How to support cooperation in hybrid learning?

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Abstract

The aim of this study is to examine university students' view on the cooperation in hybrid learning and to find out the factors that influenced cooperation the most. The analysis revealed four main themes: communication, individuality, competences and cooperation settings. When talking about the importance of communication in cooperation, the learners emphasized the selection of communication channel and the importance of social interaction. In the theme of individuality, two themes emerged: individual and group characteristics. Among the competencies, learners highlighted the pedagogical competence of the teacher and the students' self-regulation skills. The tools and environment was considered important when setting up cooperation. The results of the survey revealed that learners in the form of distance learning, learners with a higher level of digital competence and learners in study groups with a stronger team sense are more positive about cooperation in hybrid learning.

Keywords: Students' preferences; higher education; hybrid learning; survey, cooperation.

1. Introduction

In recent years, the number of electronic courses and online learning applications have increased. Main effort today is on cooperation between learners and learners and lecturer, and not on the learning materials, as it was in the very beginning of e-learning (Ulmane-Ozolina, 2011). Satisfaction from the joint work and the awareness of the benefits of cooperation during online study shows among the reasons for the students' high level of feedback. But collaborative work skills and inclination to cooperation are not innate (Stoytcheva, 2018). They have to be known and built consciously. Cooperation in online learning creates ascending dynamics allowing for a stage by stage construction of outcomes. Learners and academics had to learn how to work online in a collaborative way. Cooperation in remote learning can facilitate students to learn concepts in depth and can improve learning outcomes through positive collaboration amongst students (Silalahi & Hutauruk, 2020). The online learning community is not just a group of people who have come together to gain some knowledge, but a community with a life and history of its own, where each person's opinion matters, decisions are made after discussion and there is an atmosphere of trust and respect due to the successful cooperation (Stoytcheva, 2017).

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2. Background

In TTK University of Applied Sciences flexible learning is considered to be a simultaneous form of learning in which some learners are in the classroom and some at a distance. The need for hybrid learning arises if contact lessons are allowed, but in smaller groups. Even in situations where learners are forced to stay in isolation, hybrid learning is needed.

There are various drawbacks and advantages connected to hybrid learning and some aspects of them are related to collaboration during hybrid learning. Students make the decision to participate in hybrid learning on their motivations and needs (Park al., 2019). Hybrid learning is dependent on technology, the Internet, and various devices that not all potential beneficiaries can access (Sadeghi, 2019). Quality of hybrid learning is related to students' training, characteristics, and digital skills (Haznedar al., 2012). Hybrid learning limits physical interactions between learners, and these interactions are necessary for students' social development (Raes et al., 2020). The medium choice has also of great importance during hybrid lessons. Mumford and Dikilitaş (2020) emphasize that the medium can build a sense of community, and reduce the risk of a lack of communication and highlight the theme of the difficulties in the establishment of a social presence in online interaction. Communication between students and teachers occupies one of the key positions in the process of hybrid learning. According to Raad and Odhabi (2021) educators should

principally adopt active learning methods and this approach will promote interaction and collaboration between the instructor and learners. Hwang (2018) incites to allocate sufficient time to in-person interactions to allow for practical and hands-on sessions that are essential in technical and scientific disciplines. According to Priess-Buchheit (2020) when academics know how to communicate properly between the different groups hybrid learning transforms to a format with many advantages.

Based on the above, it can be pointed out that it is necessary to pay attention to these aspects in the research related to the implementation of hybrid learning.

3. Methodology

The qualitative survey was conducted among the students of TTK University of Applied Sciences to identify a further need for hybrid learning for learners, its causes and influencing factors of efficient communication and collaboration. This paper only concerns the influencing factors of efficient cooperation.

The survey was compiled using the Google Form tool and conducted in spring 2021. The survey was forwarded to all students of the university. In 2020\/21, the total number of students was 2931, of which 570 students responded. The overall response rate was 19.45%.

First-year students responded to the survey most actively, followed by second, third and fourth-year students. Among the respondents there were more distance learners than full time learners. The respondents came from all institutes, with the largest number of responses coming from students in the fields of logistics, building construction, accounting, social work and production management. The highest number of respondents represented the younger age group, with fewer and fewer respondents from each subsequent age group. The highest response activity was amongst learners living in the capital city - Tallinn, followed by learners living in rural areas and then living in other cities.

The principles of qualitative thematic analysis were used to analyse open question answers (Creswell, 2012). Using thematic analysis it was possible to identify themes and patterns of meanings across the collected data in relation to the research question. As the researcher has to be familiar with the data, a careful reading was done identifying the patterns and relationships of the data in relation to the research question. Coding was done manually using data-derived semantic codes to present participants' experience in a more realist and descriptive way. Semantic codes were the emerging data (data quotes identified in the previous stage) which was labeled with a name that was derived from the data itself. When the codes were identified, they were included in the list of codes. Once the coding was completed, the patterns appearing within the data was identified to identify salient parts of the data. Both the frequency as well as how important a certain code is was considered to

answer the research question at the stage of identifying patterns in the dataset. To identify the broader patterns of the data, themes and sub-themes were identified. The sub-themes were considered as collections of ideas or aspects (codes) that were categorized under a specific theme. Identified themes were revised to be sure that all the themes match the research question, to cover everything and to point out differences according to the different perspectives. Finally, the themes were presented to answer to the research question. The findings were presented by integrating it with past literature. To explain the themes quotes from the data were presented.

4. Results

The analysis revealed four main themes: communication, individuality, competences and cooperation settings. All themes are discussed in more detail below. Topics are presented in order of emerging frequency.

4.1. Communication

Learners focused on communication the most when answering the survey. Three sub-themes emerged in this theme: video-enabled communication channels, social interaction between learners and information exchange with the teacher.

Under the conditions of hybrid learning, learners preferred **video-enabled communication channels** that allow direct communication to cooperate. This will help learners better understand each other and to refine quickly if necessary. The learners felt the need to work with the camera turned on so that everyone could see each other. When participating without a camera image, the learners felt that they were contributing less because they were engaged in other activities in the meantime. The Zoom environment was mentioned as a positive example, which allows one to communicate with text messages in the chat area as well as with a video image, and group work in smaller rooms. Outside the lectures, Messenger was used for collaboration.

Respondent 324: "Communication via a webcam is exactly the same as when meeting face to face. Does not feel isolated at all if many others participate from a distance. It would be inconvenient to participate alone from a distance."

In addition to group communication, **social interaction between learners** was also emphasised in order to keep active and strengthen the connection between learners. It can also be seen in a broader sense, i.e. according to the learners, active media use helps to feel socially involved during hybrid learning and does not cause difficulties in collaborating online, as the habit and skills to do so already exists. An example is Facebook, where students had their own groups through which both study and leisure-related topics were communicated.

Respondent 49: "We have a Facebook group where we can discuss all our things and the cooperation is very good both inside the group and with the teachers."

Both the importance of social interaction between students and right choice of medium were considered as important also in scholarly literature presented in the background section.

4.2. Individuality

Students' responses highlight individual and group characteristics, which had a supportive effect on cooperation in hybrid learning.

The most important **characteristic of the individual** is the attitude towards hybrid learning and cooperation in hybrid learning. Here, students were divided into three groups. First group includes learners who do not at all want to participate in hybrid learning. This group includes learners who have had prior dislikeble experiences or who prefer to participate in the classroom in any case.

Respondent 443: "In most cases, lectures are very well organized ... Communication is very important and technical tools do not replace it. If I have choosen full-time studies, I want contact learning and communication."

Second group is only ready to participate in the hybrid learning process for a short-term hybrid learning period. They also strongly prefer to study in the classroom, but are also willing in the short term to contribute to distance learning.

Vastaja 17: "If some students also attend on-site lectures, this should not be particularly negative. For me, hybrid learning would be especially good if, for example, surprises due to work do not allow me to be present or I am ill, but I can still listen to the lecture in another way. However, if possible, I would attend lectures on-site if possible."

Third group said that it didn't matter to them how teaching and cooperation takes place. These learners are experienced and skilled users of digital tools who also use digital tools for cooperation at work. This group is characterised by independence and courage, they are not ashamed to ask or discuss things. This group also includes more introverted personalities to whom face-to-face communication is less important. This group considered that hybrid learning and due cooperation has a number of values. Convenience and economy (in the meaning of time and money) were mentioned as the most important values primarily by distance learning students living further away from the university.

Respondent 17: "If some students attend on-site, this should not be very negative. For me, hybrid learning would be especially good if, for example, suddenness due to work do not allow me to be present or I am ill, but I can still attend in another way. However, as usual, if possible, I would attend on-site."

On the **characteristics of the group** a strong team feeling was mostly mentioned. Some respondents said that if they were freshmen and fellow students would still be strangers, cooperation in hybrid learning would certainly be more difficult than now that the group is being constantly in close contact. The freshmen confirmed that cooperation is complicated in hybrid learning as they do not yet know each other well and therefore distant cooperation seemed an unsafe choice. In addition, it was pointed out that cooperation is more complicated if only one student participates remotely, because of less attention the learner receives.

Respondent 490: "Since our course had been together for several years before, I did not feel any negative impact. Of course, it would be different in the first year."

4.3. Competences

The learner's self-regulation skills, the didactic competence of teacher and digital competence of teacher and learner emerged from the competences.

Students talked the most about their own **self-regulation skills**. In the opinion of learners, everything begins with motivation, it largely determines the result. Motivation is also linked to the goal: understanding what is being done and that it is necessary. Learners pointed out they needed more self-discipline and willpower when participating in hybrid learning. Online communication needed to focus more on understanding each other, and at times learners gave up and divided group work into rations instead of working together. This way, everyone worked individually and the efficiency of group work declined. The contributions were also unequal which caused ambivalent feelings like frustration, confusion and nonsense.

Respondent 158: "The co-operation is going very well and people are much more motivated to take part in group work, as they are given the opportunity to take part at least from a distance and take part in the lecture."

Respondent 401: "There is less co-operation, more division of tasks and more pecking at them."

Students' responses brought out the importance of the **didactic competence of the teacher**. Learners emphasised that the way in which the teacher has designed group work is critical in hybrid learning. Particular emphasis was placed on how teachers have taken into account remote participation, how teachers establish contact with learners and encourage learners. This creates the right mindset and sense of security for learners. Learners had noticed that in conditions of hybrid learning, group work requires more time and considered it important that teachers had already accounted for it. Also considered important was how lecturers sticked with time schedule during studies.

Respondent 46: "Cooperation depends on the lecturer. In some lectures, the cooperation has gone very well and there has been an opportunity to successfully conduct group work with classmates, and in these cases there has been no sense of isolation."

Didactic competence of the teacher in the conditions of hybrid learning was also emerged in the previous researches discussed in background section.

4.4. Cooperation settings

While carrying out lessons students needed an environment allowing them to concentrate and tools to participate.

Learners mentioned a comfortable, safe and quiet environment as **characteristics of an environment that allows concentration**. This was particularly emphasised by remote participants. Extraneous distractions reduced concentration and commitment. Some learners described the home environment as safer than the classroom.

Respondent 73: "Distant learning is convenient. Rather, the environment is quiet. It is definitely safer from a health point of view, because we come from different areas and it is relatively unsafe, the risk of infection is high."

To participate online **tools** such as a computer, microphone and camera were needed as well as internet access. Internet interruptions and non-connection of tools prevented participation and collaboration.

Respondent 457: "I am not bothered by this, but the big obstacle for me is the poor internet connection. Unfortunately, my motivation for this has gone down."

5. Conclusions

The qualitative analysis of collected data revealed four main themes which influenced cooperation in hybrid learning the most: communication, characteristics of the individual and group, competencies and cooperation settings. The results of this study are confirmed by the results of them discussed in background section.

The results of the survey revealed that learners in the form of distance learning, learners with a higher level of digital competence and learners in study groups with a stronger team sense are more positive about cooperation in hybrid learning.

Based on the results of the study following recommendations can be made to support cooperation in hybrid learning: before group work identify learner's digital and cooperation skills and, if necessary, address them before the actual group work starts; if the group is not well acquainted with each other, pay attention to socialisation of learners; start group work

in classroom so that learners can specify the taskwith the teacher and agree upon work process with each other.

The results of the study help to understand learners' view on cooperation in hybrid learning, to plan and conduct future studies in a student supportive way and plan training for teachers to improve hybrid teaching process.

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