Research on Quality of In-Service Teacher Education and Professional Development in Ukraine by TALIS methodology and its Policy Impact

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In the present day, teacher education in Ukraine, both pre-service and in-service, is undergoing considerable change within the scope of the New Ukrainian School reform. The Ministry of Education and Science of Ukraine, as the main policymaker, came to the understanding that the reform should be evidence-based and commissioned the Ukrainian Educational Research Association to carry out the All-Ukrainian Monitoring Survey of Secondary School Teachers and Principals, using the TALIS methodology (2017–2018). The research gives insight into the professional development and support of teachers.

The authors present the survey's results on the above-mentioned issues as well as analyze how the survey results are used in policymaking. They conclude that although the reform is introducing a lot of positive changes, in the current Ukrainian educational system, which is too formalised, teachers' professional development is still propelled by external rather than internal motivation; professional development courses that are not diversified enough do not meet teachers' demands; and teachers demonstrate a low degree of awareness of the dynamic 21st-century changes that engender teachers' ability to work in a multicultural and inclusive classroom environment.

— Keywords:

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Introduction

In the present day, teacher education in Ukraine, both pre-service and in-service, is undergoing considerable changes within the scope of the New Ukrainian School reform, which was initiated by the Ukrainian Ministry of Education and Science in 2016. Within the reform, all the educational establishments and the system itself are to be cardinally transformed. The purpose of the reform is to "create a school that will be pleasant to go to and will provide the students not only with knowledge, as is the case now, but also with the ability to apply it in real life. The New Ukrainian School is a kind of school which is pleasant for students to be in. Their opinion is respected here, they are taught to think critically, not to be afraid of voicing their view and be responsible citizens" (New Ukrainian School, n.d.).

To create a favourable educational environment, which is in the focus of the above-mentioned school vision, it is important that teachers are ready to view students as partners. They should provide them with opportunities to express their critical thoughts and to take responsibility for their learning. To ensure that, the Ministry has published methodological materials called *New Ukrainian School: Toolkit for teachers* (New Ukrainian School, 2017), advising teachers on how to achieve the expected results. Nevertheless, just getting the information is not sufficient for moving towards the New Ukrainian School. It is vital that we hear the voices of Ukrainian teachers and realise their beliefs about the key aspects of the educational reform. For this, we should ask questions of the Ukrainian teachers who are experts in their field and know the school environment on the basis of their daily life. The methods of and approaches to in-service education as well as teachers' professional development are concerned with looking for some measures to raise the prestige of the teaching profession and increasing talented young people's motivation to consider teaching as a career.

The current situation in Ukrainian school education

To avoid subjectivity and to get a proper idea of Ukrainian education, we would like to view it from different angles. These mainly presuppose taking into account at least three points of view, namely, an external perspective, i.e. from outside Ukraine; an internal perspective, which is provided by teachers and school leadership teams; and the point of view of policymakers.

When we speak about the external perspective, we mean that of international institutions providing independent expertise, which is often done by analytics and observation, is usually based on short-term data, and is usually straightforward and unbiased. For instance, the World Bank pays attention to some issues affecting Ukrainian schools' sustainability. These are connected with:

1. a lack of adequate facilities, and sometimes a lack of indoor restrooms;
2. outdated teaching methodologies, low morale among teachers, and outdated approaches towards teaching and learning;
3. lessons that are overburdened with theoretical knowledge and dry textbooks dampening motivation and curiosity among students;
4. unofficial payments that are common in education;
5. teachers' low social status, low salaries and a lack of opportunities for personal and professional growth (Kahkonen, 2018).

As a result, "not all Ukrainian citizens enjoy equal access to the quality education that has been guaranteed by the constitution. In fact, too many of the country's schools deepen what is becoming an entrenched cycle of poverty" (ibidem).

According to the OECD's information, we find that "despite having a high literacy rate and high enrolment in primary and secondary education, there is evidence of a skills gap in Ukraine" (OECD, 2012a, p. 10). In addition, "the education system focuses mainly on theory" and "curricula still carry a strong legacy from Soviet times" (OECD, 2012b, p. 11).

So, as can be seen, there are plenty of problems concerning both the physical environment as well as with the teaching itself, which often applies outdated methods that do not contribute to the development of opportunities for personal and professional growth and stifle creativity, dynamism, and motivation.

The Ministry of Education and Science of Ukraine, as the main policymaker, came to the understanding that the reform should be evidence-based and commissioned a TALIS survey from the Educational Research Association as part of the Teacher Project within the large-scale project "Educational Reform: Quality Assessment in the International Context" realised by the Ukrainian Step by Step Foundation with the support of the Ministry of Education and Science

of Ukraine and Porticus. The first three waves of the Teaching and Learning International Survey (TALIS) were conducted by the OECD in 2008, 2013 and 2018. Ukraine did not participate in them, which deprived it of valuable data that might have contributed to understanding the current situation by comparing its data to those recorded in other countries. Thus, the Educational Research Association got permission from the OECD to use Principal and Teacher questionnaires from TALIS 2013 for the TALIS survey in Ukraine.

The research methodology

The Ukrainian Educational Research Association conducted the research in February–August 2017. The researched population embraced 201 principals from 201 schools, as well as 3,600 school teachers. The research was conducted in all regions of Ukraine, except for Crimea and the territories in the conflict zone (see Table 1).

Table 1. The Survey Design

SURVEY INFORMATION	DESCRIPTION
Project coordinator	Ukrainian Educational Research Association
Survey window	February–August 2017
Target group	School principals and teachers of grades 5–9 from all regions of Ukraine (government-controlled territories)
Sampling design	For schools – multistage sampling: 1 st stage – stratified, 2 nd stage – random, based on region, location, and type of school For teachers – one-stage, random
Achieved sample size	3,600 school teachers of grades 5–9 (ISCED 2), 201 principals from 201 schools
Error	Simple random sampling error is 1,6%, school sampling error with design effect is 2,3%
Tools	Questionnaires for teachers and principals. Time allotted for filling in was 45–90 min

After the survey, the results were extrapolated on the key reform documents regulating the transformation in teachers' professional development, i.e. *On Approving the Concept of the Development of Teacher Education* (Ministry of Education and Science, 2018a; hereinafter "the Concept") and *On the Roadmap for Implementing the Concept of the Development of Teacher Education* (Ministry of Education and Science, 2018b; hereinafter "the Roadmap").

The obtained data could be used for answering the following **research questions:**

1. What should be taken into account in teachers' professional development in implementing the New Ukrainian School reform?
2. In what way(s) are the problems in teachers' professional development addressed in the key documents of the New Ukrainian School reform?

Ukrainian teacher profile. The conducted survey provided data that may be used to describe the Ukrainian teacher profile. Thus, a typical middle school teacher in Ukraine is a 45-year-old female with a Bachelor's or a Master's degree, who has undertaken obligatory teacher training, who feels well-prepared for all aspects of teaching, and who is quite experienced and has a permanent job (see Tables 2 and 3).

If compared to the TALIS 2013 results, on average, the typical Ukrainian teacher is similar to teachers from other TALIS participating countries, though in Ukraine they are older and more experienced.

The average age of Ukrainian teachers in grades 5–9 is 44,7, which exceeds the international average in TALIS 2013 (42,9). The largest share of Ukrainian teachers is in the age group from 40 to 49 (29%), while for other countries it is the same proportion of teachers in the age group from 30 to 39.

The share of Ukrainian teachers in the age group of 60 and more is 12%, which is twice the international average. Only Estonia (16%) and Norway (15%) have a higher teacher percentage than Ukraine in this age group (Shchudlo, Zabolotna & Lisova, 2018). In the regional divide, the most considerable differences are observed in the 40–49 age group between Kyiv (20,4%) and Central Ukraine (35%), and in the 60-and-older age group between Western Ukraine (9,1%) and Kyiv (20%). In short, if 50 is considered the borderline between working age and possible early retirement age, the most favourable situation is in the central region (68% of teachers are younger than 50), and the least favourable is in Kyiv (53,1%), although Kyiv demonstrates a tendency for rejuvenation in its teacher population (13,7% of teachers are younger than 30, whereas in the regions the highest percentage is 5,2%).

In general, the share of teachers working after they have reached retirement age correlates with the size of the town (from 9,9% in villages and small towns with a population of up to 15,000 to 14,7%

Table 2. Ukrainian Teachers' Age and Gender Distribution

REGION	WOMEN	TEACHER PERCENTAGE, BY AGE														AVERAGE	
		UP 25		25–29		30–39		40–49		50–59		60–69					
			%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	AVERAGE	SE	
East	85,6	(1,5)	3,7	(0,8)	8,0	(1,0)	19,9	(1,6)	25,7	(1,3)	27,8	(2,4)	15,0	(1,2)	46,1	(0,7)	
West	85,1	(1,0)	3,9	(0,7)	10,9	(1,1)	24,1	(1,0)	28,8	(1,6)	23,2	(1,4)	9,1	(1,0)	43,4	(0,5)	
Kyiv	87,7	(3,3)	5,2	(0,4)	8,5	(2,5)	19,0	(3,6)	20,4	(4,7)	26,9	(5,7)	20,0	(5,6)	47,0	(1,7)	
North	87,4	(2,0)	1,2	(0,6)	6,6	(1,6)	21,6	(2,4)	32,4	(2,5)	26,3	(3,8)	11,9	(2,2)	46,4	(0,7)	
Central	76,7	(3,5)	3,6	(1,4)	6,1	(1,4)	23,4	(2,8)	35,0	(2,7)	21,2	(2,7)	10,6	(1,8)	44,7	(0,8)	
South	81,7	(3,1)	2,5	(1,7)	13,3	(2,6)	23,3	(3,6)	28,3	(3,6)	22,2	(2,3)	10,3	(1,6)	43,6	(0,9)	
average in Ukraine *	84,0	(0,8)	3,4	(0,4)	9,3	(0,6)	22,5	(0,8)	29,0	(0,9)	24,4	(1,0)	11,6	(0,7)	44,7	(0,3)	
15,000 inhabitants or fewer	81,9	(1,2)	3,5	(0,6)	10,6	(1,0)	23,5	(1,2)	29,4	(1,4)	23,1	(1,4)	9,9	(0,9)	43,9	(0,4)	
15,001 – 100,000	84,9	(1,3)	2,2	(0,6)	7,1	(1,1)	23,6	(2,1)	28,5	(2,0)	25,6	(2,1)	13,0	(1,6)	45,4	(0,7)	
more than 100,000 inhabitants	88,8	(1,1)	4,0	(0,7)	7,8	(1,0)	18,6	(1,2)	28,4	(1,6)	26,4	(2,2)	14,7	(1,6)	46,2	(0,6)	
TALIS 2013 average **	68,1	(0,20)	1,9	(0,1)	10,0	(0,1)	29,2	(0,2)	28,8	(0,2)	23,8	(0,2)	6,3	(0,1)	42,9	(0,0)	

* UERA, 2017 , ** OECD, 2014

for cities with a population of more than 100,000). The same can be noted in the growing gender disbalance, though the share of women who are younger than 30 constitutes 79%, which is the lowest when one compared to other age groups (the biggest share of 87,3% is found in the 40–49 age group). Here, we can assume that male teachers dominate in leaving their teaching career early, which leads to further gender disbalance.

There has been some previous research identifying a teacher's age as a determinant for their professional development (Desimone, 2009; de Vries, van de Grift & Jansen, 2013; Badri, Alnuaimi, Mohaidat et al., 2016). Their results demonstrated that, on average, the extent of teachers' professional development decreased with age. This indicates that, when designing professional development programmes in different regions of Ukraine, this factor should be taken into consideration. Also, there should be a special focus on activities that could prevent male teachers from leaving their teaching career early.

In Ukraine, teachers demonstrate a traditionally high level of formal education which is due to the strict state regulations in this respect. Thus, as the survey demonstrates, the percentage of middle school teachers with Bachelor, specialist or Master's degrees (ISCED levels 5A and 6) in Ukraine is 96,3% (Table 3), which exceeds the TALIS 2013 average by 5,4%. On the other hand, the share of teachers with a PhD or higher degree is lower compared to the TALIS average (by 0,2% and 1,4%, respectively). From the regional perspective, there is no significant difference in the levels of teachers' formal education except in the Central and Northern regions where the percentage is somewhat higher (5,7% and 6%, respectively) (see Table 3).

Comparing the levels of formal teacher training in Ukraine with those in the countries participating in TALIS, it is necessary to take into account the differences in the teacher qualification frameworks at different ISCED levels. Although, for instance, the majority of teachers in Flanders, Belgium (85%) have received formal education to 5B ISCED level, which corresponds to junior specialist in Ukraine, they are qualified teachers, which is sufficient for work at a secondary school.

Table 3. Teacher Distribution by Highest Level of Formal Education

REGION AND TYPE OF SCHOOL	HIGHEST LEVEL OF FORMAL EDUCATION							
	LOWER THAN JUNIOR SPECIALIST		JUNIOR SPECIALIST		BACHELOR OR MASTER'S		PHD OR DOCTOR OF SCIENCES	
	%	SE	%	SE	%	SE	%	SE
East	0,2	(0,1)	2,6	(0,5)	96,9	(0,5)	0,3	(0,2)
West	0,1	(0,1)	3,0	(0,6)	96,7	(0,6)	0,2	(0,2)
Kyiv	0,0	(0,0)	1,0	(0,7)	97,6	(1,6)	1,3	(1,0)
North	0,1	(0,1)	1,8	(0,6)	98,1	(0,6)	0,0	(0,0)
Central	0,9	(0,9)	5,7	(1,2)	93,3	(0,8)	0,0	(0,0)
South	0,3	(0,3)	6,0	(0,8)	93,7	(0,8)	0,0	(0,0)
average in Ukraine *	0,2	(0,2)	3,4	(0,3)	96,1	(0,3)	0,2	(0,1)
middle school	0,5	(0,5)	5,1	(1,2)	94,1	(1,0)	0,3	(0,3)
secondary school	0,2	(0,1)	2,9	(0,3)	96,7	(0,3)	0,2	(0,1)
TALIS 2013 average **	2,0	(0,1)	7,1	(0,1)	89,5	(0,1)	1,4	(0,0)

* UERA, 2017, ** OECD, 2014

Table 4 demonstrates the data for how prepared the teachers feel after their formal education. The results are quite close to those provided by teachers from the TALIS 2013 participating countries. With regard to the content of their subject, for example, 92,3% of Ukrainian teachers feel well or very well prepared (the TALIS 2013 average is 93,2%).

In the two other aspects, the percentage of Ukrainian teachers who feel well or very well prepared is higher than the TALIS average with 91,9% vs 88,9% in the pedagogy of the subject and 90,9% vs 88,6% in classroom practice. It is worth noting that, in comparison with other regions of Ukraine, teachers from Kyiv feel the least well-prepared, which might be attributed to their higher exposure to the challenges of teaching in urban areas and a higher level of self-demand which requires further research. A similar situation is observed in Mexico, Japan and Finland, where at least a quarter of teachers do not feel prepared in all three aspects (OECD, 2014). If viewed from a different

perspective, this dissatisfaction might be regarded as an internal motivation for professional development and lifelong learning.

Table 4. Preparedness for Teaching after Formal Education

REGIONS AND TYPE OF SCHOOL	PREPAREDNESS FOR TEACHING											
	CONTENT OF THE SUBJECT				PEDAGOGY OF THE SUBJECT				CLASSROOM PRACTICE			
	NOT PREPARED OR SOMEWHAT PREPARED		WELL OR VERY WELL PREPARED		NOT PREPARED OR SOMEWHAT PREPARED		WELL OR VERY WELL PREPARED		NOT PREPARED OR SOMEWHAT PREPARED		WELL OR VERY WELL PREPARED	
	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE
East	7,4	(1,2)	92,6	(1,2)	8,3	(1,2)	91,7	(1,2)	8,9	(1,2)	91,1	(1,2)
West	7,7	(1,2)	92,3	(1,2)	7,1	(1,2)	92,9	(1,2)	8,4	(1,2)	91,6	(1,2)
Kyiv	14,4	(3,2)	85,6	(3,2)	13,9	(3,2)	86,1	(3,2)	17,5	(3,2)	82,5	(3,2)
North	6,8	(1,2)	93,2	(1,2)	6,6	(1,2)	93,4	(1,2)	7,9	(1,2)	92,1	(1,2)
Central	9,1	(2,2)	90,9	(2,2)	8,9	(2,2)	91,1	(2,2)	9,4	(2,2)	90,6	(2,2)
South	4,9	(2,2)	95,1	(2,2)	9,6	(2,2)	90,4	(2,2)	9,4	(2,2)	90,6	(2,2)
average in Ukraine *	7,7	(1,2)	92,3	(1,2)	8,1	(1,2)	91,9	(1,2)	9,1	(1,2)	90,9	(1,2)
middle school	7,1	(2,2)	92,9	(2,2)	4,3	(2,2)	95,7	(2,2)	6,4	(2,2)	93,6	(2,2)
secondary school	7,9	(1,2)	92,1	(1,2)	9,3	(1,2)	90,7	(1,2)	10,0	(1,2)	90,0	(1,2)
TALIS 2013 average **	6,8	(0,2)	93,2	(0,2)	11,1	(0,2)	88,9	(0,2)	11,4	(0,2)	88,6	(0,2)

* UERA, 2017, ** OECD, 2014

Ukrainian school profile. The survey evidence describes a typical school as a state or community institution with 345 students and 33 teachers, with 18 students in a class, with 1 assistant staff member for 9 teachers, and 1 school leadership team member for 5 teachers. The school has considerable autonomy in teaching issues, rarely faces issues of vandalism, theft, drugs or alcohol, and enjoys an atmosphere of support, respect and good relationships between teachers and students (see Table 5 and Figure 1).

Table 5. Quantitative Characteristics of the School

	NUMBER OF STUDENTS		NUMBER OF TEACHERS		STUDENT/TEACHER RATIO		TEACHER/SUPPORT STAFF RATIO		TEACHER/LEADER-SHIP TEAM RATIO		AVERAGE CLASS SIZE	
	AVERAGE	SE	AVERAGE	SE	AVERAGE	SE	AVERAGE	SE	AVERAGE	SE	AVERAGE	SE
East	434,6	(20,7)	34,6	(1,3)	11,8	(0,5)	9,5	(0,9)	4,0	(0,3)	20,6	(0,8)
West	273,8	(16,6)	32,7	(0,8)	7,2	(0,3)	9,6	(0,7)	5,7	(0,3)	15,7	(0,4)
Kyiv	735,1	(46,9)	53,5	(2,6)	13,4	(1,0)	10,4	(1,2)	5,4	(0,7)	24,3	(1,3)
North	334,9	(26,5)	31,2	(1,7)	9,1	(0,5)	9,5	(1,0)	4,1	(0,5)	17,9	(0,8)
Central	319,1	(18,0)	28,4	(0,9)	9,1	(0,4)	6,3	(0,9)	4,6	(0,4)	15,9	(0,7)
South	284,5	(22,1)	26,2	(0,7)	9,7	(0,6)	6,8	(1,1)	3,8	(0,2)	17,3	(1,1)
average in Ukraine *	344,8	(8,9)	32,5	(0,4)	9,3	(0,2)	8,9	(0,4)	4,8	(0,1)	17,6	(0,3)
TALIS 2013 average **	546,4	(4,8)	45,5	(0,4)	12,4	(0,1)	14,4	(0,2)	6,3	(0,0)	24,1	(0,1)

* UERA, 2017, ** OECD, 2014

The school climate describes the school environment in terms of safety (intimidation or verbal abuse among students, physical injury caused by violence among students, etc.), arriving late at school, absenteeism, cheating, vandalism, use/possession of drugs and/or alcohol, and discrimination (e.g. based on gender, ethnicity, religion, disability, etc.). In addition, the school climate deals with general school culture in terms of the quality of the relationships between the school leadership team, staff, teachers and students.

Figure 1 presents the distribution of teaches at schools who encounter regular cases of negative behaviour (at least once a week). As can be seen, there are no regular cases concerning the use or possession of drugs or alcohol, which goes in line with the TALIS 2013 average (1,2%), nor are there cases of theft and vandalism.

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Figure 1. Distribution of teachers at schools encountering regular negative behaviour (at least once a week)

What presents a striking difference is the common practice of cheating at Ukrainian schools that was reported by school principals in all regions, with the most significant presence in the East (42,9%), the South (40,3%) and the capital (40,1%). If compared to the TALIS 2013 average, which is 13,2%, we can conclude that this is a general problem at Ukrainian schools which should be urgently addressed in the New Ukrainian School reform.

There have been some studies examining the association of cheating with aspects of school effectiveness. Researchers have concluded that "reducing the level of cheating is, in turn, an important prerequisite for creating a more equitable allocation of educational opportunities, and

for preventing individual students from "down-grading" their moral compass during their schooling" (Ramberg & Modin, 2019, p. 535).

Research has also shown that cheating is not restricted to a certain country or geographical area (Davis et al., 2011; Shariffuddin & Holmes, 2009). Nevertheless, some studies do focus on international comparisons. One of the few studies that has compared the extent of cheating in exams between nations, based on 7,200 university students from 21 countries, found that the rates and beliefs about cheating differ by country and that countries known to be the least corrupt had the lowest proportions of student cheating (Teixeira & Rocha, 2010). As Ukraine is the 126th least corrupt nation out of 180 countries according to the 2019 Corruption Perceptions Index (Trading Economics, 2019), we can assume that there might be some interconnection between corruption in Ukraine and cheating as early as at school. As there has not been any research focusing on this connection, it requires further studies. It therefore also requires major attention in the New Ukrainian School reform.

The principals were also asked about their school's needs, and the top problems mentioned by them related to shortages or inadequacies of computers for instruction (Ukraine average – 74,7%; TALIS average – 38,1%), instructional materials (e.g. textbooks) (63,0% vs 26,3%), computer software for instruction (61,2% vs 37,5%), and library materials (54,7% vs 29,3%) (see Figure 2).

A deeper data analysis reveals the schools' needs with a special focus on particular regions. For instance, 85,3% of the respondents from Western Ukraine work at schools experiencing a shortage or inadequacy of computers for instruction; 73,1% of teachers from the north of Ukraine report working at schools with a shortage or inadequacy of instructional materials, and 61,4% also report insufficient internet access. The information coming from school principals should be taken into account in school provisions within the New Ukrainian School reform with a special focus on the regions experiencing the greatest needs.

Figure 2. Distribution of teachers at schools by need for resources

Major differences between data from Ukrainian schools and schools in countries that participated in TALIS 2013. The Ukrainian survey results, if compared to the average obtained from those that participated in TALIS, demonstrate some differences dealing with:

1. a more noticeable gender misbalance with more female teachers;
2. a higher percentage of teachers who are above 50 years old;
3. practically no schools providing an inclusive environment;
4. more support and leadership staff members per teacher, despite there being fewer students, smaller class sizes and fewer students per teacher on average;
5. a greater shortage of qualified teachers;

6. a shortage of learning materials, computers and software, as well as a lack of internet access;
7. problems with students cheating.

Teachers' professional development impact as teachers see it

The favourable situation with class sizes and support staff, on the one hand, and the existing problems with teaching and learning, on the other, bring about the question of in-service teacher training and professional development, which is to be in the focus of the Reform.

Table 6. Teachers' professional development support

	PERCENTAGE OF TEACHERS WHO UNDERTOOK SOME PROFESSIONAL DEVELOPMENT ACTIVITIES IN THE PREVIOUS 12 MONTHS	PERCENTAGE OF TEACHERS WHO UNDERTOOK SOME PROFESSIONAL DEVELOPMENT ACTIVITIES IN THE PREVIOUS 12 MONTHS WITHOUT ANY TYPE OF SUPPORT	PERCENTAGE OF TEACHERS WHO HAD TO PAY FOR NONE, SOME OR ALL OF THE PROFESSIONAL DEVELOPMENT ACTIVITIES UNDERTAKEN		
			NONE	SOME	ALL
Ukraine average *	98,2	18,2	73,6	17,7	8,7
TALIS average **	88,4	5,7	66,1	25,2	8,6

* UERA, 2017, ** OECD, 2014

Data collected during the survey of teachers and school principals indicate that 98.2% of teachers in Ukraine during the 12 months prior to the survey participated in at least one form of professional development activity. This is almost 10% higher than the average for TALIS 2013, which proves that much more attention is paid to teachers' professional development in Ukraine (see Table 7).

In Ukraine, the percentage of teachers who report that they have paid for professional development programmes (8,7%) is nearly the same as the TALIS average (8,6%). The data provided by TALIS 2013 give clear evidence that the percentage of teachers actively participating in professional development programmes is higher

in the countries providing support to the teachers, which is quite logical. The programmes provided by universities and colleges aimed at giving teachers higher qualification levels usually involve more resources and are therefore fully or partially paid for. In Ukraine, this situation is quite common, as secondary and higher educational establishments receive financing from different sources.

The present research sought information about the types of professional development programmes most often offered to and taken by Ukrainian teachers (see Figure 3).

Figure 3. Types of professional development programmes most often offered to and taken by Ukrainian teachers

With 86,4% of teachers reporting their participation in educational conferences and seminars, Ukraine rates very high compared to TALIS countries, where the average is 43,6%. The highest percentage is demonstrated by Croatia (79%), while there are some countries where the percentage is less than 25%. Rather than be too optimistic, we instead assume that there is a different understanding of what

an educational conference/seminar is in different countries. In Ukraine, those surveyed might mean any gathering where educational issues are discussed that do not imply either the prior preparation or a presentation of the research carried out by the teachers.

Another common practice in Ukrainian teachers' professional development is their participation in specifically formed networks of teachers (85,4%). The percentage is much higher than the TALIS average, which is 36,9%. Such a gap may mean a different understanding of the professional teachers' networks and different degrees of formality in different countries. In Ukraine, teachers are members of so-called methodological unions, which are formal structures that aim at sharing the best educational practices.

As reported by the teachers, mentoring and/or peer observation and coaching, as part of a formal school arrangement, are practised by 67,9% of Ukrainian teachers, which is high compared to the TALIS average of 29,5%. As mentioned above, less than a quarter of Ukrainian teachers work as mentors, which may mean that such a high percentage is demonstrated due to active peer observation at Ukrainian schools. This is proved by the fact that 69,6% of Ukrainian teachers report participating in observation visits to other schools.

On the one hand, 55,9% of Ukrainian teachers claim that they participate in individual or collaborative research on a topic of professional interest and 43,8% are taking a qualification programme (e.g. a degree programme); on the other hand, Ukraine demonstrates a lower percentage of teachers who have PhD or higher degrees than the TALIS average.

Another aspect that requires further research is the concept of school-community partnerships for creating opportunities for fostering teacher leaders through their professional development. What the research clearly shows is that there is no real partnership between schools and businesses, public organisations, and non-governmental organisations. The evidence can reinforce this argument, as not many Ukrainian teachers participate in observation visits to their premises (20,2%) or in-service training courses organised by business, public organisations, or non-governmental organisations.

Almost all school principals reported that primary vocational socialisation programmes are available in their schools. However, on average, no more than two-thirds of teachers in Ukraine report that

they participated in such a programme during their first employment as a teacher. There is a similar situation in many other countries. This can be interpreted differently: either teachers are not fully utilising the opportunities available, or their first employment took place at a time when there was no such opportunity. There is a similar situation with mentoring programmes. According to the principals' answers, only 10,8% of Ukrainian teachers work in schools where there are currently no mentoring programmes, but no more than a quarter of teachers said they took part in them (Shchudlo, Zabolotna & Lisova, 2018).

In the questionnaire, the teachers were asked about the positive impacts of various aspects of their professional development activities (see Figure 4).

Figure 4. Positive impacts of teachers' professional development activities

The Ukrainian teachers reported different levels of impact of their professional development activities, varying from 16,7% (Teaching in a multicultural or multilingual setting) to 92,0% (Pedagogical competencies in teaching their subject field(s)) (see Figure 4). More than 75% of respondents confirmed the positive impact

of the following aspects: knowledge and understanding of their subject field(s) (90,9%); student evaluation and assessment practices (78,5%); and new technologies in the workplace (76,9%). In all these aspects, a higher percentage of Ukrainian teachers gave a positive response than the TALIS 2013 average. Nevertheless, the percentages of Ukrainian teachers who reported the positive impact of school management and administration (17,2%), teaching in multicultural and/or multilingual settings (13,0%) or teaching students with special needs (22,2%) on their professional development are considerably lower than the respective TALIS 2013 averages.

The item dealing with the teachers' underestimation of the role of school management and administration skills in their professional development leads to the assumption that it may be directly related to the low level of school autonomy, which should be focused on by the Reform. The little importance attached by Ukrainian teachers to dealing with students with special needs can be explained by the lack of an inclusive learning environment reported by the majority of the respondents. The lack of interest in teaching in multicultural and/or multilingual settings does not mean that Ukrainian classrooms are homogeneous in terms of nationality or language. On the contrary, the problem came to the surface after the adoption of the Language Article of the Ukrainian Law on Education, which encountered great opposition from national minorities and was sent to the Venice Commission (Shchudlo, Zabolotna & Medina, 2019). These positions bring about an understanding of the fact that reforms in in-service teacher professional development can and should be simultaneous with the New Ukrainian School reform. On the one hand, without teachers who are competent in dealing with issues of school autonomy, teaching students with special educational needs or teaching in multicultural and multilingual settings, a school can never expect to become an autonomous and inclusive institution that respects human rights. On the other hand, if the school environment does not require these skills from teachers, they might be seen as not attaching any importance to such topics in their professional development programmes.

Teachers on their professional development: brief evidence for policymakers

The main issues to consider in the Reform can be listed as follows: initial socialisation programmes; mentoring programmes; partnership with the labour market and a focus on students' practical skills; a focus on students with special needs and better diagnostics; a focus on multicultural school environments; multiple opportunities for teachers' professional development provided by different competing institutions; and schools' autonomy.

The New Ukrainian School reform in action: what is new in teachers' professional development?

The present research gives some food for thought concerning the new practices of Ukrainian schools and Ukrainian teachers who are competent enough to meet the new challenges. First of all, it has demonstrated that, in designing professional development programmes in different regions of Ukraine, their regional peculiarities should be taken into consideration as there are noticeable differences between the schools' provisions and teachers' characteristics and needs. In order to achieve a gender balance or at least narrow the gender gap, there should be a special focus on activities that could prevent male teachers from leaving their teaching career early. In Ukrainian schools, there is also a serious problem with cheating that has never been properly addressed, although it could go further than the educational sphere as there might be some interconnection between corruption in Ukraine and cheating at school. These and other issues demonstrating apparent discrepancies in the data require additional research, which is vital for evidence-based educational policy.

The All-Ukrainian Monitoring survey was commissioned to the UERA by the Ministry of Education and Science of Ukraine as a baseline study for the reform, and the research team consequently published their report (Shchudlo et al., 2018), produced recommendations (Shchudlo et al., 2018) and made all the survey data available (UERA, 2017).

Two years on, we have analysed the key reform documents regulating the transformations in teachers' professional development, i.e. the Concept (Ministry of Education, 2018a), the Roadmap (Ministry of Education, 2018b) and the newly adopted law "On Complete General Secondary Education" (Law of Ukraine, 2020) (see Table 8).

Table 7. Policy Impact of Research on the Quality of In-Service Teacher Education and Professional Development

RESEARCH IMPLICATIONS	ON APPROVING THE CONCEPT OF THE DEVELOPMENT OF TEACHER EDUCATION	ON THE ROADMAP FOR IMPLEMENTING THE CONCEPT OF THE DEVELOPMENT OF TEACHER EDUCATION	"ON COMPLETE GENERAL SECONDARY EDUCATION" LAW (2020)
Initial socialisation programmes	✓	✓	✓
Mentoring programmes	✓	✓	✓
Educational integrity	-	-	-
Focus on students' practical skills	-	-	-
Partnership with the labour market	-	-	-
Catering for students' special needs and better diagnostics	✓	✓	✓
Focus on the multicultural school environment	-	-	-
Multiple opportunities for teachers' professional development provided by different competing institutions	✓	-	✓
School autonomy and teacher leadership	-	-	✓

Initial socialisation programmes

At the conceptual level, initial socialisation programmes are going to be addressed through an internship, which is an interim stage between pre-service and in-service teacher education. The Concept states that "A newly qualified teacher should take a year as an intern-teacher. During the year they should be consulted by an experienced mentor of the same (or close) subject from the same school. The internship programme is designed by both the intern and the mentor and includes different forms of professional development" (Ministry of Education and Science, 2018a, p. 16). In the Roadmap

(Ministry of Education and Science, 2018b, p. 4), it was recommended that the pedagogical internship should be introduced for the teachers' initial professional socialisation in the law "On Complete General Secondary Education". The law was adopted in 2020, and according to this law, "The first year of work for a newly-qualified teacher will be a period of pedagogical internship. Within it, he/she will have a mentor who will be obliged to consult the young teacher and help him/her in becoming a successful teacher. The mentor will get a 20% bonus" (Law of Ukraine, 2020).

Mentoring programmes

According to the Concept, mentoring programmes are becoming a part of teachers' professional development. They involve the best teachers sharing their experiences in the performance of professional tasks. It is considered a priority in the professional development of newly-qualified intern-teachers and ends with their attestation based on a portfolio containing lesson plans, scenarios, and digital educational resources (videos, podcasts, e-books, sites, blogs, tests, etc.) (Ministry of Education and Science, 2018a, p. 18).

The register of teachers who can be mentors is to be made by the State Service of the Quality of Education, based on professional achievements and the document received after passing the teacher certification. Mentors must be motivated by getting bonus payments from the budget (or other funding sources), participating in systematic training and experience exchanges, and providing their expertise in the evaluation of syllabi, educational standards, projects, textbooks, digital resources, etc. The Roadmap contains some practical steps on creating the register of teacher-mentors, though the responsibilities were shifted to the Institute of Educational Content Modernisation and the National Academy of Educational Sciences. Nevertheless, neither of them has published the list yet. In the new law, there are requirements for the teacher-mentor, who "must have at least 5 years' experience in teaching the same or close subject" (Law of Ukraine, 2020, Article 23), and there is information that "based on the principal's decision a teacher-mentor may get a bonus of no more than 20% of his/her salary which is paid from the school's general payment fund" (ibidem).

Catering for students with special educational needs

The Concept emphasizes the necessity to train teachers to cater for students' special educational needs (Ministry of Education and Science, 2018a, p. 5) and states that it should be "a part of traditional and other professional development programmes, as well as be included in pre-service teacher or teaching assistant training programmes as preparing to work at special schools and schools with an inclusive educational environment" (ibidem, p. 10).

In the new law, Article 19 is devoted to the education of children with special educational needs and states that "The State and local authorities will create conditions for equal rights and opportunities for students with special educational needs that they might get an education at all levels with the special attention to their individual needs, possibilities, and interests" (Law of Ukraine, 2020). For this, the law regulates the necessity to train specialists, to use the educational forms and methods catering for the individuals' special needs, and to create access and an adaptive physical environment as well as individual development programmes. Article 20, which focuses on inclusive education, emphasizes that "inclusive education is grounded on non-discrimination, taking into account multiple individual needs, [and the] effective involvement of all parties in the educational process" (Law of Ukraine, 2020). It guarantees the right of a person with special educational needs to study in classrooms with an inclusive educational environment and introduces the possibility of getting support from specially trained teaching assistants.

Multiple opportunities for teachers' professional development provided by different competing institutions

Before 2018, the only establishments involved in teacher professional development were regional institutes for teachers' in-service education. Without any competition, the programmes offered by them often tended to be outdated and theory-oriented. However, the Concept introduced the possibility for different institutions to offer alternative licensed programmes of professional development for teachers, which has already added some competitiveness that has resulted in higher quality programmes with the quality assurance system in the process of their licensing and further monitoring. Moreover, the Concept announced the introduction of the so-called "teacher

professional development voucher" that is viewed as "a guarantee for the teacher's freedom to choose the kind, form and institution for his/her professional development" (Ministry of Education and Science, 2018a).

In the Roadmap, however, no special attention is attached to alternative professional development programmes. The same can be said about the new law, which guarantees teachers the possibility to take professional development courses at regional institutes but only adds a line about the right to choose other options (Law of Ukraine, 2020, Article 51). Nor does it contain information about teacher professional development vouchers.

School autonomy and teacher leadership

Although school autonomy was mentioned in the Concept, there was no information about how teachers should be trained to gain leadership competencies and school management skills. It was only the school's leadership team that was to undergo special training. Article 59 of the new law is devoted to schools' financial autonomy and states that "the school is responsible for the allocation of funds from the money received from the State's budget" (Law of Ukraine, 2020, Article 59). With the reported national money shortage, schools have been given the responsibility to distribute money between training the school's staff; paying salaries, bonuses and other motivational payments; constructing and maintaining the school's buildings; teachers' professional development courses, etc. The benefits of this kind of school autonomy seem somewhat vague if we take into account the fact that Ukrainian schools have been experiencing money shortages even for paying the teachers' regular salaries, which was admitted by President Volodymyr Zelensky (Ukrinform, 2019), to say nothing of covering the other aspects of the budget.

Conclusions

The current New Ukrainian School reform addresses the key problem areas identified by teachers and school principals in the All-Ukrainian Monitoring Survey of Secondary School Teachers and Principals. The main reform documents take into account the importance of initial socialisation programmes for newly qualified teachers with mentors' support, the vital necessity of catering for students' special educational

needs, as well as creating multiple opportunities for teachers' professional development to be provided by different competing institutions. Nevertheless, the issues of real school autonomy and teacher leadership still remain underestimated.

Moreover, in the reform documents, some other vital problems are still neglected. These concern the ethical issues that are connected with the common practice of students' cheating, which cannot be solved by accepting an ethical code. The problem goes much deeper and cannot be solved by any formal document. To some extent, it can be explained by the considerable gap between the theoretical education prevailing at Ukrainian schools and the real needs of the labour market. Another concern is how the practice of introducing the legally written issues will be introduced in schools and whether the teachers will actively participate in the process by applying their leadership skills and creativity as the key agents of change.

Probably the most important thing emerging from this research is the finding that it is possible to make productive use of the inconsistencies and doubts arising from comparing national data with data coming from international research and use them for developing common understandings and goals for teachers' professional development.

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