Developing online teaching and learning: The potential benefits of 'listening' to student voices for staff professional development and authentic student engagement

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Sue Taylor
Senior Lecturer, Northumbria University, UK

Prior to joining Northumbria University as a Senior Lecturer, Sue Taylor taught in the UK and abroad for over 30 years in various roles, including senior management and school leadership. Sue is Mathematics lead for Initial Teacher Education and leads four modules in Curriculum Studies on the BA (Hons) Primary Education programme. Sue completed her MA in School Management at Kingston University and her EdD at Durham University. She has a strong interest in self-regulation and creative approaches to teaching, as well as utilising student voice to develop collaborative programme design and effective pedagogy.

Northumbria University, Coach Lane Campus, Benton, Newcastle upon Tyne, NE7 7XA, UK
Tel: +44 (0)191 232 6002; E-mail: sue.rtaylor@northumbria.ac.uk

Kirstin Mulholland
Lecturer in Education, Northumbria University, UK

Before taking an academic post at Northumbria University, Kirstin Mulholland was a class teacher, senior leader and Specialist Leader of Education in primary schools in North-east England for more than 13 years. Kirstin is currently the Initial Teacher Education subject lead for English, as well as Modern Foreign Languages. She is also one of the module leaders for the Educational Research and Enquiry strand of the BA (Hons) Primary Education programme. Kirstin completed her MEd and EdD at the University of Newcastle, and also holds an MLitt in Latin American Literature. She has a particular interest in teacher research, perceptions and experiences of teaching and learning, and the role of student voice and partnership in developing pedagogy.

E-mail: kirstin.mulholland@northumbria.ac.uk

David Nichol
Senior Lecturer in Education, Northumbria University, UK

David Nichol is a qualified teacher in the Post Compulsory Education and Training (PCET) sector, and a Senior Fellow of the Higher Education Academy. He joined Northumbria University as an academic in 2006 and most recently has been programme lead for Northumbria's PCET provision. David currently leads a module on the Post-Graduate Certificate in Academic Practice, a programme aimed at all new academic staff at Northumbria and, in collaboration with colleagues, delivers teacher-training programmes to postgraduate research students who express an interest in perusing an academic career. At a national level, David is a member of the University Council for the Education of Teachers (UCET) Further Education Committee. This affords him the opportunity to help formulate and develop national policy and share good practice with colleagues working in universities, training providers and further education colleges across the UK. His current research focuses on establishing the ways in which students experience, conceptualise and understand the numerous technology-enhanced learning opportunities made available to them, together with the intentions of the academic staff in providing them.

E-mail: david.nichol@northumbria.ac.uk

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Arlene Anderson
Senior Lecturer in Education, Northumbria University, UK

Arlene Anderson is a Senior Lecturer at Northumbria University and a Senior Fellow of the Higher Education Academy. She teaches on a range of modules in Initial Teacher Education. Prior to joining Northumbria University, Arlene taught in the UK and abroad for over 19 years in senior leadership teams for the English Schools Foundation and the Primary Science Support Group in Hong Kong. She then taught as Senior Lecturer at Kingston University and Newcastle University. She currently leads on the BA (Hons) Primary Education programme. Arlene completed Master studies modules in Education Leadership, Development and Consultancy at the London Leadership Centre, Institute of Education, London University. She has current research interests in curriculum design, student support and well-being, and supporting gradate outcomes.

E-mail: arlene.anderson@northumbria.ac.uk

Jane Davies
Senior Lecturer in Education, Northumbria University, UK

Jane Davies is a Senior Lecturer at Northumbria University. She teaches on a range of programmes, including Initial Teacher Education, and is the Departmental PGR Co-Lead, supporting and developing PGR provision. She has a particular interest in teaching and learning in higher education, with an emphasis on widening participation and student voice. Her other research interests relate to diversity, with a focus on race equality and the educational experiences of Gypsy, Roma and Traveller groups.

E-mail: jane.davies@northumbria.ac.uk

Abstract This paper explores the potential role of authentic student voice in developing online teaching and learning in an undergraduate Initial Teacher Education programme in a UK higher education context. It considers the benefits of harnessing students' insider perspectives as 'expert witnesses' through providing an exemplar of practice in relation to establishing systems for gathering both 'feed-forward' and 'feed-back' information to inform the iterative development of educational provision. Alongside similar studies internationally, the authors propose that authentic engagement with student voice has positive implications for staff professional development, as well as improving student engagement and lived experiences of learning. The paper details staff and students' perceptions and experiences of adaptations to online educational provision and pedagogic practice resultant from the iterative development process. Inductive thematic analysis identifies three principal adaptations to practice: organisation and communication to support access and understanding of learning; encouraging discussion and positive peer relationships; and utilising online platforms to promote student collaboration. Findings suggest that these adaptations enriched staff understanding of student engagement and facilitated rapid adaptations to educational provision in order to support access and understanding, as well as the development of positive working relationships. Further evidence suggested that the establishment of systems to 'listen' to student voice also led to increased engagement, ownership, and an increasing sense that their perspectives were recognised and valued.

KEYWORDS: student voice, student perceptions of teaching and learning, online education, collaborative professional development, student engagement, action research

INTRODUCTION

Over recent years, online learning has increasingly grown in popularity due to the potential flexibility and accessibility afforded by this medium.[1] The COVID-19 pandemic has undoubtedly accelerated this shift, causing higher education (HE) institutions to close university campuses and transfer teaching and learning into online learning environments. This shift has prompted much thought around the delivery of core content, yet the extent to which the experiences of students themselves have been considered remains unclear. There is some evidence to suggest that students can find the online learning experience disempowering and a 'space of student surveillance'.[2] Similarly, some evidence suggests that student engagement in online contexts is more challenging than in traditional learning environments, leading to lower programme completion rates than campus-based equivalents.[3]

For academic staff, some sources indicate that the abrupt nature of this transfer may have caused feelings of unpreparedness,[4] and considerably increased workloads due to the demands of translating content to an online context.[5] Some sources, however, also highlight the 'unparalleled opportunity for pedagogical reinvention'[6] provided by the possibility of engaging with online pedagogy, including a prompt to re-examine underlying assumptions about teaching and learning, and an impetus to develop the understanding and use of educational technologies by academic staff. Furthermore, some studies suggest the emergence of various collaborative forms of support and solidarity where academic staff both within, and across, different HE institutions came together to share experiences and ideas for 'best practice' relating to online teaching and learning.[7]

Although students have now largely returned to university campuses, there has been considerable growth in the integration of online learning across HE.[8,9] In order to inform the continued development of pedagogic practice, there is therefore a need to better understand students' lived experiences of online learning. This paper adopts the stance that students can be considered as 'expert witnesses' in their education,[10] with insider perspectives that are not always accessible to those working with them. The authors therefore aim to provide an exemplar of professional practice, in which a team of academics working on an undergraduate Initial Teacher Education programme worked in partnership with students to create opportunities to 'listen' and learn from students' perceptions of online learning.

STUDENT VOICE IN HE

There is a growing body of evidence to suggest the benefits of engaging with student voice for both students and staff. In particular, it is suggested that increased engagement with student voice can reveal more authentic perceptions of the teaching and learning process which are not otherwise uncovered through routine feedback processes,[11–13] challenging staff assumptions surrounding students' experience of practice, and ultimately leading to improvements in engagement and attendance, feedback and marks.[14,15] Despite this, there remains some suggestion that student voice research in HE most commonly focuses upon quality assurance, with less emphasis upon active and purposeful student involvement.[16,17]

Regardless of the acknowledged benefits of 'listening' to student voice for staff professional development, evidence indicates that this is rarely used as a professional development strategy[18] suggesting that opportunities to learn from students' experiences and perceptions may be missed. Creating space to 'listen' to student voice can also convey a powerful message regarding the extent to which student perspectives are considered and valued, leading to a greater

sense of belonging,[19] increased engagement[20] and reduced drop-out rates.[21] It can also facilitate the co-construction of ways of working that are 'emancipatory in both process and outcome'.[22]

CONTEXT

In order to harness the potential benefits of 'listening' to student voice, a participatory action research methodology was adopted to investigate the lived experiences of undergraduate students and — working in partnership with both staff and student researchers — to use insights gained to inform and develop online learning.[23] Student voice was gathered in a range of formats across the first semester of the academic year. This included both 'feed-forward' and 'feed-back' data,[24] which facilitated the construction of a feedback loop, enabling staff to respond rapidly to students' lived experiences in order to monitor and develop engagement and learning.

Feed-forward data was collected at frequent intervals following focused teaching weeks. This data was qualitative in nature, and was collected using a range of formats, including Padlet, Flipgrid, online surveys and Google forms 'exit tickets'. Focus questions were framed in a deliberately open manner, to gain insight into students' experiences. Examples of these questions include, 'What has supported your learning this week?' and 'What challenges did you encounter in your learning this week?'. This provided immediate feedback on teaching and learning as part of the action research cycle, 'plan, act, observe and reflect'.[25]

Each time feed-forward data was collected, the staff and student research team met to conduct a critical review. This involved an approach to analysis common to action research, consisting of a rapid process of interpreting and categorising data, informing decision-making for future action.[26] Repeated iterations of the action research and review cycle established a forum for discussions between staff and students around specific pedagogical approaches in order to identify potential strategies for improving practice and the student experience. For the staff team, this constituted an authentic means of engaging with student voice, which was felt to be more advantageous than the more formalised approach incorporated in university systems, which can mean that any insights gained are received too late to benefit those students who provided them.

Feedback data was collected at the end of the semester, providing summative information regarding students' lived experiences of online learning. An online survey was co-designed by the staff and student researchers to explore students' experiences of online provision across the semester as a whole. This sought to gain insight into students' perceptions regarding whether educational provision had been enhanced by changes made as a result of the participatory action research project.

The survey was designed to gather both quantitative and qualitative data. Questions seeking quantitative data adopted a five-point Likert scale, supplemented by an additional prompt to elicit qualitative responses encouraging students to explain their choice. Examples of questions include 'How would you rate the quality of your online learning this semester?' and 'How would you rate the effectiveness of your group work at the beginning and end of this semester? If the quality of your group work changed, please give reasons for this.' The survey also included a small number of open questions, including 'Which of the strategies used in sessions worked particularly well? Which was your favourite and why?' and 'Were there any strategies which you did not think helped you to learn effectively? Why?' These questions provided a rich source of feedback regarding pedagogic strategies employed across the semester as a whole, providing

the opportunity for students to provide comparative judgments.

The online survey software presented quantitative data generated from responses to the Likert scales to provide insight into students' perceptions and experiences of online learning. Qualitative survey feedback data was analysed through the adoption of an inductive approach to thematic analysis,[27] whereby students' responses were scrutinised by staff and student researchers to identify themes and patterns. Similar responses were then grouped to facilitate comparisons within and across categories.[28,29] Members of the research team initially completed this process independently before refining findings collaboratively through analytic triangulation[30] to identify the impact of listening to student voice on the development of online provision.

EXEMPLIFICATION OF PRACTICE

The following section outlines some of the key changes to practice, which were made in response to student voice. The inductive approach to analysis enabled the research team to identify three principal ways in which practice was adapted:

- Changes to organisation and communication to improve accessibility and support students' understanding of learning tasks;
- Changes to encourage peer discussion;
- Changes to the tasks and the online platforms utilised to improve student collaboration and promote the development of positive working relationships between peers.

The three modifications will be outlined in turn below. Each section is framed with quotes from the students themselves, to provide a sense of the insights gained through engaging with authentic student voice and the consequent benefits for staff professional development.

Supporting students' understanding of learning

> 'We need a clear list of what exactly needs to be done because everything seems really confusing.' (First-year undergraduate)

One common issue involved students feeling in need of additional support to organise their workload and navigate their learning experience. Students reported feeling confused by some tasks and this was exacerbated by the solitary nature of online learning in which students were working from their own homes and had fewer opportunities to ask informal questions of either tutors or peers. This corresponds to broader findings elsewhere in the literature, which emphasise the potential benefits of explicit support for independent working, through materials to scaffold students' time-management and self-organisation.[31] For this particular cohort, who were first-year undergraduate students, their unfamiliarity with the university's learning management system (LMS) compounded these issues. This led some students to report confusion, and in some cases anxiety, over how to access both synchronous and asynchronous learning tasks.

In response to these concerns, tutors developed a consistent framework document to provide a detailed overview for each week. Presented in a 'check-list' format to support students to develop skills of self-organisation and management, this included information around the type of planned learning opportunity (directed learning task; synchronous or asynchronous session) as well as where this was taking place within the online LMS. It also included a summary of session content, key tasks, and hyperlinks to essential reading and documentation. An excerpt from one of these overviews can be seen in Figure 1.

Students' response to the introduction of these detailed overview documents was

ERE Week 1: Week beginning 5th October (Week 11)

Total teaching time: Live online teaching (2 hours). Campus-based teaching (3 hours). Recorded activity (2.5 hours). Other directed learning (3 hours)

(You may find it useful to use this overview as a checklist to help you keep track of your learning across this week)

Session	Task	Resources you will need	Complete?	Notes
Directed learning **(1 hour)**	**Induction tasks** **Task 1:** read the article 'How to bring research into the classroom and become your own researcher'. **Task 2:** who would create the best climate for learning? Why? (Add at least 2 responses to Padlet.)	• PowerPoint slides with task information • Padlet • Article link		
Live online teaching **Monday 5.10.20 9:30-10:30am**	**Introduction to the module** This session will give an overview of this module including the main aims, the themes we will consider, and how teaching, learning and assessment will be structured. Please complete this survey about attitudes to education research: https://northumbria.onlinesurveys.ac.uk/attitudes-to-education-research	• Copy of PowerPoint presentation • **PLEASE ACCESS THIS SESSION VIA BLACKBOARD COLLABORATE**		
Directed learning	**Introduction to critical reading – Part 1** You must read the following articles in preparation for your	• Lake article link • Chaplain chapter		

Figure 1: An example of a detailed learning overview document

very positive. Typical responses noted the 'helpful' nature of the information provided in this format, and there was a sense that this was particularly important to help students navigate the unfamiliar landscape of online learning:

> 'I really found it useful the checklist that was given and I feel this will help provide more guidance due to everything being online now.' (First-year undergraduate)

This alone was not sufficient to assuage students' concerns, however. Students also expressed a desire to be able to interact more frequently and informally with academic staff:

> 'Perhaps a question time period where we could ask tutors in a Blackboard Collaborate session. Email is good but sometimes face-to-face is easier.' (First-year undergraduate)

Reflecting on comments of this nature, as a staff team we acknowledged that teaching in an online environment resulted in fewer opportunities for informal opportunities to ask questions and talk directly with academic staff leading taught sessions. While some students made good use of the chat function available via the online learning platform, others reported feelings of vulnerability in the visibility of any comments or questions shared in this format not just during the sessions themselves, but also due to their inclusion in any recordings:

> 'I think people are very self-conscious and I think people care maybe a bit too much … I'm one of them. I do try and contribute when I can, but I do feel very like … I don't want to seem like the teacher's pet.' (Third-year undergraduate)

This is reminiscent of the work of Costa *et al.* who suggest that students can find the online learning experience disempowering and a 'space of student surveillance'.[32] It may also, however, reflect a sense of isolation and students' inability to forge supportive interpersonal connections as a result of the physical distance inherent to online learning

environments, and which some sources suggest can have negative implications for learning outcomes.[33]

In acknowledgement of these issues, academic staff scheduled 'drop-in' question and answer sessions to facilitate these more informal staff-student interactions. This was well received by students, leading some to comment:

> 'I have felt supported by lecturers through the drop-in sessions for further clarification that the tutors host.' (First-year undergraduate)

Despite this apparent appreciation from students, however, it is interesting to note that these sessions were not well attended. Across the semester, the most well-attended 'drop-in' session was attended by 11 per cent of the student cohort, while three had no students at all. It is therefore important to consider the value of these sessions in terms of staff time. While we strongly advocate for robust pastoral and academic support, the low attendance rate of these sessions implies that, despite students' perceptions that support of this nature is useful and even necessary, providing similar support in an alternate form may better balance the needs of both students and academic staff.

A further theme evident in the student voice related to reported challenges in engaging with learning provision in an online forum. Many students voiced concerns around sustaining concentration and focus during sessions, as well as with the pace of learning. Examples of responses of this nature are shared below:

> 'Shortening the 3-hour tutorial. It was too long to focus in my own environment online. I prefer the recorded sessions where I can pause to take a break.' (First-year undergraduate)

> 'I enjoy the pre-recorded lectures where I can take it at my own pace and really take in everything that's being said rather than the live sessions where it is on a time schedule.' (First-year undergraduate)

These responses suggest that some students experienced challenges in maintaining focus and concentration during online learning, which is also evident elsewhere in the literature.[34,35]

It is also important to note that both of these responses indicate a preference for recorded sessions, rather than live input, due to their ability to tailor their engagement with this to suit their own preferred pace of learning. This preference is in contrast to the expectations of many members of our staff team, who assumed that students would prefer live online teaching as the most similar replication of in-person teaching, and, indeed, reflective of broader national policy which prioritises face-to-face provision;[36] however, this may be indicative of findings from the Student Futures Commission[37] that 66 per cent of students would prefer a blend of in-person and online teaching. Therefore, in an attempt to provide greater choice and autonomy for students in tailoring educational provision to best suit their individual needs and preferences, all online sessions were recorded and uploaded to the university online LMS so that students could access these asynchronously.

Encouraging peer discussion

> 'I don't think breakout rooms work that well since a lot of people decide not to talk in them.' (First-year undergraduate)

One prominent theme within the data related to students' experiences of discussion tasks within online forums such as 'breakout rooms'. 'Breakout rooms' are virtual spaces in which students can meet in smaller groups, separate to the main online session. These are intended to be used for small-group discussion and collaboration and

are promoted in the literature[38,39] as a key element of effective practice for online learning.

Both staff and students, however, reported challenges relating to engagement and participation during synchronous online sessions. Both student voice and staff observations suggested that many students were reluctant to engage in online discussions, causing frustration for all parties. This is evident in the use of the word 'decide' in the account above, indicating that a deliberate choice has been made. These accounts are representative of the experiences of students more broadly. For example, when asked about less-effective elements of online learning, 44 first-year students (48 per cent of all respondents) explicitly identified breakout room discussion tasks as problematic. More than half of this group (55 per cent) identified non-participation in these discussions as the reason why this strategy was ineffective for supporting learning.

This reluctance to participate in online discussions during break out room sessions presented pedagogical challenges for staff. This is particularly significant because of the link between student interactions, the emergence of a sense of community, and successful outcomes in online learning.[40] Social-constructivist pedagogic principles[41,42] also highlight the importance of peer interactions for the development of understanding, and therefore considering how best to encourage students to engage in discussions around learning presented a considerable challenge for staff.

Accounts of students' lived experiences suggest that the underlying causes for this non-participation are multifaceted, arising from a range of issues including anxiety, confidence and concerns around vulnerability and privacy when exposing personal spaces in a public forum. For some students, underpinning these concerns was the impact of a lack of pre-existing social relationship:

> '[…] feel like people don't know each other well enough to feel comfortable to talk. It's just a little awkward and don't feel like we get anything out of them.' (First-year undergraduate)

> 'I think if you're put in a room with some random people who you've not necessarily spoken to in real life, you're not going to want the first experience to be online. If we don't know those people, we don't have the rapport with those people to then be putting your opinions out there. And you wouldn't be shot down, I'm sure. No-one's that bad. But it does cross your mind and there have been times, to be honest, where I've been put in a breakout group and I've seen the people and I've been like, "Oh, my microphone's broken now".' (Third-year undergraduate)

These responses are again indicative of students' relative isolation, as well as the barriers to the development of a supportive learning community, which can be associated with online learning environments.[43] Consequently, our staff team introduced fixed study groups to foster the development of positive working and social relationships between students and encourage the emergence of communities of practice.[44] In contrast to the temporary groupings associated with randomly allocated breakout rooms, these provided an opportunity for peers to sustain and establish collaborative working relationships over a more prolonged period of time. Students' response to this introduction was very positive:

> 'The introduction of study groups helped massively. I now feel like I know people on my course well enough without fully meeting them, to feel comfortable.' (First-year undergraduate)

This account is representative of student responses more widely. Furthermore, some responses also suggested that learning

outcomes also improved as relationships became more established:

> 'I believe that now our group knows each other and we are familiar with each other, the level of work and quality of work is much improved.' (First-year undergraduate)

In addition to the challenges presented by lack of existing social relationships and participation, engaging with student voice also provided insight into barriers presented by technological infrastructure. Common responses included reports of connection issues, which appeared to be particularly severe when breakout rooms were opened or closed.

> 'The break out rooms don't work I always get kicked off. Don't think it's fair that I'm missing out on my learning when we could do it in the main room.' (First-year undergraduate)

> 'I know some people that've been like just totally put off like "Oh, I've been disconnected again and again" and they feel like the lecture is being very disjointed for them and it sort of puts them off and they have got to the point where rather than having to listen to lecture and then go back and listen to the recording again just to cover the bits they've missed, they're just skipping the lecture at all and just listening to the recordings instead because of it.' (Third-year undergraduate)

In response, where incorporating collaborative tasks into live online sessions, staff members allowed students to select their preferred communication platform, setting a fixed deadline for discussion before students should return to the main group session. This approach enabled students to meet using technology with which they felt most comfortable and was positively received by students.

> 'I video-called my friends and we spoke for a few minutes and then the person called us back and then we actually had stuff to say … and then people will be more likely to feedback if they've actually had a chance to confer.' (Third-year undergraduate).

> 'We shared our ideas into a group chat and created a Teams call. One person wrote on the slide while everyone discussed their ideas this worked very well.' (First-year undergraduate)

Supporting students' collaboration

> 'I do feel quite isolated though, as group work hasn't really happened at all for me. However, group tasks have often been things that individuals can engage well with too, and being able to retrospectively view others' work makes up a little for not having been involved in discussions on the topic.' (First-year undergraduate)

As seen in the previous section, working collaboratively was initially problematic for students. In the quote above, the student highlights a personal issue with group work and identifies the benefits of a collaborative document, which all students can view as well as contribute to supporting their access to how their peers have addressed a task. When planning group learning opportunities, the use of live shared documents was utilised to enhance the students' collaborative practice in their study groups. These included various software and platforms, including live Google documents, Padlet and Jamboard presentations accessed online.

To address problems with engaging students in peer collaborative tasks, Google documents were selected as the platform for the two examples illustrated in this section. Zhou *et al.*'s[45] research employed these collaborative tools to enable students

to work together successfully on a shared writing task outside of teaching sessions. The use of Google slides in this first example in particular, allowed the newly created study groups to collaborate on a visual project that was well received, as illustrated in the following student response:

> 'The collaborative task has allowed us all as individuals to be able to work together in groups, collaborating to discuss our findings and opinions on different mathematical learning beliefs.' (First-year undergraduate)

The students were required to consider the optimum environment for teaching mathematics exploring the pre-task video, taught sessions and independent reading. Their ideas were to be presented visually with minimal text, displaying the information on one slide (see Figure 2). This format reflects Schmeck *et al.*'s[46] production effect, which relates to generative learning processes where material is organised into coherent representations, principally visual in format, in order to summarise and clarify understanding. Each study group worked together on their own slide selecting images to represent aspects of the task.

Overall, students' response to this way of working was extremely positive. For example, in the final feedback data, completed at the end of the semester, collaborative tasks within study groups were the most frequently identified aspect of effective online learning, representing 33 per cent of all student responses. Analysing the students' feedback on this task a number of themes were identified. The students appreciated the open-ended nature of the task and the more visual format. The social aspect of working collaboratively in a study group was highlighted with regard to the opportunity to socialise. The ability to see everyone's slides was mentioned by a number of students as being insightful and a great motivator.

> 'Sharing ideas was fun and really was the highlight of my learning. I wish we could do this once a week!' (Student survey)

Reading the students' feedback, it became apparent that tasks such as this engage the

Figure 2: Environment for mathematics learning example

students authentically relating to their future practice in the classroom as teachers as well as providing an engaging, alternative format for collaborative work.

> 'It was a fun task that I didn't find stressful, but it made me think about what I've been learning. I think because it actually made me think about the classroom, I found it more valuable than just reading a document. Personally, I find visual learning a lot easier.' (First-year undergraduate)

The shift to online learning challenged us as educators to design tasks which involved the students working together online. The optimal learning environment task for the first-year students had a twofold purpose; first, to enable the development of peer relationships and encourage the social cohesion of the recently created study groups; and second, to collaborate on a meaningful summative task at the end of the mathematics focus week.

> 'This was a good task, I enjoyed being able to work with other people even though we are online. I think group tasks are very helpful in the current situation as it allows us to work with other people and get to know them more. The task was good also because it stimulated me to think of various different ideas linking to maths and to think of it from lots of different perspectives.' (Student survey)

Another example of the use of a live shared document was an assignment criterion focused task which involved third-year students working online in self-selected groups to represent their assignment criteria visually as well as rewriting the criteria to aid understanding. Students worked in self-created groups on individual criteria and the cohort's slides were amalgamated to present a co-constructed set of visuals and student-friendly text to support the writing of a module assignment (see Figure 3).

The third-year students gave feedback on the creation of this resource through capturing their reflections on the group activity on Padlet.

> 'I find the terminology of assignment criteria difficult to understand at times

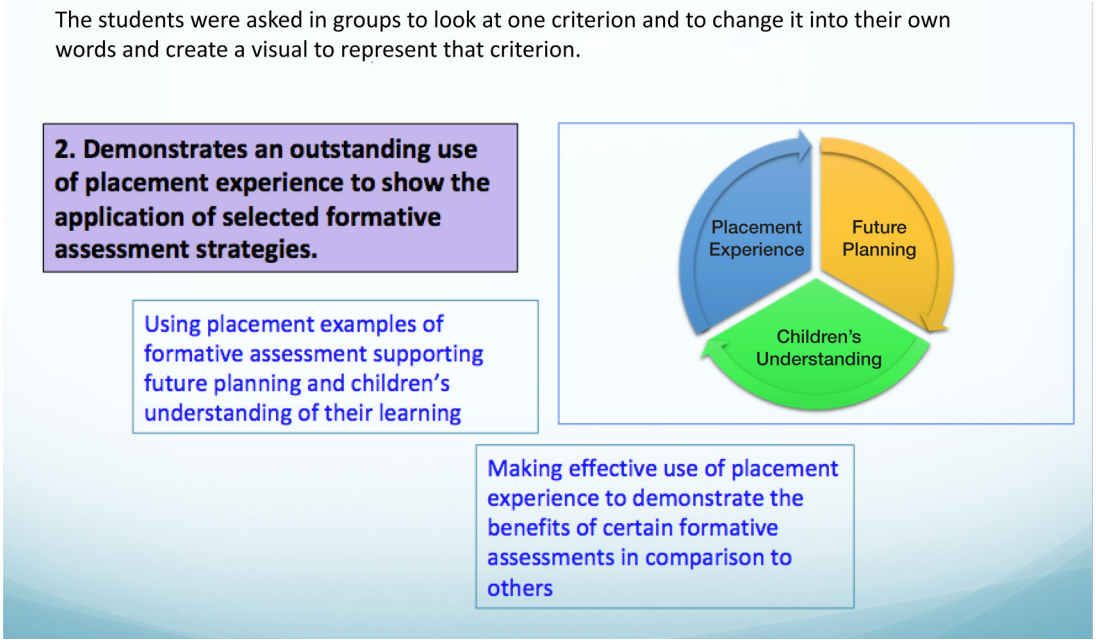

Figure 3: Assignment criteria: example of one criterion

> so this activity helped to simplify it and made it easier to understand.' (First-year undergraduate)

Students also saw this session as supporting the process of their assignment writing as well as providing them with more confidence when ensuring their work met the specific criterion for the assignment. One student also mentioned using the co-constructed document as a way to confirm that they had addressed all the required elements of an assignment.

> 'This was a very valuable session. Often criteria are filled with a lot of jargon, but this helped clarify what is expected of me. I can go back and use this as a checklist when I write my assignment.' (Third-year undergraduate)

Conversely, some students did not find this activity useful at all feeling that they understood the assignment criterion already. Perhaps staff need to be more explicit when introducing these tasks to highlight the purpose of the activity. Would students read the assignment criteria in advance and consider them in detail if not expressly directed to work with the statements?

> 'I felt comfortable with the sentences already so I didn't really need to simplify them and this was said in my breakout room too. However, I like the idea.' (First-year undergraduate)

CONCLUSIONS AND RECOMMENDATIONS

In conclusion, establishing systems to support authentic engagement with student voice had profound implications both for our professional development as a staff team, and students' lived experiences of online learning. Engaging with both feed-forward and feedback information enriched staff understanding of student engagement and facilitated rapid adaptations to educational provision in order to support access and understanding, as well as the development of positive working relationships.

It is important to acknowledge that these benefits were also recognised by the students themselves, with many students reporting improvements to online teaching and learning as a result of the action research process. Some students also expressed appreciation that their perspectives were recognised and valued, leading to increased engagement and ownership resulting from 'a sense of purpose and belonging and that your voice is being heard' (First-year undergraduate).

Moving forwards, as authors we suggest that engaging with student voice is pivotal in ensuring that educational provision meets the needs of the student body. There is therefore value in further exploration of the integration of systems for 'listening' to authentic student perspectives, including further scrutiny of the ways in which these can be used to inform the development of online teaching and learning, as well as the associated impacts of these initiatives for both staff and students. We therefore propose that academic colleagues working in HE move beyond the use of student voice merely for quality assurance purposes, and towards a more authentic and purposeful student involvement in pedagogic consultancy and programme design.

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