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METHODOLOGICAL JOURNAL****MENTAL ENLIGHTENMENT SCIENTIFIC –
METHODOLOGICAL JOURNAL**<http://mentaljournal-jspu.uz/index.php/mesmj/index>**RESULTS OF EXPERIMENTAL RESEARCH CONDUCTED IN TEACHING
FOOTBALL FOR IMPROVING THE PROFESSIONAL TRAINING OF FUTURE
PHYSICAL EDUCATION TEACHERS****D.X. Eryigitov**

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ABOUT ARTICLE

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Abstract: This article presents theoretical and practical information on improving the professional training of future physical education teachers through the application of information and communication technologies, particularly by means of electronic educational programs.

Introduction. In order to improve the professional training of future physical education teachers through information and communication technologies, theoretical studies were carried out on teaching the subject “Methods of Teaching Sports and Movement Games” (Football) based on a specially developed electronic educational program. Subsequently, experimental research was conducted to determine the effectiveness of the proposed methodology.

Particular attention was given to the results of the experimental studies aimed at identifying the effectiveness of improving students’ professional training through information and communication technologies.

Considering that the football component of the subject “Methods of Teaching Sports and Movement Games” is included in the fifth semester curriculum, the experimental research was conducted separately within the framework of the semester system.

The academic achievement indicators of students in the subject “Methods of Teaching Sports and Movement Games” (Football) during the fifth semester were analyzed.

It is well recognized that understanding the types and significance of pedagogical assessment constitutes one of the essential professional requirements for specialists in the field of physical culture.

In order to investigate the impact of applying electronic educational programs in teaching the subject “Methods of Teaching Sports and Movement Games” (Football) on the quality of education, a statistical analysis of the fifth-semester academic achievement indicators of third-year extramural students majoring in “Physical Culture” at higher educational institutions participating in the research was conducted.

Methods. Within the curriculum of the subject “Methods of Teaching Sports and Movement Games” (Football), the first topic of the fifth semester was devoted to teaching “The Origin and Historical Development of Football.” The following areas were planned for study within this topic:

- comprehensive and in-depth professional knowledge related to the methodology of teaching sports and movement games;

- theoretical information concerning professional knowledge, skills, and competencies in physical culture that are of practical significance for future professional activities, as well as the effective application of innovative pedagogical technologies;

- theoretical information regarding the origin of football;

- theoretical information about the organization of the first football games and competitions;

- theoretical knowledge concerning the spread of football across European countries and its inclusion in the Olympic Games program;

- theoretical information about the establishment, structure, and activities of FIFA, as well as the formation and functioning of football federations on different continents and the organization of football competitions under their supervision.

RESULTS.

The experimental research involved a total of 132 students from the extramural Department of Physical Culture at Jizzakh State Pedagogical University. Among them, 68 students were assigned to the experimental group, while 64 students constituted the control

group. The academic achievement indicators in the subject “Methods of Teaching Sports and Movement Games” (Football) during the fifth semester are presented in Table 1.

The achievement indicators related to the first topic were assessed as follows. Prior to the pedagogical experiment, among students in the experimental group, 18% achieved an “excellent” grade, 26% “good,” 40% “satisfactory,” and 16% “unsatisfactory.” In the control group, the achievement indicators were distributed as follows: 23% — “excellent,” 28% — “good,” 36% — “satisfactory,” and 13% — “unsatisfactory.”

Table 1

Academic Achievement Indicators of Jizzakh State Pedagogical University Students in the Subject “Methods of Teaching Sports and Movement Games” Before (Pre-Experiment) and After (Post-Experiment) the Pedagogical Intervention (5th Semester) (EG = 68, CG = 64)

№	Topics	Groups		Level of Academic Achievement							
				5 grade		4 grade		3 grade		2 grade	
1.	The Origin and Historical Development of Football	TG	TO	12	18%	18	26%	27	40%	11	16%
			TK	21	31%	28	41%	17	25%	2	3%
		NG	TO	15	23%	18	28%	23	36%	8	13%
			TK	19	30%	19	30%	21	33%	5	8%
2.	Rules of the Game of Football	TG	TO	13	19%	19	28%	26	38%	10	15%
			TK	19	28%	26	38%	20	29%	3	4%
		NG	TO	13	20%	19	30%	20	31%	12	19%
			TK	14	22%	21	33%	20	31%	9	14%
3.	Development of Football in Uzbekistan	TG	TO	14	21%	18	26%	26	38%	10	15%
			TK	20	29%	25	37%	19	28%	4	6%
		NG	TO	8	13%	23	36%	24	38%	9	14%
			TK	12	19%	22	34%	22	34%	8	13%
4.	Classification of Football Techniques	TG	TO	11	16%	22	32%	25	37%	10	15%
			TK	21	31%	25	37%	17	25%	5	7%
		NG	TO	10	16%	18	28%	26	41%	10	16%
			TK	11	17%	17	27%	27	42%	9	14%
5.		TG	TO	12	18%	18	26%	28	41%	10	15%

Classification of Football Tactics	NG	TK	22	32%	26	38%	15	22%	5	7%
		TO	11	17%	19	30%	26	41%	8	13%
		TK	12	19%	16	25%	27	42%	9	14%
Overall Average Indicator	TG	TO	12	18%	19	28%	27	39%	10	15%
		TK	21	30%	26	38%	18	26%	4	6%
	NG	TO	11	17%	19	30%	25	38%	9	15%
		TK	14	21%	19	30%	23	37%	8	13%

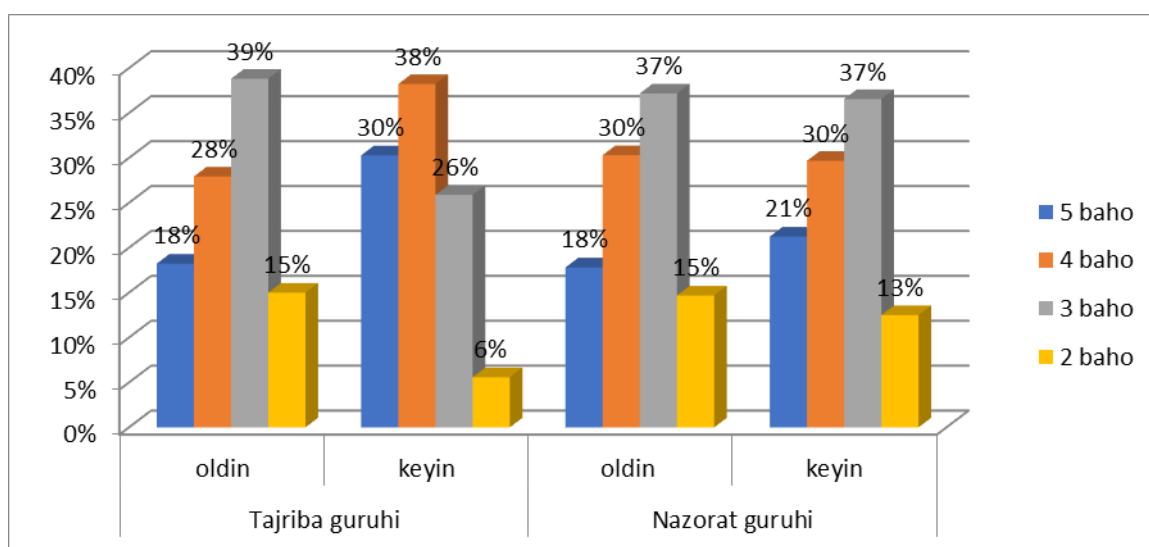


Figure 1. Overall Average Academic Achievement Indicators of Jizzakh State Pedagogical University Students Before (Pre-Experiment) and After (Post-Experiment) the Pedagogical Intervention.

Following the pedagogical experiment conducted to evaluate the effectiveness of the developed electronic educational program in teaching the topic “The Origin and Historical Development of Football,” the results demonstrated positive changes in students’ academic achievement. According to the findings, in the experimental and control groups respectively, 31% and 30% of students achieved an “excellent” grade, 41% and 30% achieved a “good” grade, 25% and 33% demonstrated a “satisfactory” level, while 3% and 8% received an “unsatisfactory” evaluation.

Prior to the pedagogical experiment, the achievement indicators for the second topic entitled “Rules of the Game of Football” among students in the experimental group were distributed as follows: 19% — “excellent,” 28% — “good,” 38% — “satisfactory,” and 15% — “unsatisfactory.” After the completion of the pedagogical intervention, the results improved significantly. In particular, 28% of students achieved an “excellent” grade, 38% — “good,” 29% — “satisfactory,” and only 4% — “unsatisfactory.”

Discussion. With regard to the third topic, “Development of Football in Uzbekistan,” the post-experimental results of students in the experimental and control groups respectively indicated the following outcomes: 29% and 19% — “excellent”; 37% and 34% — “good”; 28% and 34% — “satisfactory”; and 6% and 13% — “unsatisfactory.”

For the fourth topic entitled “Classification of Football Techniques,” the post-experimental assessment results of students in the experimental and control groups respectively were as follows: 31% and 17% — “excellent”; 37% and 27% — “good”; 25% and 42% — “satisfactory”; and 7% and 14% — “unsatisfactory.”

Similarly, for the fifth topic entitled “Classification of Football Tactics,” the post-experimental results of the experimental and control groups respectively demonstrated that 32% and 19% of students achieved an “excellent” grade; 38% and 25% — “good”; 22% and 42% — “satisfactory”; and 7% and 14% — “unsatisfactory.”

Table 2

Statistical Analysis of the Final (Post-Experimental) Results of the Pedagogical Experimental Research Conducted in Higher Educational Institutions

Statistical Indicators	Group	Jizzakh State Pedagogical University	Karshi State University	Chirchik State Pedagogical University	Total
Average Value	Experimental Group	4	4	4	4
	Control Group	3,6	3,5	3,4	3,5
Efficiency Coefficient		1,1	1,14	1,2	1,14
Sample Variance	Experimental Group	0,8	0,7	0,6	0,74
	Control Group	0,9	0,9	0,7	0,87
Standard Error	Experimental Group	0,9	0,84	0,77	0,86
	Control Group	0,95	0,95	0,84	0,93
Confidence Indicators	Experimental Group	0,3	0,3	0,03	2,1
	Control Group	0,4	0,4	0,04	2,09
Confidence Probability	Experimental Group	3,8	3,8	3,6	3,86
		4,2	4,3	4,3	4,14
	Experimental Group	3,6	3,2	3,1	3,36
		3,7	3,7	3,7	3,64
Student's t-Statistic		2,5	3,04	3	5
Degrees of Freedom in Statistics		129	116	62	308

Critical Value	1,98	2,18	1,99	1,97
Criterion Conclusion	H ₁	H ₁	H ₁	H ₁

At the significance level of $\alpha = 0.05$, it can be concluded that the average achievement indicators of the experimental group were higher than those of the control group, as evidenced by the non-overlapping confidence intervals. The obtained efficiency coefficient demonstrated the effectiveness of the conducted research, indicating that the experimental outcomes were 1.14 times higher, or improved by 1.14%, compared to the initial indicators.

Conclusion. Therefore, all results obtained at the final stage of the study confirmed the acceptance of the H₁ hypothesis. The differences observed in academic achievement indicators between the selected groups, as well as the higher efficiency and knowledge-level indicators demonstrated by the experimental groups in comparison with the control groups, verify the reliability and validity of the experimental research.

In conclusion, the research conducted within the framework of the Doctor of Philosophy (PhD) dissertation entitled “Improving the Professional Training of Future Physical Education Teachers through Information and Communication Technologies” enabled the formulation of the following conclusions.

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