Synchronous Online Learning:
Why Some Students Don't Actively Participate

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Abstract

In the context of online and distance learning, active student engagement in online synchronous tutorials is important for students' development; yet it can be challenging to achieve. The research reported in this paper explored why some students do not participate actively in online synchronous tutorials, instead preferring passive participation. The research, carried out at a large distance-learning university, employed two large-scale online surveys, one with students and one with tutors, to investigate these issues; over 600 students and almost 200 tutors on a range of modules responded to the surveys. The surveys gathered quantitative and rich qualitative data that provides insights into students' and tutors' experiences. The survey data showed that lack of confidence is an important factor affecting student participation; over a third of students indicated that they experience stress when expected to take part actively. The paper also discusses how the online tools used in synchronous tutorials (e.g. text chat, polls, shared whiteboards) can support different levels of participation; the approaches tutors can use to encourage active engagement; and the role of passive participation.

Keywords: Synchronous online learning; engagement; participation; active learning; confidence; anxiety

Introduction

Synchronous online learning has been used in education for many years, enabling teachers and students to attend scheduled sessions, share resources, and interact without being co-located. Distance learning institutions use this approach to complement the other ways students learn at a distance, such as through study of printed or online module materials and the use of asynchronous communication tools, such as discussion forums. More recently, during the Covid-19 pandemic, synchronous online learning was used by the majority of universities worldwide, facilitated using tools such as Zoom, Blackboard Collaborate, Microsoft Teams and Adobe Connect, as a principal way to ensure emergency educational continuity (Oliveira et al., 2021). Despite the move to online learning being hastily implemented during this period, its use in some form to complement face-to-face learning has continued beyond the pandemic, as its

benefits (convenience, flexibility and sustainability) are undeniable. However, there are well-documented challenges that need to be addressed (e.g. Vivolo, 2016; Wang et al., 2018; Flaherty, 2020).

Although synchronous tools can be used for large-scale lectures, the research presented in this paper focuses on the use of smaller scale tutorials. A significant challenge here is a lack of active participation by students (Handel et al., 2022; Smith & Smith, 2014). The purpose of the research presented in this paper is to understand the barriers to active student participation, and what can be done to overcome these. Quantitative and qualitative survey data gathered from over 600 students and almost 200 tutors are presented and discussed, along with recommendations for future practice to promote positive experiences and enhance online learning opportunities for students.

Literature Review

It is widely accepted among educators that an active approach to learning is beneficial for students' thinking, learning and performance. Active learning approaches focus on students engaging in activities: whether carried out individually (based on cognitive constructivism) or, more commonly, with other students (based on social constructivism). Active learning is contrasted with more passive approaches such as listening to a lecture. Based on a systematic review of articles focused on active learning, Doolittle et al. (2023) provide the following definition of active learning: "a student-centered approach to the construction of knowledge focused on activities and strategies that foster higher-order thinking." Active participation is believed to be fundamental to student success and educational quality (Lear et al., 2010; Caliskan et al., 2020). A social constructivist approach to learning advocates shared knowledge creation through discourse, and therefore online sessions that encourage active learning and incorporate participatory activities are important (Strang, 2011; von Lindeiner-Stráský et al., 2022).

Active learning can be enabled in synchronous online environments. For example, Wang et al. (2022) discuss how trainee teachers engaged in synchronous online learning during the pandemic, using Zoom, for group discussion (in breakout and plenary rooms) and tools such as text chat, and polls. Bower et al. (2015), in a collection of case studies, demonstrated that active learning can take place in blended learning contexts, where in-class engagement is combined with synchronous online interaction for remote students.

It is clear that there are many ways in which active participation in synchronous online sessions can be encouraged, such as quizzes, well-timed questions, shared whiteboards and text-based communication, as well as through the audio and video channels. However, if students do not engage, tutors may feel unable to adopt these active approaches, due to a lack of feedback from students (Rogers et al., 2021). Tutors may resort to a didactic approach, using PowerPoint-style presentations to replicate traditional lecture-style classes. Such approaches may have limited educational success because students are not learning actively.

Many students value active participation, particularly learner-to-instructor interactions (Martin & Bolliger, 2018). However, other students either opt out of online sessions completely,

or attend in a passive capacity, with a reluctance to contribute (Smith & Smith, 2014; Mogavi et al., 2021). Some students' conceptions of learning may not align with an active approach (Richardson, 2011; Okada & Sheehy, 2020; Sheehy et al., 2022). Although teaching staff may be frustrated that students are not being more active, student satisfaction with synchronous online sessions can still be high, regardless of the level of participation (Butler et al., 2018).

There are practical reasons for students not engaging with active approaches in synchronous online sessions; for example, they may not want to use audio and video communication (Castelli & Sarvary, 2021). Some studies have found that reasons for keeping a webcam turned off during an online session include anxiety, shyness, wishing to ensure the privacy of the home, and a fear of being exposed (Gherheș et al., 2021; Rajab & Soheib, 2021). The work presented here explores choices made by students with respect to active engagement on a broader scale – not just the use of webcams.

Several theories offer insights into the liminal space between visible active engagement and lack of visible active engagement, the learning that might occur within this space and how students might traverse it. It has been argued that, in the context of online learning, students' indirect vicarious participation can have benefits for their learning and that this type of engagement can be a central and valued aspect of their studies (Pleines, 2020). The notion of legitimate peripheral participation (Lave & Wenger, 1991) illustrates how those who are new to an online learning community can become aware of its norms and practices and develop the confidence and motivation to engage with 'visible' learning activities (Safadi & Berente, 2019). How learners make this transition is influenced by many factors, including the nature of the platform and study activities (Bozkurt et al, 2020). These factors affect how the community's personal interactions (e.g. tutor-student, student-students) and collaborative activities are introduced, supported, and given value. It is these personal interactions that contribute to the learners' sense of belonging and active engagement with shared learning tasks (Stoytcheva, 2021). If teachers can establish an empathetic environment, students will feel safer engaging actively. Teachers exhibit empathy through their care, concern and understanding of a student's personal situation, while ensuring that the primary focus is student learning (Meyers et al., 2019). Helping students build their confidence enables them to progress from attending passively to making active contributions.

If students' can build the confidence to progress from attending passively to making active contributions, this should bring benefits, not only to their learning, but also in developing important employability skills. Working with others, and being able to communicate effectively, are important in many roles, so employers are keen that students develop these skills (Succi & Canovi, 2020). The Covid-19 pandemic accelerated the rise in remote working (Ng et al., 2021); this means that engaging with others in online environments has become increasingly important.

Online distance learning has the risk of being isolating for a student and this can impact on the student's wellbeing and mental health (Rush 2018; Jones, Samra & Lucassen; 2021). Tutorials can be a means of reducing isolation and providing students with the opportunity to meet others and start to form supportive relationships. Through the activities undertaken within the tutorial, supportive communities and social learning spaces may start to develop (Wang et al.,

2022). This not only aids the students' learning, but it also starts to create a feeling of belonging. This can positively impact on retention and outcomes (Peacock & Cowen, 2019).

The research reported in this paper adds to current work through detailed analysis of students' and tutors' experiences of engagement in online sessions. It investigates students' and tutors' perceptions of the barriers to active participation and considers the broad spectrum of approaches and tools that can be used to encourage active participation. The overarching aim of the research is to ascertain how students might be encouraged to move from passive to active engagement in synchronous online learning. The following research questions (RQs) are addressed:

RQ1: How do tutors use active learning approaches in synchronous online sessions?

RQ2: What are the barriers to active student participation in synchronous online sessions?

RQ3: How can these barriers be overcome?

Method

Context

The research reported in this paper is based on the experiences of students and tutors on modules at a large distance-learning university where synchronous online sessions (called 'online tutorials') are an important (though not compulsory) aspect of students' learning experience. At this university, tutors perform various teaching, assessment, and student support activities, including running online tutorials. In most cases, these tutorials are the only opportunities students have to interact with tutors and other students, and to discuss and ask questions, in real-time. The tutorials therefore play a key role in active learning. Prior to the Covid-19 pandemic many of the modules included in this study offered face-to-face tutorials, as well as online tutorials. However, at the time of the research (and at the time of writing) all tutorials were taking place online. Although modules at this university can have hundreds or even thousands of students, attendance at online tutorials is much lower, from as few as five students to around 50, depending on the type of session. Tutorials tend to be one to two hours in duration and are run by one or two tutors using the Adobe Connect web conferencing system (Figure 1). Adobe Connect includes different tools that can be used to facilitate learning and encourage interaction between participants, including audio, video, text chat, whiteboard, breakout rooms, polls, 'reactions' (e.g. thumbs-up) and quizzes. Tutorials at the university have varying focuses, such as preparing for upcoming assessment activities or providing support on specific topics. Most, though not all, tutorials are recorded so that students can view them later if they wish.

Figure 1

Adobe Connect, the web conferencing system used for online tutorials
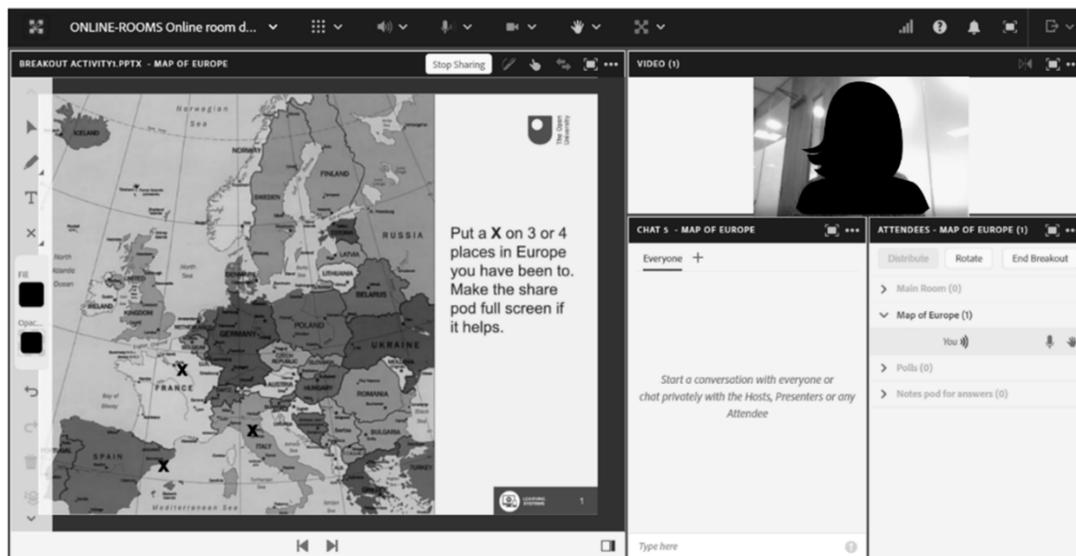
Research Design

Two large-scale online surveys were used to gather views and experiences about participation in online tutorials; one survey was for students and the other for tutors. Students and tutors were recruited from 18 large-population Stage 2 undergraduate modules from all four faculties of the university. Stage 2 modules are equivalent to the second year of a full-time undergraduate degree. Modules are units of study of 15 or 30 European Credit Transfer and Accumulation System (ECTS) credits that are studied over a period of around 30 weeks, with students typically studying part-time (as many are in work and/or have caring responsibilities). The research project team included members from all faculties, with all team members contributing to the design and content of the surveys, which were implemented using the Jisc online survey tool (https://www.onlinesurveys.ac.uk). Approval to conduct the research was obtained from the university's Human Research Ethics Committee, Student Research Project Panel and Staff Survey Project Panel. All appropriate ethical and data protection guidelines were followed.

By focusing on undergraduate Stage 2 modules the aim was to explore the experiences of students who had already had adequate opportunities to engage with online sessions and would therefore have formed opinions to address some/all of the survey questions. Focusing on Stage 2 also enabled a large number of students on different qualifications and pathways to be included in the research. Stage 2 modules are more likely to be common across qualifications, as compared to Stage 3 modules (equivalent to modules in the final year of a full-time undergraduate degree), which are often more specialised and smaller in terms of student numbers. Sample sizes from each of the 18 modules were dependent on the number of students available. For the larger modules, the sample size was capped at 650 students to aim for a more balanced spread of responses across modules and faculties.

Participants

A survey invitation was sent to a total of 7450 students towards the end of their module but before the exam period. It remained open for a month, with reminders sent before the survey closed. The overall response rate was around 8%; this is low but not unusually so for student surveys at this distance-learning university, where students are typically working and balancing family commitments with study. The total number of useable responses (where student consent had been given) was 609. Depending on their previous answers, respondents were routed around questions that were not applicable; the number of students answering each question (n) therefore varied and is reported in the results where the question is discussed.

The invitation to participate in the tutor survey was sent to tutors on the same set of modules. 866 tutors were sent the invitation and a total of 196 useable responses were received, giving a 23% response rate. As with the student survey, the number of responses received (n) for each question is reported in the results.

Table 1 illustrates the modules included in the research and the number of responses received from students and tutors for each module.

Table 1

Modules Included in the Research and the Number of Responses

Module name	Number of student responses	Number of tutor responses
Early modern Europe	40	8
The British Isles and the modern world	53	8
Exploring the classical world	31	8
Reading and studying literature	36	9
Shaping business opportunities	19	14
Developing leadership	10	9
Exploring mental health and counselling	53	17
Living psychology	82	27
Understanding criminology	40	15
Exploring childhood and youth	35	12
Sport and exercise psychology in action	32	4
Critical Issues in health and wellbeing	35	15
Object-orientated Java programming	34	23
Mathematical methods	27	5
Physics: from classical to quantum	19	3
Design essentials	10	5
Core engineering	15	6
Public law and criminal law	38	8
Total	**609**	**196**

Student Demographics

Tables 2 and 3 illustrate the demographics of students that responded to the survey.

Table 2

Ages of Student Respondents

Age	%
<25	21.6
23 to 35	38.8
35 to 45	21.7
>45	17.9

Table 3

Demographic information of student respondents

Gender	%	Ethnicity	%	Previous study	%	Socio-economic status	%	Disability	%
Female	60.4	White	87.8	Less than two A-levels	29.9	Low	18.5	No	74.6
Male	39.6	Other	12.2	Two A-levels or higher	70.1	High	81.5	Yes	25.4

Student demographics varied considerably across the modules surveyed, but the demographic profile of students who responded to the survey was generally a reasonable representation of their cohort. For example, the proportion of female students registered on a module varied from very high (over 90% in some cases) to very low, the lowest being 16%. For modules where the proportion of female students was over 90%, the proportion of female respondents was also over 90%. For modules which had very low numbers of female students, female students were slightly over-represented in the survey respondents. The proportion of students declaring a disability also varied across modules, from around 16% up to 32%. Modules with a higher proportion of students declaring a disability were somewhat underrepresented in the respondents, with proportions between 17% and 26% in responses.

Survey Questions

Data gathered from students was a mix of quantitative (from multiple choice questions and Likert-type questions) and qualitative (using open text boxes for students to give their views or add more detail). This mixed approach resulted in clear findings, backed up by rich, in-depth explanatory data. Students were asked to identify a module they were currently studying and to focus their responses on this module. The student survey then explored a number of areas, such as how students feel before attending an online tutorial; what opportunities they have to take part actively in the sessions they attend; whether they find activities valuable/enjoyable/useful; and the tools they use (e.g. audio, video, chat, whiteboard, polls etc). Examples of some of the question types and areas explored are shown below:

Example 1

Which of the following activities were included in the tutorial(s)? (Please select all that apply.)

- ☐ Answering questions
- ☐ Asking questions
- ☐ Taking part in a poll or quiz
- ☐ Taking part in discussions in the main room
- ☐ Taking part in discussions with other students in break out rooms
- ☐ Solving problems
- ☐ Practising skills
- ☐ Contributing on the whiteboard
- ☐ Other

Example 2

Reflecting on a tutorial that you have enjoyed and/or found useful, please describe the factors that you think made the tutorial enjoyable or useful.

Example 3

Please indicate how you feel about the following statements

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Students learn best through collaborative activities	○	○	○	○	○
Helping students to talk to one another productively is a good way of teaching	○	○	○	○	○

The tutor survey followed a very similar structure, and had a similar set of questions, to the student survey. This enabled a comparison between student and tutor responses. In addition, the tutor survey explored tutors' experiences of teaching online, asking, for example: "What approaches or techniques do you use that encourage active student participation?"; "Which techniques have worked well?"; "Which techniques have not worked so well?". Tutors were invited to provide specific examples.

Results

## *Tutor Approaches to Active Learning in Synchronous Online Sessions*

<u>Tutor Practices</u>

Questions were included to explore aspects of tutor practice in online synchronous tutorials. For example, we asked tutors whether tutorials were hosted by one, or more, tutors (tutor responses n = 195). Mostly (36%) tutorials were hosted by one tutor, but having two tutor-hosts was also common (31%). Other tutors mainly said they had run tutorials both on their own and with other tutors.

Tutors were asked whether they used their webcam: only 29% (n = 196) used a webcam, and this relatively low level of use was consistent across faculties. This is likely to be because historically video has caused problems for students with poor internet connections.

When tutors were asked if they provided opportunities for students to take part actively, all said they did. Tutors were asked which of the following activities they use in their sessions: asking and answering questions; polls and quizzes; discussion (in the main online room and in breakout rooms); solving problems; providing opportunities to practise skills; and inviting contributions on the shared online whiteboard. All the options offered were used by some tutors, and some mentioned alternatives. When students were asked if they had been given opportunities to take part actively in at least some of the tutorials they had attended, 98% said they had (n = 523).

The different activities tutors said they use in their sessions are illustrated in Figure 2. Also shown are students' responses regarding which activities they had been offered in the sessions they attended. There is reasonably close agreement between students and tutors on some of these (particularly answering questions and discussions in breakout out rooms). The largest discrepancy is for discussions in the main room, with 80% of tutors choosing this option but only 57% of students.

Figure 2

Activities Used in Online Sessions
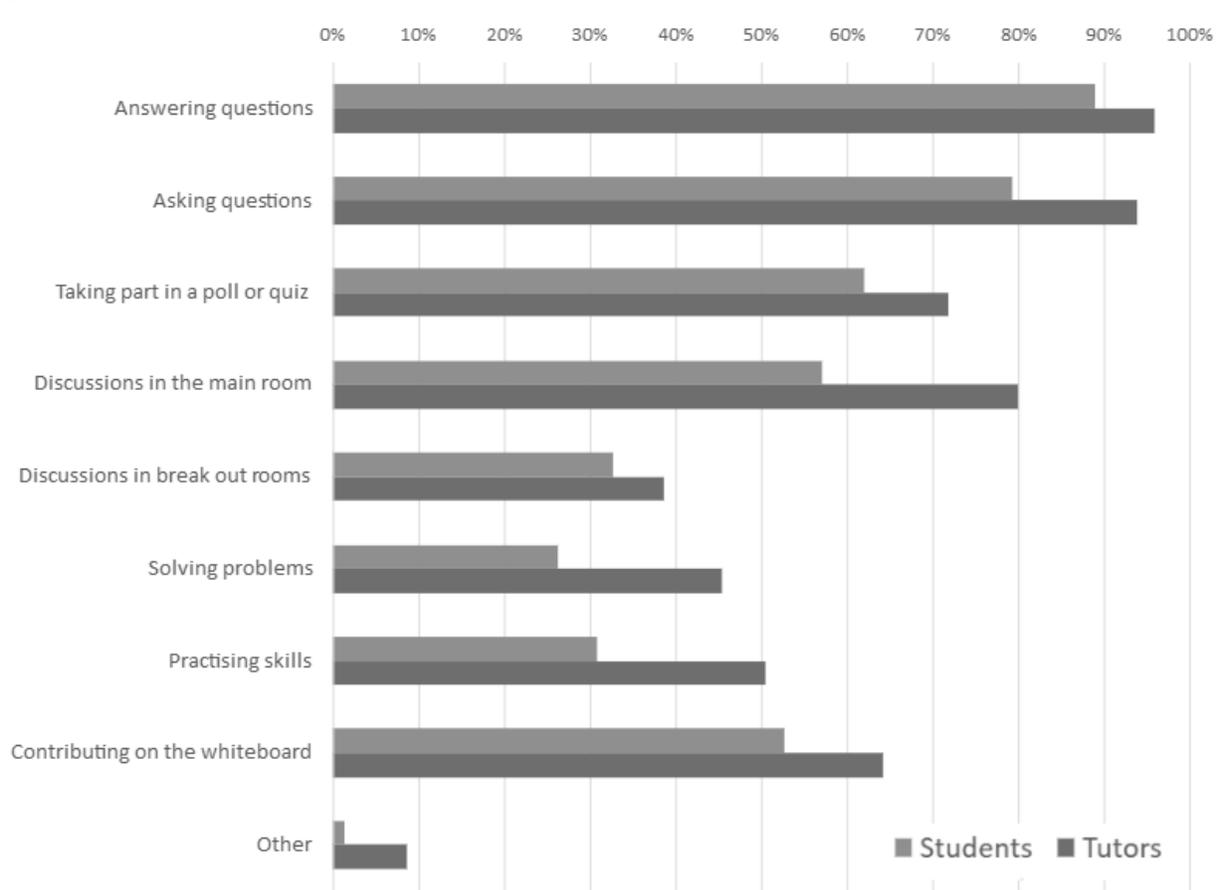
When students were asked if they themselves took part in activities, 40% of students said they took part a lot in activities, 48% said they took part a little, and 12% said they did not take part (n = 515).

Figure 3 compares tutors' and students' responses to whether students in general took part in the activities offered. Perceptions of tutors and students about how many students took part were similar.

Figure 3

Numbers of Students Who Took Part Actively in Online Sessions (Student responses n = 512; Tutor responses n = 195)
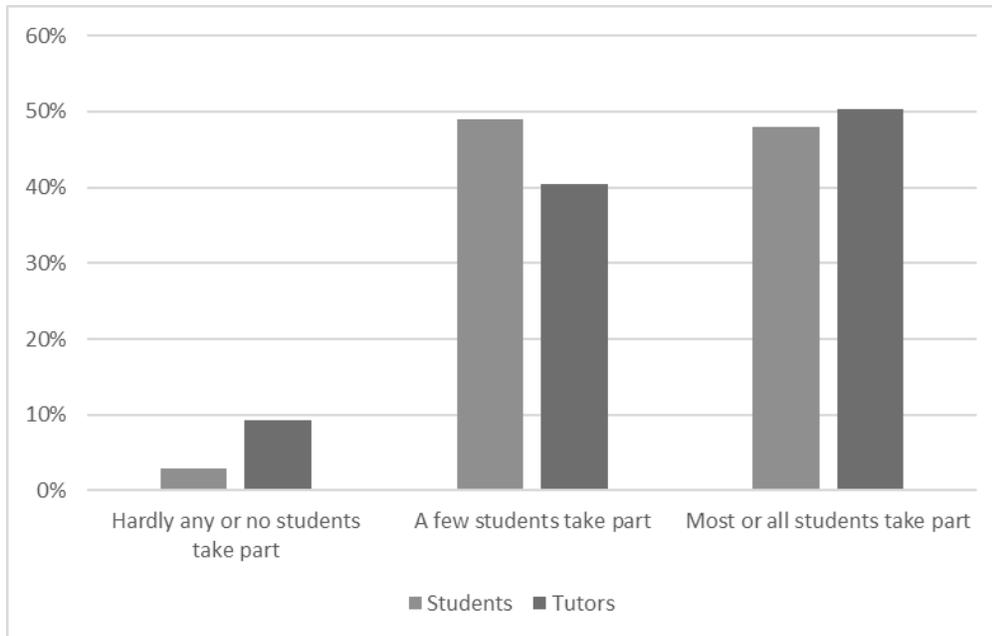
In a question in the tutor survey that enabled open text responses, we explored the approaches tutors use to encourage active participation. Many responses were received, covering a range of aspects:

> Friendly approach, materials in advance so no surprises, alternative ways of participating.

> Make sure they can contribute (ask/answer) anonymously

> Starting with simple warm up activities, polls and whiteboard […] then get better interaction for the rest of the tutorial.

When asked specifically what techniques work well, many responses echoed those above.

> Starting off with broad questions with no "right or wrong'" answer to build confidence.

> Students love whiteboarding - it's anonymous (chat isn't)

> I always spend a few minutes chatting informally with students before the session starts. I have my webcam on—they can see the 'real' me. And I try to get them involved, even if it's only asking them about the weather where they are. By making them feel included and comfortable, they join in more with the session.

Tutors were also asked about approaches that have not worked well. Again, there were many responses, but with much commonality. Breakout rooms were given as one example that did not generally work well. Another example (mentioned by several tutors) was:

Asking again and again for them to use the mic (or whatever). Just wastes time and if they don't want to they won't.

Tools and Features

The survey data contained a considerable amount of information from students and tutors about which tools within the web conferencing environment were used in online sessions. The findings are summarised in Table 4 which shows students' and tutors' responses when asked which tools were used (multiple options could be selected).

Table 4

Tutors and Students' Responses on Which Tools Are Used in Online Sessions

Tool	Percentage of ***tutors*** who reported using the tool with students	Percentage of ***tutors*** who report ***students*** using the tool	Percentage of ***students*** who report using the tool
Text chat	96%	98%	94%
Reactions	82%	74%	65%
Poll/quiz	71%	71%	60%
Whiteboard	66%	58%	46%
Microphone	86%	37%	33%
Webcam	29%	1%	3%

From Table 4, tutors' perceptions of which tools students use, and the tools students reported using are quite closely aligned. As would be expected, tutors' use of microphones and webcams is much higher than students' use. Tutors report that students engage more with the text chat, reactions (e.g. 'thumbs up'), polls/quizzes, and the whiteboard than with audio and video channels.

Nearly all students use text chat to participate, a third use their microphone, and very few their webcam. Tools such as whiteboards, reactions, and polls are used by many students, and this may be partly because they offer anonymity. Students commented:

The poll and quizzes are more enjoyable than writing answers.

The whiteboard helps to put answers down instead of using the chat box to save any embarrassment if the answer is wrong.

Some of the available tools may be seen to offer only a superficial level of interactivity.

One student commented:

I would much rather a tutor be doing things that will further our education rather than asking us to use the tick box or smile to make sure we are still listening!

Breakout rooms were offered by 39% of tutors (n = 196), and 33% of students (n = 515) reported being offered activities in breakout rooms. Of tutors, 26% (n = 196), and 25% of students (n = 512) said there was active participation in breakout rooms during tutorials they attended. However, students described some issues:

> I find breakout rooms quite stressful because you often end up with nobody saying anything, which makes me feel like I have to start off or lead the discussion. I don't want to feel like I'm talking so much other people can't participate. Breakout rooms are most effective with a facilitator.

and:

> I think it depends on who you are in the breakout room with because some students are very engaged in the breakout room activity, which is fine. I was in a breakout room on one tutorial when I was the only one speaking. The rest was typing and it was really difficult to get anything done …

Similarly, tutors are aware of the problems; one commented: "I avoid breakouts as they are time-consuming, disruptive and unpopular with students."

Text chat, on the other hand is popular with students: 94% (see Table 4) indicated that they use text chat and, when asked whether they prefer to use it rather than speak in online tutorials, around two thirds (67%) of students said they did (see Figure 4). "I'm a nervous speaker however there's no pressure and often when I use the chat box my comment is addressed which is good confidence boost."

Figure 4

Students' and Tutors' Responses to "I [Students] Prefer to Use the Text Chat Rather Than Speak in Online Tutorials" (Student responses n = 603; Tutor responses n = 194)
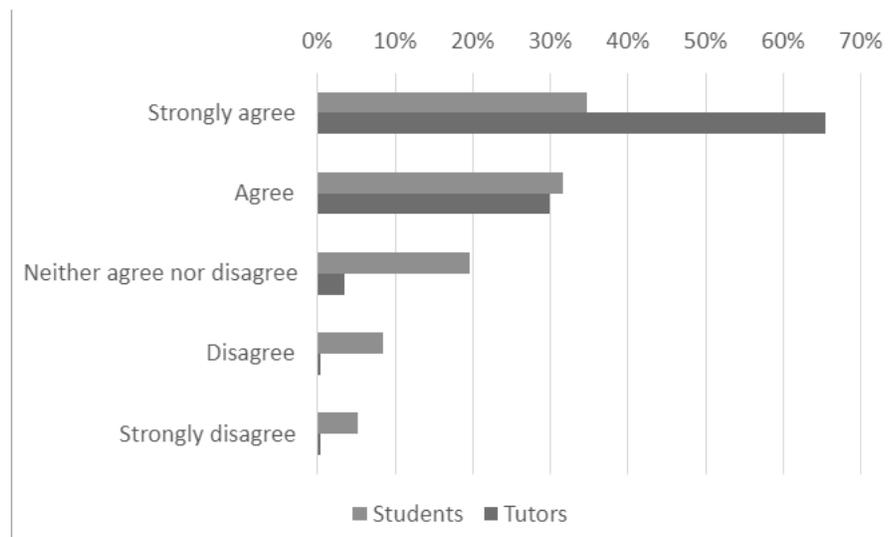
An interesting aspect of Figure 4 (and similar Likert-type questions coming up) is that student responses are more distributed across the range of available responses than tutor responses, which tend to be clustered around agree/strongly agree (or disagree/strongly disagree in other questions). This is addressed later in the Discussion section.

Although text chat is popular, there were some negative comments from students about it:

I don't find it useful when attendees use the chat box for the entire tutorial as it can be very distracting having to keep up with important comments and answers in between random waffle whilst also trying to listen to the tutor. It can also result in only a couple of eager students getting a say and answering questions first all the time. The chat box doesn't seem to have any code of conduct for this and it can never be minimised to decrease the distraction. For me it's sensory overload.

Tutors were strongly of the opinion (95% agreement – see Figure 4) that students prefer text chat to speaking. One tutor commented: "Many students are reluctant to use mic and those who do tend to dominate thus intimidating others even more as they sound intelligent and authoritative."

When asked about webcams, 30% of students said they would feel comfortable using a webcam in an online session (n = 604). In support of using webcams, two students commented: "I would prefer if the tutorials were similar to zoom calls where we could see each other as well." "Hard to feel you can ask questions of someone if you don't feel you know them."

However, only 4% of tutors thought that students would feel comfortable using a webcam (n = 195). The results imply that a larger proportion of students may be open to the idea of using webcams than tutors think.

Figure 5

Students' and Tutors' Responses to "I [Students] Would Feel Comfortable Using a Webcam in an Online Tutorial" (Student responses n = 604; Tutor responses n = 195)
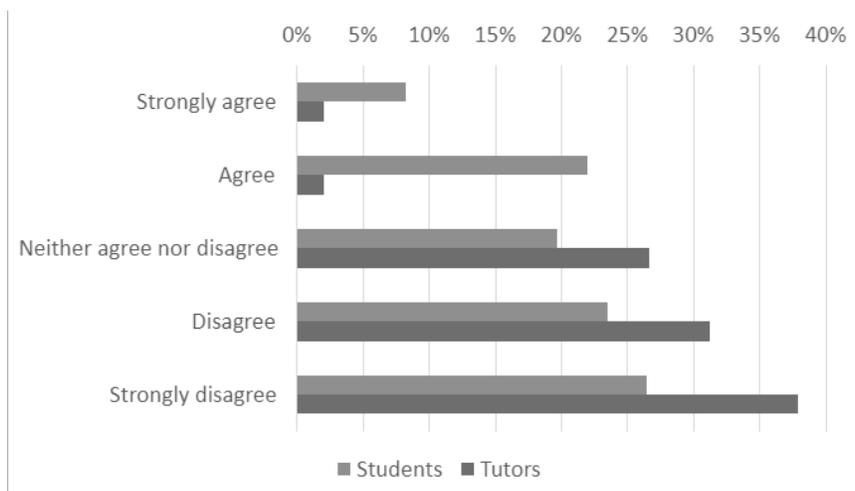
Barriers to Active Participation

In the student survey, students were asked about how they felt before online tutorials. Although 50% of students said they looked forward to tutorials, 10% of students reported feeling anxious beforehand (n = 521). Some student comments reveal anxiety and how it can be managed: "I felt anxious as I was struggling with some of the content and didn't want to be the only person attending." "I like that the tutors don't put us on the spot too much. I like that we only type and don't have to speak."

The surveys went on to explore reasons for students not actively participating. Students who said they didn't participate actively were offered a number of possible reasons and were able to select as many as they felt applied. An "other" option was also provided and an open text box to enable elaboration. Tutors were also asked about what they thought students' reasons were for not participating actively. The results from these questions are shown in Figure 6.

Figure 6

Students' Responses to: "If You Didn't Take Part in These Activities Can You Explain Why?" (N = 171); and Tutors' Responses to: "Thinking About Students Who Don't Participate Actively, Which of the Following Reasons Do You Think May Contribute?" (n = 194).
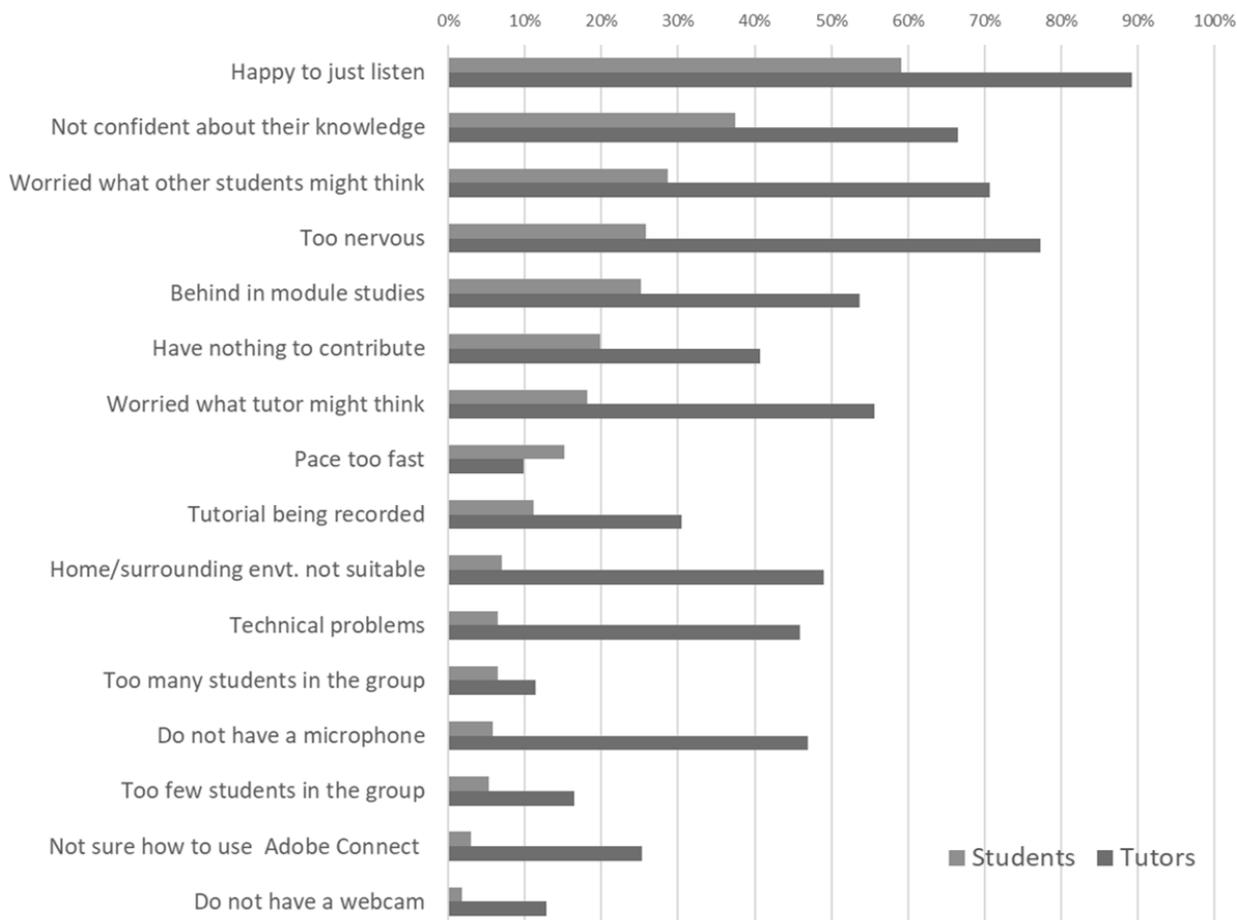
In both cases the most popular selection was "I am [students are] happy to just listen." This is explored in more detail in a later section of the paper. The next section is on the next group of reasons that emerged as popular choices: "Not confident about knowledge of module materials," "Worried what other students might think," "Too nervous," "Behind in module studies," "Have nothing to contribute," and "Worried what the tutor might think." It is noticeable, firstly, that there is a link between these reasons; they all concern a lack of confidence or an element of worry, whether about something specific, such as what others might think or their knowledge of the materials, or more generally. Secondly, there is agreement between the students and tutor results on the importance of these, in comparison to the other options.

Some of the additional comments received from students in response to this question expanded further on the issues: "I prefer to listen and make notes. Occasionally put something in chat box. Am always relieved that there are others who contribute more as I get a little anxious." "I'm really shy about this sort of thing and prefer to keep a very low profile." "I find it a bit unnerving. I think this is true for many mature students. We need perhaps a little practice."

Lack of Confidence for Active Participation

Confidence was explored further in a question which asked students and tutors to indicate their level of agreement with the statement: "I [students] feel confident speaking in sessions." Responses to this statement are illustrated in Figure 7, which shows students' and tutors' responses.

Figure 7

Students' and Tutors' Responses to "I [Students] Feel Confident Speaking in Online Sessions" (Student responses n = 603; Tutor responses n = 196)
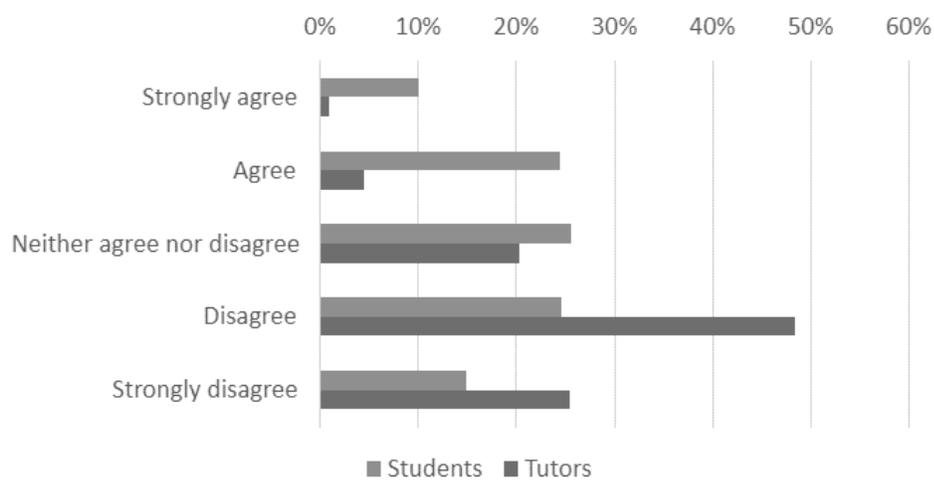
Students were divided on whether they felt confident speaking in sessions, with 35% feeling confident (agree / strongly agree) compared to 40% who did not feel confident (disagree / strongly disagree). The responses to this question from students were more evenly balanced than

the responses from tutors: 74% of tutors thought that students did not feel confident speaking, compared to only 6% who thought that students did feel confident.

The following comments from the tutor survey show that tutors take steps to allow for students' lack of confidence: "There are always a few students who just want to listen in and some who are shy therefore lack confidence to participate. I always encourage both types to actively engage..." "Students tend to prefer to use chat rather than talking & some are too shy even to use the response function, but I do my best to make everyone welcome in whatever capacity they want to participate." "'I deliberately do not require students to use camera or voice because this intimidates many students. I ensure students can always ask and answer anonymously to avoid pressurising them."

Students and tutors were also asked to respond to the statement "I [students] feel stressed when expected to actively take part." Responses are illustrated in Figure 8, which compares students' and tutors' responses.

Figure 8

Students' and Tutors' Responses To "I [Students] Feel Stressed in Online Tutorials When Expected to Actively Take Part" (Student responses n = 603; Tutor responses n = 196)
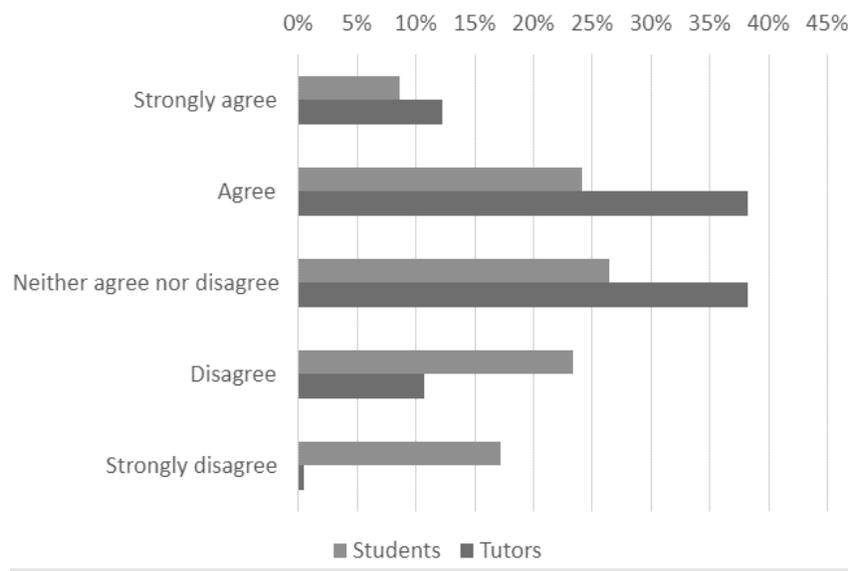
Again, there was a disparity between student responses and tutor responses to this statement: 33% of students agreed that they felt stressed when expected to take part actively, whereas 41% did not feel stressed. Tutors' views were somewhat different: 51% thought that students felt stressed, and only 11% thought they did not. Quotes from the student survey show examples of some students' feelings on this. The second quote demonstrates the link with students' mental well-being. "If you have something to contribute, they [activities that encourage active participation] have value. If not, then they're stressful, and you end up feeling a bit stupid." "I don't like it when tutors pressure you to turn your mic on at the start and use that. I have severe anxiety and I find it very stressful when I feel I have to talk on the mic. Tutors

should be more mindful of this before pressuring students or making us feel bad for using the chat box."

Preferences for Passive Attendance

Returning now to a key result highlighted from Figure 6, "I am [students are] happy just to listen" was the most popular choice for students and tutors as a reason for students not actively participating. 58% of students who responded to this question (n = 171) and 89% of tutors (n = 194) selected this option. Quotes from comments expand on students' views: "I'm more of a listener than a talker and I prefer to take in what everyone else contributes than to miss something thinking about what I might contribute - sounds a bit selfish now that I've said it!" "I'm more of an observer than participator, however, I will type something in the chat box if I have a question or particular idea to clarify."
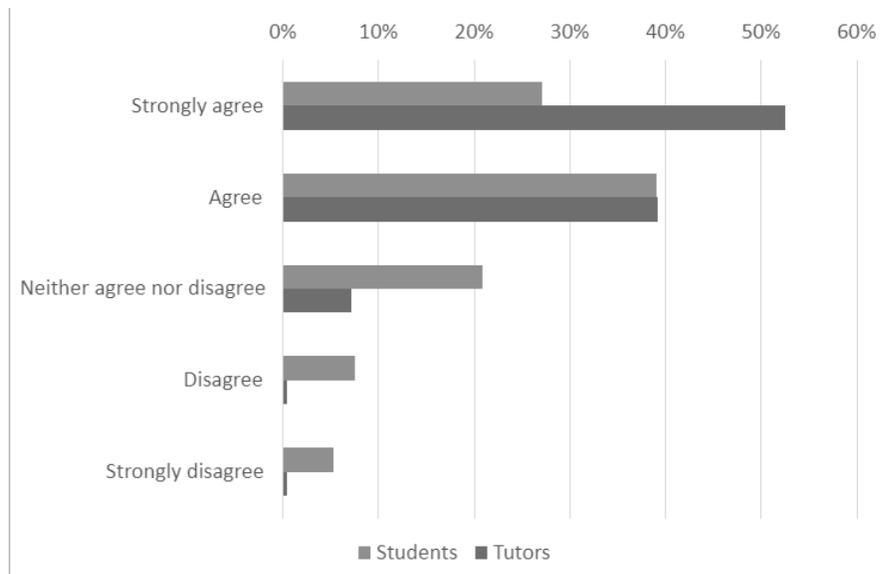
The research questions this project aims to address imply that, ideally, all students should actively participate in online sessions. Something to consider, and which is discussed in more detail later, is whether it is sufficient for some students to attend but not to participate actively, as the following tutor comment suggests: "I say it's fine to listen without actively participating and that I don't put people on the spot."

Another consideration is whether there could be other reasons for students saying they prefer just to listen. For example, there were comments from students concerning other students dominating discussions. "There were too many people all wanting to say something. The same people seemed to dominate proceedings." "Not everyone feels comfortable to participate so you find you have 5 students dominating discussion."

Despite 58% of students stating they were happy just to listen (Figure 6), another survey question showed that around two thirds of students (66%) and a higher proportion of tutors (92%) feel that there is benefit for students in actively taking part in sessions (Figure 9). One student commented: "It is important to participate actively, especially in terms of asking questions … sometimes the other students ask questions that I haven't even thought about."

Figure 9

Students' and Tutors' Responses to "I [Students] Benefit If I [They] Actively Take Part In Online Tutorials" (Student responses n = 604; Tutor responses n = 194)

Discussion

In this part of the paper, the findings are discussed in relation to the research questions. The first section below discusses our findings regarding barriers to active student participation in synchronous online sessions. This section (which addresses RQ2) provides the basis for moving on, in the second section, to discuss how these barriers can be overcome. Here we consider the approaches tutors are currently using (RQ1) to encourage active participation, and how these approaches can address barriers for students (RQ3). We also discuss where our findings indicate there is more work to be done on overcoming barriers, and how this might be achieved. We consider whether attendance without active participation, which emerged as a key theme during analysis of the data, is a legitimate approach for some students.

Barriers to Active Participation

A key aspect of our findings is that many students are anxious about online tutorials, particularly if they are expected to participate actively. A third of students expressed feelings of stress about taking part actively, and over a third did not feel confident about speaking; these are significant proportions. This suggests that lack of confidence is a primary factor affecting students' engagement in online tutorials. This finding is in line with previous work that identified anxiety and shyness as major reasons for keeping webcams turned off during online sessions (Gherheș et al., 2021; Rajab & Soheib 2021) and for low online engagement more generally (Mogavi et al. (2021). Our findings show that students' two main reasons for lack of confidence in participating are that they are unsure of their knowledge of the module and are worried about

what other students might think of them (Figure 6). Although a lack of confidence may be anticipated for students who are new to studying or attending online tutorials, it is worth noting that the respondents were students on undergraduate Stage 2 modules, so online tutorials were not new to them.

Our data has also highlighted problems with the "synchronicity" of activities in online tutorials. For example, if a tutor asks a question, one student may come in quickly with an answer (by speaking or by text chat) and this can discourage contributions by other students. There can be a perception that certain students are dominating the discussion, and this may further undermine the confidence of those who are hesitant about contributing.

Some ways of participating in online tutorials were more popular than others. In the context investigated in this research, webcams were hardly used by students. There was some use of audio, but most students engaged via text chat. Although text chat was by far the most widely used tool for participating in tutorials, it still drew some negative comments that indicated barriers to its use. Whilst some students found text chat a less stressful way of participating, others felt it could be distracting, easily going off topic, and was sometimes difficult to keep up with.

Overcoming Barriers

There is a need to build students' confidence and alleviate the anxiety that is associated with actively taking part. Previous work has established that if teachers can establish an empathetic and caring environment, students will feel safer engaging actively (Meyers et al., 2019). In our research, tutors identified ways of creating a safe and empathetic environment. Examples included: encouraging different forms of engagement (e.g. through text chat); enabling ways of participating anonymously (e.g. using the whiteboard or polls); and tutors having their own webcam on while chatting informally with students at the start of sessions. However, given that one of the main reasons for students' lack of confidence in participating was that they are worried about what other students might think of them, there is the need to encourage students (especially the more confident ones) to show empathy and support to other students. Building a sense of community and belonging among students is necessary to help them feel comfortable when learning with others (Peacock and Cowan, 2019).

Another key finding about lack of confidence related to students' knowledge of module materials. Again, examples of tutors seeking ways to alleviate this worry were identified, for example by making materials available in advance of the tutorial. Providing students with information before the event should help relieve some of the worry around this, for example by giving a clear description of the purpose of the tutorial, the approach to be used, and the content that will be covered.

Students need to be persuaded of the value of active participation, and that it does not have to be daunting. Ice-breaker activities can build confidence in using the tools and have previously been identified as a valuable way to engage students and encourage learner-learner interaction (Bolliger & Martin, 2018). Initially, tools that offer a degree of anonymity can be used; for example, polls and whiteboards are anonymous; comments were received from tutors that highlighted the benefits these afford. The text chat tool may also feel somewhat more

anonymous to students, compared to using audio or webcam. Many tutors were aware of students' worry around using audio or webcam and did not force this, instead encouraging the different forms of engagement already discussed. There was also an awareness from some tutors about the problems that breakout rooms can cause students.

As already identified, text chat was a popular choice for students as a way to participate in online tutorials. Other studies have explored the benefits of text chat in different online learning environments. Huang (2022) looked at the types of interaction occurring through chat in an online course and found that the majority of contributions were meaningful. Goodman and Moore (2023) found that text chat was a "facilitator of increased confidence in learning in an online lecture environment." Whilst there is no doubt that text chat affords many benefits, there are still ways to improve its effectiveness. Developing protocols for tutors and students on how to use it in sessions, depending on the aim of the session, could help keep things on track; so could approaches such as having two tutors to alleviate the cognitive overload that a single tutor managing multiple online tasks can experience (Kear et al., 2012; Mogavi et al., 2021).

For tutors, ongoing training and awareness-raising is important, encompassing both pedagogical development and technical skills. There would be benefit in supporting tutors to manage online rooms where some students dominate discussions. This was an issue raised by students, so finding ways to deal with this, and sharing ideas amongst tutors, would be helpful. Tutors could discuss with students the "protocols" of effective synchronous communication (e.g. the value of visual and voice interaction; how to interact without dominating discussions; and how to use the text chat effectively). Again, the challenge here is finding ways to enable less confident students to contribute, without them feeling forced to.

Attending Without Active Participation

In this study the fact that students attended at all, when online sessions were optional, is a positive factor; attending without actively participating still offers benefits over not attending. Vicarious learning, i.e. listening to, and observing, interactions between other students, and between students and tutor(s), certainly has value. This can extend to use of recordings; see for example a review by Mayes (2015) and a study by Pleines (2020), although both authors suggest that the benefit is increased by active engagement with the recording, for example by pauses for reflection. Participating on the periphery of a community of practice, particularly as a new member or beginner (Lave & Wenger, 1991) is an important part of learning.

However, it is also acknowledged that becoming more active as experience grows is desirable. There are learning opportunities that students are missing by not being more active: for example, developing their knowledge through involvement in discussions, having their questions answered, having their opinions heard, and gaining valuable transferable skills in communication. There is therefore a balance needed that encourages students to engage in active ways, by gradually building the confidence that enables them to do this without anxiety. As Wang et al. (2023) suggest, a good approach is to balance instructor-led teaching with learner-centred activities (both individual and group-based activities), interspersing short periods of each approach.

Comparing Student and Tutor Responses

A particular aspect of the findings, with respect to the Likert-type questions, is that student responses tended to be more distributed across the range of available responses than tutor responses—which tended to be clustered, either round agree/strongly agree or disagree/strongly disagree—depending on the question. See, for example, Figure 7: students' feeling confident speaking, or Figure 5: students feeling comfortable using a webcam. One interpretation of these differences is that tutors are under-estimating students' confidence in online sessions; as pointed out by Mogavi et al. (2021), educators' perceptions about barriers to participation might differ significantly from those of students. In our study, tutors may have been focussing their responses on the students who do lack confidence.

An alternative (or additional) interpretation is that the student sample, which was self-selecting, may have comprised students who were more likely to attend tutorials, and who might be more confident online than the student body as a whole. Our results indicate the diverse nature and preferences of students regarding online tutorials—with some keen to engage through the use of video and audio and others preferring to remain anonymous and attend passively.

Limitations and Future Work

The main limitations of this research are the relatively low response rates for the surveys: 8% for students and 23% for tutors. The actual size of the samples was large (around 600 students and 200 tutors) but it is possible that the resulting sample was biased towards students (or tutors) who were particularly interested or concerned about the topic of the research.

In terms of future work, it will be important to extend the investigation of active participation in synchronous tutorials to other Higher Education Institutions. This will explore the extent to which our findings can be generalised to different kinds of students and educational settings. A particular aspect of the distance-learning university in this study is that it is open access, so students come from a wide range of educational backgrounds, and some students have no prior study beyond secondary school level. This may mean that they have low levels of confidence. Students also rarely meet each other (even online) which may affect their willingness to interact with each other. Finally, the technology used (Adobe Connect), though helpful for many aspects of online tutorials, does not necessarily encourage the use of audio and video channels. For all these reasons, broadening the research to other institutions will be of value, and this is already underway.

Another aspect of future work that we would like to pursue is to gain the perspectives of students with disabilities, those with mental health issues, and neurodivergent students. We believe that the issues highlighted in this paper may apply even more to these students and may limit their learning opportunities. It will be important to find solutions which help put all students on an equitable footing, taking account of their personal situations.

Conclusion

Online synchronous sessions can enhance and deepen students' learning and can also help build a sense of belonging. But, as our findings demonstrate, this potential may not be fully realised because many students lack confidence in participating actively in these sessions. There

is a need to share more information with students about what to expect from a particular online session (e.g. what teaching approach will be used), to build students' confidence, and to develop students' understanding of the benefits of participating actively.

We have identified areas for improvement to the design and implementation of online sessions. We are convinced that ongoing discussion and sharing of good practice among tutors could further improve online sessions, resulting in better experiences for students, and also for tutors.

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