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TEACHER SHORTAGE IN ARMENIA:

THE GROWING CHALLENGE

DOI: 10.52174/2579-2989_2022.6-72

Keywords: teacher shortage, low salary,

teaching profession

Teacher shortage is an issue in many countries of the world, including developed economies. Armenia also faces teaching staff shortage, which is mainly manifested in the form of a shortage of teachers in small rural areas, in specific subjects, as well as in an aging staff.

The paper aims at studying the factors that make the profession of teacher non-attractive. In Armenia, the main reasons for leaving teaching are relatively low salary, lack of opportunities for professional growth, requirements of accountability, high workload.

Qualified, skilled and motivated teachers are the backbone of providing high quality education. Due to several challenges in teaching profession, currently the world has faced a serious teacher shortage problem. Teacher shortage is an issue in many countries of the world, including developed economies (the USA, Great Britain, Netherlands, France, etc.). Some countries are adopting new recruitment strategies, including the increased use of contract teachers'. For example, in 2022-2023 academic year to fill vacant positions France recruited contract teachers that will be trained over four days².

According to UNESCO report published in October, 2022, the reasons for teacher attrition are lack of financial incentives, poor working conditions, heavy workloads, lack

Transforming education from within: current trends in the status and development of teachers; World Teachers' Day 2022, 35 p., https://unesdoc.unesco.org/ark:/48223/pf0000383002

France to fast-track training of school teachers to fill 4,000 vacancies, 25/08/2022, https://www.rfi.fr/en/france/20220825-france-to-fast-track-training-of-school-teachers-to-fill-4-000-vacancies

of preparation, poor administrative support, poorly designed classrooms and a lack of teaching resources etc. The main reasons why teachers quit may vary by country, but in general, the relatively low salary of teachers is the core issue. Both in many high income and middle- or low-income counties primary school teachers' salary is not competitive compared to salaries of those of other professions requiring similar levels of qualifications. In the developed world, Singapore, Spain and the Republic of Korea pay more to teachers (1.39, 1.25 and 1.24 times the salary of other professionals)³.

In addition to low salary, teaching has changed "from a job with high added social value, prestige, to a form of uncertainty in the mission". Another challenge is the lack of support in dealing with stress and workload associated with teaching. High workload, policy changes and accountability pressure are considered the main reasons for attrition of teachers⁴.

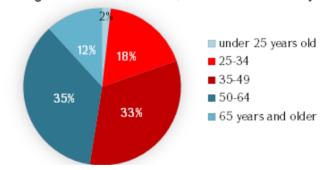
All the above-mentioned challenges make the teacher profession unappealing. As a result, teacher shortage is manifested in teacher leaving the job, on the one hand, and in decline in the number of people receiving pedagogical education, on the other hand.

In order to understand the complexity of the issue in the Republic of Armenia, we first need to study the teacher-pupil ratio, which is one of the main indicators that characterize the availability of teaching staff. According to the Statistical Committee of the Republic of Armenia, pupil-teacher ratio was 13.3 in 2021-2022 academic year⁵. Note that in European countries in primary and secondary level of education pupil-teacher ratio was 12.9 in 20196. In low-income countries the teacher has an average of 52 pupils per class at primary level⁷. Therefore, we can conclude, that teacher-pupil ratio in Armenia is quite good compared to other countries. Moreover, in the previous decade, this ratio was even smaller: for example, the teacher has 9 pupils in class in 20118. The situation arose primarily because the number of pupils was decreasing at a faster rate than the number of teachers. Pupil-teacher ratio has increased as a result of the optimization programs of the Armenian government.

At first glance, it may seem that the smaller the number of pupils per teacher the better. However, very low ratio indicates that part of the teachers in Armenia is underloaded.

But that is not the whole story. The





The age structure of teachers, 2021/2022 academic years

FIGURE 1

Transforming Education from Within: Current Trends in the Status and Development of Teachers; World Teachers' Day 2022, 35 p., https://unesdoc.unesco.org/ark:/48223/pf0000383002

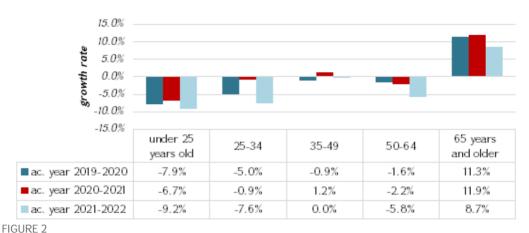
Teacher Shortages Worry Countries Across Europe, 30/11/2022, https://www.euronews.com/my-europe/2022/11/30/teacher-shortages-worry-countries-across-europe

⁵ Stephen Gorard, Ourania Maria Ventista, Rebecca Morris & Beng Huat See (2021): Who Wants to be a Teacher? Findings from a Survey of Undergraduates in England, Educational Studies, DOI: 10.1080/03055698.2021.1915751

http://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do

World Teachers' Day: UNESCO sounds the alarm on the global teacher shortage crisis, 5 October 2022, https://www.unesco.org/en/articles/world-teachers-day-unesco-sounds-alarm-global-teacher-shortage-crisis

⁸ Information System of Education Management, https://reports.emis.am/#/schools-static-reports/am



I

The growth rate of the number of teachers by age groups

above-mentioned indicator does not show that there is no shortage of teachers in the country. The indicator is expressed relatively mildly mainly due to the decrease in the number of the school-age population. A different picture emerges when looking at the regional distribution and age structure of teachers.

According to the data of the 2021-2022 academic year, the largest share (35%) belongs to the teachers of 50-64 age group. 12% (3559 teachers) of teachers are individuals of retirement age, that is 65 years and older. To put it in another way, almost half of the teachers are over 50 years old. The smallest is the group of teachers under 25 years old. The share of teachers under 25 and 25-34 years old is 2% and 18% respectively, based on which it can be assumed that there is a serious problem of staff aging. The number of people entering the system is significantly smaller than the number of people leaving the system. The large proportion of teachers of retirement age indicates the difficulty in replacement of the last ones and the problem will become more and more pressing in the coming years.

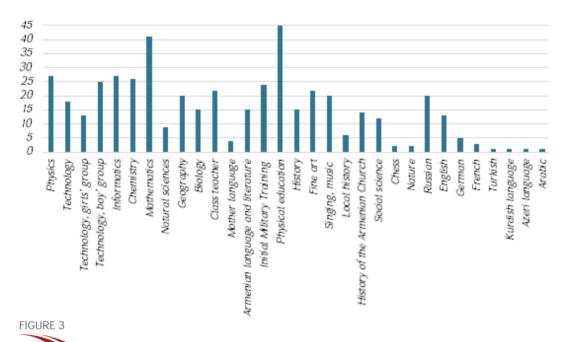
Figure 2 shows that only the number of teachers aged 65 and older has increased in recent years. While in 2017-2018 academic year there were 1758 teachers over 65, in

2021-2022 their number reached 3559. In 2021-2022, the number of teachers under 25 declined by 9.2%, the number of teachers aged 25-34 by 7.6%, and those aged 50-64 by 5.8% compared to the previous year. The number of teachers over 65 years old increased by 8.7% compared to the previous year.

In 2021-2022, the number of teachers decreased by 877 compared to the previous year, and as the education experts note unlike the previous years, there was no planned optimization. As of 27.11.2022, there were 469 teacher vacancies according to the website of the Ministry of Education, Science, Culture and Sports of the Republic of Armenia. 157 of them are available in Lori region, and 68 in Yerevan. 9.6% of the announcements refer to Physical Education teacher vacancies, 8.7% to Mathematics, 5.8% to Physics, 5.8% to Informatics, 5.5% to Chemistry teacher vacancies (Figure 3).

Consider the changes in the number of teachers by subjects they teach. In the 2020/2021 academic year, the number of teachers of the Initial Military Training decreased by 15.7%, the number of teachers of Informatics by 3.5%, and the number of class teachers by 2.6%. A slight decrease was also recorded in the number of teachers of Mathematics, Physics, Chemistry, History,

⁹ 3500 teachers are over 65, the number of teachers decreased by 877 in one year. Serob Khachatryan, 13 July,2022, https://www.aravot.am/2022/06/13/1273872/



The number of teacher vacancies according to the subjects taught, as of 27.11.2022

TABLE 1

The growth rate of the number of teachers by the subjects taught

	0	•	0
	Subject	Growth rate of the	Growth rate of the
		number of teachers	number of teachers
		in ac. year 2020-2021	in ac. year 2021-2022
1	Mathematics	-0.2%	-2.1%
2	Physics	-0.5%	-3.5%
3	Chemistry	-0.5%	-8.3%
4	Informatics	-3.5%	-8.5%
5	Geography	1.7%	-5.9%
6	Biology	3.9%	-5.1%
7	Armenian Language and Literature	9.3%	6.0%
8	History	-0.6%	-1.7%
9	Russian Language and Literature	2.9%	-3.2%
10	English	2.0%	-0.6%
11	Social Sciences	-2.2%	3.2%
12	Physical Education	3.4%	-2.1%
13	Singing, Music	5.5%	-1.4%
14	Fine Art	6.5%	-2.1%
15	Initial Military Training and Safe Life Activity	-15.7%	-26.7%
16	History of the Armenian Church	13.8%	-3.7%
17	French	3.0%	-2.1%
18	German	1.4%	-3.8%
19	Other Language	31.0%	-18.4%
20	Technology	-1.7%	-4.4%
21	Chess	-1.0%	-7.9%
22	Technical Drawing	0.0%	50.0%
23	Class teacher	-2.6%	-3.2%

Technology and Chess. In the 2021/2022 academic year, the number of teachers of all subjects has declined, except for the teachers of Armenian Language and Literature, Social Sciences and Technical Drawing. Hence, it can be assumed that the teacher attrition is a general problem.

However, growth rate indicators do not form a complete picture of particular subjects, where there is a shortage of teachers in the country. For this reason, we have studied the number of schools in each region and compared it with the number of teachers of a particular subject in that region (Appendix 1).

The number of teachers of Mathematics, Armenian Language and Literature, Physical Education, Russian Language and Literature is more than the number of schools in each region, therefore, we can conclude that each school has a teacher of these subjects. The number of history teachers is slightly lower than the number of schools only in two regions - Vayots Dzor and Syunik. In Syunik region there are 117 schools and 115 history teachers, in Vayots Dzor 48 schools and 44 history teachers. We skip the analysis of foreign languages, as foreign language taught in each school can be different. The number of teachers of all other subjects is smaller than the number of schools both in the regions and in Yerevan. The situation in Yerevan is a little different. It should be taken into account that one teacher can teach in several schools of Yerevan without any difficulties, especially in case of those subjects (singing and music, fine arts, technology) with small weekly class hours. The problem is acute in regions, especially in small villages, where schools are far from each other and poor transport infrastructure does not make teaching in several schools possible and profitable. There are almost no teachers for Technical Drawing. In the whole republic there are only 12 teachers of the respective subject, 10 of them teach in Yerevan, one in Lori and one in Shirak region. The situation connected with the teaching of the subject "Initial Military Training and Safe Life Activity" is also alarming. In Aragatsotn region there is only one teacher of the above-mentioned subject, when there are 121 schools in the region. The situation in other regions is not much different: 48 schools of Vayots Dzor have 5 teachers, 120 schools of Armavir region have 6 teachers and 117 schools of Syunik have 6 teachers of the "Initial Military Training and Safe Life Activity" subject, etc. The number of teachers of Physics, Chemistry, Biology and Geography is less than the number of schools in all regions and in Yerevan. The situation is particularly difficult in Syunik region, where the number of teachers of the above-mentioned subjects is less than half of the number of schools. 57 Physics, 44 Chemistry, 51 Biology and 46 Geography teachers teach in 117 schools of Syunik region. The number of Social Sciences teachers is equal to 10-20% of the number of schools.

Thus, the number of those who leave the teaching profession is increasing, on the other hand, the number of those entering university to get a qualification of a teacher is declining. In order to find out the factors that make the teacher's profession uncompetitive in Armenia, we conducted a survey among individuals having pedagogical qualification. Surveys of people with teacher qualifications will allow us to understand the factors under the influence of which people quit teaching or, having the qualification of a teacher, have never been a teacher.

The survey is not representative, it has a cognitive character. One third of teachers in are graduates Armenia of the State Pedagogical University Armenia¹⁰. of YSU graduates are also able to obtain pedagogue's qualification along with the professional one¹¹. Since it is not possible to find out the entire population of individuals with teacher qualification, the most effective way is conducting internet surveys. Internet access is quite high in Armenia¹² and, therefore, has a minimal impact on the

Armenia. Teacher Profile and Policies, 2021, 87 p, https://documents1.worldbank.org/curated/en/196931619675110826/pdf/ Armenia-Teacher-Profile-and-Policies.pdf?cid=ECA_FB_Armenia_ARM_EXT

The Problem of Pedagogue's Qualification was Clarified, 14.03.2017, http://ysu.am/sc/hy/1489483395

Are you currently teaching?

		Frequency	Percent	Valid percent
	Yes	20	19.4	39.2
Valid	No	31	30.1	60.8
	Total	51	49.5	100.0
Missing	Legal skip	52	50.5	
Total		103	100.0	

results of the survey. The data were obtained through a survey of people registered on LinkedIn and Facebook, who indicated the State Pedagogical University of Armenia, Gyumri State Pedagogical Institute, Vanadzor Pedagogical Institute as their educational institution. The questionnaires were sent to 200 people, 103 of them participated in the survey. 89.3% of them are female. It should be noted, that 89.2% of teachers were women in academic year 2021/22. Also, 86.1% of those admitted to the State Pedagogical University of Armenia in the 2022-2023 academic year are female.

Half (50.5%) of the respondents have never worked as a teacher. And about 61% of those who have ever worked as a teacher have already left that job. To put it in another way, 19.4% of the respondents are currently working as teachers, 30.1% have left the job of a teacher and the other 50.5% have never taught. At the same time, most of the teachers do not intend to change their jobs.

The respondents who have never worked as a teacher when asked "what are the reasons for not working as a teacher?" most often answered "low salary" (36.5%), "I have continued my education in another profession and I work in another profession" (34.6%) and "I did not want to work as a teacher" (25.0%). In fact, teacher education often serves as a springboard to prepare for careers in other fields. Some of them do not teach the subject, but work in the field of that subject. For example, "I am working as an ichthyologist/biologist, which is also a part of my profession due to scientific orientation".

So, we can conclude, that a part of the students, who enter the pedagogical university, does not initially have an intention to be a teacher, but to learn the subject (for example, they want to learn English, not to become a teacher of English).

It is even more important to understand the motivations of those who have left the teaching profession or are planning to do it.

Resons for leaving the teaching job, multiple response, (N of answers, % of cases)

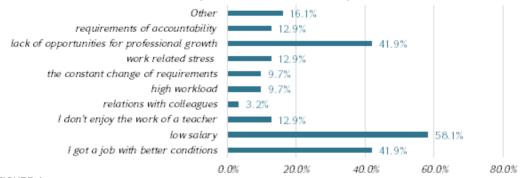


FIGURE 4

What are the reasons for leaving the teaching job?

https://armstat.am/file/article/sv_03_21a_6200.pdf

Reasons for not working as a teacher, multiple response (N of answers, % of cases)

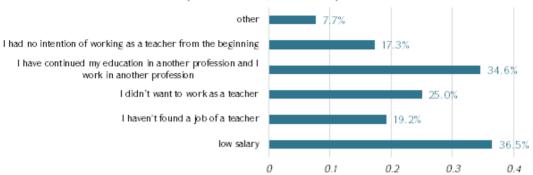


FIGURE 5

What are the reasons for leaving the teaching job?

The most common reasons for leaving the job of a teacher are "low salary" (58.1%), "lack of opportunities for professional growth" (41.9%) and "getting a job with better conditions" (41.9%). Among other reasons, "the lack of technical equipment in schools", "outdated textbooks", "a large amount of useless paperwork", "relations with the parents of pupils", "superiors and elderly teachers, who do not accept young graduates" were mentioned.

Those, who have an intention to leave teaching, present the same reasons: low salary, lack of opportunities for professional growth and moving to a better job. The core issue is the uncompetitive, relatively very low pay.

Thus, it can be concluded that although the student-teacher ratio in Armenia is quite good compared to other countries, but it is mostly due to a faster rate of decline in the number of school aged population. In Armenia there is a shortage of teachers due to the uneven territorial distribution of teachers. The unfavorable age composition of teachers will create serious problems in the coming years. According to the results of the admission at the Armenian State Pedagogical University, 1156 places remained vacant in 2022¹³. The teaching profession is not attractive and people do not want to

become teachers. Even some of those receiving pedagogical education do not consider the work of a teacher as a career. The main reason is relatively low salary. The other reasons influencing that decision are lack of opportunities for professional growth, requirements of accountability, work-related stress, etc.

As a solution to the problem, the following can be considered:

- 1. in case of some subjects, the expansion of distance learning. This can be a very effective solution, especially in small rural areas, where the number of pupils is small and the teacher cannot objectively have a full-time workload:
- 2. providing support for teaching in rural areas, e.g. accommodation, transport, etc;
- 3. providing targeted scholarships to pedagogical students, provided that after graduation they will teach in a certain region for a certain period of time;
- 4. in the near future, artificial intelligence can completely change the education system. But it will take time for developing countries like Armenia to turn to innovative forms of education. Therefore, it is necessary to take measures to bring young generation to this sector, primarily by providing attractive salaries.

The vacant places of the universities have not been filled. Summary, 30.07.22, https://www.usanogh.am/krtutyun/tapur-tex-buh-dimord/

APPENDIA

The number of teachers of a particular subject in the regions of Armenia, academic year 2021-2022

	Yerevan Araga		rogatsotn Ararat		rat	Armavir		Gegharkunik		Lori		Kotayk		Shirak		Syr	mik	Vayot	s Dzor	Tan	ush	
	Number of teachers	Number of schools																				
Armenian Language and Literature	856	252	247	121	271	112	302	120	293	124	298	163	285	100	343	163	182	117	72	48	157	82
Mathematics	802		199		236		272		272		275		237		338		160		67		138	
Physics	237		71		86		93		95		113		88		116		57		24		55	
Chemistry	199		52		66		89		82		79		70		92		44		17		48	
Biology	215		75		86		88		94		101		80		117		51		26		53	
History	473		129		164		191		176		190		150		201		115		44		98	
History of the Armenian Church	103		46		41		40		35		36		40		36		16		10		19	
Geography	219		72		87		102		99		93		86		112		46		19		49	
Social Sciences	58		17		15		17		25		21		16		32		5		3		18	
Physical Education	474		133		164		177		145		162		172		214		103		52		89	
Singing, Music	257		25		49		88		44		26		67		44		29		15		42	
Fine Art	163		25		24		34		33		24		40		18		21		11		22	
Initial Military Training and Safe Life Activity	31		1		8		6		13		20		8		21		6		5		7	
Russian Language and Literature	809		178		216		255		246		240		232		264		140		63		139	
English	796		98		135		179		136		176		172		171		104		39		83	
Informatics	130		27		36		31		45		48		39		32		9		9		26	
Technology	217		62		77		93		82		67		73		78		29		15		45	
Class teacher	164 5		436		544		607		489		566		550		561		378		144		310	
Chess	137		27		36		43		45		54		38		41		31		8		17	
Technical Drawing	10		0		0		0		0		1		0		1		0		0		0	

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Շուշան ՄՈՎՍԻՍՅԱՆ

ՀՊՏՀ «Ամբերդ» հետացոտական կենտրոնի փորձագետ

ԿՐԹՈՒԹՅՈՒՆ, ՆՈՐԱՐԱՐՈՒԹՅՈՒՆ, ԳԻՏԵԼԻՔ

ՈՒՍՈՒՑԻՉՆԵՐԻ ՊԱԿԱՍԸ ՀԱՅԱՍՏԱՆՈՒՄ, ԱՃՈՂ ՄԱՐՏԱՀՐԱՎԵՐ

Ուսուցիչների պակաս կա աշխարհի բազմաթիվ, այդ թվում՝ զարգացած երկրներում։ Հայաստանում այդ երևույթը դրսևորվում է հիմնականում մեծահասակ կադրերի զգալի մասնաբաժնով, իսկ փոքր գյուղական շրջաններում՝ որոշ առարկաների գծով մասնագետների պակասով։

Հոդվածում փորձ է արվել պարզելու այն գործոնները, որոնք մանկավարժի մասնագիտությունը դարձնում են ոչ գրավիչ։ Հայաստանում ուսուցչի աշխատանքից իրաժարվելու հիմնական պատճառներն են հարաբերականորեն ցածր վարձատրությունը, մասնագիտական աճի հնարավորությունների բացակայությունը, հաշվետվողականության պահանջները, աշխատանքային մեծ բեռնվածությունը։

Հիմնաբառեր. ուսուցիչների պակաս, գածր աշխատավարձ, մանկավարժի որակավորում

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ОБРАЗОВАНИЕ, ИННОВАЦИИ, ЗНАНИЯ

НЕХВАТКИ УЧИТЕЛЕЙ В АРМЕНИИ: РАСТУЩАЯ ПРОБЛЕМА

Нехватка учителей является проблемой во многих странах мира, в том числе и в развитых странах. В Армении также наблюдается нехватка преподавательских кадров, которая в основном проявляется в виде нехватки учителей в небольших сельских районах, по отдельным предметам, а также в старении кадров.

В статье изучаются факторы, которые делают профессию учителя непривлекательной. В Армении основными причинами ухода из преподавательской деятельности являются относительно низкая заработная плата, отсутствие возможностей для профессионального роста, изменение требований, высокая нагрузка.

Ключевые слова: нехватка учителей, низкая заработная плата, профессия учителя