

Student attitudes towards learning online using Moodle and Zoom

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Introduction

Online learning is not new and has grown alongside the internet over the past 30 years. However, pedagogy in the online environment is still an underdeveloped field (Rapanta et al. 2020). Early 2020 COVID-19 prompted universities world-wide to suddenly move from face-to-face (FTF) to online teaching and institutions were generally unprepared for this (Serhan 2020). Teachers had to quickly learn how to design and deliver materials and students to adapt their study skills to suit the new virtual context. This happened against the backdrop of a wider transition in Higher Education from a top down, information transmission pedagogy to a more student-centred, active learning approach in which students engage with course content through collaborative tasks (Roberts 2017). Active learning is underpinned by constructivism where learners actively construct their own knowledge and understandings of the world through social interactions (Vygotsky 1978). Interaction is key to constructivist approaches. Teachers therefore, rather than simply imparting knowledge must create opportunities that foster communication and collaboration thus enabling learning to occur (Carwhile 2007). Selecting an appropriate pedagogy for instruction is difficult at the best of times but selecting one that accommodates active learning within a virtual environment is very challenging indeed. However, one pedagogic approach that can achieve this, is flipped learning.

In flipped learning the traditional classroom model is reversed. Traditionally, input on course content occurs during the lesson, then learners complete post-lesson homework to consolidate that input. In the flipped classroom, learners study course content by themselves before the lesson through video, audio or text-based input. Then, in the lesson itself learners participate in collaborative activities to further process, consolidate and apply that input (Flipped Learning Network 2014).

There are many advantages to the flipped classroom. It accommodates principles of active learning (Hartyányi et al. 2018), allows more class time for learners to actively engage with subject matter so understanding is increased (Ramírez et al. 2014), it is particularly suited to online learning as students study outside the classroom (Romero-García et al. 2018) which in turn motivates this technology-driven generation (Ramírez et al. 2014). It also caters for different learning styles and fosters self-directed learning as students study independently at their own pace and in their own ways (Hartyányi et al. 2018).

There are disadvantages to flipped learning such as increased teacher work load, learner resistance to learning independently, lack of rigorous research into its effectiveness (Arnold-Garza 2014; Hartyányi et al. 2018; Ramírez et al. 2014), but I the researcher, still elected to use flipped learning as part of my online teaching from March to June 2020, when the University of Széchenyi István (SZE) suddenly switched to online education in response to the COVID-19 pandemic.

1. The current study

In the 2020 spring term 2000, I taught three course types online through the medium of English: young learner methodology, academic writing, language development. Moodle is the learning platform used at SZE and I decided to use the video conferencing app Zoom to complement Moodle as the best platform available to meet the needs of flipped learning. The flipped classroom requires learners to collaborate in small groups and Zoom allows the teacher to organise small group work easily, quickly and spontaneously through its breakout room function. Also, Zoom’s record function allows the live Zoom lessons to be recorded and made available to students for further analysis and study.

I incorporated the following online activities into my teaching from March to June 2020. I prepared and uploaded onto Moodle pre-recorded videoed lectures course containing *input on course content*. The videos were interactive in that students completed tasks while watching, visually pleasing and personally relevant. Students watched these videos and studied the content by themselves. Then in live Zoom lessons to consolidate the subject matter contained in the videos, we held whole class discussions and students completed collaborative tasks in pairs or small groups. *Zoom was used for whole class teaching, pair work/small group work, student to student presentations and individual tutor-student consultations. Also systematically built into the courses were activities drawn from websites such as BBC Learning English, British Council TeachingEnglish, UEFAP (Using English for Academic Purposes). Other activities included: using game-based learning apps such as Quizlet, Lyricstraining; watching professionally-produced videos guided by tasks; contributing to written online discussions and problem solving tasks on Moodle’s discussion forum.* There was also a range of self-study materials uploaded onto Moodle which students were expected to study by themselves.

The purpose of this study is to explore and document students’ perceptions of their online learning experiences, in particular to identify which of the above-mentioned activities were perceived as most effective. This I believe can illuminate ways of improving my online teaching practices in the future.

2. Methodology

2.1. Participants, research question, and data collection

The participants were students at *the Apáczai Csere János Faculty*, University of Széchenyi István, Győr. From September to November 2020, 35 students studying English were approached about their experiences of learning their English courses online from March to June 2020. 32 students responded on a voluntary basis, giving an overall response rate of 91.5%. Twenty-one were Hungarians studying on the teacher training programme, eight were international students studying on the International Relations programmes, plus three Erasmus students taking classes in both programmes.

The two research questions this study addresses are:

1. What are students’ attitudes towards online learning using Moodle and Zoom?
2. Which online activities best supported students’ learning?

Data was collected through a mixed methods approach using questionnaires (*quantitative method*) and focus group interviews (*qualitative method*). An online questionnaire via Google Apps was used, respondents were limited to one response only and responses were anonymous. The questionnaire elicited information on: background information of the students; a comparison of FTF and online learning; an evaluation of the online activities used; suggestions for improving future online teaching. The questionnaire contained closed questions, open-ended questions and a satisfaction scale rating in which students rated from 5 to 1 the effectiveness of the ten online learning activities used.

After an initial analysis of the questionnaires, three semi-structured focus group interviews were conducted to investigate participants' responses in more depth. Ten Hungarian students were interviewed, each interview lasted between twenty to thirty minutes, were recorded and transcribed verbatim. The interviews were guided by core questions to elicit information arising from the questionnaire responses, but other topics were explored as they arose.

2.2. Data Analysis

For questionnaire data, responses to closed questions and the satisfaction scale rating (question 5) were tallied into tables, the resulting numbers were converted into percentages and then represented visually on graphs. The open-ended responses from questionnaire and interview data were organised into thematic categories and used to confirm, clarify and add insight to information gained from the questionnaires.

3. Findings

3.1. Research question 1: What are students' attitudes towards online learning?

Students have reservations towards online learning. In response to questionnaire question 10, 'Which do you prefer? Face-to-face lessons or online learning?', 75% respondents stated FTF, 15.6% online, and the remaining 9.4% preferred blended learning. Furthermore, respondents identified fewer advantages than disadvantages to learning online through Moodle and Zoom.

Table 1 summarises five advantages identified by participants in response to question 11 'What are advantages of online compared to face-to face learning?' Participants suggested that online learning is: convenient (75% of respondents); facilitated the understanding of course content (25%); developed their online study skills (24%); used more varied multimedia than in class (16%) and gave a sense of community to help ease the loneliness incurred by the COVID-19 lockdown (9%).

In Table 1 the left column reports the five advantages illustrated by comments from questionnaire and interview data. The right column reports the percentage of questionnaire respondents who identified the given advantage.

The five advantages plus illustrative comments. Q = taken from questionnaire data Int. = taken from interview data	% of respondents who identified this advantage
Convenience We could be anywhere and still participating in the lesson, and I don't have to travel to the classroom. (Q)	75%
Easy to understand course content I have more time to understand it and I can learn in my own pace. (Q) I watched again the recording of the lesson and I looked up the unknown words and listened again if I didn't understand something. (Q)	25%
Can learn new skills <u>Technical skills</u> You (the teacher) helped us use Moodle and different websites and tools and e-learning activities so in the digital world of 2020 I think it is necessary. (Q) You showed how to use applications like Zoom and websites that are good for the kids like the British Council one. I learnt how to do it like with my kids I started with Skype and then Google Meet but it was too slow and the quality wasn't as good. Now I teach through Zoom, I can put the kids into groups with Zoom. (Int.) <u>Organisational skills</u> I started to make a calendar for the tasks I should upload and I'm still doing it organising my task and my time. (Int.)	24%
Use of Multimedia We had more videos and I liked that. (Q) We used more things like the Vocaroo it was interesting. (Int.) NB Vocaroo is a voice messaging app, used to ‘speak’ messages to student rather than write emails.	16%
Sense of community In Spain it was boring in my flat so it was good to meet online and I was in comfort in my room. (Q)	9%

Table 1: Advantages of online learning
Source: own edited (2020)

Six disadvantages were identified by respondents in response to ‘What are advantages of online compared to face-to face learning?’ (question 12). These were: poor quality of interaction (56%); poor internet (40%); lack of a sense of community (38%); lack of online study skills (29%); practical problems (16%) and poor tutor skills (9%). While the focus of this study was the subjects in English that participants studied with me, several participants provided unsolicited feedback about other subjects and ‘Poor tutor skills’ refers to this.

The six disadvantages plus illustrative comments.	
Poor quality of interaction It’s hard to understand and guess what the teacher says because there is a limited amount of gestures. (Q) E-learning is less direct and there is a time lag so it’s harder to ask for help. (Q)	56%
Poor internet We can have errors with the internet that makes the quality of on-line classes worse than normal class. (Q)	40%
No sense of community We need to meet our friends in person. It gives the experience along with the lesson so it’s easy to remember and understand the content. (Q)	38%
Poor online study skills <u>Technical skills</u> It was a little unorthodox for me. make a storybook video or use the Google Drive? How to do this? (Int.) <u>Organisational skills</u> The teacher says what should I do, and it's easier to get the knowledge. (Q) The university atmosphere motivates me and it’s hard to motivate myself. (Int.)	29%
Practical problems My family was noisy. (Q)	16%
Poor tutor skills We didn’t study online with most teachers. We just studied with handouts and it was terrible. It was chaos for me and I didn’t understand a lot, so it was bad. (Q)	9%

Table 2: Disadvantages of online learning
 Source: own edited (2020)

Thus, participants have reservations about online learning. 75% prefer FTF teaching and more disadvantages than advantages were identified. Also, most disadvantages were identified by more than 29% of participants but each advantage by less than 25% participants (with the exception of convenience). This implies that disadvantages were more significant to the respondents.

3.2. Research question 2: Which online activities best supported their learning?

To answer this question, students rated the effectiveness of ten activities on a five-point scale of satisfaction. Questionnaire question 5 asked, ‘Did these activities help improve your English language and understanding of course content?’ Mark 5 represented 100% effectiveness, mark 3 represented 50% effectiveness and mark 1 represented 0% effectiveness. The activities were: self-study using materials from Moodle; watching tutor-made pre-recorded videoed lectures on Moodle; watching course-related videos; participating in Moodle’s discussion forum; learning through online games; live Zoom classes with whole class/teacher-directed interaction; pair/group work in Zoom; individual consultations with the tutor on Zoom; giving student presentations on Zoom; using external websites.

Although flipped learning was the main pedagogic approach used during this period, the term ‘flipped learning’ does not appear in the questionnaire. This is because the term is technical and too obscure to include. However, flipped learning is represented through activities such as: watching pre-recorded videoed lectures where students study content by themselves at home; live Zoom classes (whole class interaction) and pair/group work in Zoom where that content is reinforced. Therefore, I hoped to gauge student attitudes to the effectiveness of flipped learning by how they ranked these activities.

Fig. 1 ranks activities in order of student satisfaction to give a snapshot into student preferences. Each coloured column corresponds to a mark. For example, light blue represents mark 5, orange represents mark 4 and so on. Thus for watching pre-recorded videoed lectures

‘Videoed lectures’, 84% of participants awarded mark 5 (100% effective) and 16% a mark 4 (75% effective).

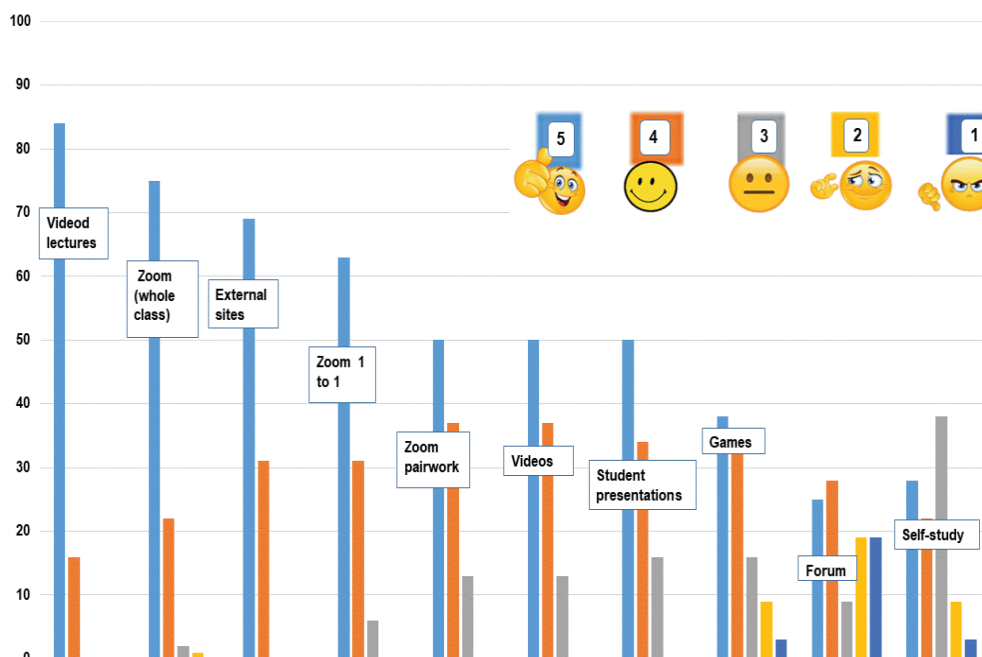


Figure 1: Student perceptions of effectiveness of online activities
Source: own edited (2020)

Figure 1 indicates that students judged the two most effective activities to be watching pre-recorded lectures at home, the content of which was later explored in a live Zoom whole class lesson. Many participants reported how this model supported their understanding of course content. As one student wrote, ‘I saw the video pictures and you spoke the information, then we did it again in Zoom....it was easy to understand and remember’ (questionnaire comment). Other students referred to self-directed learning that the ‘Student can study by himself, pay more attention to the parts of the lecture that are more difficult by re-watching the lecture and it easy for me and then I can ask you in class too’ (interview comment). These two activities in part constitute a flipped learning approach, so it can partially be concluded that students perceive the flipped classroom as effective. However, the term ‘partially’ needs qualification and this is provided below.

Fig. 1 also shows that using external websites is effective, ranked third. Activities from websites were integrated into the students’ university courses and proved to be *motivating, instructive and useful* both for language learning and professional development. *Several students* continued to use them after their university courses had finished.

Zoom pair work is ranked fifth. This is significant because of the message conveys about students’ attitudes towards the collaboration so central to flipped learning. To recap, I had elected to use the Zoom app precisely because of the opportunities it gives for collaborative work in pairs. In follow up interviews, students expressed far more negative than positive comments about working collaboratively. Some suggested that because they had not experienced this work mode in school, they feel uncomfortable doing it now. One participant stated, ‘No pair work.... that’s what we got used to when we were at school I don't like sharing’. Others referred to free-loading, that is the work load not being shared equally amongst group members, ‘It isn't fair because I always do everything.’ Some doubted the value of collaboration as a useful learning technique. ‘I hate it...It's more time and harder to talk about something with your partner than when the teacher tells you what to do, what to

talk about and asks questions. Anyway why is it good to listen to my friend?’ Others simply expressed a personal preference for working alone.

Participating on the Moodle forum and studying from self-study materials achieved the lowest rankings. For the forum as with pair work, the main problem was a reluctance to collaborate. There was a reluctance to share as one participant explained, ‘I don't like sharing my homework with others. If I write it on the forum and the others don't do it, they might see what I wrote, the solutions, and I don't like that’ (interview comment). There was also a fear of *being ridiculed*, ‘If I write on the forum everyone can see and it's kind of embarrassing if I write something badly, they can see and laugh at me or criticise me. It's just another Hungarian thing that we are ashamed of our opinion and what we write’ (interview comment).

The least effective online method by far was studying from self-study materials. For participants, simply doing materials uploaded by the teacher was boring, unhelpful, pointless.

4. Discussion

Regarding research question 1 and attitudes to online learning via Moodle and Zoom, findings revealed that most students are not really satisfied with their online learning experience. 75% of respondents prefer FTF to online or blended learning and more disadvantages than advantages were identified. Learning was hindered by: poor tutor-student interaction, poor internet, lack of learning community, their own poor online study skills. Indeed, a high 29% of participants acknowledged that their technical and organisational skills were lacking.

However, on an optimistic note, despite student reservations 25% of respondents favoured either online or blended learning. This is positive given the digital background of most of the participants. Before March 2020 only six of the thirty-two participants (four of whom were internationals) had studied online, ITC is not really integrated into Hungarian education and ITC use is lower than the OECD average (OECD 2020). It is unsurprising therefore that Hungarian students in particular, may be wary of online study. To speculate, if 25% are already open towards online learning, then the attitudes of the remaining 75% can perhaps be positively changed with more work. This is something to consider for the future.

These findings concerning student reservations are consistent with other work into attitudes to online learning (e.g. Adnan–Anwar 2020; Wang 2018; Coverdale–Jones 2000; Serhan 2020). This suggests that the problems uncovered by this study are important and so should be addressed if a high quality of online instruction is to be achieved.

One main problem was how the poor quality of student-teacher interaction hindered communication and so learning. Nonverbal cues such as gesture, facial expressions, eye contact play a critical role in effective communication, especially for second language learners (Williams–Burden 1997; Banbaeroo–Shoktpour 2017). These students highlighted how online communication reduced their access to for example body language, which made it hard to understand teacher explanations. In fact, as early as 2000, Coverdale–Jones (2000) alerted us to the challenges of reading body language in online communication but there still appears to be a lack of evidence-based research into how to deal with non-verbal communication in virtual environments. Therefore, further study of the issue would be of interest.

Concerning research question 2 and the online activities that best support learning, participants judged the most effective to be watching pre-recorded videoed lectures at home followed by live whole class Zoom lessons. This combination of activities reflects in part the flipped classroom pedagogical model where course content is studied independently outside the classroom, then consolidated in the lesson through collaborative tasks. Students claimed this model helped them understand course material better and provided opportunities for self-directed learning, benefits which echo those outlined in the literature (e.g. Romero–García 2018; Ramírez et al. 2014; Hartyányi 2018). This implies that a flipped learning approach to

online instruction may indeed work and should continue to be developed to enhance the online learning process.

There is however *a caveat to this* conclusion. Student-student interaction is key in the flipped classroom, there must be collaboration for learning to occur. Several participants in this study were frustrated by collaborative work as indicated by the mid-range satisfaction ranking of Zoom pair work and low ranking for Moodle’s discussion forum. To reiterate, some students were reluctant to share opinions, feared ridicule, recognised the problem of free loading and that their schooling did not foster collaborative skills and attitudes all of which negatively affected their collaborative experiences. Instead these students preferred to process the input they had previously studied as a whole class with the teacher and not in groups. Teacher-directed interaction however, does not meet the requirements of the flipped learning model which has student collaboration at its core.

Collaborative skills are important not just for flipped learning but also to enhance general performance at school and the modern workplace (OECD 2017). Similar to any other skills, collaborative skills can be taught. Therefore, I as an educator, should explicitly instruct my students in the skills needed for effective group work if I want a flipped learning approach to fulfil its potential in the future.

Conclusion

In March 2020 SZE moved to teaching online, a change that was hard for both teachers and students as we were not prepared for this sudden shift. This study documented students’ attitudes towards this new learning experience. I used Moodle and Zoom to replace my FTF classes and implemented a flipped classroom pedagogical approach in an attempt to use active learning techniques in a virtual environment. The study’s findings indicated that while students were not completely satisfied with their learning experience, they could identify the online learning activities that did and did not support their learning. Students liked studying course content by themselves outside lessons through video-based input then consolidating input in class through teacher direct interaction, a model of learning I suggested that partially reflects a flipped classroom model.

This student feedback is important because it has revealed to me ways in which my online teaching can be improved in the future. I as an educator should help students to work collaboratively if I want to continue teaching through the flipped classroom model. I should work out how to improve my own on-screen body language to facilitate student understanding. I should also help students to improve their own online study skills especially organisational skills such as time management.

Online study is arguably a permanent fixture in education today so I conclude by calling on colleagues to document their own online teaching experiences, to report lessons learned in order to *improve online learning* for students in general.

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