Multimedia learning object "Mathematical Induction"

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Every mathematical research is based on the deductive or the inductive method. The deductive method is based on the judgment from the general to the separate. However, the inductive method is based on the judgments from the separate to the general, which is the opposite of the deductive method.

The method of mathematical induction can be compared with the progress. We start with the lower degree and, as a result of logical judgments; we come to the general conclusion (result). The man always tries to advance, tries to develop his ideas in a logical way, consequently, nature itself makes the man think in an inductive way.

The inductive method plays a significant role in understanding the principle of mathematics. Although, the range of the problems concerning the usage of the mathematical induction method has grown, in school syllabi very little attention is paid to the issue. What can a student acquire during two or three lessons of mathematics, if the theory is explained very briefly and teachers provide the solutions of five simple exercises? In addition, the student gets a good grade although, in reality, he knows nothing about the method.

The majority of students are visual learners. Therefore, if mathematical induction teaching methods are improved, more and more students would become interested in it. This is a powerful and sophisticated enough method to be acceptable for the majority.

The century of information offers our society completely new opportunities in nearly all fields. However, the field of education is the one where the new technologies provide the greatest advantages.

Multimedia provides the opportunity to create teaching aids that combine text, pictures, sound and video, as well as quickly helps to find the necessary information. Professional usage of the multimedia appliances turns learning process into an exciting process of cognition.

For students the learning process sometimes may seem boring, therefore we can attract their attention with the help of information technologies. It can be done by creating multimedia learning objects. The multimedia learning objects can make the learning process more exciting, visually more perceptible and more specific. In that way teachers can work easier and faster, paying more attention to practical assignments.

The created multimedia learning object "Mathematical induction" serves as successful evidence to that statement.

References:
1. Cunska A. (2009) Programma Lectora multimediju matemātikas objektu izveidei, lpp 75.-82., *12tās Starptautiskās konferences un skolotāju radošo darbnīcu materiālu apkopojums „Sadarbība rītdienas skolai"*. Rīga: Latvijas Universitāte