaska's ethnic groups have less than one thousand speakers [23]. The main problem of the Alaska's educational system here is the low academic performance of children from aboriginal ethnic groups and, as a result, their more frequent, in comparison with other students, expulsion from schools and colleges. Although, in recent years, scholarships from corporations and foundations have improved the situation [24].

In Russia, the training of qualified national personnel from SIPNs, with studying their languages and culture, is provided by Herzen State Pedagogical University of Russia (St. Petersburg), M.K. Ammosov North-Eastern Federal University (Yakutsk), Yugra State University (Khanty-Mansiysk), etc. [25]. According to experts, whom we interviewed during our scientific expeditions in 2017 and 2018, the current system of Arctic ethno-regional education in our country needs a prospective modernization in the following areas:

- state support implementation of SIPN education;

- personnel provision;
- improvement of educational programs and educational technologies aimed at northern areas;
- development of inclusive education, taking into account UNESCO standards for minority groups;
- carrying out complex interdisciplinary research of the Russian Arctic territories' educational space and monitoring of the Northern ethnic groups' languages and culture study.

Materials and methods

The research of peculiarities and areas of education's change in the Arctic region was overviewed by us within the methodology of P. Bourdieu as the socio-spatial education [26]. Positions and dispositions of social groups, served as actors—carriers of various educational practices and activities, which needed professionals, were identified first of all. In order to get necessary empirical information, we used qualitative and quantitative sociological instruments: widespread surveys of northerners with SIPN selection (*Tab. 1*), in-depth interviews with experts, focus-groups, content-analysis of media and social networks.

Surveys and other studies were conducted by qualified interviewers: graduate students and teachers of Tyumen Industrial University, staff of the West-Siberian Branch of the Federal Center of Theoretical and Applied Sociology of the Russian Academy of Sciences with grant support from the Russian Foundation for Basic Research.

We developed our own methodological instruments that allowed us to analyze the dynamics and territorial factors of the ongoing changes.

The analysis of the results of the survey was conducted in four main social groups of respondents: 1) old residents of the Northern regions (Russians, Tatars and others); 2)

Table 1. Socio-demographic structure of respondents representing SIPNs, % from the number of respondents (N=1,340 people), 2018

Indicators	YNAO regions	
	Krasnoselkupsky	Purovsky
<i>1. Nationality</i>		
Nenets	6.5	89.6
Khanty	1.8	2.0
Selkup	90.5	7.3
Others from the number of SIPN	1.2	1.1
<i>2. Sex</i>		
Male	32.9	37.5
Female	67.1	62.5
<i>3. Age</i>		
Under 20	1.9	5.3
21–30	20.9	25.3
31–40	32.9	35.8
41–50	25.9	27.4
51–60	13.3	4.2
Above 60	5.1	2.1
<i>4. Sphere of occupation</i>		
Reindeer husbandry	5.4	4.2
Fishing	3.6	7.3
Animal husbandry, hunting	6.0	4.2
Oil and gas production	6.0	7.9
Service sector	7.1	3.1
Education	19.0	26.0
Sphere of culture	13.1	10.4
Healthcare	10.1	11.3
Public authorities	1.2	6.3
Construction	1.2	2.1
Folk craft	1.8	1.5
Commerce	2.4	1.0
Transport, communication, etc.	14.9	8.4
Unemployed	19.0	6.3

representatives of aboriginal ethnic groups, indigenous peoples of the North; 3) new settlers (who has lived in the Arctic for less than five years); 4) shift workers. The biggest issue was the survey of the SIPN nomadic population. For this purpose, we attracted representatives of public aboriginal organizations (first of all, “Yamal is for descendants”) and local intelligentsia.

One clarification is required here. There is the discussion in the literature: who “old residents” of the North are. While determining this category, we were guided by three factors. First of all, unlike SIPN, there is no definition

of it in the law. Attempts of some regional legislatures to do it were not successful, because they were solely focused on, for example, “Russian Arctic old residents of Yakutia” [27: 151–152]. Second, the question, whether to consider those who have lived on this territory for a long time with locals (for a generation or more) “old residents”: it is still debatable because of the growth of ethnic consciousness of the northern aborigines. Third, extreme natural and climatic conditions allow us to include all permanent residents (excluding “shift workers” and settlers), who have lived in the local community for more than five years, into this category: five years is a sufficient period for adaptation and understanding of further prospects of living in this region. That is why we attribute not only Russians, who have lived there for a long time (more than five years), to old residents of YNAO but also Tatars, Ukrainians, and members of other ethnic and cultural groups.

Results of the research

In this work, to certain degree, educational levels 0–7 are analyzed according to the International Standard Classification of Education (ISCED 2013), in which SIPNs are presented [28]. Let us point out the specific features of getting education while completing one of its levels.

For preschool education (ISCED level 0), it is children’s life in tundra, away from stationary preschool institutions. Socialization of children and their training for school are practically the family’s concerns, primarily – the mother’s concern. Recently, preparatory classes in boarding schools have become common in the process of training children for school: in this case, a child is brought from the tundra to the nearest village which has a school for SIPN children. This is where a child receives the necessary training to successfully master the programs of primary and secondary general school education.

School education (ISCED levels 1, 2, 3) for SIPN children also has some peculiarities. It functions in two forms: first of all, as stationary acquisition of primary, basic, and secondary general education, when children study and live in a boarding school; second, as acquisition of primary education in nomadic conditions [29; 6]. In the recent case, SIPN children are put in tundra schools where several aboriginal families, which are in a joint nomad (“kaslanie”) with deer in tundra, organize a nomadic school of levels 1–2, where children are taught by specially trained teachers of primary and basic classes: usually, they are members of united families. Such teachers are trained in pedagogical colleges of the Tyumen Oblast (Tyumen, Tobolsk, Golyshmanovo locality, etc.) and in the Yamal Multidisciplinary College (Salekhard) with a branch in Labytnangi.

Vocational secondary and higher education (ISCED levels 4–5, 6–7) for SIPN children is not common: it is especially noticeable at levels 6–7 (bachelor’s degree, specialty’s degree, master’s degree). Distance learning for two last levels is quite popular among SIPN children. At the same time, girls prefer pedagogical and medical specialties, and boys prefer agricultural specialties (zootechnicians and veterinarians) or economic ones. National political, management staff for SIPNs is primarily trained in the University of Tyumen, Tyumen Industrial University, and universities of nearby regions [30].

Our research found out educational trajectories and attractiveness of activity fields in the educational level discourse (*Tab. 2*).

As it is stated in Table 2, traditional crafts top the list of SIPN education of levels 0–5. It could be explained by sufficiency of education for reindeer herding, hunting, fishing occupations. At the same time, employment in the oil and gas sector of the regional economy and the corresponding education’s receiving is becoming more and more attractive for SIPN. Orientation toward commercial and

Table 2. The attractiveness of various activities for the YNAO SIPN, depending on respondents' level of education, % from the number of respondents (N=1,340 people), 2017

Spheres of work	Education level				
	ISCED 0	ISCED 1	ISCED 2-3	ISCED 4-5	ISCED 6-7
1. Traditional crafts	50.0	55.0	56.1	42.0	25.6
2. Oil and gas industry	8.3	25.0	21.5	33.3	30.8
3. Commerce and entrepreneurship	25.0	10.0	8.4	7.2	12.8
4. Authorities	-	5.0	7.5	5.8	23.1
5. Other	16.7	5.0	6.5	11.6	7.7
Total	100.0	100.0	100.0	100.0	100.0

entrepreneurial activities is quite weak: especially with the increase of educational level (it is believed that simple literacy would be enough). Only a small number of SIPN want to join governing bodies. It is related to undesirability of separation from a traditional way of living.

Earlier, we studied the quality of higher professional education for oil and gas sector of the Arctic region. 670 senior students, 560 teachers of specialized disciplines, and 195 different managers from oil and gas companies, situated on the territory of YNAO, were interviewed. Training of oil specialists in Russia is conducted in four universities: National University of Oil and Gas ("Gubkin University"), Tyumen Industrial University, Ufa State Petroleum Technological University, and Ukhta State Technical University. Some results of the conducted research are given in *Table 3* and in [5].

The experts expressed their opinion about young specialists' lack of foreign languages knowledge, information technologies know-

ledge, specifics of the Arctic regions knowledge, and practical skills. In their opinion, it is especially important to improve the interaction between universities, enterprises and organizations for the formation and implementation of educational programs oriented toward the Arctic, taking into account already commenced and promising mega-projects in high-latitude regions.

Low assessment, in comparison with teachers and students' assessments, of specialized enterprises' representatives were followed by specific proposals for changing the structure and content of the educational process.

The primary conclusion of this study is that the main regional university, which effectively interacts with the government, business and civil societies, should become the primary integrator of innovative neo-industrial development of the Arctic region. It must be the coordinator of the formation of new partnering structures (business incubators, technology parks, etc.), the polygon of the efficient technologies' development, business processes,

Table 3. Assessment of professional oil and gas personnel for the Arctic training quality by regional Russian universities, % of the number of respondents (N=1,425 people), 2017

Assessment	Students	Teachers	Employers
Great	18.3	10.1	2.4
Good	29.1	49.3	20.1
Satisfactory	36.9	25.4	35.0
Unsatisfactory	3.1	13.2	39.1
Hesitate to answer	12.6	2.0	3.4
Total	100.0	100.0	100.0

and, finally, one of the major actors of sustainable socio-economic and socio-cultural development of the Russian Arctic region.

According to experts, except the specialists of oil and gas profile, who are trained for the Arctic in aforementioned universities, it is necessary to expand, or start, training for industries related to the traditional SIPN activities. It includes reindeer husbandry and deep processing of venison, fishing and fish processing, aquaculture, tourism, biotechnology, artistic production of souvenirs, northern logistics, Arctic ecology, northern urban economy, as well as engineering, medical, pedagogical, management specialties, and others demanded in the circumpolar regions.

Specifics, problems, and ways to solve them in the spheres of the northern education and staff training for neo-industrial Arctic development were studied in details during two last expeditions. The first one happened in September of 2017: in Salekhard, Novy Urengoy, on the territory of the Yamal District of YNAO (Yar-Sale locality and others) in-depth interviews with experts were conducted: they were related to education of young northerners and the formation of labor resources for circumpolar region; 140 experts were interviewed: heads of schools and educational departments, members of YNAO executive authorities and district's municipal institutions, deputies of the legislative assembly of YANA O, district, city, settlement's legislative bodies, representatives of employers, national and cultural organizations, mass media, and others.

To study the real situation with SIPN education, we chose one of the northern ethnic groups, which has not been specially studied before. According to the 2010 census, 3.6 thousand Selkups lived in Russia, including two thousand in YNAO, 1.2 thousand in the Tomsk Oblast, 0.3 thousand in Krasnoyarsk Krai.

In May of 2018, we conducted scientific expedition to the territory of compact primary residence of the Selkup ethnic group – Krasnoselkupsky District of YNAO. Its center is Krasnoselkup locality where 769 Selkups live. It is 19.7% of average annual number of permanent residents of this settlement. There is a great school, which has the same level of material and technical equipment, in the locality, but the Selkup language is not studied there. Local authorities explained this by the lack of teachers and low demand among children who got used to communications in Russian. The Selkup language is taught in primary schools of two settlements of the District: Ratta locality, where 195 Selkups live (87.7% of the population), and Tolkinskoye locality, where 629 people are Selkups (34% of total population). The main area's occupations are fishing, hunting, gathering and processing of wildflowers, reindeer husbandry. At the same time, only a quarter of Selkup people still retain knowledge of their native language.

A particular feature of the demand for teaching the native language in this Arctic region should be noted. The current generation of SIPN young people largely “passively bear” knowledge of the language, because language link between generations was broken. Often, there is no communication in native language between family members. Also, parents usually do not support its study, because they see meaning and perspective for their children in learning the national and/or international language (e.g. English).

Because of this situation, according to some mass media sources, the Ministry of Education of the Russian Federation is planning to reduce hours of teaching native language to northern ethnic groups in all entities of the Russian Arctic zone – from 3 to 1 hour per week. It cannot be explained as socially justifying.

The training of qualified teachers of the Selkup language is conducted in two Russian universities: Institute of Northern Peoples, which is the part of Herzen State Pedagogical University of Russia, and Tomsk State Pedagogical University. In YNAO, there is only one institution of secondary vocational education which trains specialists in spheres of native languages and culture – Yamal Multidisciplinary College in Salekhard, with a branch in Labytnangi. Ethno-regional education in the region is still at the initial stage of a prospective modernization. It requires long-term state and corporate support, which it is partially receiving now. For example, YNAO, within the national project “Education”, will receive more than 32.2 billion rubles until 2024. It is planned to build 27 schools for 14,925 places, to create three technoparks “Quantorium” for children in Salekhard, Novy Urengoy, and Noyabrsk, to open the center of advanced professional training on the basis of Noyabrsk College of Professional and Information Technologies, and implement other projects using this money. Active participation of representatives of the real economy’s sector, leading scientists, inventors, and entrepreneurs is envisaged in the project’s implementation [31]. By ethno-regional education we mean an educational system that integrates the multiculturalism and polyethnicity of the Arctic region, taking into account a specific ethnic group, in order to provide a harmonious educational environment based on historical, national-cultural traditions, spiritual and moral values. Features of mentality, ways of living of indigenous ethnic groups, the need to preserve the unity and integrity of the cultural-educational space of Russia must be expressed, in accordance with the spirit of commitment to the Bologna process. In this case, the central problem is the formation and integration of ethnic and common Russian

national identity. Self-understanding of being involved in spiritual and moral heritage of ancestors, being an heir, a bearer of language, culture and spiritual traditions of own ethnic group and simultaneously being a citizen of a multinational Russia, natural part of the culture, which includes culture of northern ethnic groups, is the meaning of identification. It is a value basis for the formation and development of ethno-regional education.

Field studies that we conducted in 2017 and 2018 on the territory of YNAO, showed that ethnoregional identity often becomes some kind of an integrator of civil and ethnic identity. While studying the self-consciousness of residents of remote YNAO settlements, it was found out that there are more people who identify themselves as “northerners” and “Yamals” than those who identify themselves as all-Russians, members of ethnic identity (“Russian”, “Slavs”, “Russian”, “Nenets”, “Selkup”, etc.) and locals (“Salekhard”, “Novourengoyets”, etc.). It is proved by the study results of socio-spatial transformation of the Arctic macro-region territory, which had been conducted before [32]. Some survey results of SIPN representatives are given below. This research was conducted in May 2018 according to representative samples in Krasnoselkupsky and Purovsky districts of YNAO. In Purovsky District (Tarko-Sale settlement, N=519, p±3.1%), natural gas production has been carried out for a long time, but industrial development of Krasnoselkupsky District (Krasnoselkup, Tolka, Ratta settlements, N=821, p±2.9%) has only just began. At the same time, the sample was representative not only for the peripheral districts of YNAO as a whole, but also for each of the above-mentioned districts.

The part of a questionnaire, aimed at identifying northerners’ utmost concerns, included questions about the extent of people’s

worries related to children's education and upbringing. It turned out that this problem is very important for members of aboriginal ethnic groups. While determining the level of satisfaction with various elements, SIPN were asked about the importance of obtaining education and the degree of respondents' satisfaction with children's education (*Tab. 4*).

Importance of educational issues and Purovsky District's indigenous people's low level of satisfaction with this aspect are obvious: these problems are major ones.

Respondents were also asked the following question: "What would you want for your children?" The answers are given in *Table 5*.

It should be noted that Purovsky District has been included in the process of industrial development since the 1970s, while Krasnoselkupsky District and its indigenous residents have acquired "civilized" experience recently – at the beginning of the 2000s. Indigenous people from the north of Purovsky District have extensive experience in cooperating with industrial civilization. That is why they are more critical toward anything new and

more actively advocate for the preservation and development of traditional lifestyles than residents of Krasnoselkupsky District.

Discussion and conclusions

Summarizing the results, obtained in the course of sociological research, we can point out that different levels of general and professional ethno-regional education of the Arctic zone of the Russian Federation requires long-term state, non-state, corporate, and public support, associated with the prospective modernization of the entire system. It is necessary to expand the training programs with courses which allow gaining knowledge on the Arctic region's specifics, to strengthen the cooperation between universities and companies, involved in the neo-industrial development of the Arctic in order, among other things, to expand the training of specialists for industries related to the traditional life of northern indigenous ethnic groups. Educational organizations, conducting professional training, should take into account the need for expanding educational trajectories for SIPNs: not only for traditionally profiled specialties, but also for

Table 4. The importance of children's education issue and the level of satisfaction with its solution in SIPN assessment, % from the number of respondents (N=1,340 people), 2018

A. The degree of issue's relevance	YNAO region	
	Krasnoselkupsky	Purovsky
1. Issue of primary concern	86.1	82.1
2. Issue of secondary concern	13.9	17.9
B. Level of satisfaction with children's education		
1. Completely satisfied	54.7	16.1
2. Partially satisfied	30.9	52.7
3. Not satisfied	14.4	31.2

Table 5. Desired life opportunities for children according to respondents from YNAO SIPNs, % from the number of respondents (N=1,340 people), 2018

Future options for children from SIPN, which determine educational strategy	YNAO region	
	Krasnoselkupsky	Purovsky
1. Enjoy all the benefits of modern civilization by moving away from traditional forms of living	28.0	31.8
2. To preserve traditional way of living, even at the expense of giving up some civilization's benefits	22.6	41.2
3. Children should choose their own way of living	49.4	27.0

new, socially significant ones (medical skills, social work, pedagogical training, management competencies, IT-technologies, etc.). It is necessary to adjust mechanisms of referral and quota education for the admission of young people to universities and other educational organizations of Tyumen, Yugra, Moscow, and Saint Petersburg, additional discussion of such mechanisms' legal and financial basis by interested parties is also required. For example, in relation to the provision of the right to receive preferences on the legislative level for SIPN young people, in the form of admission points for universities and other educational organizations, after the successful passing of the exam or sponsorship scholarships from corporations like "Gazprom", "Rosneft", "NOVATEK", interested in qualified national personnel.

Nowadays, native languages of the indigenous peoples of the Russian North are not languages of education. They are taught only in primary classes from 1 to 3 hours a week, or optionally from 1 to 2 hours a week. In fact, there are no educational and methodological teaching materials and professionally trained teachers.

Real pedagogical practice is often not provided with the necessary legal, scientific and methodological, organizational and material conditions for the implementation of ethno-cultural education, including the lack of a unified alphabet in individual languages (for example, in Khanty). Nomadic small schools, created in YNAO, require large material and technical support from, first of all, regional and municipal authorities. In current circumstances, the educational paradigm and the semantic content of the "nomadic school" concept have changed. It was necessary to coordinate its provisions with Federal educational standards, to create an informatized educational environment, etc.

Today, the educational process in a nomadic school goes on for the whole year: training is replaced by "kaslanie", lessons are replaced by practice during a seasonal nomad. There are stationary versions of nomadic schools, based on factories, tribal communities, and transshipment bases, and mobile versions, when people roam together with reindeer herding herd. The educational project "Nomadic school" received legal consolidation in the YNAO in 2012, when training of specialized personnel began in Yamal Multidisciplinary College. New pedagogical, psychological, literary historical, ethnological, cultural courses were prepared. The curriculum included such basic subjects as "Reindeer husbandry", "Chum's host", "Fishing", "Small northern appliances", "Basics of national sewing", "National kitchen", "Folk medicine". Courses on manufacturing fur clothes and shoes, beadwork, bone carving began in training workshops. Physical education lessons are used for testing "Northern multiathlon" educational program. After receiving the necessary theoretical knowledge during full-time field sessions, students of Yamal Multidisciplinary College spend a significant part of their academic time in nomadic schools, practically consolidating acquainted knowledge. An issue concerning advantages (versatile children's socialization) and disadvantages (separation from family and traditional way of living) of boarding schools' activities in the system of SIPN general education requires a special study.

It is clear that ethno-regional education in the Arctic region should be overviewed by taking into account standards, adopted by UNESCO for minor groups of population. It should be seen as inclusive education which has the status different from other educational institutions. Smallness of many arctic settlements and nomadic camps' schools should also be considered.

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