Nikola V. Mijanović[1]

University of Montenegro, Faculty of Philosophy, Nikšić

Review article

Educational and Technological Competences of Teachers as a Factor in the Organization of Contemporary Teaching and Learning

Extended summary

The paper analyzes and elaborates on educational and technological competences of teachers who remain a key and an indispensable factor in the organization of contemporary teaching and learning. Their professional competence is conditioned by a set of subject-specific, pedagogical-psychological, didactical-methodological, educational-technological and other factors. The issue of teachers' competences becomes even more pressing given the fact that the modern-day individualized, differentiated, research-oriented, heuristic, developmental and other forms of teaching cannot be imagined without an adequate use of modern educational technology. Educational technology encompasses a set of pedagogical, functionally compatible devices and instruments which have been synchronized with adequate curricular contents, methods, approaches and strategies. The mission and function of educational technology is not limited to the selection, application and management of the media and multi-media in the process of teaching and learning. This technology is increasingly more involved in the process of planning, organization, realization and evaluation of the entire educational cycle, while respecting the general, specific and individual goals and tasks of teaching, as well as the individual abilities, needs and interests of students. Educational technology is an interdisciplinary-oriented pedagogical discipline the content of which encompasses the subject-specific, technical-technological, cybernetic-information technology, pedagogical-psychological, and didactical-methodological knowledge and skills. It has been included in the teaching process to provide each student with the most favorable conditions for obtaining the necessary functional knowledge and skills, with maximum mobility of all cognitive senses, along with an effective encouragement of the development of individual cognitive, affective, psychological, motor and other resources.

1 nikolam@ac.me

Both pedagogical theory and practice offer plenty of evidence that the educational and technological competences of teachers are indeed a basis and a necessary prerequisite for organizing modern teaching and learning. The competences include very complex, multidisciplinary-based professional knowledge, skills and abilities which are determined in equal measure by the goals and outcomes of modern teaching and the essence and function of a broadly understood concept of educational technology. An objective profile of a competent teacher in terms of mastering educational technology can be provided by means of a subtle, ergo-didactic analysis and an overall identification of his/her interactive and legally regulated impact on the processes of teaching, learning, development, formation and self-formation of students' personalities. It is indisputable that the complexity of teaching profession derives from an interdisciplinary and multidisciplinary based concept and essence of modern teaching, as well as the knowledge of and the possibility of direct application of appropriate educational technology in the rationally organized teaching and learning process. from a widely understood pedagogical, didactical and also interdisciplinary-based concept, the pedagogical function and essence of educational technology, result in the necessary and consequently extremely complex requirements which objectively determine the general and special educational and technological competences of the modern-type teacher. Apart from a high level of the subject-specific knowledge, a competent teacher must also be equipped with a solid knowledge and skills related to technology, pedagogy, psychology, didactics and methodology, cybernetics, information technology, communications, and the humanities. These skills, along with good social, axiological and motivational characteristics, complement a teacher's professional profile in terms of educational and technological competences.

It is also indisputable that the necessary, and consequently extremely complex, requirements which objectively determine both general and specific educational and technological competences of the modern-type teacher arise from a broadly understood pedagogical, didactical and interdisciplinary-based concept, as well as pedagogical function and essence of educational technology. Whether the educational technology applied in teaching will result in the expected educational goals and outcomes depends primarily on these competences. Competent, conscientious and adequately motivated teachers have always been an indispensable factor in the efficient organization of modern-day teaching which is based on cognitive and constructivist paradigms. Similarly, the achievements in the field of educational technology are very powerful and functional didactical and methodological tools without which modern teaching is virtually impossible.

Key words: educational technology, teachers' competences, modern teaching, constructivist approach, student achievement.

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