

Online Learning from the Peers in Higher Education

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Abstract

The main reason for the research is to find out what factors affect the student's participation and engagement to peer learning in the university's online course. Today's higher education has a strong foothold in learning theories and pedagogical approaches that focus on collaborative learning, networking and working with peers. Now when digital technology and eLearning platforms have established their place in the infrastructure of educational institutions, we should have the keys to implementing modern education in practice. The hypothesis of the article suggests that we do not yet know how to exploit the capabilities of modern learning technology in a way that students can learn from their colleagues, peers.

The practical objective of this article is to create information for planning online courses and organizing weekly tasks. The research data for this paper was drawn up from two different online implementations of the single university course. Students conducted a Moodle-based survey in which they were asked about the pedagogical approach and tools of the course. One aspect of the research is to increase the understanding of the students' opinions of peer activities in an online course. The theoretical background of the research is based on theories of active learning and learning communities. The research data are also reflected in the scientific literature on peer learning and peer assessment.

According to the results, students' opinions on peer learning are quite positive. Students are able to appreciate the learning opportunities offered by assignments and activities, which are open and visible to everyone during the course. Most of the students were not interested in peer assessment, but preferred feedback and grade produced by the teacher. Most of the students opposed the small group assignments of the online course. According to the data, students feared that their contribution was considered weak in the eyes of others in the course

The results of this document underline the need for further research into peer learning in higher education. Many strategies that utilize collaborative learning may be useful, but there are still questions about the individual needs, fears and motivation of peer learning. In addition, it would be important to find a way to strengthen mutual trust through online courses.

Keywords

Online course, Peer learning, Higher education, Peer assessment

1. Introduction

At today's university, we are able to utilize versatile digital tools for learning. In fact, the lack of time and the lack of physical space drive universities to exploit the tools of distance learning. In addition, there are many expectations and hopes for advanced types of learning and the learning outcomes that learning technology brings with it. In today's educational areas, it would be incomprehensible to imagine learning and education that have nothing to do with technology, such as digital devices and the Internet.

We can always argue what is part of educational technology. Digital tools for collaboration or distance learning were game changers when technologies were introduced. The rapid growth of digital technologies has significantly changed the learning field, and online and mobile technologies have become key elements of education in recent years. Digital technology has many expectations that support teamwork and commitment to the learning process in the academic field. Teachers and students have their own ideas about how online courses support the building of knowledge. At the same time, the institution is likely to have administrative expectations about how a large group of students can be taught remotely at reasonable cost and optimal learning outcomes.

Despite widely used terms such as eLearning and Computer Supported Collaboration Learning (CSCL), we can ask whether there is any kind of learning that is not related to digital technology and modern web-based

communication. At least in higher education, it can be difficult to imagine a degree programme where the student avoids information and communication technology in a learning situation. In addition, the majority of students coming to the university are in their twenties and are likely to make better use of modern media and social media practices than older generations. Social media systems, which has launched over the past decade embody ideas of co-production and shared learning experience. However, these modern views are not so simple to implement in practice in the field of education. Mechanics of collaboration and sharing are more complex in the field of formal learning (see e.g. Veletsianos & Navarrete 2012).

This article examines students' views on the various features of online learning. The focus of the research is to find out how students of the university's online course experience the peer learning approach and its various cases, such as group assignments, peer assessment and learning from other students. The practical purpose of this document is to create a well-founded argument and knowledge in the design of online courses and, in particular, online activities for peer learning. The theoretical background of the study is based on learning communities and peer learning literature. Recent research on peer learning and peer assessment has been carried out, which not only deepen understanding of research but also shed light on the key concepts of the research process.

2. Technology behind the pedagogy

Learning Management Systems (LMS) are an established part of the IT infrastructure of educational institutions. The IT unit of the school manages educational technology such as video services, online learning platforms and student management system. Teachers are trained to use a variety of tools and students can log in to the system using their ID. Organisations such as universities expect a lot of learning outcomes that such tools could provide. These tools enable students to independently learn time and place, and teachers are able to disseminate course material into the network. A significant investment in the technical maintenance of the organization, training of personnel and course management will have to be paid off.

Using an eLearning platform such as LMS does not automatically guarantee learning. In the research literature, researchers highlighted the danger of a technology-driven approach in which the new tool is used only as a channel for traditional classroom education or the features of technology are used regardless of their pedagogically appropriate (Conole 2003; Unwin 2007; Wood 2010). While guides to harness ICT for educational purposes are available on discussion forums and blog sites, the teacher must be self-aware and seek information on how technology can be adapted to personal pedagogical views. Over the past ten years, technology has in many ways changed learning in higher education. Audiovisual spaces and media servers provide lecture recordings, and students may not consider it particularly necessary to participate in the lecture, but instead study via online video. However, the latest online learning facilities do not change pedagogy alone. We also need to understand how students and teachers are able and willing to use these new technologies (Wood 2010; Sihvonen 2018).

Large groups of students in one course puts increasing pressure to offer e-learning. LMS such as the university administered Moodle is suitable tool to manage the students' assignments and course materials even with the large group of students. Moodle is also equipped with the peer assessments features. However, it would be hard to change the pedagogical approach if the tool encourages copying previous course implementation with only minor alterations for instance. Thomas and Milligan (2004) present the danger of fixed pedagogy that does not correspond to individual learning styles and teaching situations when the material is designed to be permanent.

3. Network of active learners

In today's higher education, the learner is seen as an individual, with personal motivation factors and unique practices in knowledge construction and perceptions and critical thinking (Magno 2010). Students of the same course rarely have the same starting point in learning, and their prior knowledge differs from other students. The cognitive-constructivist learning approaches also underline the learners' ability to set learning goals and examine their own learning process (Jonassen et al. 1993; Kuhn 1999). Active and critical learner also understands the competences and the opportunities offered by the learning environment. In this paper, the definition of learning environment is not limited only to digital environments, such as e-learning platforms, but the extended academic learning context including physical facilities to human resources that academic context can offer (Lizzio et al. 2002). Therefore, all the members of academic community are important, but rather incalculable resource of learning. Scaffolding (Silliman & Wilkinson 1994) and the Zone of Proximal

development model (Vygotsky 1980) highlight the learning that occurs, while receiving help from a more experienced person or other kind of support.

The formation of the learning community can be approached through the concepts of Sense of a Community (SOC) and Sense of a Virtual Community (SOVC) (Blanchard & Markus 2002). Participation in online course may include a feeling of membership, however feeling of influence and emotional connection of SOVC model can be difficult to achieve. An online community cannot be built unless the members of the community already share something in common, such as history, values and perspectives (Sadara et al. 2009). In the connectivistic approach, the teacher's role is to facilitate the active participation of the networked activity of learners. This involves: 1) aggregation, accessing the resources to read, watch, or play; 2) relating, after reading, watching, or listening to some content; 3) creation, learners might create something of their own; and 4) sharing. This participation in activities is seen to be vital to learning (Kop 2011). However, using this approach require the change of mindset from task-based and grade-oriented teaching and studying.

Compared to other educational stages, a greater degree of responsibility for learning is placed on the student in higher education. That include the ability to build relationships to the learning community. Prior research show evidence of positive development in higher education when learning community experience was positively associated with student gains in personal and practical competence, social development, greater effort and deeper engagement (Zao & Kuh 2004). Krause (2005) points out that student who engage with peers, academics and the institution also likely report higher levels of achievement than their less engaged peers and indicate clear plans to persist with their study at university.

4. From peer learning to peer assessment

Peer learning is not a new concept in the field of education. As far as there have been student groups, there has also been learning from peers. The development of modern learning technologies, especially online learning platforms, has brought new tools and practices for peer learning. For example, the result of peer learning is fairly easy to present in open discussion forums or other LMS web applications. However, we can assume that the long continuum of teacher-guided learning can influence the general attitudes of how the learner sees the meaning of peer learning in their studies. The approaches to cognitive-constructivist learning focus on the learner's previous knowledge and metacognitive skills. If the learner can independently assess the learning process and the goals of the learning from the point of view of metacognitive skills, it automatically brings us to set expectations for the success of peer assessment. Boud et al. (1999) present four skills that are essential for peer learning: (1) the development of learning outcomes related to collaboration, teamwork, and becoming a member of a learning community; (2) critical enquiry and reflection; (3) communication skills; and (4) learning to learn.

We can find several arguments justifying peer assessment as an important learning concept, especially in the context of online learning. First, the student automatically studies when evaluating other student tasks. In an optimal situation, students will be able to familiarize themselves with a large number of relevant course material, including comments and opinions, which have been filtered and reviewed by peers. After studying the peer student's answers to the same task, which the student has already returned himself; it gives the student the opportunity to look at the task from a different perspective. The ideal situation of self-built knowledge can be close to achieving. We can argue that assessment skills are crucial for a university student. In carefully planned peer assessment processes, the student learns how to determine the final grade and what kind of learning the course should include. Peer assessment is also seen as an organisational solution that relieves teachers' workload from course evaluation. Evaluating tasks and providing quality feedback can take a long time. The peer assessment can be used to ensure that each student receives feedback. This is one way to reduce teachers' workload, as the evaluation task can be partially outsourced to students.

Table 1: Bay (2001) points out several arguments for and against peer assessment from the pedagogical point of view

Pros in peer assessment	Cons in peer assessment
<ul style="list-style-type: none"> • Learning efficiency and quality improves • Students get detailed information of their work • Students are required to think critically • Contributes metacognitive awareness of learners • Improves social and communicative skills 	<ul style="list-style-type: none"> • Require time for organization, training and monitoring • Students may experience the peer assessment as waste of time • Feedback and scoring requires extra time devoted for training

According to Bay (2001), learners prefer teacher evaluation and constructive feedback. When the feedback affects the grade, the student's attitude can be even more reserved. Anderson and Speck (1997) pointed out that even teachers in staff training demanded a grade, although they had already received a considerable amount of feedback from the workshops. This brings us to the question of what kind of mindset grades in higher education relate to. If the learner focuses on getting credit points with a satisfactory grade, giving and receiving feedback may seem less important (see e.g. Cotten & Wilson 2006). However, feedback has a pedagogical importance. For example, Gibbs (1999) stated that the learner needs feedback to learn, and students pay more attention to feedback related to the social dimension.

5. Content and community in an online course

The data was collected from the implementation of intermedia studies in the Information Studies and Interactive Media programme in spring 2019. The first part of the data was collected from the course implementation, in which 62 degree students participated. Implementation of the course included the possibility to participate in classroom teaching, even though the students were able to complete the course completely online. The second part of the data was collected from the course implementation, in which 24 students from the open university participated. Both courses lasted 7 weeks and the main teaching method was a weekly 1.5 hour lecture available online. The course also required weekly course assignments and final essay. The first course was implemented by 36 degree students and 18 open university students.

Students conducted a Moodle-based survey in which they were asked about the pedagogical approach and tools of the course. The survey was conducted anonymously and voluntarily. 23 degree students and 8 students from the open university were responded to the survey. The course did not have a peer assessment task that would have affected the evaluation. That can be seen as a limitation in this paper. Another limitation in this study was a small number of respondents. If the number of respondents had been higher in the open university student group, it would have been possible to compare the opinions of the two student groups. However, some interesting trends can still be highlighted in the results between the two groups.

The questions covered peer learning on three different topics: 1) online and classroom learning, 2) course assignments and performance, 3) feedback and grades.

Open university students had more experience in online courses. Most of them had previously participated in more than five online courses, while most of the degree students previously had only 1-3 online courses. Online learning routines are probably more familiar to open university students, as many of their studies are offered online only. This was also the case when asked whether they would prefer class education if they had a choice. Degree students would participate more voluntarily than open university students. However, the reasons were practical and related to scheduling and the location of the students.

Some of the assignments were visible only to the teacher, while some of the weekly assignments were visible to everyone during the course. Students were not afraid that someone would plagiarize their work. Instead, they felt uncertain about how their own contribution could appear in the eyes of other students. This may be associated with a lack of mutual trust, which was also considered relatively difficult to achieve in the online course (Figure 1). All respondents (n = 31) are taken into account in the figures of this chapter.

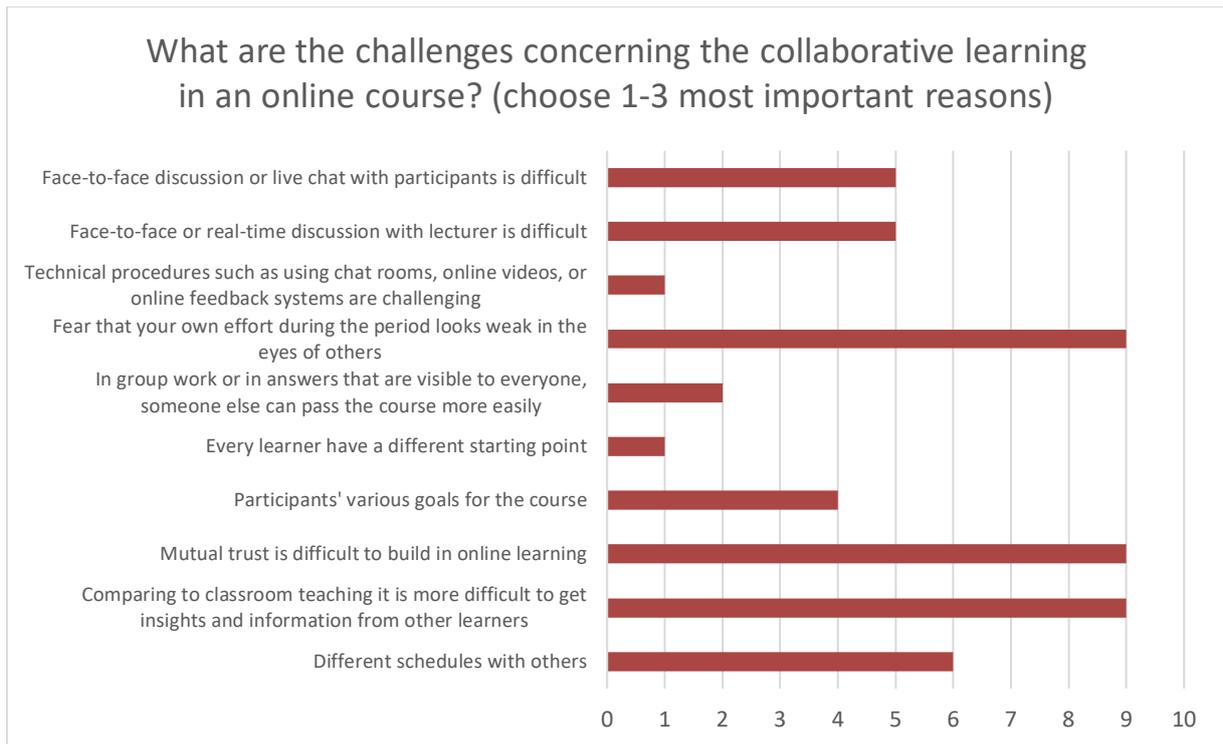


Figure 1: Main challenges concerning the online collaboration (all the respondents, n= 31)

Figure 2 shows which of the statements relating to course materials, such as lecture recordings, were most significant in the students' opinion. The course material, such as presentations, created by the student, was gaining some popularity. Students appreciate the fact that the online learning environment offered the opportunity to comment on the course topics and post links.

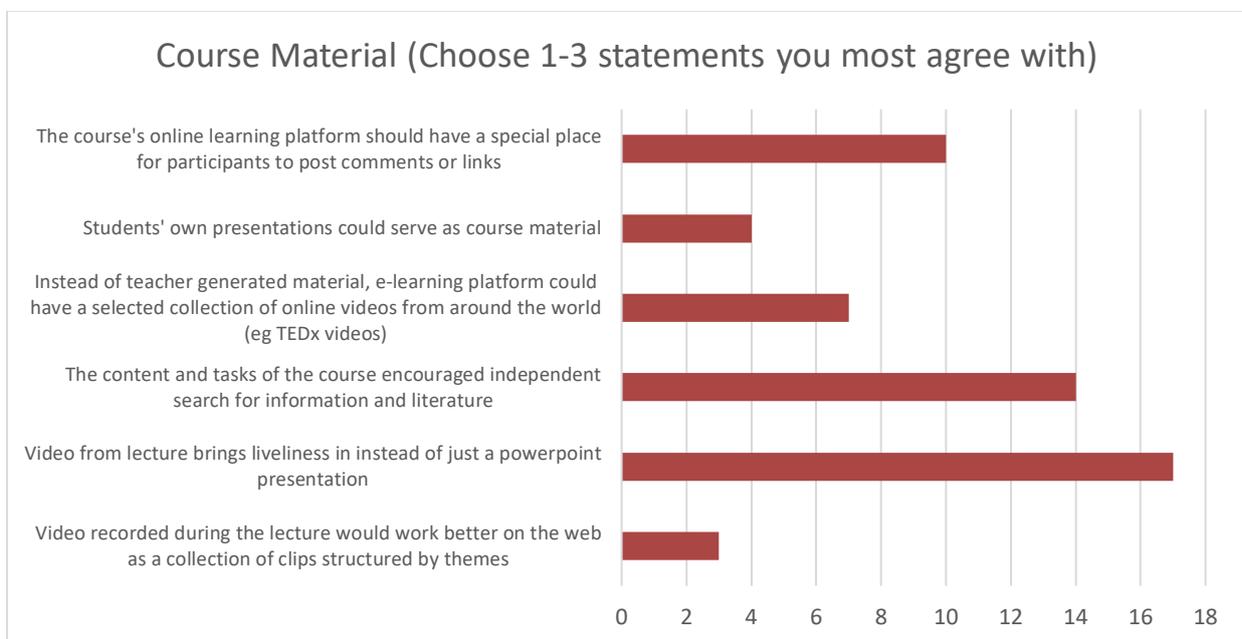


Figure 2: Relation to teacher generated and student generated course material

Course material and assignments were delivered through Moodle's e-learning environment, where students also completed the feedback survey for this study. Moodle is a popular and open source learning management system (LMS) and its features can influence the pedagogical approach and thinking when planning a course (see e.g. Remley 2003).

During the course, students were encouraged to discuss and comment on other students' contributions in Moodle's discussion forums. Of the seven weekly tasks, 4 were sent to discussion forums, which were available to everyone in the course. When peer students' stakes were visible, it was inspiring and opened up new perspectives (Fig. 3 & 4.).

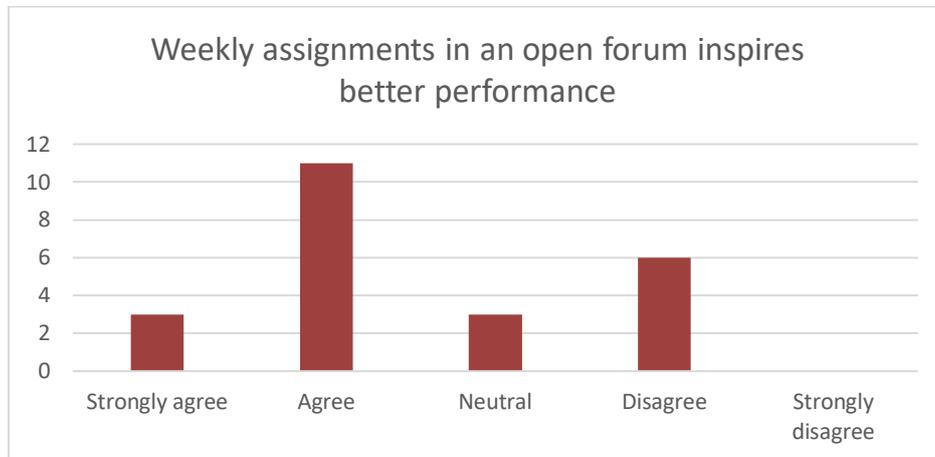


Figure 3: Relation to assignments in an open forum

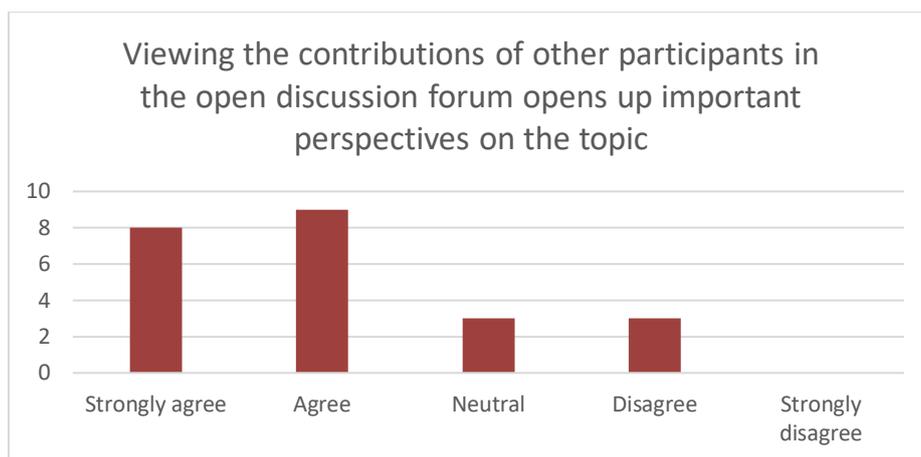


Figure 4: Relation to assignments in an open forum

Most students consider the feedback given by the teacher to be important for learning. Surprisingly, three out of eight open university students wanted more peer assessment (Fig. 5.), but none of the respondents wanted their grades to be based on peer assessment. However, open university students were more willing to carry out peer assessment as part of course work.

Some students also have negative experiences of peer grading.

“I have been in classes where peer assessment has affected the course's grade, and it usually does not work. Even if the criteria are clearly outlined, some students still do it according to their own model, and teachers have not always checked this, especially when there are a lot of participants in the course.”

All respondents agreed when they were asked whether the teacher's personal oral or written feedback was important, even if there were only a couple of sentences. All students supported the traditional teacher-based grade and did not prefer the idea that at least 50% of the final grade should be based on peer assessment.

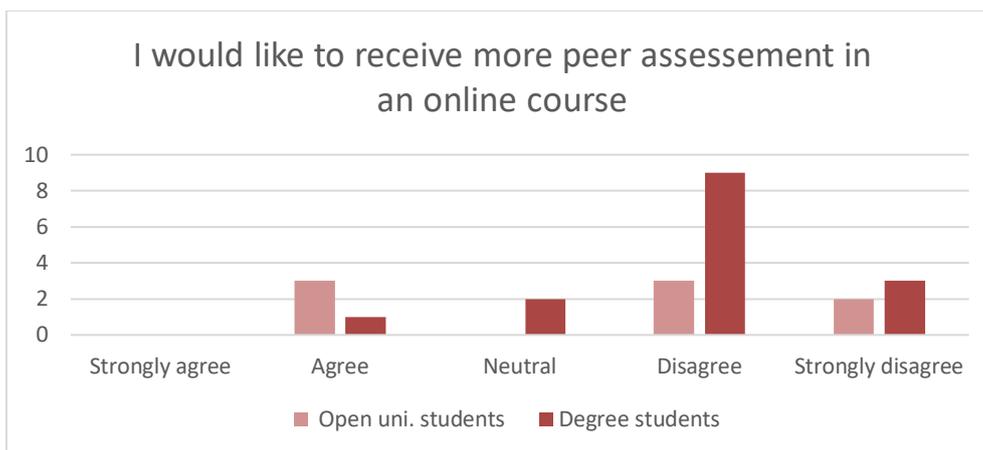


Figure 5: Students' relation to peer assessment

6. Towards student generated content and feedback

As the number of respondents was relatively small, the study cannot be considered representative. However, the data revealed interesting trends that should be taken into account when planning online peer learning. First of all, the teacher must ensure that students appreciate the importance of peer students' contributions and use this material as a learning resource. Secondly, there must be tools and support to make the students' own critical thinking visible. Thirdly, it would be important to find a way to strengthen mutual trust through online courses. It may be the only way to ensure that students are ready to give constructive feedback to their peers. Especially when students are beginners on online learning platforms. According to the survey, the respondents had a negative attitude towards their grade. Although there are administrative and pedagogical arguments for peer assessment, students consider teacher-based classification to be more important and objective (see e.g. Liu & Carless 2006). Monitoring the tasks and activities carried out in the course can be challenging for teachers. For example, the student's personal contribution can be difficult to recognize among several dozen messages.

7. Reflection

A critical relationship with information and knowledge can be seen as one of the main goals of higher education students. Conversation skills and argumentation are essential in academic discussions, where it is important to be able to assess the strengths and weaknesses of others and to formulate their own positions with appropriate criteria (Marttunen & Laurinen 1998). Some students may find it difficult to share their thoughts with the audience in the lecture hall. Commenting on other students' work in an online environment can be challenging, although shared writing and web-based discussion forums are established practices in today's education. For example, microblog applications such as Twitter work in such a way that comments remain permanently online, so the situation is different from face-to-face conversation. According to the students, the main challenge for tasks requiring comments is to find new perspectives, especially since other students have already commented on the original assignment. There may also be extra excitement to give critical feedback on the learning tasks of friends (Bay 2010; Topping 2009).

There were promising views on peer learning, despite the fact that the respondents were sceptical about some team exercises and peer assessment. Both groups, degree students and open university students felt that learning results will improve if weekly assignments are published for everyone to see and comment on the online course. There was no significant difference between the opinions of student groups in this matter. Open University students were more positive about peer assessment tasks than the degree student group. According to this study, students oppose peer assessment if their grade is entirely produced by their fellow student. In addition, feedback from teachers was considered important. The main reason for this result may be the long tradition of teacher-based grades and feedback. The teacher is seen as an expert on the subject and therefore the best person to evaluate the contribution of the students. It may also be feared that student work will be viewed in a biased manner in peer assessment. In addition, the responsibility for assessing the contribution of peer students seems to be a heavy burden. As far as learning communities are concerned, the online course rarely forms a solid network of learners. Even if the objectives and background are shared, it is challenging to build enough trust among learners to carry out diverse peer assessment processes. However, this can be achieved through other support methods, such as online support and encouragement for discussion.

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