



PRACTICAL APPLICATION OF MODERN EDUCATIONAL TOOLS IN “TARBIYA” LESSONS AS A FACTOR IN DEVELOPING PRE-SERVICE TEACHERS’ SPECIAL COMPETENCIES

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Abstract. This study examines the practical use of modern educational tools — multimedia resources, computer and mobile technologies, and online platforms — in “Tarbiya” (moral-civic upbringing) lessons as a means of developing pre-service teachers’ special competencies. The purpose of the research was to substantiate criteria for selecting educational tools and to design and trial a set of practice-oriented tasks that build student-teachers’ technical, technological and digital competencies. A formative pedagogical experiment was conducted with pre-service “Tarbiya” teachers, who prepared multimedia products (infographics, video and audio materials, e-presentations), interactive didactic games with the Hot Potatoes application, and quiz-based lessons on the Kahoot! platform, built around specific topics of the 10th- and 11th-grade “Tarbiya” curriculum. Selection criteria included learners’ prior familiarity with a tool, its capacity for producing prompt methodological materials, ease of use for school students, opportunities for teacher–learner feedback, and the possibility of rapid troubleshooting. The results show that guided, criterion-based engagement with multimedia tools, Hot Potatoes-based didactic games and Kahoot!-based interactive quizzes measurably improved student-teachers’ ability to design methodologically sound, age-appropriate materials, while increasing learner engagement and interactivity in trial lessons. The study concludes that systematic, criterion-guided practice with modern educational tools is an effective mechanism for developing the special competencies required of future “Tarbiya” teachers and offers a replicable model for teacher-training programmes.

Keywords: modern educational tools, pre-service teacher training, special competencies, multimedia resources, Hot Potatoes, Kahoot!, Tarbiya education.

1. Introduction

The digital transformation of education has placed new demands on teacher-training programmes, requiring future teachers to combine subject-matter knowledge with technical and technological competence. This requirement is particularly evident in the “Tarbiya” subject taught in general secondary schools of Uzbekistan, whose content — civic responsibility, national values, media





literacy and moral-spiritual education — is closely tied to rapidly changing social and information conditions. Consequently, pre-service “Tarbiya” teachers must be able not only to explain such content but also to translate it into engaging, technically sound learning materials.

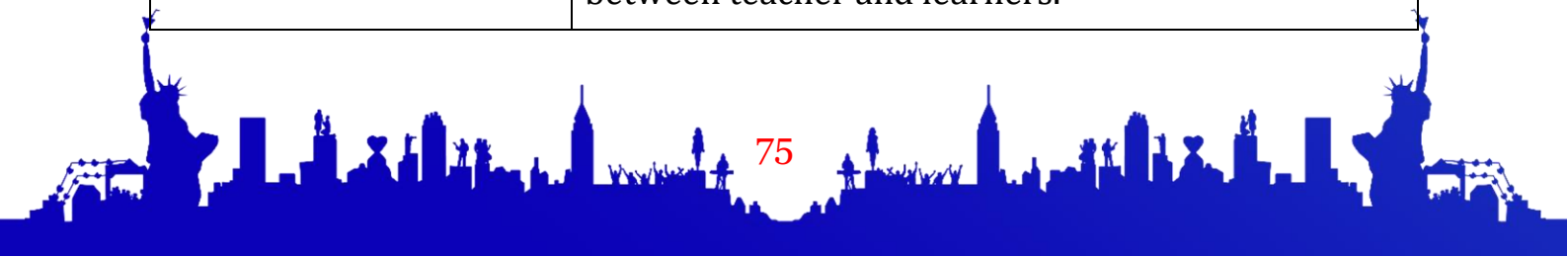
A prior stage of this research identified five categories of modern educational tools relevant to “Tarbiya” teaching: multimedia resources (video, audio, infographics, e-presentations); computer and mobile technologies; online platforms; virtual and augmented reality (VR/AR); and social networks and messengers. The present article focuses on the first three categories — multimedia resources, computer/mobile technologies and online platforms — and reports on a formative experiment designed to develop pre-service teachers’ special competencies through structured, criterion-based practice with these tools. The purpose of the article is to substantiate the criteria used for tool selection, describe the instructional tasks built around them, and analyse the resulting competency gains.

2. Methods

The selection of specific tools within each category was not arbitrary but was guided by five interrelated pedagogical criteria, summarised in Table 1.

Table 1. Criteria for selecting modern educational tools

Selection criterion	Pedagogical rationale
Prior learner experience	Reduces the time spent overcoming technical obstacles and allows attention to remain on pedagogical goals rather than tool operation.
Capacity for prompt material design	Enables the rapid preparation of methodological materials on any topic of the "Tarbiya" curriculum, which is closely tied to current social and moral issues.
Ease of use for learners	Widely available, learner-friendly interfaces (mobile apps, messengers, multimedia files) support quick, barrier-free engagement by school students.
Convenience of feedback	Supports prompt question-and-answer exchange, online discussion, testing and opinion-sharing between teacher and learners.





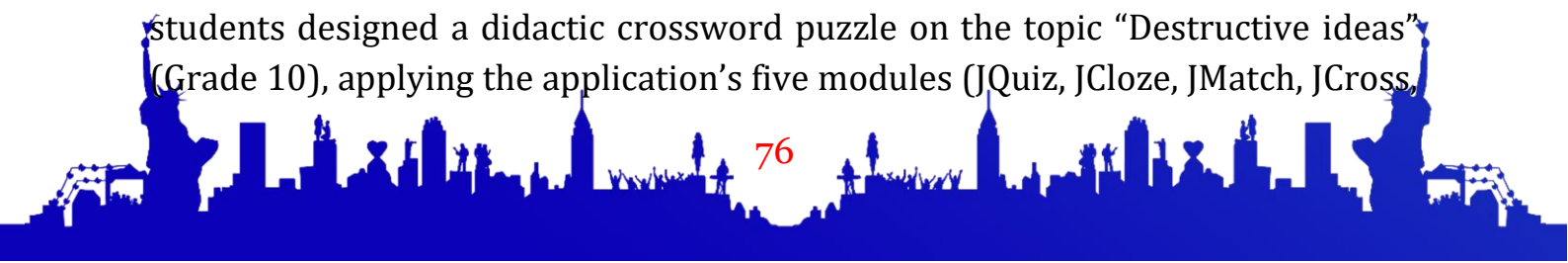
Selection criterion	Pedagogical rationale
Rapid troubleshooting capacity	Digital platforms allow technical or comprehension difficulties to be identified and resolved without delay, ensuring continuity of the learning process.

The study involved pre-service “Tarbiya” teachers at the participating higher education institutions, organised into small working groups. A formative experiment was designed around the 10th- and 11th-grade “Tarbiya” curriculum, from which a set of topics with high practical and age-appropriate pedagogical potential was selected as the basis for methodological development (Table 2 gives representative examples).

Table 2. Sample work plan linking curriculum topics, tool types and competencies (Grade 10, excerpt)

Topic (Grade 10)	Tool type used	Targeted competency
Homeland is one	Video, e-presentation, infographic	Socialisation competency
Duty and responsibility in the family	Short videos, interactive platform	Socialisation competency
Destructive ideas	Video clips, media materials	Ideological-immunity competency
A safe media ocean	Internet platforms, video lesson	Life-safety responsibility competency
Religion and culture	E-presentation, documentary video	Tolerance competency

Three task types were used to develop learners’ competencies. First, respondent-students prepared infographic-based creative projects (e.g., on the topic “A safe media ocean”) using free online infographic services (Canva, Piktochart, Visme, Infogram, Venngage, Google Charts, Easel.ly, Genially, Adobe Express, Mind the Graph), guided by an eleven-point checklist of general didactic and technical requirements for instructional multimedia products (alignment with curriculum goals, factual reliability, logical clarity, visual and interactive richness, age-appropriateness, information security and copyright compliance, among others). Second, working in the Hot Potatoes authoring application, students designed a didactic crossword puzzle on the topic “Destructive ideas” (Grade 10), applying the application’s five modules (JQuiz, JCloze, JMatch, JCross,





JMix) to construct interactive exercises. Third, students designed a five-part interactive quiz and poll set on the Kahoot! platform for the integrated topic “Family upbringing as the foundation of a child’s development,” combining multiple-choice questions, true/false items, opinion polls, sequencing tasks and a discussion prompt.

Each task followed the same procedural logic: (a) diagnosing students’ existing familiarity with the tool; (b) introducing its didactic capabilities; (c) engaging small groups in creating an original product; (d) organising peer and instructor review of the products; and (e) evaluating the outcomes against explicit criteria.

3. Results

Diagnostic results confirmed that nearly all respondent-students already possessed basic skills for producing video clips, audio materials, infographics and e-presentations. However, initial products frequently fell short of didactic requirements in content accuracy, visual design or pedagogical structure. After the checklist of requirements was introduced and a correction (feedback and revision) cycle was carried out, the quality of the infographic projects on “A safe media ocean” improved substantially in both content organisation and visual clarity.

In the Hot Potatoes task, respondent-students successfully produced a functioning didactic crossword puzzle on “Destructive ideas,” incorporating twenty-one key terms (extremism, manipulation, corruption, vandalism, cyber-crime, and related concepts). Beyond the technical outcome, the task strengthened students’ logical reasoning, independent analysis and ability to translate abstract civic-education concepts into an interactive learning format.

In the Kahoot! task, the five-part interactive quiz on family upbringing (comprising an eight-item multiple-choice section, a true/false section, an opinion poll, a sequencing exercise and a discussion question) was completed and trialled. Respondent-students demonstrated the ability to design questions appropriate to learners’ age and psychological characteristics, and reported that the platform’s immediate feedback and game-like format supported lively classroom interaction.

Across all three tasks, small-group work consistently produced richer, better-structured outcomes than individual work, and repeated cycles of feedback and revision were the single most important factor in raising the quality of the finished materials.

4. Discussion





The results are consistent with multimedia learning theory, which holds that combining verbal and visual channels of information supports deeper processing and retention when cognitive load is properly managed (Mayer, 2009). The gains observed in the infographic task in particular reflect the value of explicit design principles: without a clear checklist, students' initial multimedia products tended to replicate common design weaknesses — informational overload, weak visual hierarchy and insufficient alignment with instructional goals — that are well documented in the data-visualisation literature (Krum, 2013).

The Kahoot! results align with prior findings that game-based quiz platforms increase learner engagement, motivation and immediate feedback opportunities in classroom settings (Wang & Tahir, 2020). The Hot Potatoes task illustrates a complementary benefit: because the software itself imposes a structured exercise format (crossword, matching, gap-fill), it required students to distil complex civic-education content into precise, testable units, thereby reinforcing both subject-matter mastery and instructional design skill.

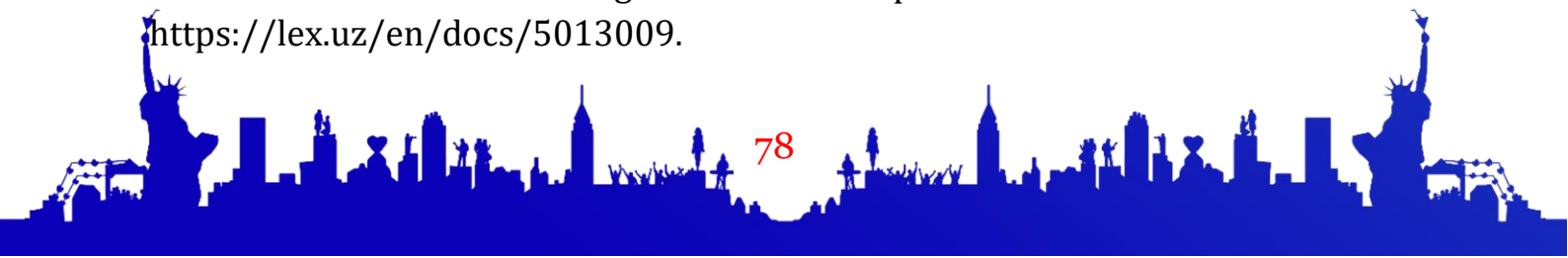
A limitation of the study is that several of the free infographic services used offer only partial functionality without a paid subscription, which may constrain access for students with limited financial means; institutions adopting this model should therefore prioritise genuinely free or institutionally licensed tools. Furthermore, as the experiment was limited to three tool categories, further research is needed to determine how these competencies interact with those developed through VR/AR and social-media-based tasks, which are addressed in a companion study.

5. Conclusion

Structured, criterion-guided practice with multimedia resources, computer/mobile technologies and online platforms is an effective way to develop the special competencies required of future “Tarbiya” teachers. Explicit selection criteria, clear didactic checklists, small-group production tasks and systematic feedback cycles together produced measurable improvements in the technical and pedagogical quality of the methodological materials designed by respondent-students. The approach described here offers a replicable, low-cost model that teacher-training programmes can adapt to other subjects and educational contexts.

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