

CHARACTERISTICS OF SAMPLES IN RUSSIAN-LATVIAN RESEARCH PROJECT ON PEDAGOGUE PROFESSIONAL IDENTITY: ANALYSIS OF PERSONAL INFORMATION ITEMS

Tatiana Bogdanova

Smolensk State University, Russian Federation

Jelena Jermolajeva

University College of Economics and Culture, Latvia

Svetlana Silchenkova

Smolensk State University, Russian Federation

Abstract. *The study is a part of Latvian-Russian research project on the professional identity of teacher started in 2013. The aim of the article is to analyze and compare the data of Latvian and Russian respondents in personal information items in two questionnaires for school teachers and university lecturers designed for studying the structural model of teacher's professional identity. The surveys were carried out in 2015 (for university teachers, 198 respondents) and 2017 (for school teachers, 433 respondents). The common features of the modern pedagogical staff of the two countries are revealed, and differences and problem zones of the educational systems are indicated. Examining respondents' personal information items, researchers revealed that in both countries, official statistical data on the pedagogical community, especially on the school teachers community, are incomplete and contradictory, especially in general school education. This suggests the need to improve methods of collecting statistical information in the field of public education.*

Keywords: *age, gender, teachers' professional identity, qualification, representative sample, requisite section of questionnaire, work experience.*

Introduction

There is now growing common understanding that teacher's stable and strong professional identity (PI) is a key to teaching/learning success (Beauchamp and Thomas, 2009; Carillo et al., 2015; Voinea & Palasan, 2014). In the last 20 years, research on teachers' PI has shown a significant growth. Diverse aspects of this theme have been studied, among them PI essence (Tateo, 2012; Ilyshin & Azbel, 2017; O'Connor, 2008), PI contents (Buitrago-Bonilla, 2017; Hsieh, 2015; Li, 2016), PI development (Vangrieken et al., 2017; Prytula & Weiman, 2012; Aykac et al., 2017), changes in teachers' PI in the context of educational reform (Buchanan, 2015). This study is a part of Latvian-Russian research project

“Professional identity of educators”, which is being implemented since 2013 by a group of scholars from Riga (Latvia) and Smolensk (Russia) including the authors of this paper. In the center of project are the contents of pedagogues’ PI. Since 2014 several surveys have been organized. On the whole, 1786 respondents filled questionnaires: university teachers, school teachers, and teacher students. At the current stage of the project, the hypothetical model of pedagogue’s PI contents has been created based on the data obtained earlier and the existing literature on the topic (first of all Beijaard et al., 2004; Emerson, 2010; Woo, 2013), and two more surveys have been organized for testing this model. In May-June 2015, 198 university teachers (80 in Smolensk and 118 in Riga) filled the questionnaire “University Teachers’ Professional Identity” (the authors of the technique are A. Shpona, M. Vidnere, J. Jermolajeva; see Senchenkov & Shpona, 2016). In April-May 2017, 433 school teachers from Latvia and Smolensk region (Russia) filled the questionnaire “School Teachers’ Professional Identity” (the authors are A. Shpona, M. Vidnere, J. Jermolajeva, T. Bogdanova, S. Silchenkova). Both questionnaires were developed on the base of the Professional Identity Scale in Counseling by H. R. Woo for the profession of counselor (Woo, 2013), which was radically modified for testing pedagogues.

The aim of the article is to analyze and compare the data of Latvian and Russian respondents in personal information items in two questionnaires for school teachers and university lecturers.

Representativeness and reliability of samples is most important for any research. Representativeness means that sample represents the general population; reliability is related to the sample size and error. In the implementation of the project, the researchers of both countries were permanently faced the difficulty of creating representative samples. It has been revealed that official statistical data on the pedagogical community, especially on the school teachers community, are incomplete and contradictory; their arranging by criteria and groups is arbitrary and sometimes illogical. In Russia, in addition, the criteria may vary from year to year. In both countries, there is a tendency to publish statistics that testify to success and improvement. Indicators that do not meet this trend are not available, which makes it difficult to trace dynamics and correctly set criteria for representativeness of samples being created. For this reason, the authors found it necessary to study in details the personal information items of the questionnaire “School Teachers’ Professional Identity”, filled by 433 teachers from the two countries. The analysis of these data is presented in the article.

Typical (stratified) repetition-free samples are used in the study. The general population was divided into 2 groups (strata): urban school teachers and rural school teachers. The individual respondents were randomly selected from each stratum. An important feature of a typical sample is that it yields more accurate results than other methods of selecting respondents (Spirina & Bashina, 2012).

The representativeness of the Smolensk and Latvian samples was ensured by fulfilment of the following requirements:

- a) Each member of the general population had approximately equal probability of getting into the sample. For the survey the typical schools were selected; the questionnaires were randomly distributed between teachers at schools meetings. It was not known in advance, who would receive the questionnaire. The principle of randomness of getting teachers into the sample is used to prevent systematic errors.
- b) The respondents were selected from the general population independently of the analyzed features. Since the teacher's PI was studied, which is a very complex phenomenon, the researchers could not know in advance the specific survey indicators. Moreover, the survey was often carried out by other people (assistants).
- c) The selection was carried out from homogeneous typical groups. In each country, respondents from over 20 schools participated in the selection. There were representatives of two typological groups in the Russian and Latvian samples: urban school teachers and rural school teachers. Each group included teachers of different age, education, work experience, qualifications.

In order to verify the representativeness of the samples, the sampling error was calculated for each of them. According to the published statistics, there were 7,476 teachers in the school year 2016-2017 in the Smolensk region. 3 % sample of them was created for the study (202 people). The sampling error is 6.8 %; that is, the discrepancy with the general population is 6.8 %. The sampling error for the Latvian sample is 6.4 %; it was calculated from the general population of school teachers in Latvia (22068, according to Statistika par izglitību, 2017) and 1 % sample (231 people). In both cases, the error is allowable (ЯДОВ, 2007) Thus the created samples were representative and ensured reliability of the study.

In the process of study, the common features of the modern pedagogical staff of the two countries were revealed, and differences and problem zones of the educational systems were indicated. In order to get a more general view on the pedagogical community of the two countries, the characteristics of school teachers were analyzed in the common context with the data of university teachers.

The incompleteness of statistics on teachers in both countries revealed in the process of the research suggests the need to improve methods of collecting official statistical information in the field of education.

Results

The survey "School Teachers' Professional Identity" took place in April-May 2017. 433 teachers from Latvia and Smolensk region (Russia) filled the

questionnaire. Its requisite section requested the following personal information: gender, age, education, qualification category, type of school, work experience, and grades, in which the respondent teaches. The analysis of these data revealed some features of the professional group that are not quite visible in statistical reports. The requisite data of the questionnaire are presented in Table 1.

Table 1 Characteristics of Latvian (LV) and Russian (RU) samples of school teachers

Indicator Group	Quantity of teachers		Age (mean)		Work experience, years (mean)		Education (%)			
	LV	RU	LV	RU	LV	RU	Higher		Specialized secondary	
	LV	RU	LV	RU	LV	RU	LV	RU	LV	RU
Urban schools	179	96	48.3	46.7	22.8	22.8	99.4	97.9	0.6	2.1
Rural schools	52	106	47.9	46.8	22.2	26.5	100	90.6	0	9.4
All	231	202	48.2	47.0	22.7	24.6	99.6	94.0	0.4	5.9
Indicator Group	Number of pensioners (%)*		Highest attestation category (%)		Work experience over 20 years (%)		Gender			
	LV	RU	LV	RU	LV	RU	M (%)		F (%)	
	LV	RU	LV	RU	LV	RU	LV	RU	LV	RU
Urban schools	9.5	20.9	-**	54.2	54.7	62.5	5.6	5.2	94.4	94.8
Rural schools	5.8	30.2	-	29.2	57.7	74.0	13.4	17.0	86.6	83.0
All	8.7	25.7	-	41.1	55.4	68.8	7.3	11.4	92.7	88.6

* In Russia the pension age for women is 55 years, for men - 60 years. In Latvia at the time of the study the pension age for both women and men was 62 years 9 months.

** Reliable information for this item is not available (see the text).

Due to the territorial and demographic features of Russia, there are a great number of rural schools. In the Smolensk region, the number of teachers employed in rural schools is higher than the average for Russia. The percentage of rural teachers in the Russian sample is much higher than in Latvian one, although, according to the official statistics, the Smolensk region is more urban than Latvia (72.1 % and 67.2 % of urban population, correspondingly) (Смоленская область в цифрах, 2017; Demogrāfija, 2017). Though it should be noted that division of Russian settlements into urban and rural ones is very contradictory and not fixed by general legislation. In recent years, the number of villages is declining and the number of small settlements increasing, where in statistical reports, the latter are mechanically referred to as urban (“urban-type

settlements”). In this survey, schools in small settlements were attributed to rural ones (in fact, there is no difference between these small schools and rural schools).

The data of the survey and comparison of them with available statistics of recent years shows the alarming growth of the percentage of teachers of pension age: while in 2002 proportion of pensioners in the Smolensk region was 12 % in rural schools and 13.8 % in urban ones (Развитие системы образования, 2017), in 2017 the corresponding data of Russian sample are 30.2 % and 20.9 % (the common indicator 25.7 %).¹ This negative trend correlates with the changes in age and work experience of teachers. In 2003, the percentage of teachers with length of service over 20 years was 48.7 % (ibid). In 2017 this indicator was already 62.2 % in urban and 74 % in rural schools. It should be recalled that the sampling error is only 6.8 %. This means that in the last years there has been practically no inflow of young specialists in the profession, although pedagogical faculties continued to produce them regularly. The average length of service of the teachers from the Russian sample is 24.6 years, the average age is 47.

In the Latvian sample, the proportion of urban/rural teachers also does not fit the official statistics: according to it, in 2017 more than a half of Latvian teachers worked at rural schools (Statistika par izglītību, 2017). It is obvious, however, that compilers of the statistical report did not take into account that many teachers worked at 2 (sometimes 3) schools; their main place of work is considered to be a rural school, but in the survey they more often identified themselves as urban teachers. This demonstrates certain biases and incompleteness of published statistics on Latvian teachers.

The average age of teachers in Latvian sample is 48.2 years, which is 1.2 years more than that in the Russian sample. At the same time, the average length of service (22.7) of Latvian teachers is 1.9 year less than the same indicator in Russian sample. Probably that can be partly explained by longer school years (12 in Latvia versus 11 in Russia). The demographic situation in the community of Latvian teachers is very far from optimistic. The percentage of teachers with length of service over 20 years is 55.4 %, which is less than in Russian sample, but it is still too high. Compared with the Smolensk region, there are fewer pensioners in the Latvian sample: only 8.7 %. However, the pension age in Latvia at the time of the study was 62 years 9 months, whereas in Russia it is 55 years for women and 60 for men. In general, Latvian school teachers are older than their colleagues in Russia. In Latvian and Russian samples, the proportion of women teachers at the age over 55 is 31.2 % and 19.3 %, correspondingly. It should be noted that in Latvian sample, in contrast to the Russian one, the number of teachers-pensioners in cities is higher than in rural areas (9.5 % versus 5.8 %).

¹ The authors could not trace the dynamics of changes of this indicator in recent years since corresponding statistics are not available.

The obtained data indicate to the aging of the teaching staff and the lack of continuity of generations in the profession in both countries; the situation in Latvia is more alarming than in the Smolensk region.

Among the positive factors is the high level of education of pedagogical staff: almost all teachers have higher education: 99.6 % and 94 % in the Latvian and Russian sample, correspondingly. The Latvian indicator on this item is especially impressive. In addition, it should be noted that according to the state statistics 3.9 % of Latvian teachers have the doctor degree (Statistika par izglītību, 2017). In the Russian sample, the significant difference is observed in education between urban and rural teachers: in urban schools, the percentage of teachers with specialized secondary education is 2.1 %, whereas in rural schools it is 9.4 %. The above-mentioned difference in the length of service in the samples of the two countries (2 year) was mostly formed by the rural teachers of the Smolensk region: their average length of service is 26.5 years, while in Latvia and in Smolensk city this indicator is from 22.2 to 22.8. Taking into account the data on the level of education, this suggests that a certain percentage of Smolensk rural teachers begin to work at an earlier age than their colleagues in Latvia and Smolensk city, i.e., not having higher education; they get it only later (mainly by distant learning).

The requisite section of the questionnaire contained an item on attestation category of teacher. In both countries, the system of teacher certification (attestation) was created to assess the qualifications of a teacher and to stimulate her/his professional growth. The researchers expected to obtain data to compare the samples according to the level of professionalism and dynamics of its formation by age and work experience. In the development of the questionnaire, the international research team took into account the certification categories of both educational systems and the professional requirements and criteria that they set considering them a clear expression of state educational policy. However it turned out that the attestation system fully works only in Russian education. All respondents from the Smolensk region indicated their category in accordance with the certificates they received: the highest, first, second category, or none (qualification growth from the 2nd to the highest category). It was found out that in urban schools there were significantly more teachers of the highest category than in rural schools: 54.2 % versus 29.2 %. Having practically the same average age as their urban colleagues and even longer work experience (46.7 – 46.8, 26.5 – 22.8, respectively), rural teachers clearly loose to them in the certification category, on which their salary and status depend. There may be two explanations: either less skilled teachers work at rural schools (it is worth remembering the difference in the percentage of those who do not have a higher education at rural schools, as well as the percentage of rural teachers who get it by distant learning), or the certification system is designed in the way that it puts teachers from villages

and small settlements in a non-winning position, which violates the equality principle in the professional community. However, rural students loose most since their right to qualitative education is violated. It should be noted that Smolensk, the most urbanized city in the Russian sample, is a small regional center with the population of 330 thousand inhabitants. If the comparative analysis included large cities, not to mention the capital, the difference would be catastrophic.

To the part of Latvian respondents, the item on the attestation category caused difficulties. Some teachers consulted colleagues or school administration to find out their category; 34 respondents (14.7 %) left this item blank. These data demonstrate that the previous system of certification of teachers did not work; the problem required urgent and drastic changes. Now the Ministry of Education of Latvia is implementing a new system of attestation of school teachers.

The gender characteristics of the samples confirm the obvious fact that school has become an exclusively female professional territory in both countries. The number of men in the Latvian and Russian samples is 7.3 % and 11.4 %, correspondingly. However, in rural areas the percentage of men in teaching staff is higher than in urban schools. In the Latvian sample, there are 5.6 % of men among urban teachers, and 13.4 % of men among rural teachers; in the Russian sample – 5.2 % and 16.98 %, respectively. This feature, common for both countries, can be interpreted in the following way. Once choosing a pedagogical profession, rural men do not usually leave it, and it becomes a matter of their whole life and the main place of work; the kitchen garden helps to solve financial difficulties. Men from urban schools more often leave the profession in search of a job with higher social status and salary.

In order to get a more general view on the pedagogical community of the two countries, the characteristics of school teachers were analyzed in the common context with the data of university teachers. In May-June 2015, 198 university teachers (80 in Smolensk and 118 in Riga) filled the questionnaire “University Teachers’ Professional Identity”. Their requisite data are shown in the Table 2.

Table 2 **Characteristics of university teachers in the samples of Riga and Smolensk**
(Jermolajeva & Bogdanova, 2017)

	F/M (%)	Age				Work experience				Sc. degree
		Mean	Up to 35 (%)	36-55 (%)	56 and above (%)	Mean	Up to 5 (%)	6-15 (%)	16 and above (%)	Dr. or candidate/ Mg. (%)
R	76,3/23,7	52,8	8,5	49,2	42,4	20,0	7,6	28,0	64,4	57,6 /42,4
S	76,4/23,6	42,3	26,3	57,5	16,3	14,8	20,0	47,5	32,5	80 / 20

R – Riga, S – Smolensk

Four leading higher education institutions of Smolensk participated in the survey: Smolensk State University, Smolensk State Medical University, Smolensk State Agricultural Academy, and Smolensk Academy of Physical Culture, Sports and Tourism. The average age of Smolensk lecturers is 42.3, which favorably distinguishes them from the other 3 samples. This means that in recent years there has been an inflow of young people into higher educational institutions of Smolensk (57.5 % of this sample are people aged from 36 to 55), and there are good dynamic indicators of this process: 26.3 % of teachers are under 35 years old. The opposite situation is in the Latvian sample consisting of teachers from Riga Teacher Training and Education Management Academy, Latvian Academy of Sport Education, Latvian Academy of Music, and Riga Technical University. This sample is the oldest: the average age in it is 52.8 years, 42.4 % of the sample are people in the age of 56 years and over (cf. 16.3 % in Smolensk). The inflow of young people is very small: only 8.5 % are 35 or younger. Evidently it is impossible to change the situation radically in the near future, though it requires immediate and effective measures.

Most of the respondents in Riga started work at the universities more than 16 years ago (64.4 %); the percentage of teachers with the scientific degree (57.6 %) is mainly provided by them. 42.4 % of university teachers from the Riga sample have only the master degree. Therefore, not only the aging of the pedagogical staff is observed, but decrease in pedagogical and research skill level as well. In Smolensk universities the situation is essentially better: 80 % of teachers have the scientific degree. This means that capable graduates remain in universities as teachers, actively engage in research, and successfully defend theses. The above-mentioned differences indicate an alarming situation in the issue of academic personnel of Latvian higher education.

The gender ratio of university teaching staff in Russian and Latvian higher schools is the same: 23.6 % of men in Smolensk, 23.7 % in Riga. Without taking into account the situation in the school sector, the proportion of men teaching in higher school may seem small. However, in comparison with the number of men among school teachers (11.4 % in the Smolensk region sample and 7.3 % in Latvian sample), it looks different. The number of men in the universities teaching staff is about the fourth, whereas their percentage among school teachers is too small, especially in Latvia. It should become a matter of great concern in society since the lack of male teachers has a negative impact on the professional choice of young people; it seems difficult to change the situation in the near future.

Conclusions

1. The analysis of personal information items of the questionnaire for school teachers revealed incompleteness of official statistics in both countries,

which complicates the pedagogical research, monitoring the current situation and the implementation of the educational reform. This suggests the need to improve methods of collecting statistical information in the field of public education.

2. A marked aging of teachers community as a whole has been observed in both countries, as well as a lack of continuity of generations in the profession. In Latvia, it is more evident than in Russia. In the 4 groups of teachers participating in the study, the most unfavorable indicators are observed in the group of university teachers in Riga.
3. The level of education of school teachers has grown significantly in recent years: in Latvia 99.6 % of teachers have higher education and 94 % in the Smolensk region. The problem of insufficient education of teachers persists in rural areas of the Smolensk region (90.6 %).
4. Rural teachers loose to urban colleagues in the certification category, despite the fact that their work experience is four years longer: the percentage of teachers with the highest attestation category at rural and urban schools is 29.2 % and 54.2 %, correspondingly. Such an imbalance can indicate to non-qualitative initial education (probably due to the distant form of learning that is still widespread in rural areas), inefficiency of the system of in-service teacher professional development, as well as inadequate certification system that puts rural teachers in a non-winning position, which violates the equality principle in the professional community. However, rural students loose most since their right to qualitative education is violated.
5. The obtained data showed that in Latvia the previous system of certification of school teachers did not work; the problem requires urgent and cardinal changes.
6. School has become an exclusively female professional territory in both countries. This leads to an imbalance in the educational environment; students do not see sufficient number of positive patterns of male behavior. However it should be noted that the percentage of men in rural schools is higher than in urban ones.
7. Apart from aging of academic staff, decrease of teachers' scientific productivity is observed in Riga higher education institutions. The number of university teachers in Riga who do not have a scientific degree is twice as large as the similar indicator in the universities of Smolensk; the inflow of young people is minimal, therefore the dynamics of scientific growth of university teachers is weak. This requires immediate changes in the personnel policy of Latvian higher schools.

References

- Aykac, N. et al. (2017). Understanding the Underlying Factors Affecting the Perception of Pre-Service Teachers' Teacher Identity: A New Instrument to Support Teacher Education. *University Bulletin*, 6 (1), 67–78.
- Beauchamp, C., & Thomas, L. (2009). Understanding teacher identity: An overview of Issues in the literature and implications for teacher education. *Cambridge Journal of Education*, 39, 175–189.
- Beijaard, D., Meijer, P. C., & Verloop, N. (2004). Reconsidering research on teachers' professional identity. *Teaching and Teacher Education*, № 20, 107-128.
- Buchanan, R. (2015). Teacher identity and agency in an era of accountability. *Teachers and Teaching*, 21 (6). Retrieved from: <http://www.tandfonline.com/doi/full/10.1080/13540602.2015.1044329>
- Buitrago-Bonilla, R. E., & Cárdenas-Soler, R. N. (2017). Emociones e identidad profesional docente: relaciones e incidencia. *Praxis & Saber*, 8 (17), 225–247.
- Carrillo, C., Baguley, M., & Vilar, M. (2015). The Influence of Professional Identity on Teaching Practice: Experiences of Four Music Educators. *International Journal of Music Education*, 33 (4), 451-462.
- Demogrāfija (2017). Rīga: CSP. Retrieved. from: <http://www.csb.gov.lv/dati/e-publikacijas/demografija-2017-45935.html> .
- Jermolajeva, J., & Bogdanova, T. (2017). Professional identity of higher education teachers in samples of Riga and Smolensk. *Society. Integration. Education. Proceedings of the International Scientific Conference*. Rēzekne: RAT 1, 197–207
- O'Connor, K. E. (2008). “You choose to care”: Teachers, emotions and professional identity. *Teaching and teacher education*, 24, 117–126.
- Emerson, C. H. (2010). *Counselor Professional Identity: Construction and Validation of the Counselor Professional Identity Measure*. PhD thesis. Greensboro: The University of North Carolina.
- Hsieh, B. (2015). The Importance of Orientation: Implications of Professional Identity on Classroom Practice and for Professional Learning. *Teachers and Teaching: Theory and Practice*, 21 (2), 178–190.
- Ilyushin, L. S., & Azbel, A. A. (2017). The modern Russian teacher: Studying awareness with the use of the semi-structured interview. *Psychology in Russia: State of the Art*, 10 (1), 49–66.
- Li, B. (2016). Identifiable but Changeable: Capturing the Features of Teacher Identity. *International J. Soc. Sci. & Education*, 6 (2), 225–234.
- Prytula, M., & Weiman, K. (2012). Collaborative professional development: An examination of changes in changes in teacher identity through the professional learning community model. *Journal of case studies in education*, 3 (July 2012), 1–19.
- Senchenkov, N., & Shpona, A. (Eds.). (2016) *Professional identity of teacher: A comparative international study. Collective monograph*. Smolensk: Smolensk State University.
- Spirina, A., & Bashina, O. (Ed.) (2012). *General theory of statistics: Statistical methodology in the study of commercial activity*. Moscow: Finance and statistics.
- Statistika par izglītību (2017). Rīga: IZM. Retrieved from: www.izm.gov.lv/lv/publikacijas-un-statistika
- Tateo, L. (2012). What do you mean by “teacher”? Psychological research on teacher professional identity. *Psicologia & Sociedade*, 24 (2). Retrieved from: <http://dx.doi.org/10.1590/S0102-71822012000200012> .

- Vangrieken, K., Meredith, C., & Kyndt, E. (2017). Teacher communities as a context for professional development: A systematic review. *Teaching and Teacher Education, 61*, 47–59.
- Voinea, M., & Palasan, T. (2014). Teachers' professional identity in the 21st century Romania. *Procedia: Social and Behavioral Sciences, 128*, 361–365.
- Woo, H. R. (2013). *Instrument construction and initial validation: professional identity scale in counseling*. PhD thesis. Iowa: University of Iowa.
- Развитие системы образования в Смоленской области* (2017). Retrieved from: <http://pandia.ru/text/78/362/764.php>
- Смоленская область в цифрах* (2017). Смоленск: Смоленскстат. Retrieved from: http://sml.gks.ru/wps/wcm/connect/rosstat_ts/sml/resources/3bd0730047071c7396eebe87789c42f5/smck17.pdf
- Ядов, В. А. (2007). *Социологическое исследование: методология, программа, методы*. Москва: Омега-Л.