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Managing Editor
Georgina Spencer
Will Foster

Administrator
Samantha Mottram

Telephone
+44 (0)1782 734436

Email
jade@keele.ac.uk

Web
<https://www.keele.ac.uk/kiite/publications/jade/>

Address
KIITE, Claus Moser Building, Keele, ST5 5BG

Sudden transition to online learning; an action research study exploring Foundation Year students' experience at Keele University

Naqash Masood¹ and Laura Hibberts²

¹Dr Naqash Masood, PhD

Lecturer in Biosciences
School of Life Sciences
Keele University, Staffordshire ST5 5BG, UK

n.masood@keele.ac.uk

Office. Huxley 202

Tel: 01782733056

²Dr. Laura Hibberts, PhD

Lecturer in Biology
Foundation Year Centre,
Keele University, Keele, Staffordshire, ST5 5BG, UK

l.hibberts@keele.ac.uk

Tel: 01782732549

Corresponding author Dr Naqash Masood, n.masood@keele.ac.uk

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Abstract

The COVID-19 pandemic induced closure of the university campuses resulted in forced improvisation and adoption of online learning. Following sudden transition towards exclusive online learning, we needed to know more about students' experience to identify best online teaching practices. This action research project was aimed to study experiences of the foundation year students in the context of sudden transition to online learning.

Virtual focus group meetings were used as a method of data collection. A total of seven participants were recruited. Three virtual focus group meetings were conducted on Microsoft Teams in the first cycle. Discussion in each online focus group meeting was guided predominantly by a set of open ended, pre-written questions.

Initial thematic analysis yielded three major themes: use of cameras in synchronous sessions, accessibility of the tutor and digital communities. These themes informed two subsequent interventions: the launch of an online discussion board on MS Teams to promote tutor accessibility, and weekly group work sessions that created effective digital communities.

There was a clear division amongst participants on use of cameras in synchronous sessions. Post-pandemic, most students would prefer blended mode of learning combining flexibility of asynchronous learning with face to face learning, where availability of the tutor mainly promotes active learning.

Background, context, and objectives

University campuses are vibrant cultural hubs, where students coming from different nations and cultures live together in close proximity. The foundation of this ecosystem has recently been shaken with the rapid onset of the COVID-19 pandemic, causing a great deal of uncertainty for higher education. The pandemic caused closure of the university campuses and an unplanned shift from face to face (f2f) or more precisely from blended learning to exclusive online learning. Blended learning is a pedagogical approach that combines f2f learning with computer based applications (O'Byrne & Pytash, 2015). This model is adapted by most universities in the developed world and incorporates f2f learning, an element missing in exclusive online and remote learning. The complete switch to online learning necessitates adaptations in teaching practices and the ways in which the modules are designed and delivered (Koehler & Mishra, 2009; Boling *et al.*, 2012). Effective design and implementation of the digital or online learning is a complex process needing intensive resource and time investment. Sudden transition to exclusive online learning can be problematic since it generally involves improvisation rather than the actual design (Moore *et al.*, 2011; Bryson & Andres,

2020). This in turn can lead to challenges in teaching and learning process, both for educators and learners.

The f2f teaching and learning creates a teacher-student bond facilitating direct transmission of information to learners (Bandara & Wijekularathna, 2017; Qureshi, 2019). Interpersonal contact is a central element in f2f learning which creates a genuine sense of community, which not only enriches the learning process, but also boosts confidence levels and intelligence while alleviating problems often linked with learning in isolation (Kirkup & Jones 1996). Online learning on the other hand physically separates the students from their teacher and institute. It can be synchronous, where students and teachers can interact virtually in real time using any online platform such as Microsoft (MS) Teams or it could be asynchronous, where no real time interaction takes place between them. The key objective of the online learning is to make the process more flexible and convenient, but an abrupt forced switch to exclusive online learning can lead to unforeseen challenges, most important being the readiness for this transition (Bryson & Lauren, 2020). Institutional readiness is also important, although most higher education institutions in the developed world responded swiftly, it was a bigger challenge for low-income countries where institutions lack resources (Alea *et al.* 2020).

The forced transition to online learning caused by the COVID-19 pandemic meant educators had to modify their teaching practices and to learn new ways of teaching in a short amount of time. Exclusive online learning requires significant creative thinking and time investment to make the learning process engaging and interactive. Furthermore, we also need to consider the acceptance of this exclusive online learning by students. The generation of students we have today is brought up with technology, hence adapting to technology and online learning platforms is unlikely to be an issue for them but other socioeconomic factors can influence their engagement with online learning. It is therefore important that we as educators have a deeper understanding and evidence-based perspective of:

- What works best and what does not work so well for online learning?
- What are the best online teaching practices?
- What motivates learners and what do they expect from the tutors when learning online?
- What are the general implications of online learning for both learners and educators?

Since it is an evolving situation, we do not have any clear answer to these questions yet. It requires continuous development and reflection of one's own online teaching practice. With the pandemic situation improving gradually, we are all hopeful that this crisis will be over soon, but the impact on higher education will be long standing. Some educators believe that universities may never be the same after the COVID-19 pandemic, in person class experience may radically differ, and it could lead to more and better online learning (Hodges *et al.*, 2020). It is important to look ahead and carefully plan our online teaching strategy, which is likely to go beyond the pandemic. Due to the emerging nature of these issues, answers to these questions require a 'trial and error' based approach and would therefore be best approached through a cyclical research method, aligning well with an action research strategy. This project fits well with the definition and purpose of action research as the

learning and action of the educator and learners are interrelated (figure 1). The nature of this action research meant a mutually influential relationship between the educator and learners where the teaching practices adapted by the educator would directly impact the learning experience of the students, which in turn could lead to changes in our teaching practice. In addition, the process is dynamic, evolving and cyclical requiring regular contact with learners, and the outcomes are not known (McNiff, 2017: 87). It is for these reasons the action research method was considered the best approach for this study.

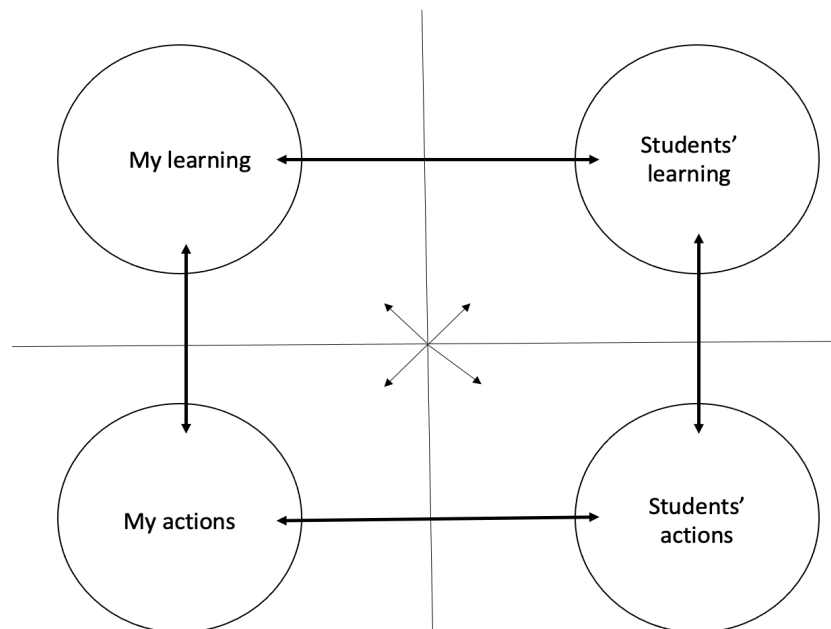


Figure 1. Mutually reciprocal influence relationship of this action research project. Author's own (concept acquired from McNiff, 2017: 87).

The focus of this action research study was on the Foundation Year (FY) students at Keele University. The FY students are at their crucial transition state to higher education. Taking a foundation year at Keele University under normal (pre-pandemic) circumstances provides these students an opportunity to fully experience university life before they embark on their chosen undergraduate courses. However, an unexpected switch to exclusive online learning was a shock to the higher education system, inevitably impacting students' learning experience.

This study was aimed to understand FY students' perspectives on online learning, the factors affecting their engagement, and to identify areas within our teaching practice that require interventions to promote students' learning experience.

Methodology

The main method of data collection was virtual focus group meetings conducted on MS Teams. Ethical approval was obtained, and the project was carried out in line with the recommendations of the ethics committee of the Keele Institute for Innovation and Teaching Excellence (KIITE).

The folk pedagogies concept introduced by Bruner (1996) was applied in this action research and rejuvenated from '*Do, Know, Think, Manage*' to '*Know, Do, Think, Manage*'.

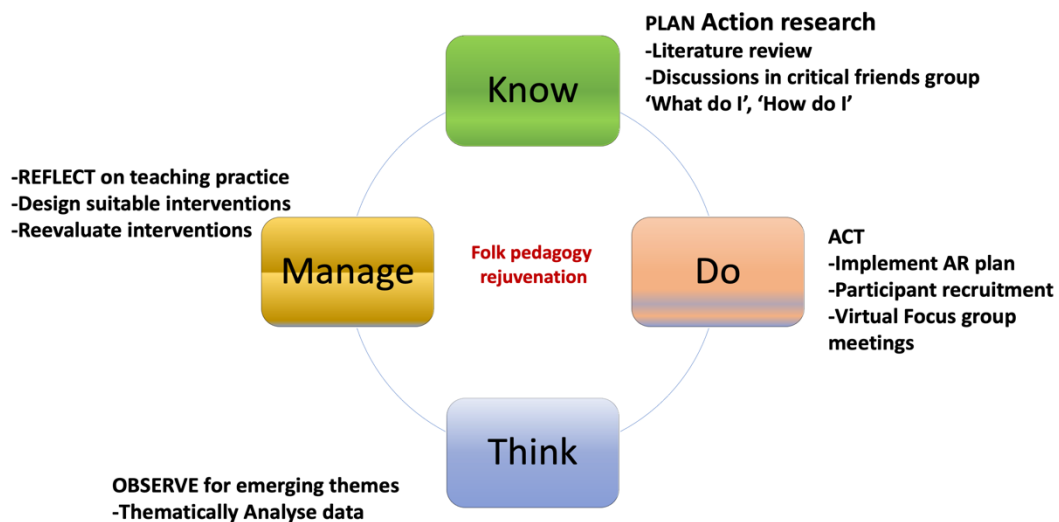


Figure 2. The folk pedagogies concept rejuvenated (author's own adapted from Bruner, 1996).

The 'Know' stage involved 'planning' of this action research through engagement with literature and discussions in critical friends' group (CFG), a model of professional development and reflective practice (Kuh, 2016). The 'Do' stage involved implementation of the plan, including participant recruitment, and organising virtual focus group meetings. The 'Think' stage involved thematic data

analysis to 'observe' any emerging themes, while 'Manage' stage involved 'reflection' on our teaching practice in light with emerging themes.

A total of 7 participants were recruited to form one focus group. All participants were FY students registered on the Advancing Life Sciences module (ALS) and were adults, capable of providing written consent to participate in the study. Invitations to participate were sent via email and MS Teams.

Three virtual focus group meetings were conducted on MS Teams on 22 March 2021, 13 May 2021, and 21 May 2021 respectively. Timing for each of these meetings was agreed a week in advance through email communication. Each virtual focus group meeting was recorded with the informed consent of the participants. The first meeting was primarily focussed on identifying issues affecting student engagement, and possible areas of intervention. Discussion in these meetings was guided by a set of mostly open-ended pre-set questions (figure 3) presented to participants on MS forms. They were allowed sufficient time to record their responses. The responses of the participants were then used to initiate the discussion in the virtual focus group meeting.

How would you rate your experience of online learning to date?
How motivated do you feel about participating in learning activities during weekly online tutorials?
What are your thoughts about turning cameras on during live online sessions?
How often do you have a 1-1 discussion with your teacher?
What length of recorded lecture do you prefer?
Do you think the group working helped you make friends and create digital communities?
How stressful (if at all) do you find online learning during the COVID-19 pandemic?
If you were teaching this module in the current circumstances of COVID-19, what is the one thing that you would do to make online teaching more engaging?
What aspects of the face to face learning do you miss the most?
What aspects of the online learning would you like to carry forward once the COVID-19 pandemic is over?

Figure 3. Example of questions asked in the first focus group meeting.

Following our first virtual focus group meeting, interventions were designed and implemented based on initial thematic analyses of these data.

The second and third virtual focus group meetings were primarily focussed on evaluating and analysing the effectiveness of the interventions implemented, and students' experiences of participating in this study.

Data analysis

The data analysis took place concurrently with the data collection. The general process of the data analysis involved reviewing detailed notes and re-visiting the recordings. A thematic approach was used to identify patterns and themes. The data analysis also looked for surprises in the open-ended questions where students had the opportunity to provide unique answers. Thematic data analysis was also used to identify areas of teaching practice need changing based on the feedback from participants. Suitable interventions were then designed and implemented which are presented in the discussion section.

Results

It was exciting to observe the level of enthusiasm of participants in the focus group meetings and their honesty and openness while expressing their views on a certain topic.

Three prominent themes were identified by thematic analysis of the data generated in the first virtual focus group meeting. These themes comprised: use of cameras in the synchronous sessions, tutor accessibility, and digital communities.

Use of cameras during online synchronous sessions

The use of cameras was debated in the first focus group meeting. There was a clear divide in participants' opinions. Some of them strongly believed that having cameras 'on' should be mandatory during live sessions. They supported their argument by referring to some live sessions when they had their cameras on, and as a result, found them much more exciting and engaging.

One participant commented:

“I’m all for it. I think at the start, it’s hard to turn them on, because you don’t know anyone but I have lessons where I have to keep camera on and I find that those are the most enjoyable lessons as people HAVE to be interactive. Additionally, overtime the “scariness” of having the camera on fades. However, I don’t think it should be a forced thing - perhaps easing people to turn them on in breakout rooms would be better than a whole group (first time wise)”.

On the other hand, some participants thought that having cameras on could be distracting and annoying if there was movement in the background:

“I Don’t mind but do find the movement distracting. If I am trying to concentrate on the lecture, I can see movement in the other side of my screen and find it annoying. I usually use a post-it to cover them!”

An interesting point of view was that having cameras off gives opportunities for shy and less confident students to participate in the discussions, who otherwise would not be willing to interact when other students can see them!

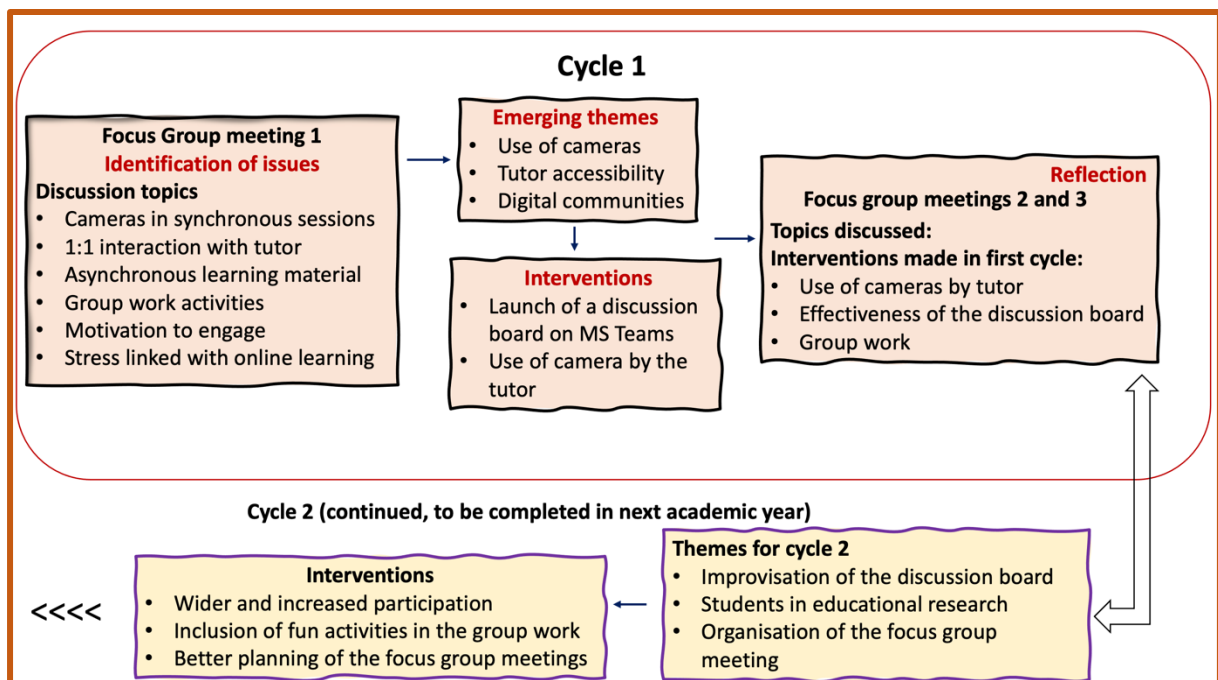


Figure 4. Action research cycles 1 and 2. Cycle 1 is completed while cycle 2 is continued and will be completed in the next academic year (author’s own).

Accessibility of the tutor

Another prominent theme was the accessibility of the tutor. When participants were asked how often they had one to one interaction with the tutor, most participants responded either ‘rare’ or ‘sometimes’.

Some students also commented that they miss the ease of access they would have in face to face to teaching to approach the tutor. For example, one participant commented:

“I miss having the tutors in the same place at the same time to be able to speak to them without sending an email or having to arrange a meeting”.

When asked what we can do to improve the student- tutor communication, one participant commented:

“make time each week available for students to know that any questions that are not personal, will have a time slot for questions to be answered”.

Another participant responded:

“make sure to provide a time slot and comment box that I would be free each week to answer questions, as sometimes emails do not always get answered and do not know when they will get answered”.

Although we had timetabled drop-in sessions every week for ALS module, detailed conversation with students identified a need for an alternative platform where students can approach the tutor more easily, this is discussed in more detail in the interventions section.

Group work and digital communities

Another theme was the group work and digital communities. Independent group work sessions, led by students, were timetabled as part of the ALS module where students met within the MS Teams module space. Each week, students took turns to be the group leader and worked on dedicated tasks complementary to synchronous and asynchronous learning. These groups work sessions also gave students an opportunity to meet with their peers and make friends.

When asked about their experience of the independent group sessions, most agreed that they enjoyed them, although for some groups the level of engagement was lower than others.

When asked if the group work sessions helped them find friends, most participants agreed that group work sessions helped them make friends and develop acquaintances. For example, one participant commented:

“Yes! it makes you feel connected to other students, which is crucial in a time where I met almost no one at university and it felt quite lonely at times. Last week my group all added each other on Instagram! Also, it does feel like you're making connections which there's been a great lack of chance to do this year”.

Another participant commented:

“Relatively! For ALS, I have made, at best, familiar acquaintances but they've never been taken further than the lesson (which for my case, is a welcomed preference!) However, I have had success with making friends and making digital communities within the foundation year”.

The preferred length of lecture was also discussed. Most participants in this study preferred asynchronous lectures to be divided into short segments of 15-20 minutes.

Discussion

The participants of this action research were a pro-active group of students, actively participating in the discussions. Online focus group meetings certainly made their experience enjoyable especially in the pandemic environment where they needed to interact with their peers. It allowed them to interact with each other in a friendly atmosphere and have their say on educational processes in higher education, especially in the context of COVID-19 induced transition to exclusive online learning. They valued the opportunity to be able to engage in discussions on higher education and expressed their thoughts and views openly, as suggested by their comments:

“This focus group has allowed me to get to know my fellow students better and appreciate their diverse points of view. Moreover, I feel honoured to have been given this opportunity to contribute to enhance teaching and learning practices, I only hope that mine and my fellow students' input were useful in the development of higher education learning and teaching”.

Involvement in academic debates can help improve argumentation and critical thinking skills of the participants. Participating in mutual discussions meant they patiently listened to each other while respectfully disagreeing on certain issues. Respecting diverse opinions can groom personalities, while improving confidence level, communication, and interpersonal skills (Chikeleze, Johnson & Gibson, 2018). It is also important for the graduates of higher education to have acquired high professional values, strong critical thinking, and effective communication skills. As a matter of fact, there is an increased demand for individuals equipped with higher order critical thinking skills and strong communicative competence for the workforce of 21st century (Halpern, 2004; Gervery, Drout, & Wang, 2009). We argue that the focus group debates in this action research study helped student participants enhance these highly desirable skills as they were able to appreciate a variety of viewpoints and engage with their peers coming from different backgrounds with different point of views.

This action research also improved their learning experience on the module as they could see teaching interventions made swiftly in response to their feedback. It made them feel valued thereby creating an environment of confidence, as suggested by their comments:

“Brilliant experience, small group allowed everyone to contribute. Encouraging to see changes being put into place straight away”.

This action research project has positively influenced our teaching practice through constructively engaging with students’ feedback to intervene quickly to improve our teaching practice.

Use of cameras in synchronous sessions:

Synchronous remote learning has several benefits such as real time collaboration, timely feedback, enhanced interactivity between learners and tutors (Racheva, 2018). The web cameras are an important component of the synchronous remote learning to promote interactivity between learners and tutor. However, the use of cameras by students is not mandated by Keele University. There is a lot of recent literature discussing the use of cameras in synchronous online sessions, highlighting its advantages and limitations (DeGrande *et al*, 2020; Day & Verbiest, 2021). While facial expressions of students give valuable pointers to a tutor to see how well they are engaging in a lesson, having cameras on by the whole class does not necessarily mean that a synchronous lesson is inclusive (Castelli & Sarvay, 2021). There are students who are better able to engage when they can hide their faces and such students are less likely to ask any questions in a f2f session when they feel nervous about everybody noticing them. In addition, there are other socioeconomic factors such as internet connectivity, domestic issues, students not wanting to expose their home environment, and issues linked with privacy and data protection. Students from economically disadvantaged households are also likely to suffer disproportionately due to digital poverty (Dorn *et al.*, 2020). Hence in the light of our observations, we propose that students should be given a free choice to turn their cameras on in order to make them feel safe and confident. In our opinion, an advance communication with students about the synchronous sessions which are more likely to benefit from having cameras on can help students better prepare for it. In addition, the use of ‘chat function’ and ‘audio only’ in live sessions should also be encouraged to promote engagement. Moreover, it is also important for the tutors to have their cameras on in synchronous sessions, unless prohibited by exceptional circumstances.

Accessibility of the tutor

Accessibility of the tutor emerged as a prominent theme since there was a general dissatisfaction amongst participants regarding accessibility of the tutor. This was quite the opposite of our personal experience and perception. Before this action research study, our personal experience and perception was that with online mode of learning, students are better able to approach their tutors compared to f2f learning because they now have access to user friendly platforms such as MS Teams

facilitating chat and audio/video calling features. After transition to online learning, we received significantly more student queries than pre-pandemic. Similar facts have been reported in the literature. Some studies suggest that students feel more comfortable approaching their tutors by either calling them online, or through starting quick chats compared to traditional forms of communication such as visiting teachers' offices or sending them formal emails (Lee, 2020).

However, students at different levels of study may differ in terms of their confidence to approach their tutors using digital means. The FY students may not be as confident as other undergraduate students when approaching their tutors for help (Karabenick, 2011). It is also worth mentioning that the FY students at Keele university did not have any real campus experience in academic year 2020/21 because of the COVID-19 induced restrictions. We received more email messages from them compared to messages on MS Teams chat. Academic workload can affect the response time for email queries and in busy term time, the response could be delayed, and perhaps this is where there was some distress amongst students as reflected in their responses.

Group work and digital communities

Our discussion, supported by literature suggest that in a group work there can be a mix of students, some more engaged and verbose while others can be quite anxious and nervous. Nevertheless, group work turned out be a great way of forming digital communities. This was encouraging since loneliness and sense of isolation are reported as major issues linked with anxiety amongst students studying remotely (Duranton & Mason, 2012). Based on our observations, we propose careful planning for the group work sessions as found that interactivity differed significantly between different groups. Furthermore, some students can be hesitant when interacting with people they have not met before in person. In our opinion, inclusion of some icebreaker sessions and fun activities, could help overcome these barriers.

Interventions and recommendations

Lack of student teacher interaction can negatively drive students' feelings about online learning and can make it quite unpleasant and challenging (Aguilera-Hermida, 2020). An effective use of technological platforms can lead to better mutual engagement and collaboration between students and teachers (GarcíaBotero, Questier, Cincinato, He, & Zhu, 2018; Bower, 2019;). Responses received from most of the participants on accessibility of the tutor suggested an urgent need for an intervention to bridge the communication gap between tutors and students. After discussion with the module team, we decided to launch an online discussion board channel on MS Teams, a form of asynchronous learning environment that offers flexibility through promoting discussions and interaction between tutors and students without any time constraints (De Lange, Suwardy and Mavondo, 2003; Delaney, Kummer and Singh, 2018). The discussion board was launched on 1st of April 2021, eight days after our first virtual focus group meeting which took place on 22 March 2021.

The rationale for the launch of a discussion board for ALS module was to provide a platform for students to interact with their peers as well as their tutors without any restriction. We also decided within our module team that one of the module tutors would monitor the discussion board at least once a day and answer any queries directed to the tutors.

This idea was very well received by the students as within 24 hours of its launch, there were over 100 messages posted on the discussion board. Most of these messages were related to an upcoming assessment, showing the timing for this intervention was quite right.

It was encouraging to see students making use of this platform and getting engaged in discussions and forming effective digital communities. The launch of this discussion board had many positive aspects. The MS Teams' digital interface is more user friendly, it works like other social messaging platforms and avoids the need to login to students online accounts to send emails. We usually receive large numbers of emails from students when deadline of a coursework is approaching, so it also reduced our email traffic significantly.

When asked about their feedback on discussion board, all participants highly rated it and appreciated the swift action taken following their initial feedback on accessibility of the tutor. Some of the comments made were:

"I liked how easy it was to contact the lecturers for questions or find answers for my questions".

"I liked that when I was uncertain about something, there was already multiple people who had asked similar questions to my own query, so I was able to access help and understanding within minutes, as opposed to if I had sent a question by email to the teacher, where I could be waiting days for a response".

"I liked how it was regularly checked and the questions were answered as soon as possible. there wasn't anything I didn't dislike about it".

Following the launch of the discussion board, students appreciated the ease of access to the tutors, saving them time and getting a quick response while avoiding the hassle of writing an email. Some students also liked to see what queries other students had for the assessment which they had not thought about.

Although students benefited immensely from the launch of the discussion board facility, it is also important to manage their expectations appropriately. It can increase the workload for tutors as students can expect them to respond more quickly to their messages (Delaney, Kummer & Singh, 2018). Furthermore, same question can be asked multiple times as some students find it easier to post the question again rather than searching for an answer in the conversation threads. It is therefore important to specify the time when students' queries will be answered by the tutor. Another important point that was brought up in the focus group meeting was the conflicting answers to students' queries by different tutors, as one participant commented:

“Good- ask questions about the assignment, to see questions that you did not think to ask, better response then email. Bad- Conflicting answers from different tutors”.

Conflicting answers by tutors can cause distress amongst students, so it is important that confusions are avoided through better communication between tutors. If a discussion is on an assessment, it is likely that many students will ask the same question. It can be useful, and time saving for the tutors to draft a Frequently Asked Questions (FAQs) document and make it available.

We also suggest that post-pandemic, tutors can also make themselves available on discussion boards in their office hours. This will allow greater flexibility to students who are unable to physically visit their offices due to other commitments.

The preferred lecture length was also discussed. Students have variable attention spans for a lecture. Most participants in this study preferred asynchronous lectures to be divided into short segments of 15-20 minutes. According to Wankat (2002) *“Although student attention is high at the start of a lecture, it has reached a low point after 10–15 minutes”*. In future, we plan to produce bite-sized video lectures, where each video segment lasts no longer than 20 minutes.

Online learning requires a greater degree of self-motivation and ability to manage one's time effectively. For some students, it can be quite challenging and cause stress and anxiety if they fall behind. Although, it did not emerge as a major theme in our action research, when asked if they found online learning experience stressful, one respondent commented:

“Incredibly, it's very easy to have no motivation so one may become insanely behind on work, and feel a lot of guilt cause there's so much to do, so it becomes insanely stressful. By the end of the first term I was crying very often”.

Moving forward, it therefore important, if any module is largely delivered online, we also give due consideration to students' mental well-being. Signposting students to support provided centrally by the university and encouraging them to speak with their personal tutors can be helpful in this regard.

The COVID-19 pandemic is likely to have a long lasting impact on higher education. This action research aimed to capture the experience of FY students, and working in partnership with them, introduce improvements. The findings of this study suggested high acceptance of online learning by FY students at Keele. Thus, synchronised online learning holds promising potential for the future and is likely to be integrated into the higher education curriculum. Students liked the flexibility provided by online learning, yet equally craved the social interaction facilitated by face to face learning. While this action research studied some factors affecting students' engagement in online learning, more research is needed to evaluate the full range of factors including socio-cultural, economic, and technological factors. We recommend that all future changes in curricula and mode of delivery should be evidenced based taking on board the experiences of both learners and educators.

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Competing interests

Authors declare no competing interests for this study.

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