Student Experience of Learning, Assessment and Support during the Covid-19 Pandemic.

Creating a New Reality

Phase One Report

November 2020

Early Years

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Executive Summary

March 2020 saw the start of a pandemic in England which has impacted on every part of society. In Higher Education online teaching, meetings and engagement with students and colleagues became the norm. All face to face teaching was suspended at 5pm on Friday 20th March 2020.

Since 2014 the University of Northampton has been moving towards its current institutional approach to learning and teaching: Active Blended Learning. This approach has eased the transition to online learning and provided a firm foundation on which to build (JISC, 2020). However, translating this into online teaching was new for us all and capturing academic and student experience within the Early Years subject area was crucial to shape teaching in the forthcoming academic year and beyond.

This report presents the findings from phase one of the research. They suggest that students missed the opportunities afforded them by face to face, campus-based sessions. Long sessions were difficult for both students and academics. Whilst the majority had appropriate technologies for online learning, this was not the case for all. In fact, academic staff also faced internet challenges which could impact on the students learning experiences. The key recommendations of this report are a focus on the basics of ensuring accessibility, developing student's skills and familiarity in using the online tools and continuing to match the supper supportive environment provided face to face through online alternatives.

The student voice and lecturers' experience enabled the team to reflect and innovate for the new academic year and develop a flexible working module that would support online or face to face teaching. Shorter whole group sessions, small group work, tutorials and bespoke support, where necessary is now embedded and constantly reviewed. This ensures the model adapts to the continual shifting landscape that we current find ourselves in within Higher Education.

David Meechan and Dr Eunice Lumsden

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Aims and Objectives

This research aimed to capture the experience of undergraduate Early Years students at the University of Northampton (UoN) who were studying on either a three year BA, a two year Foundation Degree or a one year Top-up degree. The research examines the changes to student's study and learning as a result of the COVID-19 pandemic and the shift from face to face (FtF), campus based delivery to online and virtual delivery of their courses between March and May 2020. It also allowed the opportunity to compare the student and staff experience to create new ways of learning that were to be revisited during the forthcoming academic year.

The primary objective is to capture information from the student's in relation to the learning, assessment and support they received between March and May 2020. A change was assumed to have happened because of the shift in modality of their university experience, however, the exact details of such a change were unknown.

The secondary objective is to provide data, information and ideas for the Early Years team at UoN as a feed forward in terms of what works for the student online experience and how this could be improved.

Research Questions

1. What impact did the change to online delivery of lectures have on your learning?
2. How did the change to online delivery affect assignment preparation, completion and submission?
3. What support has been offered to students by module leaders and personal tutors?

4. What resources, information or further support would enhance the student experience moving forward?

Context and Rationale

Most governments worldwide have temporarily closed educational institutions to halt the spread of the Covid-19 pandemic (Zhu and Liu, 2020). UNESCO (2020) report that such closures impacted on up to 90% of the world's student population during April 2020. Some countries began reopening educational institutions in May, but as of June 2020 63% of students worldwide were still affected by closures. However, for many universities, it was only campuses that closed as learning, assessment and support systems were continued online. Lee (2020) details how such a shift was by no means easy and highlights a lack of time to prepare and retaining student interest as real concerns during this process.

The UoN suspended all FtF teaching after 5pm on Friday 20th March 2020. Academic staff had begun to prepare for this shift to online learning with students being given four days' notice. The change to online delivery impacted on 177 students at levels 4, 5 and 6 across the Early Years subject area at UoN.

The move to online learning and assessment was made possible through the UoN's virtual learning environment called Northampton Integrated Learning Environment (NILE). NILE is provided by Blackboard Learn and incorporates the use of Blackboard Collaborate. Blackboard Collaborate is software that provides a virtual classroom with various functions to encourage student participation and interaction. It is assumed that the change in modality, from FtF and campus based, to the online and virtual delivery of both learning and assessment will have impacted on student expectations and experience.

The shift in modality has also affected how students receive support. Every student is assigned a Personal Tutor (PT). E-mail exchange, phone calls and FtF meetings are a key part of this role but with the shift to online, FtF meetings on campus are no longer possible. E-mails, phone calls, NILE announcements and Blackboard Collaborate have been relied on more heavily moving forwards. Module leaders are also responsible for providing assignment guidance and assignment related support to students. This is traditionally achieved through a combination of delivery in session and assignment drop ins outside of sessions,

all based on campus and FtF. Assignment support is now presented through Blackboard Collaborate in session or through Blackboard Collaborate as a designated drop-in session.

This research hoped to capture and learn from the resulting changes of modality and experience that students have been exposed to as a result of the COVID-19 pandemic.

Methodology/Method

This exploratory case study aimed to capture student insights in relation to the shift from FtF, campus based delivery to online delivery of learning, assessment and support. A survey was created using Online Surveys (formerly Bristol Online Surveys) and sent to all students within the Early Years subject area to complete. The survey aimed to capture more quantitative leaning data with open ended questions asked at the end.

Ethics

This study considered informed consent, the right to withdraw, openness, privacy and disclosure in line with the ESRC (2012) and BERA (2018) guidance. Ethical approval was received from UoN ethics committee. All questionnaire responses were anonymised and participants were also asked to indicate if they would be prepared to participate in a focus group.

Sample and Response Rate

A purposeful sampling strategy (Palys, 2008) was used to approach students via e-mail to complete the survey. 89 students (51%) of the total student population (n=174) responded to the questionnaire. The percentage of responses from each year group and programme was reflective of student numbers.

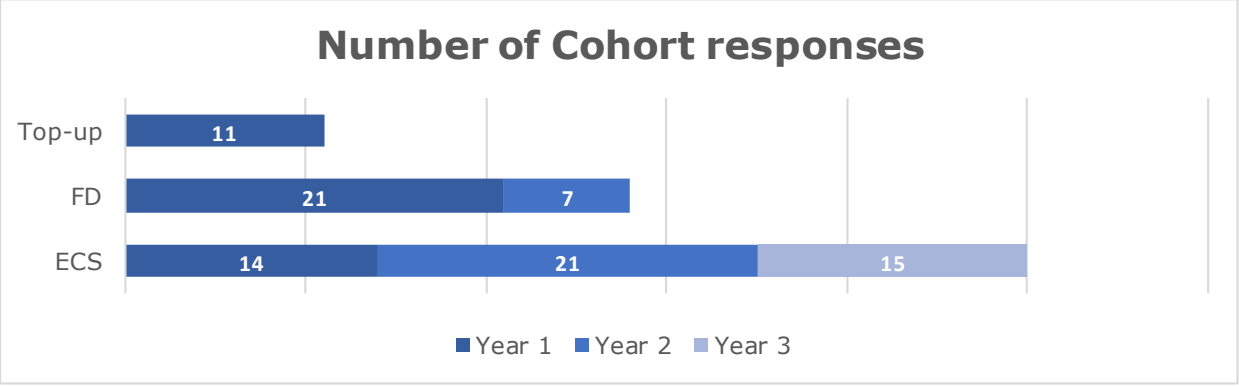


Figure 1: Breakdown of Early Years cohort responses

Presentation of Survey Data

Quantitative Data

The quantitative responses were collated and analysed in terms of frequency. Responses were often associated with scales providing a range of responses from agreeing to disagreeing.

Access to online delivery

The question was asked what primary device was used to access online delivery and if students had access to a secondary device. As can be seen in Figure 2, 78% of students used a Laptop and 14% used a MacBook as their primary device to access online delivery. In terms of access to secondary devices, iPhones were most popular (65%) with Android phones being second most popular (24%). This shows that the majority of students used a laptop to access online delivery with students having access to a secondary device most likely being an iPhone or Android phone.

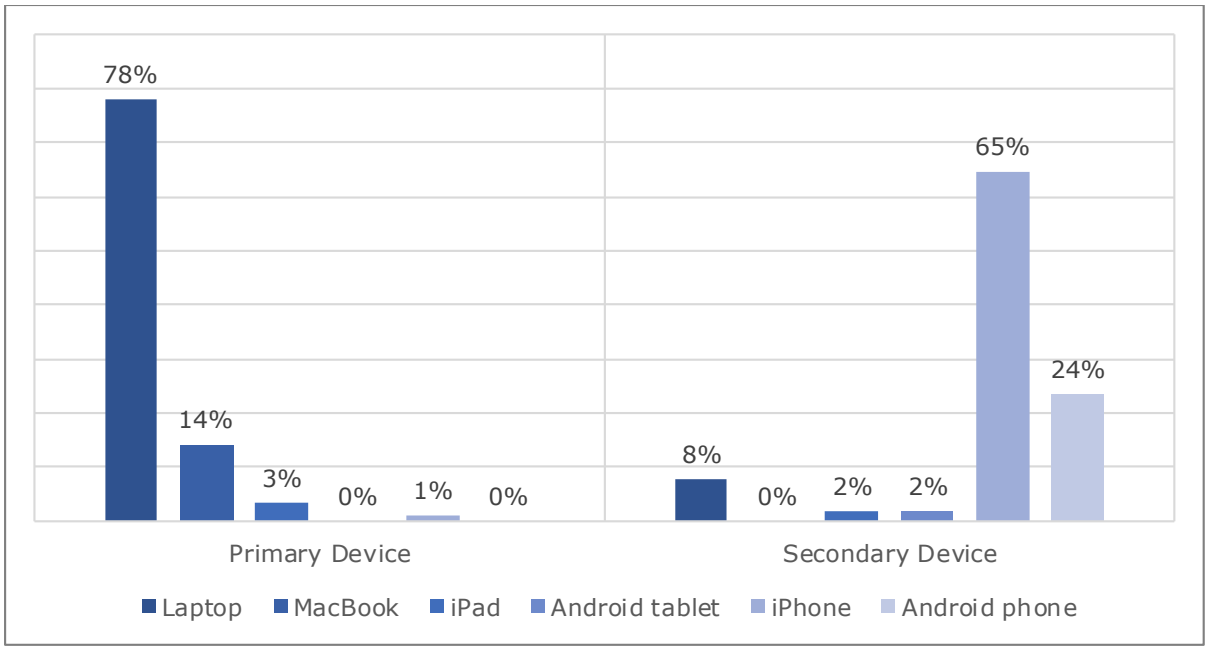


Figure 2: Devices used to access online delivery by students

As Chrome is the recommended browser to use for accessing Blackboard Collaborate, students were also asked if they were aware of this and Figure 3 shows that 75% of students were. 95% of students used either a Laptop, MacBook or an iPad to access online delivery, so it is important that the use of Chrome is continually promoted.

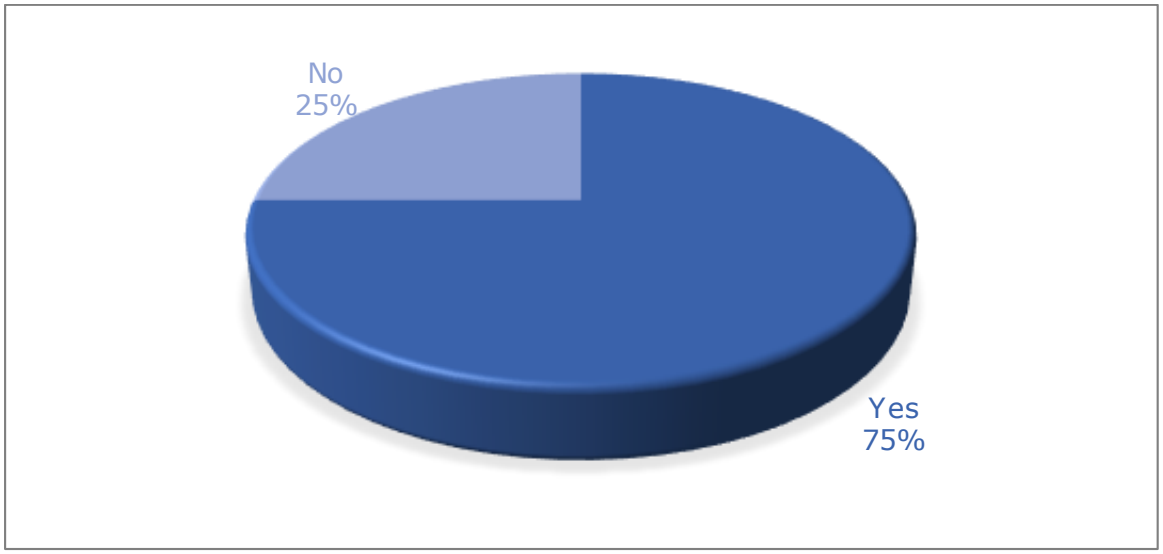


Figure 3: Did you know to use the Chrome browser when accessing the virtual classroom?

Figure 4 shows that the chat function and the raise your hand function were both positively received with 76% and 62% respectively, of students agreeing that the functions worked all of the time. Functions relating to the student being heard or seen, were also reviewed positively with 56% of students stating that they could be heard all of the time and 49% of students agreeing that they could be seen by the lecturer if they wanted to. In terms of the students being able to see and hear the lecturer, 47% agreed that this was possible all of the time and 31% thought that they could hear the lecturer all of the time. Combining the responses relating to 'most of the time' and 'all of the time' in Figure 4 shows that the average student response is 90% positive in relation to the functions described.

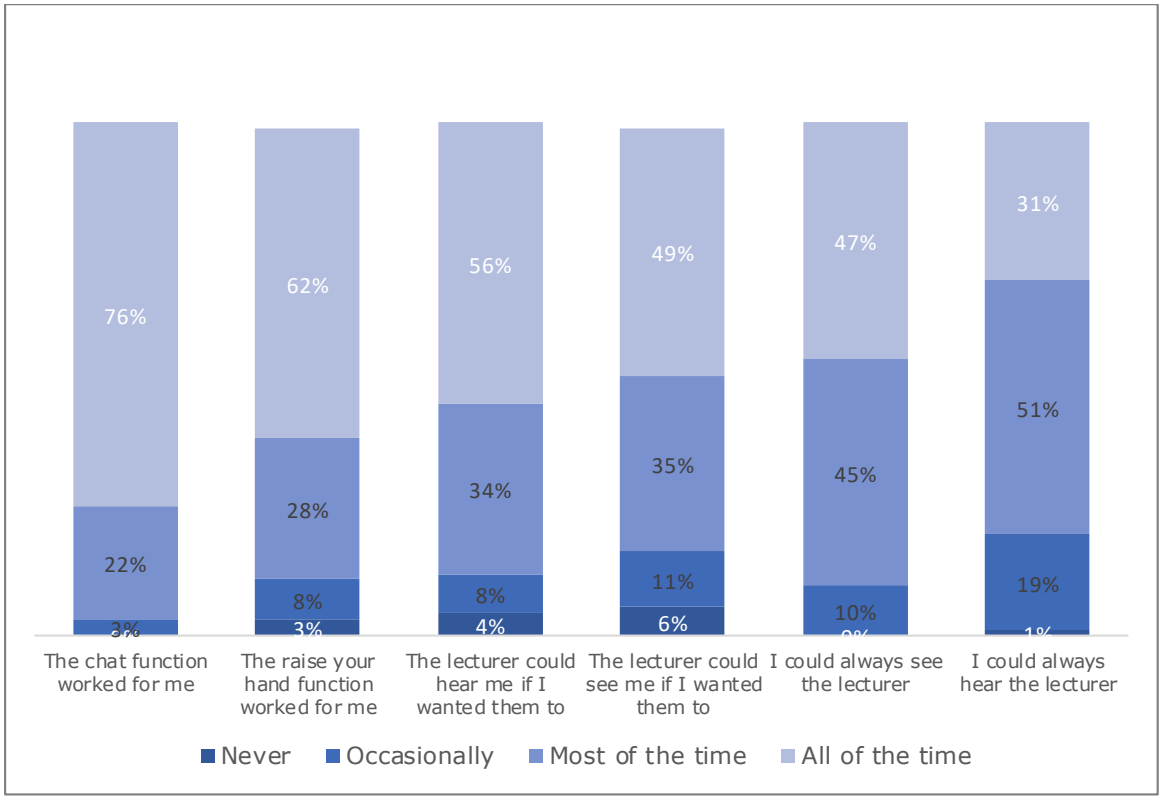
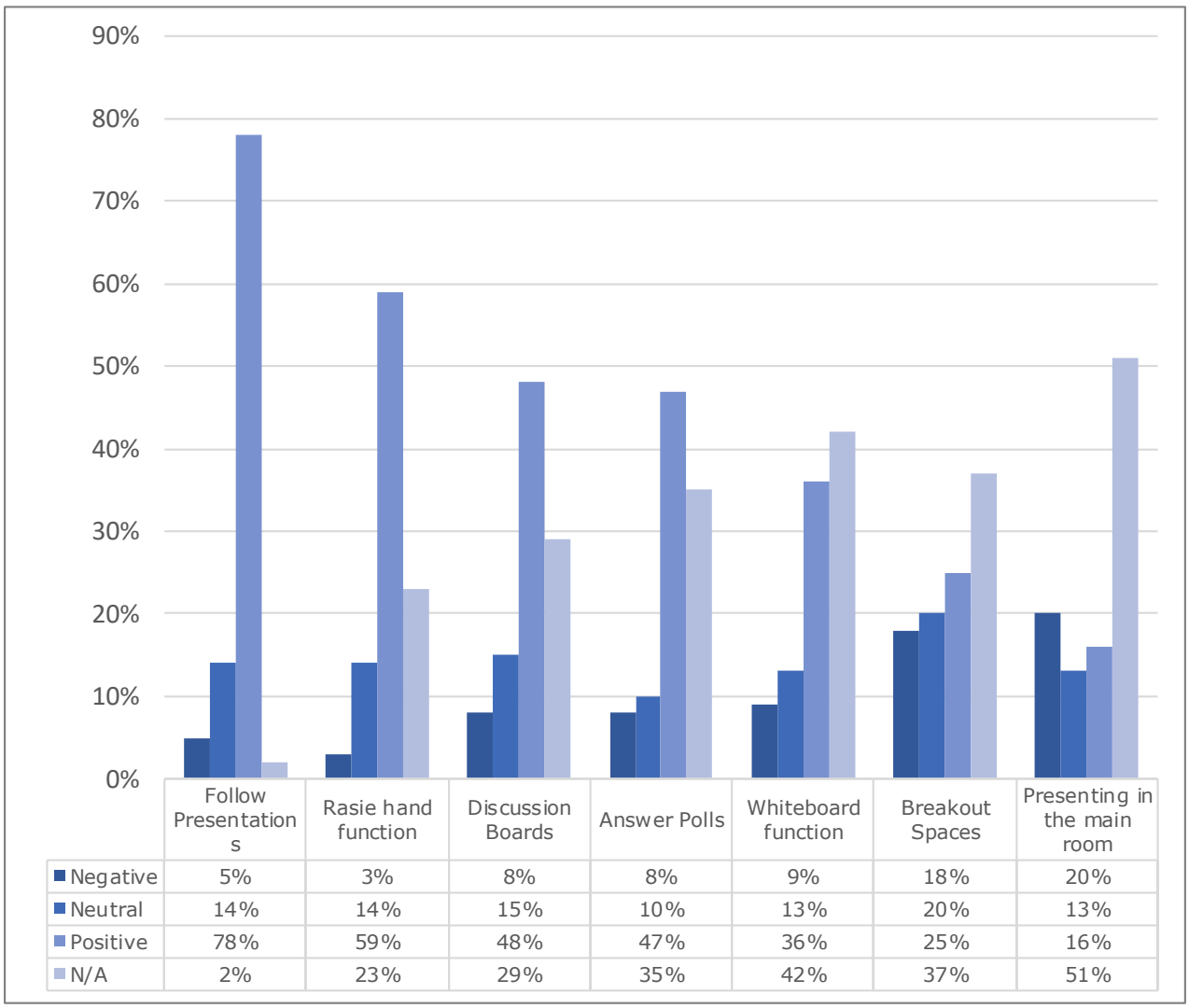


Figure 4: Did the technology work?

Functions of online delivery

Students were asked to rate their experience in terms of negative/neutral/positive/not applicable, in relation to the use of the following functions:

1- Being able to follow presentations
2- Using the 'raise hand' function to ask questions
3- The use of online discussion boards to support collaborate sessions
4- Answering polls
5- Contributing to the whiteboard function
6- Working in breakout spaces in general
7- Presenting in the main room



	Follow Presentations	Rasie hand function	Discussion Boards	Answer Polls	Whiteboard function	Breakout Spaces	Presenting in the main room
Negative	5%	3%	8%	8%	9%	18%	20%
Neutral	14%	14%	15%	10%	13%	20%	13%
Positive	78%	59%	48%	47%	36%	25%	16%
N/A	2%	23%	29%	35%	42%	37%	51%

Figure 5: Student experience of online functions

Figure 5 shows that students were more likely to respond positively where experiences had been applicable. 'Follow presentations', using the 'raise hand function' and 'discussion boards' were all received positively. The least popular experience was 'presenting in the main room' of the virtual classroom. However, this was also the question that 51% of students responded not applicable to meaning that half of the students had not had chance to experience this in the virtual classroom.

Assignment support

47% of students believed in general that assignments had been affected by the move to online delivery. However, 46% of students did not believe this to be the case or felt neutral in response to this question. This shows that there was not a general consensus regarding the impact of the move to online delivery on assignments.

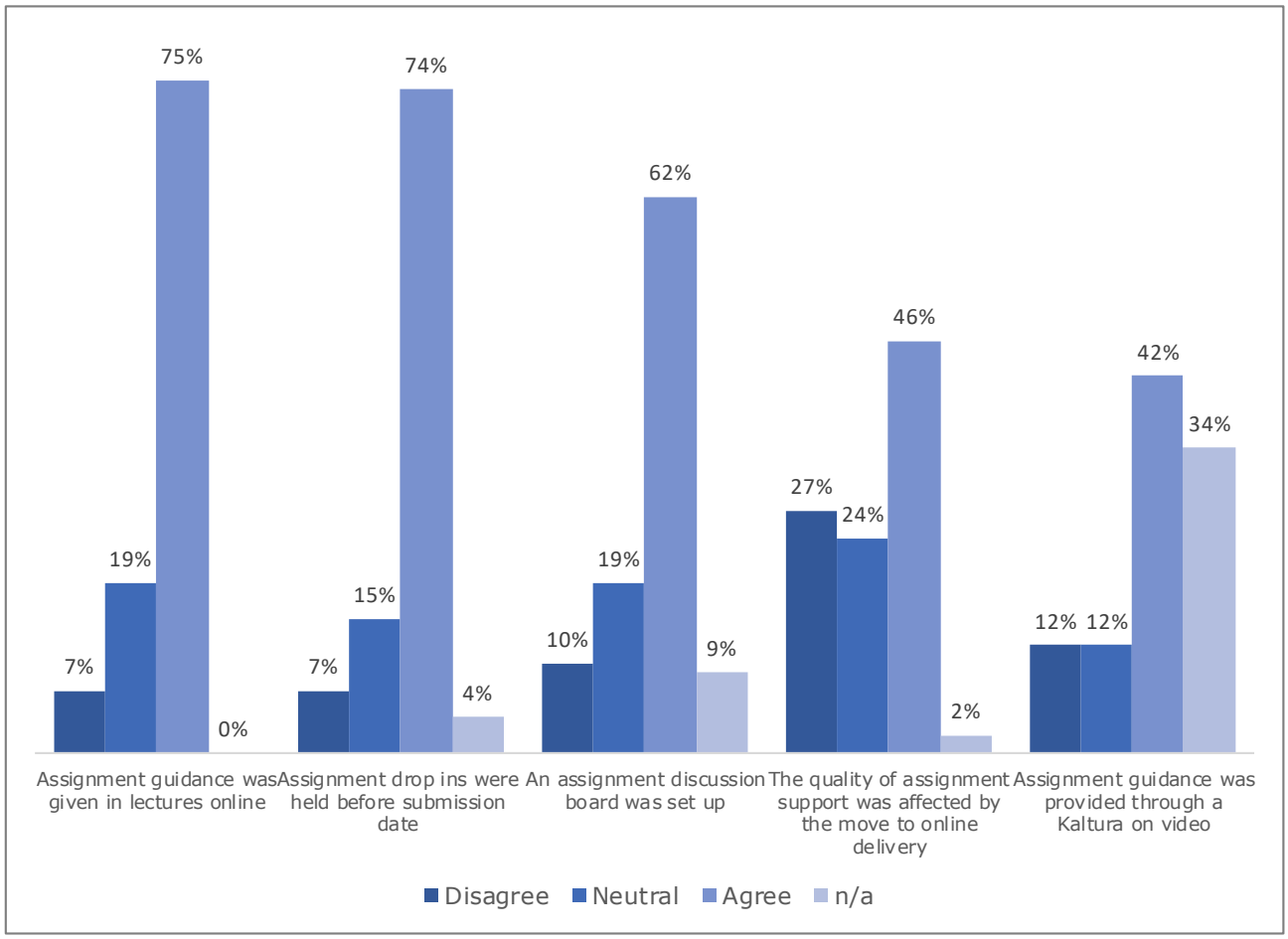


Figure 6: Student experience of online assignment support

Figure 6 shows that assignment guidance was continued in lectures and supported with drop ins as well as discussion boards in an overall majority of student experiences. 42% of students also had access to assignment guidance via a Kaltura video. 46% of students believed that the move to online delivery impacted on the quality of assignment support they received, however, 27% disagreed with this and 24% were neutral. Figure 7 shows that students were

mainly made aware of changes to assignment submission dates by programme leaders, but also by the university as well. 79% of students agreed that module leaders were readily available to answer assignment queries.

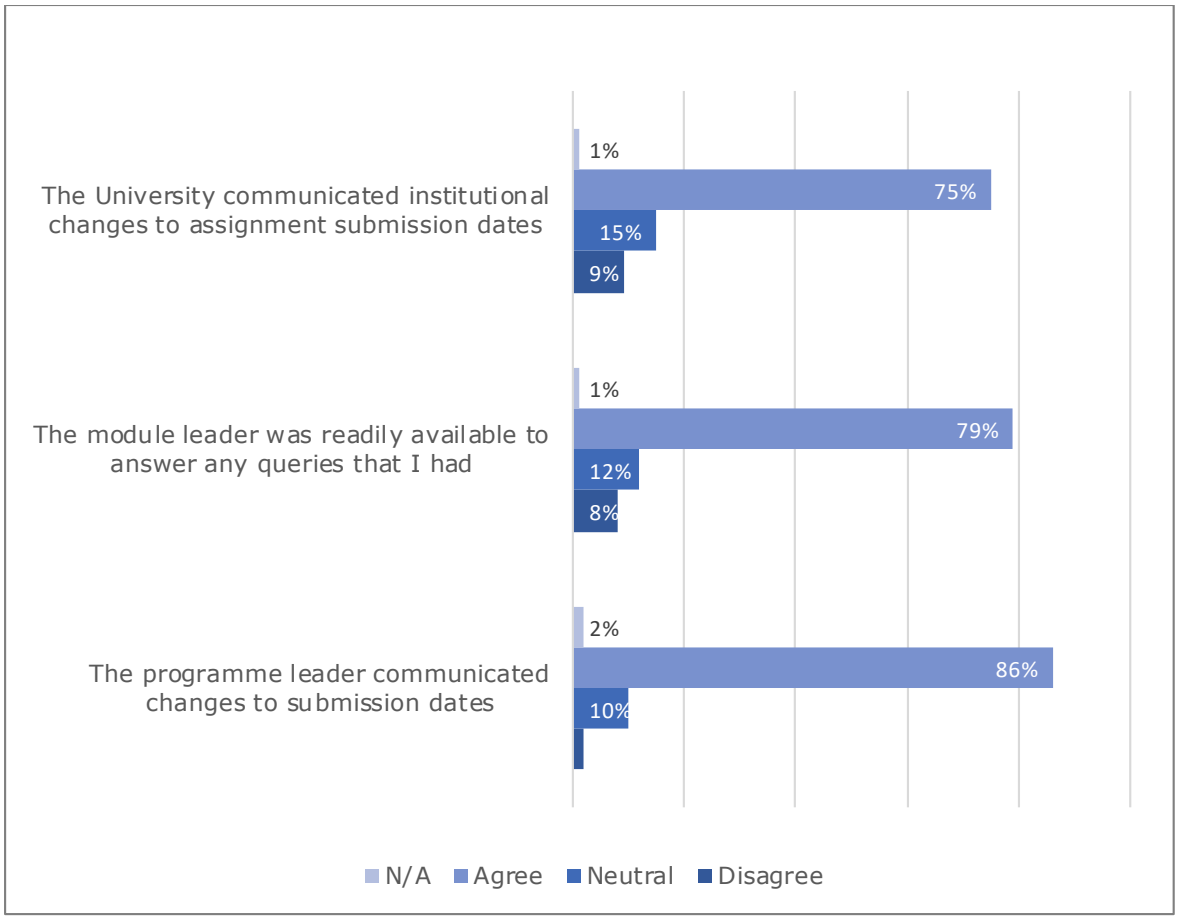


Figure 7: Assignment related communication

PAT Support

Figure 8 covers PAT support in terms of if the student's PAT had been in contact with them, how the PAT contacted them and if they found this contact useful. Students were also asked if they would like more PAT support than received and if the student themselves, had contacted their PAT since the move to online delivery. The majority of students had been contacted by their PAT, mainly by e-mail, with half of students also receiving a phone call. 68% of students have contacted their PAT since the move to online learning, with 77% of students finding contact with their PAT useful.

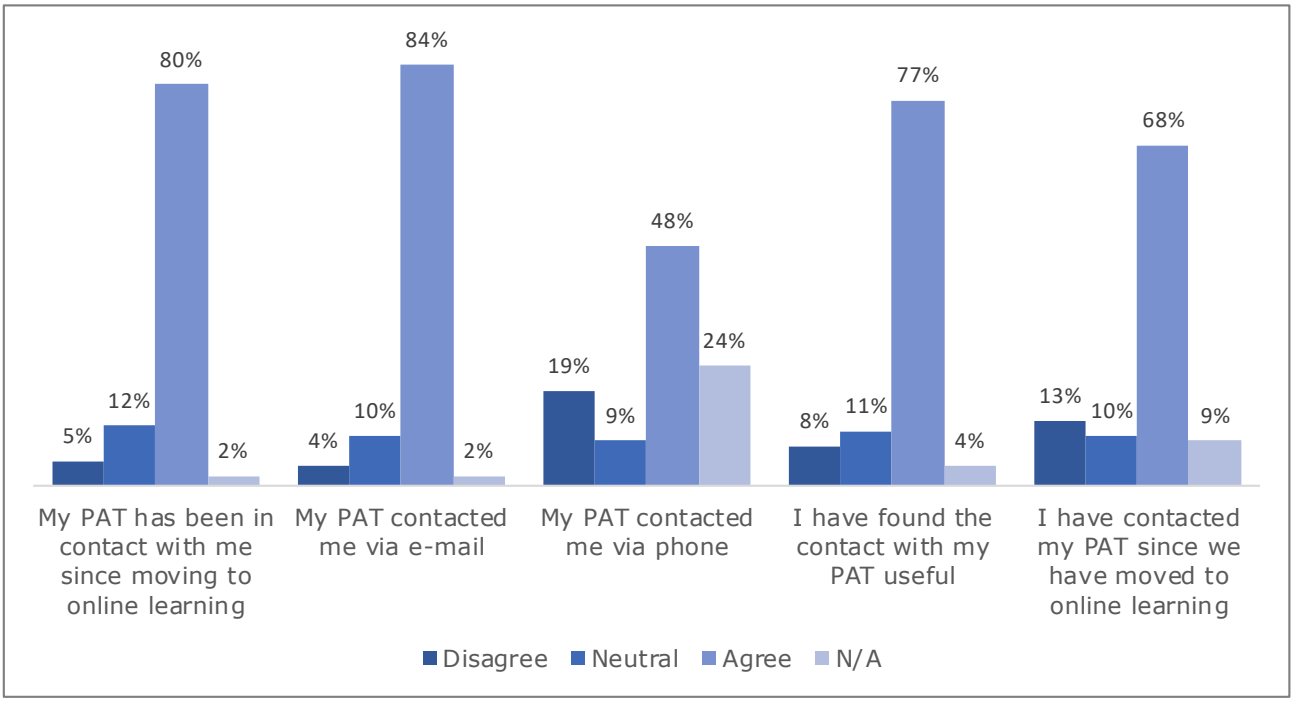


Figure 8: PAT Support

General findings of the student experience of online learning

48% of students disagreed that online learning was easy to participate in but 33% agreed that it was with 19% remaining neutral. A similar range of responses were also shown in relation to whether online learning gives more flexibility in the student's day. There is a slightly higher percentage, 43%, that disagree online learning is convenient with 33% agreeing that it is.

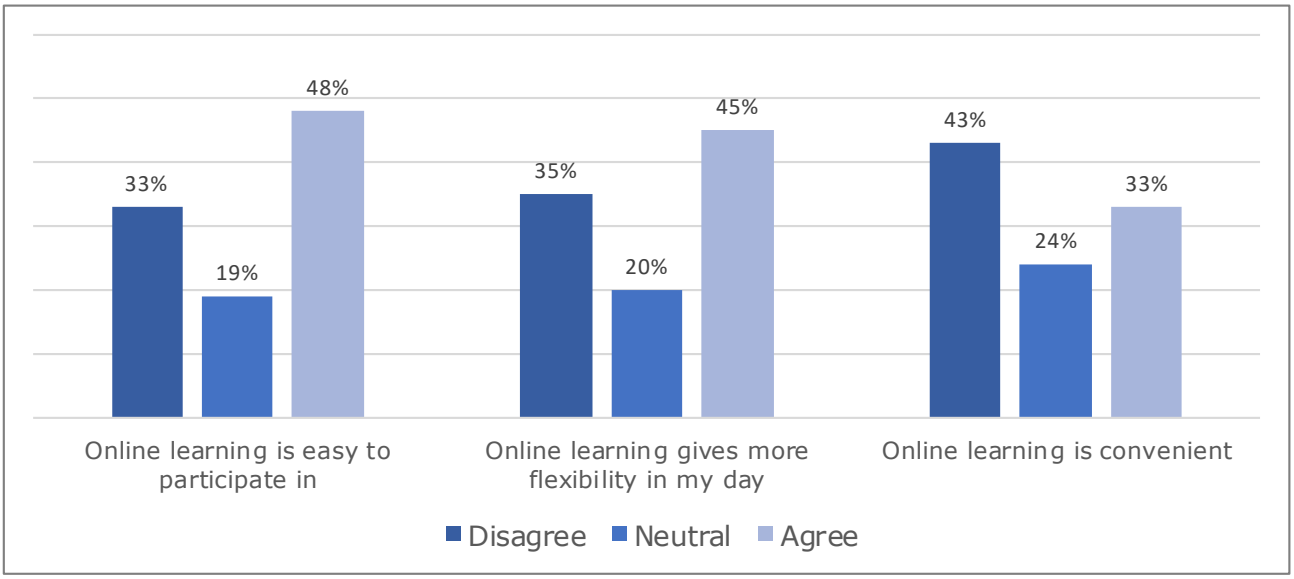


Figure 9: Convenience of online delivery

These findings show that students experience a range of views in relation to online learning (Figure 9).

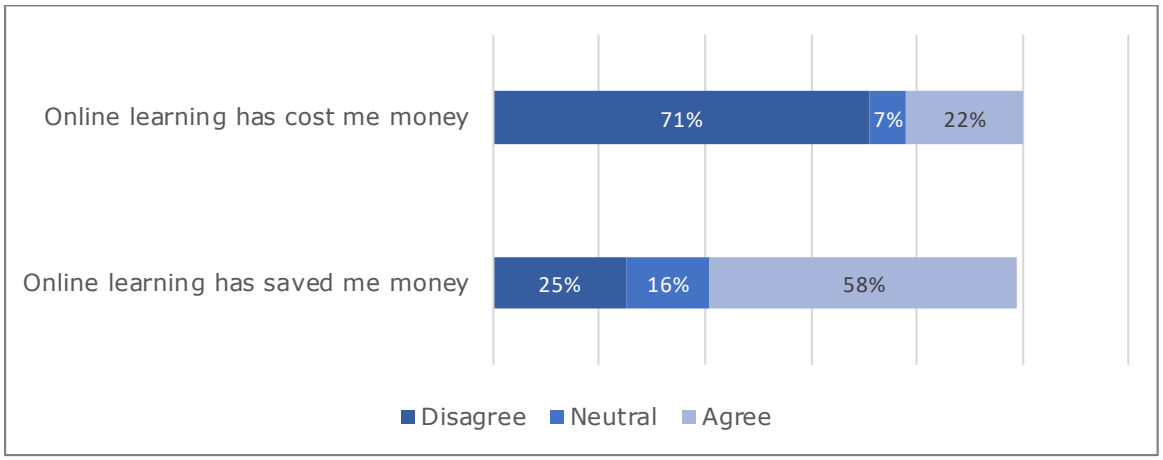


Figure 10: Does online learning cost or save money?

In Figure 10, 71% of students disagree that online learning has cost them money, whilst 22% of students believe that online learning has cost them money. A similar question relating to if online learning has saved student's money, shows that 58% of students believe it has, 25% believe it has not and 16%, remain neutral. Figure 11 shows a similar level of response to if online learning makes it difficult to ask questions in terms of disagree/neutral/agree. 38% of students believe that online learning makes it difficult to get the specific answers that they want, but 33% of students disagree with this statement. 44% of students disagree that online learning provides instant feedback with nearly a quarter (24%) agreeing that it does. 57% of students disagree that online learning has helped them to participate more than in FtF lectures.

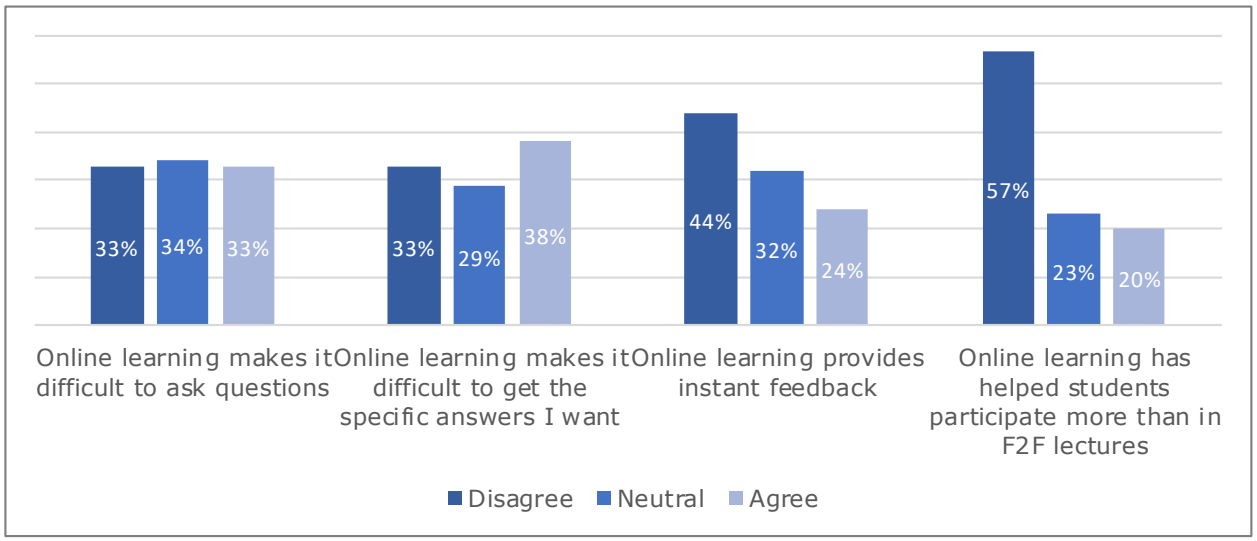


Figure 11: Online learning and participation

Figure 12 shows that a majority (68%) of students found it more difficult to stay on task during online learning. An even larger majority (73%) found it harder to motivate themselves. 60% of students found that online learning also created more distractions than FtF lectures.

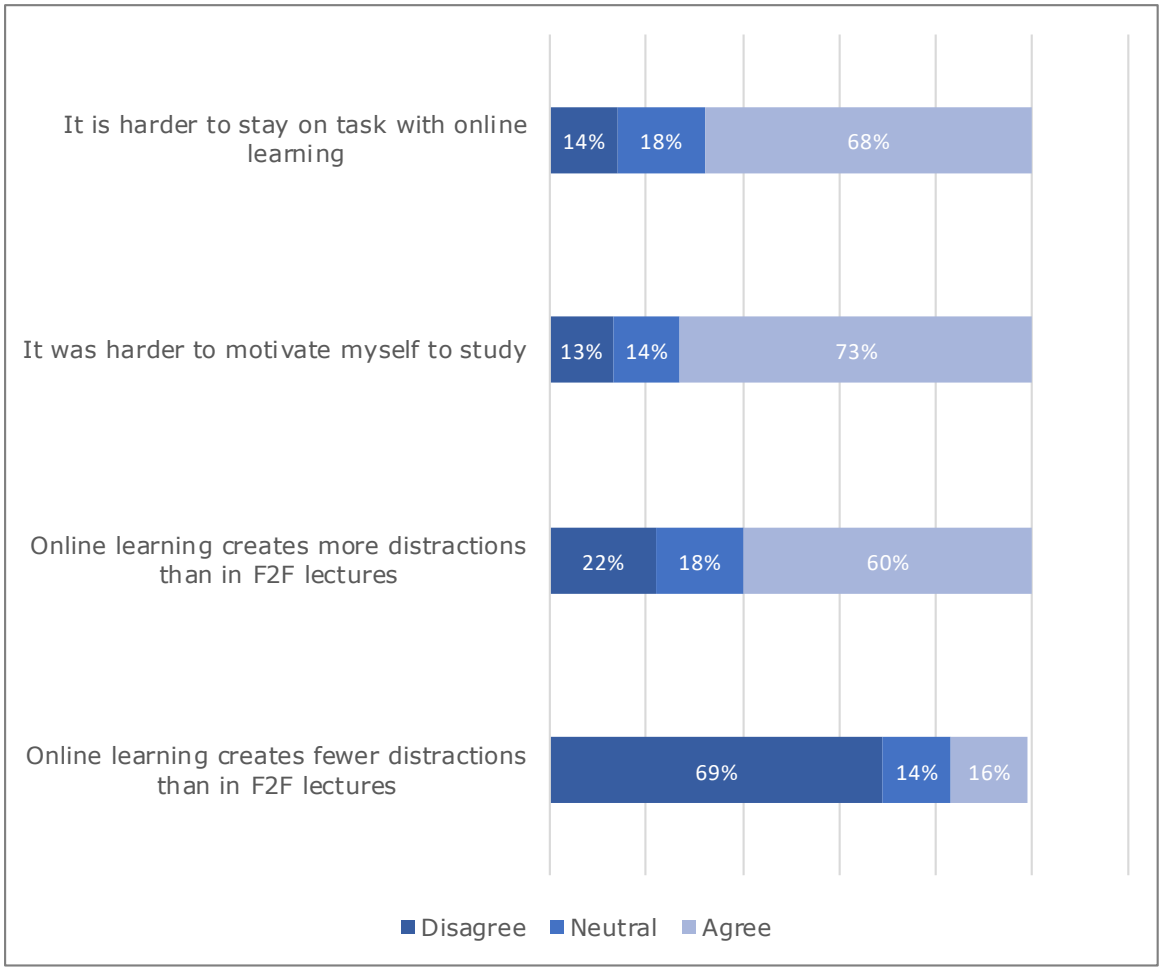


Figure 12: Student focus and concentration

Nearly three quarters (74%) of students missed the hands-on activities experienced during lectures on campus (Figure 13). 82% of students missed social contact with their peers and the same number (82%) preferred participation in campus based, FtF lectures.

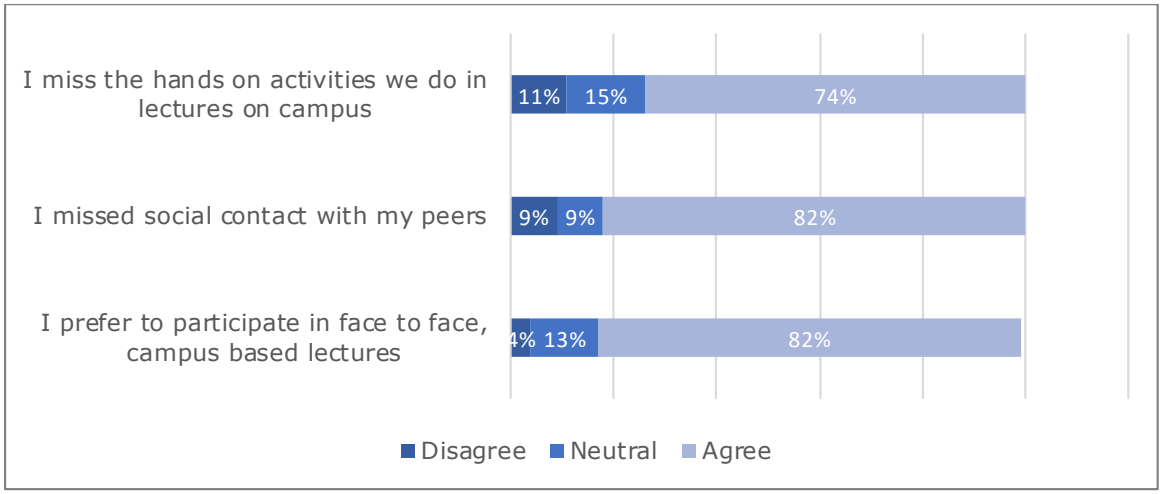


Figure 13: Face to Face contact

Qualitative Data

The qualitative responses were coded and analysed in terms of frequency of response. The codes were then categorised into the most common and less common.

<u>The learning experience would be made better if…</u>

- FtF teaching: 21% of student responses related to FtF lecturing returning, with one student suggesting they have FtF
- F sessions at the beginning of the week and then online at the end of the week.
- Online teaching experience: 11% of comments were very positive: 'I would not change anything about the online learning experience, the lecturers did an amazing job!'

Suggestions:

- More activities whilst online
- Providing individual support opportunities after each session, just as students would hang back and come and talk to you if needed once the lecture was finished.
- Shorter sessions
- Everyone to turn their videos on

- Smaller groups for seminar
- NILE notifications going out immediately
- Being able to ask questions privately online
- Advanced notification of dates and times of sessions
- Involving everyone in discussions

The assessment experience would be made better if…

Assessment Process:

- 19% of student's comments were positive: 'I don't think there was any change in the assessment process in fact I liked it more' and 'Generally couldn't be better, just a really tough time with the pandemic'.
- 12% asked for more guidance with one student suggesting 'a dedicated lesson for step by step support about the assignment'.
- 9% of students would prefer it being f2f.

Suggestions:

- Quicker feedback
- Clearer LOs
- Lecturers not being too strict with marking
- Library access
- More support from PAT
- Support in uploading assignments
- Lecturers to look at drafts
- More online resources
- Less lectures
- Prompt responses to e-mails

The support experience would be made better if…

Student Support:

- 35% positive comments: 'I feel the support has been excellent, therefore I would not make this any better'.

- 14% more individual support: 'Individual support should be available straight after the session for people that want it as in normal lectures it is easy to speak to lecturers in private about the lecture or assignments if they were too embarrassed to ask their question in front of everyone'
- 14% faster replies to e-mails etc: 'There were more people available to respond to queries more quickly'.
- 12% it was f2f: 'If there was any opportunity for FtF contact. I am not good with technology and my anxiety is affected by the transition to online learning'
- 12% more contact from PAT: 'PAT was in contact more often, a bit more support with assignments.

Suggestions:

- Smaller groups
- Course materials on NILE ASAP
- Evening opportunities
- Use of polls/questionnaires to check on students
- Receive help from someone other than PAT whilst Pat was on leave

Advice for students who are going to engage with online delivery is…

Advice for students who are going to engage with online learning:

- 20% Minimise distractions: 'Be in area of house where no distractions. Plan the hours you will study and then tell other people in house not to distract you until a set time'.
- 7%: Attend all sessions
- 7% Create a learning space
- Enter the virtual room early in case you have technical problems
- Get motivated
- Prepare as if it is a f2f lecture
- Communicate if you're having difficulties
- Use chrome

- Ask questions and follow up with e-mails if you don’t understand
- Be comfortable and move around
- Use earphones
- Don't be afraid to turn your microphone or camera on
- Don’t be afraid to speak- use your microphone it’s easier than typing.
- Make extra effort to keep in touch with friends
- Have pen and paper

Discussion

What impact did the change to online delivery of lectures have on student learning?

The pandemic meant that teaching online was immediate and the student experience dependent on their access to technology and the internet. The online survey showed that a large majority (n=71) of students had access to a laptop as a primary device as well as a secondary electronic device if needed. Guidance was provided recommending the use of the Chrome browser to improve functionality and experience when accessing the virtual classroom but 25% of students were not aware of this. Access to the virtual classroom is important to enable the student to interact and engage with all aspects of the online experience. The basic functions (microphone, camera and chat function) detailed in Figure 4, were positively received meaning that the primary functions of the virtual classroom worked for students.

Student majorities of 48% agreed that online learning was easy to participate in and 45% agreed that it gave flexibility to their day. 43% of students however, disagreed that online learning was convenient. Students who did not find online learning convenient disagreed that it created fewer distractions than F2F lectures, missed social contact with their peers, found it harder to motivate themselves and harder to stay on task. Survey results showed that the more applicable or used functions were (such as being able to follow presentations online, raising their hand or using the discussion board), the more positively these functions were viewed by students. Other functions, such as the whiteboard, the use of breakout spaces and students having to present in the main virtual classroom were viewed least positively but also more likely to be seen as not applicable. The assumption here is that they are not applicable because they have not been experienced. However, it is also very common for students to dislike presentations in front of the whole group in a FtF context, so it is not a surprise to see that the virtual equivalent of this is also received poorly.

Responses varied in relation to how difficult it was to ask questions during online learning with the majority of students (44%) neither agreeing or disagreeing. 44% of students disagreed that online learning provided instant feedback and 57% disagreed that online learning helped students participate more than in FtF lectures. The concept of instant feedback is left open meaning that there is room for further enquiry into the actual conceptions of what students believe this to be and what they expect.

The online learning experience presents challenges for some students as 60% agreed that it created more distractions than FtF learning, 68% that it was harder to stay on task and 73% found it harder to motivate themselves to study. This is concerning as the online environment in the context of the pandemic was key to students being able to focus, apply themselves and learn. However, the change in learning style may explain this as 88% of these students also missed the hands-on activities experienced in FtF lectures and 93% of them missed social contact with their peers.

Overall, 82% of students preferred FtF, campus based lectures. Ensuring that all students have access to the online sessions is essential. Students may need additional support in terms of navigating the settings of their device and browser. The functions of the online classroom were generally received well the more they were used. An exception to this was students presenting in the main room, although presenting is important to develop confidence and skills for the workplace, as well as demonstrate a range of academic skills.

How did the change to online delivery affect assignment preparation, completion and submission?

Maintaining the highest levels of support and quality for students was a priority for all Lecturers within the Early Years subject area at UoN. There was not a majority consensus in terms of this research question, however the data shows 47% of students believed that in general, assignments had been affected. As an institution, the UoN had granted all outstanding assignments extended submission dates in response to the national lockdown. Three quarters of students responded that UoN had communicated these changes to them, with

86% responding that the programme leader had, showing an overall positive response to communication of the changes. Three quarters of students agreed that assignment guidance had still been given and that assignment drop ins were held before submission dates. Discussion boards were also set up in a majority of cases. Online delivery therefore followed the same process as campus based and FtF delivery would have.

Issues of access could have prohibited some students from signing into online sessions or drop ins, but other standard procedures meant that assignment guidance was uploaded to NILE module sites. This included assignment briefs, presentations and Kaltura videos, meaning that students would be able to access these in their own time. Should any assignment questions arise, 79% of students agreed module leaders were readily available to answer queries.

46% of students believed the quality of assignment support was affected by the move to online delivery although, as already discussed, students were aware of assignment guidance, drop ins and module leaders being readily available to answer questions as needed. This could mean that that other factors impacted on the student's ability to engage with assessment support at this time. Obvious barriers to engagement with assignment support could be the stress and anxiety caused by the national lockdown and Covid-19 pandemic as well as having a negative experience of online delivery and working.

Students were also asked what would make the assessment experience better. Nearly one fifth of the coded responses to this open question were positive. Such responses praised the support and acknowledged the wider difficulties the pandemic had caused everyone. Nonetheless, there were some worthy comments that may act as stimuli moving forwards. Some students asked for further guidance to be given and for it to be done FtF. As already stated, there was a comprehensive assortment of guidance and opportunities for further discussion and questioning delivered online. The request for FtF delivery, will be pursued when it is safe to do so. More support was asked for in relation to uploading assignments. This is especially relevant as the change medium meant that presentations had to be submitted online for some students and there were occasional issues with file size etc. Library access was also an issue as the library on campus was closed. The library has since began to ensure that all module

reading lists are available electronically. Quicker feedback was also asked for, although all feedback is provided within the four-week requirement of the UoN.

Students presented a range of views in relation to assignment preparation, completion and submission. 47% indicated that assignments had been affected by the move to online but clear majorities, 75%, 74% and 62% of students respectively, agreed that guidance had been given in lectures, drop-ins were held and a discussion board set up. This shows that lecturers continued to provide the same level of support online as they would have on campus but 47% of students still believed the quality of assignment support was affected. Of this 47%, 95% showed a preference for FtF campus based lectures and this may be one of the reasons that they felt the quality of assignment support was affected.

What support has been offered to students by module leaders and personal tutors?

Student's learning is facilitated by module teams and through a personal tutor (PAT) role. However, PATs are also module leaders and all module leaders PATs so the roles cross over. The primary importance of both these roles is that students should always have someone to talk to, if and when needed. The data shows an overall positive response to the Module Lead and PAT role regarding contact. As stated in the previous section, 79% of students agreed that the Module Leader was readily available to answer queries. 80% of students agreed that their PAT had been in contact with them since they moved online. The majority of students had been contacted via e-mail (84%) with 48% of students also receiving a phone call. Although PATs sort to contact students by phone, not all students wanted this. These responses reflect a range of student experiences. Unfortunately, some students (5%) disagreed that they had been contacted at all by their PAT since moving to online learning. Again, there was an overall positive response (77%) from students regarding the usefulness of contact with their PAT. It is also important to highlight that students are free to contact their PATs as and when needed throughout the academic year. Given the wider context within which this research was conducted, it is therefore not surprising that 69% of students had also made contact with their PAT.

Students were also asked how the support experience could have been improved or enhanced. Of the coded open-ended responses, 35% of them were positive. The second most frequent code related to more individual support being available. A suggestion was made that individual support should be made available for students immediately after a session. After FtF, campus based sessions, students often 'hang on' to have informal chats with the lecturer regarding the session or any other queries they may have. With the move to online delivery, this opportunity may not be as visible but lecturers could stay in the virtual classroom after the session has finished to allow students to 'hang on' who want to. However, this opportunity will need to be communicated clearly and regularly to remind students. A number of students (n=15) also asked for faster replies to e-mails and slightly less asked for more contact from their PAT. Six students asked for support to be FtF with one student commenting that they are not good with technology and the shift to online learning has affected their anxiety.

In summary, this section showed a good level of support has been received by students from their lecturers, however, there is still more that can be done. PATs need to ensure that they are chasing up any students that they have not been in contact with and that the UoN requirements of responding to e-mails are being met. For lecturers delivering sessions online, allowing a five minute grace period after each session, would create a private sphere for students to hang on and ask questions in a similar way that students do when learning is FtF and campus based.

What resources, information or support would enhance the student experience moving forward?

It is clear from the data that some students have been able to adapt to the online learning environment more fully than others and have therefore had a more positive experience. Regular reminders will help to keep students aware of the range of functions available to them to support their engagement with sessions and assignments. Lecturers ensuring that they are available for a few minutes after each session, and students being aware of this, may also provide a

space for less confident or shy students to ask follow up questions to the session. A key message should also be that lecturers are unable to help or support students in their work if the need is not communicated.

Students were also asked to provide advice for other students who are going to engage with online delivery. A fifth of students stated the importance of minimising distractions when online. Creating a learning space was also recommended and attending all sessions. In response to reducing distractions and creating a learning space, at the beginning of modules students may be asked to reflect on their work or learning space. Is it comfortable? Do they always use the same place? What would they change if they could etc? This may form an informal and light touch risk assessment that staff working from home at the UoN have to complete. The point of this would be for students to try and correct areas they are not happy with.

Other advice given by students involved entering the virtual classroom early, to ensure they can connect and the technical functions work. If the lecturer is signed in ten minutes prior to the start time, then they would be able to assist in any initial problems as once the session begins, it is difficult for the sole presenter to address such issues. Students also highlight the importance of communicating if they are having difficulties, but as just stated, there are only certain windows of opportunity within sessions for the lecturer to address this unless there is a second person managing the technical and communication elements of the session.

Students also advised using earphones and a microphone if available as the sound quality is better. This will also help to cut out background noise if the student wants to speak, as well as filtering out background noise for the student when listening.

Recommendations

The report data and discussion leads to a number of recommendations being made:

A. Online Session Related Recommendations

1. Begin each session with a reminder to use the chrome browser. This does not have to be spoken, and can just be a PowerPoint slide, message in the chat function or a message on the whiteboard.
2. Regularly remind students of the functions available to them to communicate with others and the lecturer:
    a. Raise hand
    b. Chat message to everyone (public)
    c. Chat message to presenter (private)
    d. Send e-mail to lecturer after session for further clarity or comment if appropriate
3. Remind students to be comfortable and minimise distractions in their surroundings at the beginning of a session.
4. Remind students to use headphones and a microphone if they have them.
5. Ask students to communicate with the lecturer if having technical problems or with a peer if it happens in mid-session, so that the peer can let the lecturer know.
6. Use digital pedagogy toolkit when preparing and reviewing: https://www.jisc.ac.uk/full-guide/digital-pedagogy-toolkit
7. Actively use tools that provide instant feedback for students within the virtual classroom such as the whiteboard and polls, but also other tools external to the virtual classroom which can be shared within it: Padlet, Mentimeter, Jamboard etc.
8. Take regular breaks
9. Introduce a standard 5 minute 'hang on' at the end of every session, so students can hang on to talk to the lecturer if needed. This would also need to be publicised to students so that they are aware of it.
10. Schedule formal times for one to one support on lecture content before or after session.

B. Assignment Recommendations

1. Regularly remind students of the assignment support available from NILE which is always accessible.
2. Encourage students to use discussion boards or padlet to ask assignment related questions outside of sessions.
3. If assignments are to be uploaded via alternative methods, e.g. videos/Kalturas in Blackboard, ensure that students are given appropriate guidelines and that any limitations (e.g. file size) are highlighted.

C. Recommendations in general

1. Check up on students who had technical difficulties during session to see if resolved. This is obvious if a student has had to sign in several times and has an increasingly high number next to their name- e.g. 'Sharon 8'.
2. Getting students to check their own internet speed will immediately allow them to see if their connection speed is the problem or if it is another factor such as their web browser. Websites such as: https://www.speedtest.net/ will provide a student with their internet connection speed. A dedicated internet connection of at least 5Mbps or higher is recommended when using the virtual classroom. Blackboard will adjust connections according to their speed and may therefore limit video sharing if there are connectivity issues.
3. When searching for new reading list material ensure that electronic versions are available on NILE. If they are not, contact the library.

Reference list

British Educational Research Association (BERA) (2018) Ethical guidelines for educational research. London: BERA.

Economic and Social Research Council (ESRC) (2012) *ESRC work for Research Ethics (FRE): Updated September 2012.* Swindon: ESRC.

Gupta, U.C. (2013) *Informed consent in clinical research: Revisiting few concepts and areas.* Perspectives in Clinical Research. **4** (1), pp. 26-32.

JISC (2020) *Digital learning rebooted: From 2020's quick fixes to future transformation* Report 4 [online] Available at: https://repository.jisc.ac.uk/7979/1/digital-learning-rebooted-report.pdf [Accessed on 27/11/20]

Lee, K. (2020) *Coronavirus: universities are shifting classes online – but it's not as easy as it sounds* The Conversation [online] Available at: https://theconversation.com/coronavirus-universities-are-shifting-classes-online-but-its-not-as-easy-as-it-sounds-133030 [Accessed on 6/10/20]

Palys, T. (2008). Purposive sampling. In L.M. Given (Ed.) *The Sage Encyclopaedia of Qualitative Research Methods.* (Vol.2). Los Angeles: Sage Publications, pp. 697-8.

UNESCO (2020) *Education: From disruption to recovery* [online] Available from: https://en.unesco.org/covid19/educationresponse [Accessed on 08/06/20]

Zhu, X. and Liu, J. (2020) *Education in and after Covid-19: Immediate Responses and Long-term visions.* In Postdigital Science and Education. https://doi.org/10.1007/s42438-020-00126-3