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PODCASTS AND INTERACTIVE EXERCISES: A COMPARATIVE STUDY ON UPPERGRADE STUDENTS INDEPENDENT LEARNING

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ABSTRACT

This study experimentally compared the effects of podcasts and interactive online exercises (Quizlet, Kahoot!) on uppergrade students independent learning skills. Sixty 10thgrade students were divided into three groups: a podcast group (n=20), an interactive online exercise group (n=20), and a combined group (n=20) using both tools. After a 10week experiment, the combined group improved independent learning scores by 68%, the podcast group by 39%, and the interactive exercise group by 34%. The integrated approach demonstrated the highest effectiveness.

INTRODUCTION

Digital technologies have significantly expanded students opportunities for independent learning in language education. Computerassisted language learning (CALL) tools, particularly podcasts and interactive online exercises, enable learners to develop their knowledge autonomously outside the classroom. Learner autonomy – the ability to plan, execute, and evaluate ones own learning process – has become a central goal of modern language teaching.

Podcasts serve as authentic audio materials that effectively develop students listening comprehension skills. They provide natural speech rates, various accents, and real conversational contexts. Interactive online exercises such as Quizlet and Kahoot! offer immediate feedback and selfmonitoring opportunities, allowing students to test their knowledge and correct mistakes independently.

Previous research has examined the effects of podcasts and interactive online exercises separately. However, comparative studies on their relative effectiveness and, importantly, the additional effect of using them together have been insufficient. This study aims to comparatively evaluate the impact of using podcasts and interactive online exercises separately and in combination on uppergrade students independent learning skills, and to identify the most effective approach.

METHODS

A quasiexperimental design was employed with pretests and posttests comparing three groups. Participants

were 60 tenthgrade students from a secondary school in the Republic of Karakalpakstan. Students were randomly divided into three equal groups: podcast group (PG, n=20, 10 female, 10 male), interactive online exercise group (IOMG, n=20, 9 female, 11 male), and combined group (BG, n=20, 10 female, 10 male). Pretest results confirmed that all groups had English proficiency at A2B1 level with no statistically significant difference between groups (p>0.05).

Three instruments were used for data collection. First, an independent learning skills test consisting of 30 multiplechoice and 5 openended questions measured listening comprehension, selfmonitoring, independent mastery of new material, and problemsolving abilities (Cronbachs α=0.89). Second, a 5point Likert scale questionnaire based on autonomy scales developed by Little (1991) and Benson (2013) assessed students attitudes and motivation toward independent learning. Third, a daily observation checklist completed by the teacher recorded student engagement, initiative, and selfassessment during each session.

The experiment lasted 10 weeks with two 30minute sessions per week. The podcast group listened to 57 minute podcasts selected from BBC 6 Minute English, VOA Learning English, and ELLLO platforms. Each session followed a threestage framework: prelistening (topic introduction, key vocabulary), whilelistening (gapfilling, notetaking), and postlistening (summary, discussion).

The interactive online exercise group used Quizlet and Kahoot! platforms, completing tasks such as interactive flashcards, multiplechoice tests, gapfill exercises, matching words with definitions, and online competitions.

The combined group followed a fourstep algorithm: (1) listen to a podcast, (2) complete interactive exercises based on the podcast transcript, (3) listen to the podcast a second time to check comprehension, and (4) assess their knowledge through an online test.

Data were analyzed using SPSS 26 with oneway ANOVA, paired and independent samples ttests. Statistical significance was set at p<0.05.

RESULTS

All three groups showed significant improvement from pretest to posttest. The combined group increased from a mean score of 28.5 to 47.8 (68% improvement, t=15.47, p<0.001, Cohens d=2.84). The podcast group increased from 28.4 to 39.6 (39% improvement, t=8.91, p<0.001, d=1.42). The interactive online exercise group increased from 28.6 to 38.2 (34% improvement, t=7.63, p<0.001, d=1.21). Oneway ANOVA showed that the difference between groups was statistically significant (F(2,57)=12.84, p<0.001). Posthoc Tukey test confirmed that the combined groups results were significantly higher than both other groups (p<0.001).

Analysis of independent learning components revealed different strengths. The podcast group achieved the highest gain in listening comprehension (+50%, from 28 to 42). The interactive online exercise group showed the largest gains in selfmonitoring (+46%, from 28 to 41) and problemsolving (+39%, from 28 to 39). The combined group demonstrated

the highest gains across all components: listening comprehension +71% (28 to 48), selfmonitoring +69% (29 to 49), independent mastery +68% (28 to 47), and problemsolving +66% (29 to 48).

Questionnaire results showed that the combined group rated their materials highest in interest (4.8 out of 5), willingness to continue independent learning (4.9), ability to selfassess (4.9), and retention of material (4.8). The podcast group rated interest (4.5) and willingness to continue (4.4) highly, while the interactive online exercise group rated ease of use (4.7) and retention (4.6) highly.

Teacher observations recorded active participation rates of 92% in the combined group, 78% in the podcast group, and 75% in the interactive online exercise group.

DISCUSSION

The results confirm that podcasts improve listening comprehension and independent mastery of new material, consistent with previous findings that podcastbased autonomous learning significantly enhances listening skills when combined with metacognitive instruction. The 50% gain in listening comprehension in the podcast group supports the value of authentic audio input.

Interactive online exercises demonstrated strong effects on selfmonitoring and problemsolving skills. The immediate feedback provided by platforms like Quizlet enables students to test their knowledge, identify errors, and correct them independently, thereby fostering selfassessment abilities essential for autonomous learning. However, as previous research noted, interactive exercises alone may not develop autonomy equally for all learners, highlighting the importance of teacher guidance and task adaptation.

The most important finding of this study is that combining podcasts with interactive online exercises yields substantially higher effectiveness than using either tool alone. The combined group achieved 68% improvement compared to 39% and 34% for the separate groups. This synergy operates through several mechanisms. First, the two tools complement each others limitations: podcasts provide authentic input but lack systematic consolidation, while interactive exercises provide structured reinforcement but lack authentic context. Together they create a complete learning cycle of input, comprehension check, error correction, and knowledge consolidation. Second, multimodal learning (audio plus interactive testing) enhances memory retention. Third, the engaging content of podcasts combined with gamified elements of interactive exercises increases both intrinsic and extrinsic motivation. Fourth, students develop all dimensions of autonomy through regular practice of planning, executing, and evaluating their own learning.

These findings align with previous research showing that integrating podcasts with other digital tools positively affects independent learning.

The study has several limitations. It lasted only 10 weeks, involved a single school, had a relatively small sample size (n=60), did not examine longterm effects, and did not fully account for individual learning styles or prior proficiency levels. Future research should involve larger

and more diverse samples, longer durations, and examine the role of artificial intelligence in personalized recommendations.

CONCLUSION

This study compared the effects of podcasts and interactive online exercises on uppergrade students independent learning skills and reached three main conclusions.

First, both tools are effective in developing independent learning, but they operate through different mechanisms. Podcasts primarily enhance listening comprehension and independent mastery of new material. Interactive online exercises more strongly develop selfmonitoring and problemsolving skills.

Second and most importantly, using podcasts and interactive online exercises together is significantly more effective than using either tool alone. The combined group improved by 68%, while the podcast group improved by 39% and the interactive exercise group by 34%. This difference was statistically significant with a large effect size.

Third, the higher effectiveness of the integrated approach is explained by complementarity of functions, multimodal learning, enhanced motivation, and comprehensive development of learner autonomy.

Practical recommendations: Teachers should integrate both tools rather than treating them as alternatives, for example by following podcasts with interactive quizzes on the same content. Curriculum developers should include podcast and interactive exercise integration in school programs and provide teacher training on CALL tools. Students should establish regular weekly schedules for podcast listening and interactive exercise practice.

Future research should investigate longterm effects, compare different educational contexts, examine individual learner characteristics, and develop AIbased personalized recommendation systems..

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