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FLIPPED CLASSROOM IN HIGHER EDUCATION

Introduction

The expectations placed in the politically defined programme "Bologna Project" are high. The call for Bologna-oriented higher education is omnipresent at all universities. Terms such as Deeper Learning Methods, Self-directed Learning, Student Centred Learning, Competence Orientation are to be implemented in the courses of modern university teaching. Furthermore, the curriculum and the general conditions of the respective university must be taken into account.

The Horizon Report 2016 cites a "paradigm shift to deeper learning methods" as a medium-term trend in international academic education and training. This refers to the use of methods in teaching that transcend superficial learning (Surface Learning), which is limited to reproducing information, in the direction of in-depth learning [1].

The changing process from teaching to learning paradigm, student-centered learning and teaching should be incorporated into a modern course. From a university-didactic point of view, the focus of teaching activities is now to be directed towards student activities. This means that attention must be paid to student work and learning behavior. From a formal point of view, this change is reflected in the use of ECTS credits as a unit of measurement for the student workload instead of the usual semester-week hours [2].

The teacher in the role of a pure knowledge lecturer is no longer up-to-date. Self-organized and self-directed learning is becoming increasingly important in higher education. Teachers need to focus their didactic considerations more on students' learning activities, which also means that they must include the possibility of learning outside of face-to-face events. Learning responsibility and activity should be transferred to students as soon as possible [2].

Learning outcomes, competence orientation, employability must not be overlooked in the field of movement and sport [3]. The digitalization of higher education offers the

opportunity to change the content of the teaching offers and to generate a sharpening of awareness of a modern competence-oriented teaching [4]. New forms of teaching and learning need to be adapted for many subjects.

According to Hennessy, the head of Stanford University, the format of the classical lecture might eventually die out and be replaced by new formats. As an alternative to the classical lecture, he mentions the Flipped Classroom model, in which students develop the knowledge themselves at home and then apply it in practice in the classroom course [5]. By flipping the learning activities of the students are swapped in the presence phase and in the individual phase with the aim of having more time for the joint, interactive deepening in the presence phase.

1. Flipped Classroom model

The basic idea of the Flipped Classroom Model is to swap the content transfer, which takes place in the traditional lessons together in the "classroom" with the teacher and the students (students), and the practice and deepening, which is done alone in the traditional lessons at home. This should allow more time for joint practice and deepening of the knowledge learned in theory. Lage, Platt and Treglia [6] describe this in their scientific treatise as follows: "Inverting the classroom means that events that have traditionally taken place inside the classroom now take place outside the classroom and vice versa."

This exchange of the two phases of content transfer and exercise and deepening brings significant advantages. In this way, content mediation can be individualized. Each student can individually design his or her learning pace. Individual breaks can be taken during learning, information can be looked up, the substance can be repeated or skipped. It is not the group or the lecturers who set the pace, but only the learners [7]. Teachers can be relieved of their role as classical lecturer through the use of new media and thus be directly available to the learners as coaches [8].

In the Inverted Classroom concept, the role of the teacher changes significantly, from the facilitator of the learning material to the learning subject, which supports students in self-steering learning processes or the cooperative practice of learning material [9]. Warter-Perez and Dong [10] write: "The fundamental idea behind flipping the classroom is that more classroom time should be dedicated to active learning where the teacher can provide immediate feedback and assistance"

In the online phase, the learners inform themselves about the contents, e.g. by means of a lecture online as a video or as prepared teaching materials about the technique and about preparatory exercises and games.

In addition to conventional formats, such as texts and images, dynamic objects (videos, simulations, animations) can now be combined and used to illustrate knowledge, taking into account perceptual psychological principles [11].

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DIGITAL TECHNOLOGIES IN PHYSICAL EDUCATION

2. Introduction

New information technologies are an integral part of our everyday lives and determine the lives of our students with increasing speed. They occupy a large part of