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## ***Teachers, Interactive Whiteboards, and Learning Materials in Slovenia and Serbia***

### **Extended summary**

The modern-day classrooms are equipped with interactive whiteboards driven by the corresponding software. Using all the advantages offered by interactive whiteboards is often limited by the lack of knowledge on software or the lack of time for the preparation of learning materials. The existing practical suggestions, examples or ideas how to prepare teaching and learning materials suitable for interactive whiteboards can be rather useful and encourage teachers to apply them. The software delivered together with interactive whiteboards opens up possibilities for the use of versatile didactic resources, such as e-slides, didactic games, web applications, online learning environments, and the like. Therefore, interactive whiteboards can be used at all levels of education and in all subjects. Furthermore, the software and the tools supporting interactive whiteboards offer a whole range of possibilities for education in the field of fine arts. Teaching contents based on play in visual arts are one of the regular activities linking understanding visual language and the expression of visual arts. Teachers can use play in all phases of learning process, in accordance with the design of teaching or fine arts tasks. The examples stated in the paper point to the advantages of learning materials using interactive white-

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boards, based on the responses of the potential users (teachers) and the short descriptions of the test results representing opinions on the efficacy and suitability of their application.

The research problem, i.e. the aim of the research is the comparison of the frequency of using interactive whiteboards in Serbia and Slovenia and determining the elements which make the content interesting and efficient, including the issue of the existence of appropriate teaching content.

According to several carefully prepared examples of teaching contents in the form of didactic games, as a basis of the future repository of the teaching content for interactive whiteboards, the researchers explored what types of contents are attractive to children and what elements of teaching contents they acquire to a greater extent. Having played the games, enabling learning and understanding of the subject matter, questionnaires were distributed to pupils in order to get feedback on the effects of their use. The questionnaire was supposed to provide an insight into the following: what attracted pupils to use didactic games, which elements of the teaching unit they acquired best, and what influenced them to remember those elements so well. The methodological approach involved the qualitative analysis of the comparison of the current state at the level of two countries and the quantitative analysis from the aspect of the didactic features of the content elements for interactive whiteboards.

The research has showed that the use of interactive whiteboards in Slovenia is significantly more spread in comparison to Serbia, where their use is to great extent dependent on the current economic situation in the sphere of education in general. The situation is slightly better in bigger towns in Serbia, but it was determined for both countries that the mere existence of interactive whiteboards does not mean that teachers necessarily use them in teaching. Such a situation can with great certainty be explained by the lack of didactic materials suitable for the use on interactive whiteboards. The lack of materials is also associated with the language barrier, bearing in mind that the existing materials for specific interactive whiteboards are mainly in a foreign (i.e. English) language. The materials are also adapted to suit the specific needs of individual school systems and are often incompatible with the local syllabuses. The key reason for the limited use of interactive whiteboards is an insufficient teacher training and the lack of knowledge on the tools for the preparation and development of didactic contents. The results of the research show that teachers assess the didactic games as a very useful tool, promoting the implementation of interactive whiteboards in the learning process, while pupils evaluated the games as interesting, fun and informative, feeling at the same time that they are motivated to continue with their work, integrating contest and team spirit.

Finally, it was established that it was necessary to prepare a content repository, which has to be prepared by teachers and for teachers, and which would at the same time be in the open access mode with a full observance of the predefined copyrights.

**Keywords:** interactive whiteboard, learning materials, art education, teaching process, learning material repository.

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