

Physical Upbringing in their Classes, Digital Technologies Use: Advantages and Problems

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Abstract: *This article analyzes the benefits and challenges of using digital technologies (mobile apps, fitness trackers, video content, and interactive whiteboards) in physical education classes in schools in Uzbekistan in the IMRAD format. Using qualitative and quantitative methods, a study was conducted with the participation of 150 students and 10 teachers in 5 schools in Tashkent. The results showed that digital technologies are important in increasing students' motivation and physical activity (78% of students reported increased interest), as well as in improving the effectiveness of the educational process (70% of teachers noted the benefits of video content). However, infrastructure constraints (60% of schools lack sufficient infrastructure), teacher skills shortages (50%), and economic problems make implementation difficult. The article offers practical recommendations (improvement of infrastructure, teacher training, development of affordable applications) to overcome these problems and identifies directions for future research on the effective use of digital technologies in the education system of Uzbekistan.*

Keywords: *Physical education, digital technologies, fitness trackers, mobile applications, video content, interactive whiteboards, motivation, infrastructure, teacher training, education in Uzbekistan, healthy lifestyle.*

Introduction

Modern education in the system of digital technologies all sciences, this including physical upbringing in the field important place is holding. In Uzbekistan, the “ Third Renaissance initiatives within in education innovative approaches current to reach separately attention is being considered, this and physical upbringing in their classes digital from technologies use current to the point Digital technologies, such as mobile apps, virtual workouts, fitness trackers and video content students physical activity increase, motivation strengthen and education process effective organization in doing new opportunities creates. Research shows that digital tools physical upbringing in their classes students activity and training the results improve possible (Gibbone et al., 2010). However, this technology current in the process of infrastructure, teachers' qualification and economic restrictions such as There are also problems. This article discusses Uzbekistan in schools physical education in their classes digital technologies of use advantages and problems in IMRAD format learns.

Research purpose

Article purpose Uzbekistan in schools' physical upbringing in their classes digital from technologies of use advantages , surface coming problems analysis to do and them effective current to grow according to practical recommendations working is an exit .

Methods

Research design

This research good quality and quantitative approaches combined mixture to the methodology is based on. Qualitative analysis digital of technologies physical upbringing in the lessons advantages and problems determination for literature analysis and students with to conversations based on . Quantitative analysis and digital from tools used without of the students physical activity and motivation assessment for questionnaire and experimental from observations uses .

Participants

Research 5 secondary schools in Tashkent , Uzbekistan 7th- 9th grade students (N=150, ages 12-15) and 10 physical upbringing his/her teacher own inside Schools random selectively was taken , but their in the infrastructure digital from technologies use opportunity existence into account received .

Materials

In the study following digital technologies used :

- **Mobile apps:** like Fitbit and Strava applications of the students physical activity observation for used .
- **Video content:** YouTube and local education on platforms exercise videos in classes instruction as used .
- **Fitness trackers:** Xiaomi Mi Band and other cheap at the price devices of the students heart beat and steps measurement for used.
- **Interactive Boards:** Some in schools physical exercises explanation for interactive boards was used

Methods

Research following in stages done increased:

1. **Literature Analysis:** Physical upbringing in their classes digital from technologies use according to international and local research (2010-2024) was studied.
2. **Questionnaire:** Students and teachers between digital of technologies application , advantages and problems determination for questionnaire was conducted (5- point Likert scale).
3. **Experimental observation:** 3 months in 2 groups (experiment) and control groups) physical upbringing lessons The experimental group used digital technologies (mobile apps, fitness trackers) , while the control group used traditional methods.
4. **Interviews:** Semi-structured interviews were conducted with teachers to discuss the challenges and opportunities in implementing digital technologies.

Data analysis

Quantitative data was processed through statistical analysis (mean , standard deviation). Qualitative data was systematized through thematic analysis, which helped to identify the experiences and problems of teachers .

Results

Advantages

Showed that digital technologies have the following advantages in physical education classes :

- **Increased motivation** : According to the survey results, 78% of students reported that they were more engaged in class when using fitness trackers and mobile apps. For example, tracking steps and calories burned on the Strava app encouraged students to participate more actively.
- **Improved physical activity** : The average physical activity (step count and heart rate) of students in the experimental group was 15% higher than that of the control group. The fitness trackers allowed students to monitor their activity levels in real time .
- **Effectiveness of the learning process** : Video content and interactive whiteboards provided clarity and visual support in explaining exercises. 70% of teachers used videos using exercises explanation that it has become easier emphasized .
- **Individualized approach** : Digital tools have allowed students to choose exercises that are appropriate for their physical abilities. For example, the Fitbit app has helped students set individual goals (e.g., 10,000 steps per day) .

Problems

The following problems were identified in the implementation of digital technologies:

- **Infrastructure constraints** : According to the survey , 60% of schools did not have full digital infrastructure (interactive whiteboards, internet). This is especially true in rural areas . in schools this problem noticeable was .
- **Teachers' Qualification** : 50% of teachers are digital technologies effective application according to special to prepare has that it is not This is and in classes technologies complete current to reach made it difficult .
- **Economic constraints** : The cost of fitness trackers and other devices was not affordable for all students. According to the survey results, 65% of students stated that it was difficult to purchase the devices for personal use.
- **Technological distraction** : 25% of students have been distracted from class while using mobile apps, such as accessing social media or playing games.

Discussion

Significance of the results

The results of the study show that digital technologies have great potential to improve the effectiveness of physical education classes in schools in Uzbekistan. Increased motivation and improved physical activity encourage students to pursue a healthy lifestyle, which is consistent with Uzbekistan's "Healthy Generation" policy. Video content and interactive whiteboards provide teachers with new opportunities to explain exercises, which improves the quality of the lesson. The possibility of an individual approach helps to develop programs that are suitable for students' different physical abilities, which is consistent with the principles of inclusive education.

Restrictions

The study only included schools in Tashkent city , which makes it difficult to generalize the results to rural areas. Also, the short duration of the experimental study (3 months) did not allow for a full assessment of the long-term impact of digital technologies. Future studies should cover different regions of the country and examine long-term effects .

Practical recommendations

1. **Infrastructure improvement** : Government and education institutions schools digital infrastructure (high at speed internet , interactive boards) with to provide investment input need .
2. **Teachers qualification Increase** : Physical upbringing teachers for digital technologies application according to special trainings organization to be done recommendation is being done .
3. **Cheap at the price Alternatives** : Economical restrictions eliminate to grow for cheap at the price or free mobile applications and from devices use promote to do
4. **Technological to distract Management** : Students attention to class focus for digital from tools use rules working exit need , for example , only lesson with related to applications permission to give
5. **Local applications working output** : Uzbek in the language working and local education to programs customized digital applications create , for example , national sports for sports (wrestling , taekwondo) special programs .

Conclusion

Uzbekistan in schools physical upbringing in their classes digital from technologies use students motivation , physical activity and training process efficiency in increasing big opportunities However , the infrastructure restrictions , teachers qualification shortage and economic problems this the process makes it difficult . This problems eliminate to grow through digital technologies physical upbringing further effective and modern to the level lift possible . In the future this technologies wider current to grow and local to the context adaptation according to additional research transfer recommendation is being done .

Literature

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