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SUCCESS FACTORS FOR HYBRID TEACHING

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Abstract

Hybrid teaching and hybrid learning have often been considered disruptive innovations in the field of education. Hybrid teaching and hybrid learning offer a new definition for what is good teaching and what produces good learning experiences and outcomes. It is not easy to define the term "hybrid" since it is used in different ways in different educational settings by different educators. In this study, we define hybrid teaching as regularly scheduled face-to-face meetings explicitly integrated with significant online learning activities that replace onsite sessions.

This paper aims at identifying successful hybrid teaching. The research data was gathered with 12 semi-structured teacher interviews in a higher education institute. The interviews were composed of three selected themes: technology, pedagogics and teaching contents. The data analysis combined thematic and content analysis, for this combination allowed classifications and comparisons of the data, as well as identifying completely new data patterns.

As a result, four success factors for hybrid teaching were identified. The first success factor, teachers' pedagogical solutions, include the planning of the course and the actions taken during the hybrid session. The second success factor, teacher's identity, refers to the can-do-attitude towards hybrid teaching and to the courage of trying new tools and pedagogical solutions. Organizational practices were discovered as a third success factor. These practices include, for example, arranging the timetables, deciding group sizes and the possibility to teach in pairs. The fourth success factor was educational technologies and facilities. This relates to the software and applications used and to other technologies like cameras and microphones of the classroom. Based on this study, it can be concluded that a successful hybrid teaching requires not only a skilled and open-minded teacher but also organizational and technological practices to support the teachers' work.

Keywords: flipped classroom, higher education, hybrid learning, hybrid teaching, success factor

1 INTRODUCTION

The three main targets of higher education are quality, efficiency and equity [1]. There is also a constant need for more education and training that is more diverse and frequent, as skills go out of date more quickly and working life requires life-long learning [2]. Hybrid learning and hybrid teaching have increased their popularity as higher educational institutions strive to meet these challenges.

Defining what is "hybrid" is complicated, but it is widely accepted that hybrid teaching includes regularly scheduled face-to-face meetings explicitly integrated with significant online learning activities that replace onsite sessions [3]. Hybrid teaching creates "courses that integrate online with traditional face-to-face class activities in a planned, pedagogically valuable manner". [4] Hybrid teaching thus uses online technology to not just supplement but transform and improve the learning process in a way that technology and teaching inform each other [5].

The use of hybrid teaching changes pedagogy into andragogy (i.e. teaching methods for adult learners). Hybrid pedagogy utilizes technology to create a variety of learning environments with active learning techniques and methodologies to enhance student learning and to respond to different learning preferences of students. This means a shift from teacher-centred to student-centred methods and techniques and emphasis on autonomous, independent and self-directed learning. [4]

Hybrid learning research, though relatively new, is related to both educational technology research and distance education research [6]. Hybrid learning can be diverse in how it is implemented, but it enables educators to provide personalized instruction with some element of student control over path, pace, time, and place [7]. In general, hybrid learning is a combination of instructional modalities, delivery media, instructional methods and web-based technologies – both synchronous and asynchronous. Its methodology combines mixture of face-to-face and online pedagogical components; innovative use of technology; reconceptualization of the learning paradigm; and continuous assessment and evaluation. [8]

A form of hybrid learning, "flipped classroom", has been seen to replace the lecture-in-class format. Flipped classroom increases in-class active learning time by shifting delivery of content to the online environment. This leaves more time to hands-on work during the class time. [5]

The benefits of hybrid learning are its versatility that is supposed to engage, encourage and motivate the student, the possibility to self-pace [4] and the pedagogy that supports interactive and collaborative learning, reduces costs of both teaching and learning and offers possibilities to match learning to the students' individual learning styles. As to shortfalls, hybrid learning and teaching can be time-consuming, and it demands technological skills from both teacher and learner. [8]

In this study, by hybrid teaching we mean a learning environment that virtually incorporates remote learners into synchronous classrooms using electronic delivery and communication tools and a learning environment where face-to-face learning activities are combined with technology-mediated activities so that students interact with content before, during and after face-to-face teaching.

Based on the above, hybrid teaching is a complex setting where both pedagogics and technology play an important role. This complexity motivates the research reported in this paper, where the aim is to decompose hybrid teaching and identify its key components. The decomposition enables creating a deeper understanding of hybrid teaching and further enables its improvement. Hence, the research question of this paper is to study what makes successful hybrid teaching.

2   METHODOLOGY

The research topic, namely components of a successful hybrid teaching, was examined with a qualitative approach. This allowed the researchers to gain new understanding and insight on the complicated topic. The data was collected with 12 semi-structured interviews. The informants were teachers from all four schools of the JAMK University of Applied Sciences in Finland, namely School of Business, School of Technology, School of Professional Teacher Education and School of Health and Social Studies. The selected data collection method allowed the researcher to guide the interview with the pre-defined themes, while the discussion remained open for following informants' leads and to new areas. [10]

The interviews were composed of three selected themes: technology, pedagogics and teaching contents. These three themes were abstracted from the literature review and they were specifically based on the teachers' competence model TPACK [11]. Interviews were recorded and transcribed to enable the analysis of the data.

The data analysis combined thematic analysis and content analysis. According to Saldana [9], content analysis is systematic examination of various texts, where the goal is to analyse their prominent manifest and latent meanings. Manifest can be interpreted to be said straight, while latent meanings are merely expressed with mincing words [9]. In thematic analysis, the focus was on identifying various patterns from the data [10].

At first each interview was analysed separately. The data was organized according to the predefined three themes, for the informants often spoke on many themes simultaneously or the talk concerned a different topic from what the interviewer had raised. Second, the relevant contents relating to the three pre-defined themes were extracted from the data. Third, after the interviews were analysed separately, the data from all interviews were combined so that all the themes included all relevant data from all interviews. Fourth, the deductive analysis was then completed with an inductive analysis. In this phase, new, emerging patterns were identified from the data [9]. This enabled the researchers to get a rich and deep understanding of the phenomena at hand.

3   RESULTS

The research reported on this paper identified four success factors for hybrid teaching. These factors, illustrated in figure 1, are teachers´ pedagogical solutions, teachers´ identity, organizational practices and the available facilities and education technologies. In the following chapters, these results are described in more detail.
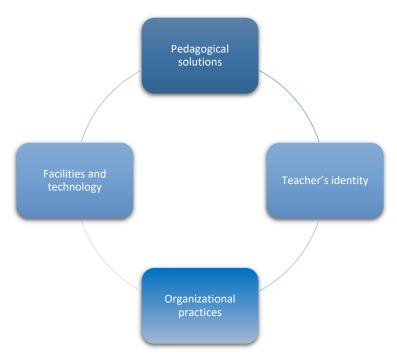
Figure 1. Research results are categorized into four themes.

3.1 Teachers´ pedagogical solutions

The results indicate that a key success factor for hybrid teaching are teachers' pedagogical solutions. These solutions include the planning of the course and the actions taken during the hybrid session. In the planning phase, the teacher should analyse the teaching contents and identify the main objectives: what are the critical contents that students must know and what are the less important details. Particularly the need for a pedagogical script was emphasized in the data. The pedagogical script includes both an overall plan of the course but also a more detailed plan of contents and pedagogics to be used during a specific hybrid session.

Based on this study, hybrid teaching works best when the pedagogy consists of conversations or group discussions on such topics, where flipped classroom pedagogy can be used. Interactions between the teacher and the students, and between the students, are considered as a sign of successful hybrid teaching. Hence, in addition to the beforehand planning, the teacher's skills to interact with the students and to facilitate the students' mutual interaction in hybrid setting were identified as central pedagogical solutions.

3.2 Teacher's identity

The second success factor, teacher's identity, refers to a can-do-attitude towards hybrid teaching and to the courage of trying new tools and pedagogical solutions. Based on this study, the attitude is even more important than the actual subject matter that is taught, for it creates confidence in an uncertain environment. The uncertainty is caused both by the technology and by sharing one's attention to two places (online and offline) at the same time.

Teacher's attitude relates also to the shift of the teaching paradigm from teacher-centric to student-centric. Based on the data, in successful hybrid teaching, the knowledge is constructed and deepened together with the students and the teacher only facilitates this process instead of leading it. This shift challenges those teachers whose previous experiences have merely been in more traditional teaching settings.

3.3 Organizational practices

The organizational practices refer to the surroundings where the hybrid teaching is implemented, such as timetables, group sizes and classrooms. According to the data, a key practice is to limit the group

sizes so that teacher can concentrate on the students. Another key practice is teachers' possibility to work in pairs in the classroom. This practice enables one teacher to concentrate on the pedagogy and the other to facilitate with the technology and with the online setting. To make these practices work in the daily settings, co-operation between teachers, educational planners and university management is required.

In addition to these, also practices and rules inside the student group were identified relevant to the fluent hybrid teaching. Shared rules, such as "be online in time" and "be precise when giving instructions" were mentioned in almost every interview. Further, scheduled and clearly phased sessions with relaxing brakes were recognized as important components of a successful hybrid teaching.

3.4   Facilities and educational technologies

The fourth success factor emphasizes the appropriate facilities and educational technologies that are used in the hybrid teaching. The appropriate facilities are classrooms designed particularly for the hybrid teaching: the chairs and tables are easy to arrange so that both online students and students in the classroom can see each other. These classrooms also have several cameras and microphones attached to the ceiling, enabling the classroom to be seen and heard online.

Based on the data, running hybrid teaching in a regular classroom, with a regular conference microphone, is often doomed to fail, for the classroom voices hardly can be transmitted online. This makes the needed interactions slow and cumbersome and thus lowers the quality of the hybrid session.

The hybrid classrooms are highly appreciated, and their advantages are recognized by the teachers. However, the complexity of the learning environments and the related classroom technologies challenge teachers to update their competence. Some teachers experience this exhausting while some others find it highly motivating. Based on the data, on the job learning and mentoring was recognized more effective than separate course sessions.

Nonetheless, the teachers underline their need to be familiar with the classroom´s educational technology, which highlights the importance of technological support and its availability during the teaching hours. The availability of the support creates confidence and calmness for the teachers, who work in high-tech environment and simultaneously are responsible for the whole teaching process.

4   CONCLUSIONS

The research reported in this paper defines four success factors that build a high-quality hybrid teaching. Teacher's pedagogical solutions and attitudes were highlighted as well as the need for common practices or rules for the teaching. These practices and rules are needed both in the classroom but also on an organizational level. Further, the technological environment must be suitable for hybrid teaching and the teachers need support in order to use the facilities and technologies appropriately in their teaching.

To improve the hybrid teaching, knowledge sharing on good practices is essential, for it enables the teachers to learn from each other. The success factor presented in this paper identify the components, which build up a successful hybrid teaching. The research results can thus be used to frame the discussion and to facilitate improvement initiatives. Further, in the following development projects the identified success factors can be used to measure the quality of the current teaching, which in turn enables the improvement of the selected areas.

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