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Review paper

doi: 10.5937/inovacije1602015D

Paper received: February 16th 2016
Paper accepted: March 30th 2016
Article Published: July 15th 2016

Standards of Students' Achievements Functioning in Efficient Differentiated Teaching Mathematic

Extended summary

Contemporary teaching methodology of Mathematics means considering different characteristic of students who cannot be undertaken with the same treatment meant by classical teaching. Introducing innovations into the Mathematics teaching should present reactions of the shortages of traditions teaching Mathematics. They must be created for the purpose of bringing efficiency to teaching.

This paper is devoted to aspects of functional using of standards of students' achievements in organising efficient differentiation of teaching Mathematics. For the clearer review of the whole topic and its significance in teaching, the term of differentiated teaching, standards of students' achievements and their three-degree connection are analysed. Special attention was given to potential significance of standards in differentiated teaching as an aspect of contemporary approach to teaching Mathematics. The aim of the paper is through pointing at the significance of the role of standards of students' achievements in realisation of efficient differentiating of teaching Mathematics to provoke our professional public to discuss their influence on the students' success in initial teaching Mathematics.

Standards of students' achievements as educational innovation have the aim of helping teachers to prepare teaching materials, which will respond to characteristics of students. In initial teaching Mathematics, there are standards, which respond to instinctual-mathematical abilities of students. Significance of this paper lies in the need and significance of the three-level aspect of differentiated teaching which may be used for improving work in teaching. The mentioned three level connectivity was shown in the table. Significance of differentiated teaching

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according to the achievement standards is seen through raising the level of knowledge of students and developing potential abilities of students.

In the paper, we have given the example of the contents differentiating of teaching Mathematics in the fourth grade of the primary school concerning the teaching topic Geometry. In addition, the paper contains the example of differentiated determination of the teaching topic the area of a rectangle. Each sheet contains three tasks from this level and two tasks from the advanced level. The sheet for the advanced level, part from the three tasks of the advanced level has to tasks for additional leaning and teaching. In this way, there is a possibility for every student to advance. It is significant to stress that there are possibilities for this type of work both at revising and instruction classes. Instruction classes should be provided with teaching sheets for three levels of complexity. The sheets should contain the same contents with different requirements. Following the instruction at the sheets, students individually, win their own pace come to new knowledge and this contributes of improving teaching quality. Individual teaching enabled each student to advance according to own abilities, and this contributes to better results in comprehension and application of knowledge.

Preparation and realisation of these classes demand thorough didactical, methodological, psychological and pedagogical knowledge, to know students (intellectual abilities, interests, character, health issues, and family status), creativity, love for the job and openness for changes and permanent professional development.

Key words: initial teaching Mathematics, achievement standards, differentiated teaching, student.

References

- Dejić, M. (2000). Nastavne metode i način njihovog korišćenja u početnoj nastavi matematike. *Učitelj.* 70 (4), 55–61.
- Dejić, M., Egerić, M. (2007). *Metodika nastave matematike.* Jagodina: Učiteljski fakultet.
- Dejić, M., Milinković, J. (2012). Obrazovni standardi – osnova diferencirane nastave matematike. *Inovacije u nastavi.* 2, 97–104.
- Đorđević, J. (1997). *Nastava i učenje u savremenoj školi.* Beograd: Učiteljski fakultet.
- Đurić, Đ. (1998). *Modeli diferencirane nastave. Osobine učenika i modeli diferencirane nastave – činioci efikasnosti osnovnog obrazovanja*. 2, 13–30.
- Egerić, M. (2004). *Sadržajna diferencijacija u nastavi matematike.* Beograd: Zavod za udžbenike i nastavna sredstva.
- Gončarov, N. K. (1971). Differenciacия i individualizacия obrazovanия i vospitanия v savremennыh usloviяh. Moskva: APP SSSR.
- Gusev, V. A. (2003). Psihologo-pedagogičeskie osnovы obučenия matematike. Moskva: Verbum-M.
- Joksimović, A. (2014). Novija shvatanja pojma diferencirana nastava. *Pedagogija – časopis foruma pedagoga*. 159–168.
- Jukić, S. i sar. (1998). *Didaktika.* Jagodina: Učiteljski fakultet.

- Levkov, Lj., Kartal, V. (2010). Obrazovni standardi za kraj prvog ciklusa. *Učitelj – časopis Saveza učitelja Republike Srbije*. 78, 28–32.
- Potkonjak, N., Šimleša, P. (1989). *Pedagoška enciklopedija*. Beograd: ZUNS.
- Potkonjak, N., Pijanović, P. (1996). *Pedagoški leksikon.* Beograd: Zavod za udžbenike i nastavna sredstva.
- Stanojević, D. i sar. (2010). *Obrazovni standardi za kraj obaveznog obrazovanja za nastavni predmet Matematika*. Beograd: Zavod za vrednovanje kvaliteta obrazovanja i vaspitanja, Ministarstvo prosvete Republike Srbije.
- Vilotijević, M. (1999). *Didaktika 1. Predmet didaktike*. Beograd: Učiteljski fakultet.
- Vilotijević, M. (1999). *Didaktika 2. Didaktičke teorije i teorije učenja*. Beograd: Učiteljski fakultet.
- Zarupski, S., Mijanović, N. (2014). *Matematika 4, vežbanka za četvrti razred*. Beograd: Eduka.
- Retrieved January 18, 2016. from www.ceo.edu.rs