Chapter 1
SMART Pedagogy: (Re) Defining Pedagogy

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ABSTRACT

In this chapter, the authors would like to discuss topical issues in pedagogical science related to the learning process in a technology and media-enriched environment, opening up discussions on the development of pedagogical science’s sector – smart pedagogy to promote a synergy between technology and pedagogy in the context of higher education. The authors’ ideas on the concept of smart pedagogy, opened discussion on domains of teachers’ role in the discourse of smart pedagogy, and domains of smart pedagogy as a new branch of pedagogy are discussed.

INTRODUCTION

Every individual in the globalised world more and more frequently faces the challenge to change or improve the previously acquired competences. For the economy to progress, the education sector has to be the first that is able itself to adjust flexibly and to apply innovations for the development of the individuals’ knowledge, skills and competences. There is a vast amount of virtual and augmented reality technology solutions, learning sites (Blackboard, Moodle, etc.) countless MOOCs, apps for smartphones and computers, that influence the transformation of knowledge and skills. It is proposed to apply learning strategies to promote the development of knowledge in a technologically enriched environment, but there are many unanswered questions which need to be answered by pedagogy science. For example, what pedagogical principles can be used to promote the cognitive development of learners, their motivation and interest in learning, which has changed with the learner’s environment becoming ever more digitalized and virtualized? Which pedagogical principles should be reviewed and which are still relevant in a transformational educational environment? As pedagogical paradigms change, there have been many discussions about the role of learners and educators in the context of human pedagogy,
unequivocally accepting that the learning process should be centered on learners. However, nowadays, with the digitization of the educational environment, when the competence of learners to handle digital tools is often superior to teacher’s competence, at the same time, learners do not have a clear vision of learning principles, the development of cognitive processes, etc. It is important to define the principles of such learning when the learner is still at the heart of the learning process. It is paramount to determine and define the teacher’s role in a technologically enriched environment. There is substantial evidence proving that technological solutions fascinate learners, that virtual reality provides the ability to take a look in the past and in the future, that it is possible to promote the development of an inclusive society and lessen the risks of social exclusion by implementing learning technologies in the learning process. At the same time the acquired information gets fragmented, promoting the development of short-term memory, which could influence the development of cognitive processes in the future, thus influencing readiness for knowledge acquisition (Visvizi et al., 2017).

There are articles and studies on smart education, some countries have already developed smart education systems and there is a lot of pressure coming from the business environment and technology developers on the potential user, including the educational environment, which is already oversaturated with technology and technological solutions. The smart education focus and developments has become a new trend in the global educational field. At the same time there are only fragmented studies on the didactic aspects of technology usage, that is why pedagogy as a science has to engage in a new research direction – smart pedagogy. To launch discussions on these emerging issues on how to use all sorts of smart education solutions in the context of already existing learning theories, on how to apply innovative solutions in order to reduce the marginalization of different groups in society – for example people with various types of special needs, people from SEN groups, who do not have access to traditional education, in the context of gender-based technology enriched learning, etc. It is necessary to accumulate new knowledge about the place and role of pedagogical science in a transformed pedagogical environment, about the role of the educator, about applicable teaching methods, research and assessment of acquired knowledge when the learners are fully-fledged actors in the learning process who are responsible for constructing their own knowledge.

(Re)inventing Pedagogy in Smart Pedagogy

In Cambridge dictionary Pedagogy is defined as “the study of the methods and activities of teaching” (2017). Žogla (2017) has updated the role of Pedagogy in analyzing the interdependence of Pedagogy and other Educational sciences and showing the development of pedagogical science which has shifted from an external coercive influence on learners to an understanding of the complicated nature of learning that, from a learning centred perspective, respects the learners’ individual needs and seeks to accentuate and energize their capabilities. As Žogla points out - pedagogy has much in common with approaches traditionally developed within, for instance, Germany, Poland, Austria where ‘Pädagogie’, ‘pedagogia’, ‘Erziehung’, ‘Didaktik’ are common notions (Žogla, 2017).

Bloom’s taxonomy of learning suggests that the cognitive domain is divided into six levels of objectives and these are – knowledge; comprehension; application; analysis; synthesis and evaluation (Bloom et al., 1956). All these verbs included in taxonomy are characterized by outcomes of each objective like knowledge is characterized by memorization, definition etc. Later Anderson and colleagues slightly changed it and the 2001th revised edition of Bloom’s taxonomy is different and the verbs used address the learner: remember, understand, apply, analyze, evaluate, create (rather than Synthesize (Anderson...
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