



Aktivna uporaba tehnologije v procesu učenja matematike

An active use of technology in the process of learning mathematics

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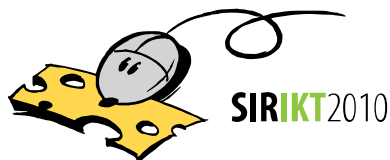
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Povzetek

Z vidika načina učenja bodo na delavnici izpeljane nekatere ključne situacije učenja, kot so opazovanje vzorcev, odkrivanje povezav, učenje ob dinamičnih slikah, raziskovanje problemskih situacij in podatkov ter učenje s povratno informacijo z različno programsko podporo. Utemeljili bomo razvoj produktivnega znanja in razvoj IKT-zrelosti.

Uporabo IKT-tehnologije lahko delimo na pasivno, kvaziaktivno in aktivno uporabo.

Pasivna uporaba tehnologije omogoča učencem, da opazujejo vizualizirane pojme in povezave med njimi ter sami eksperimentirajo. Eksperimentiranje je predvideno in vodeno, praviloma so to enolično rešljive situacije, učenci se učijo po začrtani poti. Pravimo, da na ta način sprejemajo gotovo znanje. V primerih aktivne uporabe tehnologije so lahko dani problemi odprti, učno okolje dovoljuje napake in omogoča učenje iz napak, eksperimentiranje brez



omejitev in nadaljevanje ali razširitev danega problema. Učitelji in učenci so lahko ustvarjalni in lahko odločajo, kako in kje bo mogoče tehnologijo smiselno in učinkovito uporabiti. Le-to so učne situacije samodiferenciacije in nastajajočega znanja. Kvaziaktivna raba je v primeru uporabe didaktičnih predlog – datotek, ki jih lahko tako učitelji kot učenci spreminjajo in s tem bogatijo IKT-kompetenco.

Abstract

From the point of the learning method, the workshop will carry out some key learning situations such as observing patterns, discovering new connections, learning by using dynamic pictures, investigating problem solving situations and data as well as learning from feedback using different software. We will establish a development of productive knowledge and a development of ICT maturity.

ICT can be used on passive, quasi active and active way. Passive use of technology supports students' observations of visualised concepts and connections among them and their experimentations. The experimentation is foreseen and guided. These are usually uniquely solved situations, students are learning by provided way and by that reason they acquire ready made knowledge. In the case of an active use of technology given problems can be open-ended, a learning environment allows errors and learning from errors. Experimenting unwinds without constrains and the given problem can be continued or extended. Teachers and students can be creative; they can be decision makers regarding appropriate and effective use of technology. These are learning situations of self differentiation and knowledge by acting. Quasi active use is discussed when means of didactical templates are in usage. These are files that can be transformed by both students and teachers and in such a manner they all enrich ICT competence.