ISSN 3060-5091 (Online)
Farg‘ona metodika maktabi – Ферганская методическая школа – Fergana methodical school
2026-yil 6-son.

DOI: https://doi.org/10.5281/zenodo.24164271

The effectiveness of preparing future teachers to foster students' immunity against harmful habits

Abdulazizova Nilufar Abduraxmonovna –
Associate Professor, Department of Pedagogy, Fergana State University
E-mail: nilufarabdulazizova73@gmail.com

Annotation. *The article presents the results of a pedagogical experiment aimed at assessing the effectiveness of a system for preparing future teachers to foster students' immunity against harmful habits. The experiment was conducted in 2022–2025 at Fergana State University, Kokand State University and Gulistan State University with 431 second-year pedagogy students (experimental group – 217, control group – 214). In the experimental group, preventive content was integrated into five pedagogical disciplines and supported by author-developed methods, trainings, the "School of Useful Habits" club and tasks during teaching practice. Preparedness was assessed using theoretical-cognitive, practical-pedagogical and reflective-corrective criteria at three levels. A diagnostic survey showed that 67.1% of students obtain information about harmful habits mainly from the internet, and 91.0% support the introduction of special courses on prevention. Before the experiment, the groups did not differ significantly ($\chi^2 = 0.262$; $p = 0.877$); after the experiment, the difference was statistically significant ($\chi^2 = 20.496$; $p < 0.001$). The share of students at the high level increased from 24.4% to 47.9% in the experimental group and from 23.4% to 31.3% in the control group; the efficiency coefficient was 1.155.*

Keywords: *future teachers; harmful habits; immunity; prevention; teacher training; pedagogical experiment; interactive methods.*

Эффективность подготовки будущих учителей к формированию у учащихся иммунитета к вредным привычкам

Аннотация. *В статье представлены результаты педагогического эксперимента, направленного на оценку эффективности системы подготовки будущих учителей к формированию у учащихся иммунитета к вредным привычкам. Опытно-экспериментальная работа проводилась в 2022–2025 годах в Ферганском государственном университете, Кокандском государственном университете и Гулистанском государственном университете с участием 431 студента второго курса педагогического направления подготовки (экспериментальная группа – 217 человек, контрольная группа – 214 человек). В экспериментальной группе профилактическое содержание было интегрировано в пять педагогических дисциплин и подкреплено разработанными автором методами, тренингами, деятельностью кружка «Школа полезных привычек» и заданиями, выполняемыми в период педагогической практики. Уровень подготовленности студентов*

оценивался по теоретико-когнитивному, практико-педагогическому и рефлексивно-коррекционному критериям на трёх уровнях. Результаты диагностического опроса показали, что 67,1% студентов получают информацию о вредных привычках преимущественно из интернета, а 91,0% поддерживают введение специальных курсов по профилактике. До начала эксперимента статистически значимых различий между группами не выявлено ($\chi^2 = 0{,}262$; $p = 0{,}877$), тогда как после его завершения различия оказались статистически значимыми ($\chi^2 = 20{,}496$; $p < 0{,}001$). Доля студентов с высоким уровнем подготовленности увеличилась в экспериментальной группе с 24,4% до 47,9%, а в контрольной группе – с 23,4% до 31,3%. Коэффициент эффективности составил 1,155.

Ключевые слова: *будущие учителя, вредные привычки, иммунитет, профилактика, подготовка педагогических кадров, педагогический эксперимент, интерактивные методы.*

Bo‘lajak o‘qituvchilarni o‘quvchilarda zararli odatlarga qarshi immunitetni shakllantirishga tayyorlash samaradorligi

Annotatsiya. *Maqolada bo‘lajak o‘qituvchilarni o‘quvchilarda zararli odatlarga qarshi immunitetni shakllantirishga tayyorlash tizimining samaradorligini baholashga qaratilgan pedagogik tajriba-sinov natijalari yoritilgan. Tajriba-sinov ishlari 2022–2025-yillarda Farg‘ona davlat universiteti, Qo‘qon davlat universiteti va Guliston davlat universitetida pedagogika ta’lim yo‘nalishining 431 nafar ikkinchi bosqich talabasi ishtirokida o‘tkazilgan (tajriba guruhi – 217 nafar, nazorat guruhi – 214 nafar). Tajriba guruhida profilaktik mazmun beshta pedagogika fani bilan integratsiyalashtirilib, muallif tomonidan ishlab chiqilgan metodlar, treninglar, “Foydali odatlar maktabi” to‘garagi hamda pedagogik amaliyot davridagi topshiriqlar orqali mustahkamlangan. Talabalarning tayyorgarligi nazariy-kognitiv, amaliy-pedagogik va refleksiv-korreksion mezonlar asosida uch darajada baholangan. Diagnostik so‘rov natijalariga ko‘ra, talabalarning 67,1 foizi zararli odatlar haqidagi ma’lumotlarni asosan internetdan olishi, 91,0 foizi esa profilaktikaga oid maxsus kurslarni joriy etishni qo‘llab-quvvatlashi aniqlangan. Tajriba-sinov boshlanishida guruhlar o‘rtasida statistik jihatdan ahamiyatli farq kuzatilmagan ($\chi^2 = 0{,}262$; $p = 0{,}877$), yakuniy bosqichda esa farq statistik jihatdan ahamiyatli bo‘lgan ($\chi^2 = 20{,}496$; $p < 0{,}001$). Yuqori darajadagi talabalar ulushi tajriba guruhida 24,4 foizdan 47,9 foizga, nazorat guruhida esa 23,4 foizdan 31,3 foizga oshgan. Samaradorlik koeffitsienti 1,155 ni tashkil etgan.*

Kalit so‘zlar: *bo‘lajak o‘qituvchilar, zararli odatlar, immunitet, profilaktika, pedagog kadrlarni tayyorlash, pedagogik tajriba-sinov, interfaol metodlar.*

INTRODUCTION

The prevention of harmful habits among school-age children – tobacco and vape use, alcohol, gambling, internet and gaming addiction – has become one of the priority tasks of modern education systems. International guidelines emphasise that schools are among the most effective settings for prevention and that teachers play a key role in this process [5; 6]. Prevention programmes based on developing life skills and resistance to social pressure have shown sustained positive effects [1], and the risk and protective factors framework explains why prevention should begin early and involve the school, family and community together [2]. Research on social and emotional learning shows that well-organised school programmes improve students' social skills and behaviour [3], yet the success of such programmes depends largely on teachers' own competence and readiness [4]. Consequently,

the preparation of future teachers for preventive work is a crucial but still underdeveloped link. In Uzbekistan, state documents set the task of promoting healthy lifestyles among young people; however, the content, methods and assessment criteria of preparing future teachers for this activity have not yet been brought into a single system.

The aim of this study is to test experimentally the effectiveness of the improved system of preparing future teachers to foster students' immunity against harmful habits. The research hypothesis assumed that integrating preventive content into pedagogical disciplines, applying author-developed interactive methods and including preventive tasks in teaching practice would significantly increase the level of students' preparedness compared with traditional training. The theoretical foundations and the diagnostic stage of the study were partially presented in our earlier publications [7; 8].

MATERIALS AND METHODS

Design and participants. A pedagogical experiment with experimental (EG) and control (CG) groups was carried out during the 2022–2023, 2023–2024 and 2024–2025 academic years. It involved 431 second-year students of pedagogy programmes at three universities located in different regions: Fergana State University, Kokand State University (147) and Gulistan State University. The experimental group included 217 students and the control group 214 students. Stages. The experiment consisted of three stages. At the preparatory (diagnostic) stage, experimental sites were selected, groups were formed, questionnaires and tests were developed and the initial level of preparedness was measured. At the formative stage, the improved system was implemented in the experimental group. At the final (verification) stage, the questionnaires and tests were re-administered and the initial and final results were compared using mathematical-statistical methods.

Intervention. In the experimental group, preventive content was integrated into the disciplines "Diagnostics and Correction of Upbringing", "Social Pedagogy", "Family Pedagogy", "Methods of Teaching Upbringing" and "Media Literacy and Information Culture". Six author-developed methods were used: "Preventive Diagnostics", "Healthy Choice Scenario", "Reflective Protection Laboratory", "Anti-toxic Environment Design", "From Situation to Immunity" and "Media Immunity Navigator". In addition, trainings, the forum "Healthy Choice – Professional Responsibility", the "School of Useful Habits" club and preventive tasks during teaching practice were organised. The control group studied under the standard curriculum.

Instruments and criteria. A questionnaire, tests, observation, case tasks and analysis of students' portfolios were used. Preparedness was assessed using three criteria – theoretical-cognitive, practical-pedagogical and reflective-corrective – and three levels: high (3 points), medium (2 points) and low (1 point). Data analysis. The distributions of the two groups were compared using Pearson's χ^2 test ($df = 2$; critical value 5.99 at $\alpha = 0.05$). The mean score for each group was calculated, and the efficiency coefficient was determined as the ratio of the final mean score of the experimental group to that of the control group.

RESULTS AND DISCUSSION

Diagnostic survey. The initial survey of 431 respondents revealed several gaps in teacher preparation. Regarding the coverage of healthy lifestyle issues in pedagogical disciplines, 48.5% of respondents noted that the topic is addressed only partially, and 31.3% considered it insufficient. Most respondents obtain information about harmful habits from the internet and social media: 289 respondents (67.1%) named internet sources as their main source of information, 91 (21.1%) named university classes, and 51 (11.8%) mass media and books. During teaching practice, 238 respondents (55.2%) had carried out educational activities with schoolchildren, 124 (28.8%) had done so to some extent, and 69 (16.0%) lacked sufficient experience. Only 38.7% considered themselves sufficiently prepared to

take into account schoolchildren's psychological characteristics in educational work (44.1% partially; 17.2% insufficiently). Similarly, 36.9% reported having skills for individual work with students prone to harmful habits (45.2% partially; 17.9% insufficiently).

Respondents rated interactive methods (74.5%) and psychological trainings (69.3%) as the most effective means of prevention; 344 respondents (79.8%) confirmed the effectiveness of interactive methods. Although 87.4% emphasised the importance of the family's role, only 34.8% considered school–family cooperation to be adequately established (46.6% partially; 18.6% insufficiently). In addition, 84.7% acknowledged the negative impact of digital technologies and social media, and 89.1% considered communicative competencies crucial for future teachers. Finally, 392 respondents (91.0%) supported the introduction of special courses on the prevention of harmful habits; 72.4% proposed increasing practical sessions, 68.1% regular psychological trainings, and 64.3% a specialised course or module.

Experimental results. The distribution of students by levels of preparedness before and after the experiment is presented in Table 1.

Table 1. Levels of future teachers' preparedness before and after the experiment

Group	Stage	High	Medium	Low	Mean score
EG (n = 217)	Before	53 (24.4%)	76 (35.0%)	88 (40.6%)	1.839
	After	104 (47.9%)	88 (40.6%)	25 (11.5%)	2.364
CG (n = 214)	Before	50 (23.4%)	80 (37.4%)	84 (39.3%)	1.841
	After	67 (31.3%)	90 (42.1%)	57 (26.6%)	2.047

Before the experiment, the distributions of the experimental and control groups did not differ significantly ($\chi^2 = 0.262 < 5.99$; $p = 0.877$), which confirms that the groups were equivalent. After the experiment, the difference became statistically significant ($\chi^2 = 20.496 > 5.99$; $p < 0.001$). In the experimental group, the share of students at the high level almost doubled (from 24.4% to 47.9%), while the share at the low level decreased from 40.6% to 11.5%. In the control group, the changes were moderate (high level: from 23.4% to 31.3%; low level: from 39.3% to 26.6%). The mean score increased from 1.839 to 2.364 in the experimental group and from 1.841 to 2.047 in the control group; the efficiency coefficient was 2.364 / 2.047 = 1.155, i.e. the final result of the experimental group was 15.5% higher than that of the control group.

The results confirm the research hypothesis: the improved system produced a significantly greater increase in future teachers' preparedness than traditional training. These findings are consistent with international evidence that prevention is most effective when it develops practical skills rather than merely transmitting information. Programmes based on life skills and resistance to social influence achieve stable effects [1], and school-based social and emotional learning programmes improve students' behaviour and skills [3]. Our study adds that the same principle applies to teacher training: the largest gains were achieved where students practised diagnostics, scenario design and micro-teaching instead of only studying theory. The survey showed that future teachers rely mainly on the internet for information about harmful habits and see school–family cooperation as weak. This supports the risk and protective factors approach [2], according to which prevention should cover the digital environment, peers and the family simultaneously. It also explains the effectiveness of the "Media Immunity Navigator" method and family-oriented tasks included in the system. The high demand for practical sessions and trainings (72.4% and 68.1%) reflects the conclusion that teachers' own social-emotional competence is a precondition for successful preventive work [4].

The study has certain limitations. Preparedness was assessed partly on the basis of self-reports and observation; the experiment covered three universities; and the long-term

effect on schoolchildren's behaviour was not measured. Further research could examine how the preparedness of future teachers affects the actual behaviour of their students.

CONCLUSION

The pedagogical experiment conducted with 431 students showed that integrating preventive content into five pedagogical disciplines, applying author-developed interactive methods, trainings, the "School of Useful Habits" club and preventive tasks during teaching practice significantly improves future teachers' preparedness to foster students' immunity against harmful habits. The difference between the experimental and control groups after the experiment was statistically significant ($\chi^2 = 20.496$; $p < 0.001$), and the efficiency coefficient was 1.155. It is recommended to introduce an elective module on the prevention of harmful habits for all pedagogy programmes and to include preventive tasks in teaching practice.

REFERENCES

1. Botvin G.J., Griffin K.W. Life Skills Training: empirical findings and future directions // Journal of Primary Prevention. 2004. Vol. 25, No. 2. P. 211–232.

2. Hawkins J.D., Catalano R.F., Miller J.Y. Risk and protective factors for alcohol and other drug problems in adolescence and early adulthood: implications for substance abuse prevention // Psychological Bulletin. 1992. Vol. 112, No. 1. P. 64–105.

3. Durlak J.A., Weissberg R.P., Dymnicki A.B., Taylor R.D., Schellinger K.B. The impact of enhancing students' social and emotional learning: a meta-analysis of school-based universal interventions // Child Development. 2011. Vol. 82, No. 1. P. 405–432.

4. Jennings P.A., Greenberg M.T. The prosocial classroom: teacher social and emotional competence in relation to student and classroom outcomes // Review of Educational Research. 2009. Vol. 79, No. 1. P. 491–525.

5. United Nations Office on Drugs and Crime; World Health Organization. International Standards on Drug Use Prevention. Second updated edition. Vienna: UNODC, 2018.

6. World Health Organization; UNESCO. Making every school a health-promoting school: global standards and indicators. Geneva: WHO, 2021.

7. Abdulazizova N. Pedagogical conditions for the development of immunity against harmful habits in future teachers // Web of Technology: Multidimensional Research Journal. 2025. Vol. 3, Issue 1. P. 43–48.

8. Abdulazizova N. Bo‘lajak o‘qituvchilarni zararli odatlarga qarshi kurashga tayyorlashning amaliy holati va tahlili // Maktabgacha va maktab ta'limi. 2025. № 3(11). B. 975–979.