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«Some aspects of using mixed reality technologies in the training of physics teachers»

P V Zakharov, A S Kataeva, A S Kochkin, A M Eremin and A V Markidonov



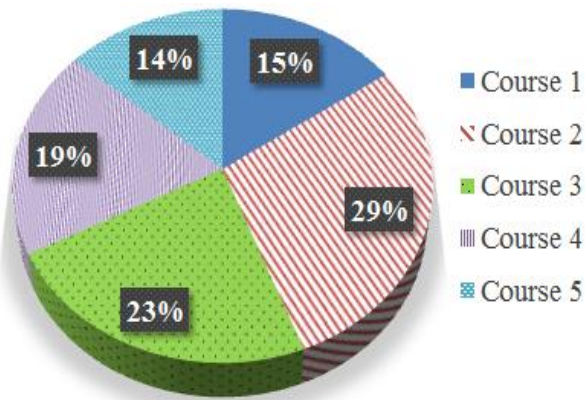
# Problem statement



The purpose of this work is to consider the possibilities and prospects of using modern technical means using the example of mixed reality (MR) technology in the preparation of physics teachers. We also see the expediency of this topic in the fact that students of a pedagogical university will not only gain knowledge using mixed reality, but also in the long run embed MR elements into their lessons and events. The relevance of the introduction of such technologies in the form of fragments of lessons or full-fledged lessons in a virtual environment has increased with the introduction of elements of distance learning.



# Solution methods



Distribution of  
respondents by training  
course

- Technically, the study was based on the use of classvr virtual and mixed reality headsets with basic software and a web interface. This equipment allows you to use the developed content, which is extremely important when considering standard tasks. The portal has ready-made developments that can be applied in the classroom in a wide range of disciplines, both the school curriculum and higher education.
- At the first stage, meta-analysis was used as a research tool, providing the study of literary sources on the research topic
- Further, a survey of students of the Shukshin Altai State University for Humanities and Pedagogy, (Biysk, Russia) from 1 to 5 courses. The total number of respondents was 54. The content of the survey and its results are discussed below
- The final stage of the research was an expert assessment of a number of our developments for mixed reality



# Conclusions

## Results, implementation

The article analyzes the literature on the use of mixed and virtual reality technologies in the preparation of physics teachers. A survey was conducted among students from 1 to 5 years of study. The results of the survey indicate that these technologies are of interest to students of a pedagogical university, both in their training and as a methodological tool in their future professional activities. However, there are skeptical students, about 6%, who plan to adhere to traditional teaching methods. Expert assessment of developments with mixed reality elements showed that they are considered by experts as other multimedia means. According to the results of the study, the introduction of mixed and virtual reality systems into the training of physics teachers seems to be expedient along with other innovative technical teaching aids.



# Contacts

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