Empowering students as partners in enhancing assessment practice, using the research-informed EAT framework

Authors
Sheila Amici-Dargan, University of Bristol, anzsld@bristol.ac.uk
Kaisa Ilmari, University of Bristol, kaisa.ilmari@gmail.com
Annabelle Buckley, Cardiff University, annabelle.buckley@nottingham.ac.uk
Mathusha Chandrakumaran, Cardiff University, Mathusha1902@outlook.com
Carol Evans, Cardiff University and University of Salford, evansc101@cardiff.ac.uk
Stephen Rutherford, Cardiff University, rutherfords@cardiff.ac.uk

Abstract

Developing self-regulatory skills is fundamental to effective learning in higher education, and assessment has a key role to play in this process. Assessment designed to support self-regulation drives student agency, independence, and criticality, provided students are engaged with the assessment activity. Student partnership is valuable in evaluating the benefits and limitations of assessments, and in enhancing their impact. Student engagement can be achieved either through actively understanding the core elements of the assessment, co-designing assessment tasks, or, active involvement in *post hoc* revision of assessments. A powerful conceptual approach for engaging students in assessment is the 'Equity, Agency, and Transparency' (EAT) framework established in 2016 to support an integrated approach to assessment and feedback. EAT has three interrelated dimensions: assessment literacy, feedback and design. EAT resources (including tools for ranking assessments and an engagement scale) can be used for free by students and staff to view assessments objectively. This case study focuses on a series of activities which involve students using EAT to review a series of assessments and co-design interventions to enhance student assessment literacy and feedback. We describe how EAT can be used to initiate conversations about enhancement needs and to scaffold the development of a peer-led intervention. We found EAT effective in providing opportunities for students to participate in discourse around assessment and empowering them to support their own and each other's learning. The outcomes of our assessment interventions highlight the benefits of involving students as active partners in developing and enhancing assessment and feedback practices.

Background

Student satisfaction and engagement with assessment and feedback are challenging to achieve in higher education. The exact nature of this dissatisfaction with assessment and feedback has been heavily researched (Deeley et al., 2019) and is evidenced by consistently low student ratings in module/course level feedback surveys, and national metrics such as the 'National Student Survey' in the UK (Ball et al., 2012; MacKay et al, 2019). It is difficult to 'score' student satisfaction accurately because students and staff may have different interpretations of survey questions relating to expectations of assessment (Bennett & Kane, 2014). For example, when asked if assessment arrangements and marking criteria were 'fair' and if students were clear about what they needed to do to be successful in a teaching unit, students tended to report being satisfied if they got good marks, without any consideration

of the learning outcomes, grading criteria or quality-controlled marking and moderation procedures (Andrews et al., 2018). There is also a considerable mismatch between staff and student expectations of assessment and feedback processes (Perera et al., 2008; Evans & Waring, 2020; Zhao et al., 2022).

This mismatch is due to many factors, including personal perceptions of assessment by students and staff, institutional barriers to change, and over-scaffolding of learning and guidance by staff (Evans & Waring, 2020). Traditionally, assessments are set by academic staff for students with very little or no student input in the design process. This hierarchy of assessment design places students in a passive role, and consequently, students see assessment as something that is "done to them" (Evans, 2020). Students often do not see assessment as an activity in which they have the potential to be actively engaged as contributors (Gravett et al., 2020) or the potential of assessment to drive their learning (Evans, 2013; Lynam & Cachia, 2018). Particularly, students may not appreciate the potential for assessment to develop their ability to self-regulate as independent learners (Sadler, 1989; Evans et al., 2021).

Self-regulation is a fundamental requirement for independent learning in higher education (Boekaerts, 1977; Boekaerts, 1999). Self-regulated learning refers to the extent to which learners are metacognitively, motivationally, and behaviourally active participants in their own learning process (Evans et al., 2024, drawing on Zimmerman, 1989). Effective self-regulated learners have a degree of mastery over the cognitive (how one thinks), metacognitive (how one manages the learning process and verifies its effectiveness) and motivational/affective (defining goals and motivations for learning) elements of learning (Boekaerts, 1999; Zimmerman, 2002).

Engaging students actively within assessment and feedback processes and supporting student agency, so that students are enabled to manage their own learning, is important to effective self-regulation (Sadler, 2010). Engaging students as 'partners' to collaborate with staff at various levels, from creating lecture materials to designing the curriculum (Healey et al., 2014), is perceived as common in higher education, but effective implementation of this is highly variable. Student-staff partnerships have been demonstrated to benefit both parties by increasing student engagement and agency in teaching and learning activities (Cook-Sather et al., 2014).

Empowering students as partners in assessment can be challenging because of resistance to change and the traditional power dynamics that exist between staff and students (Bovill et al., 2016; Matthews et al., 2023). Supporting students to work as effective partners in assessment is essential if we are to solve current issues impacting student engagement with assessment and feedback in higher education (Bovill et al., 2021). Not all staff-student interactions can involve full partnership (Healey et al., 2014), and processes can be challenging if stakeholders have different assumptions, expectations and misconceptions (Healey et al, 2019). However, increasing student involvement in designing and supporting assessment and feedback activities can be beneficial and impactful (Boud & Molloy, 2013).

Although powerful and potentially transformative for all parties, empowering students to act as change agents is still challenging in an environment where many students are content to play a passive role in their own education (Dunne & Zandstra, 2011; Hawe & Dixon, 2017; Evans & Waring, 2020). The contradiction of students adopting a passive role in assessment and feedback, whilst simultaneously expressing their dissatisfaction with assessment via higher education surveys, is problematic and discourages academic staff from working in partnership with students.

The Equity, Agency, and Transparency (EAT) framework (Evans 2016, 2022) is a research-informed approach that strongly values the role of student partnerships in the development of assessment and feedback practices in higher education. The EAT Framework is a synthesis of the findings of >50,000 research papers on assessment and feedback (Evans, 2013, 2016, 2022). The EAT framework focuses on 3 core interrelated dimensions: Assessment Design (AD), Assessment Literacy (AL), and Assessment Feedback (AF). Each of these dimensions may be subdivided further into 4 sub-dimensions, often visualised as an interconnected wheel (Figure 1; Evans 2016), highlighting the interconnectedness of the 12 sub-dimensions. EAT is a holistic and integrated framework that can be used in partnership with students to evaluate and enhance assessment practices at all levels, from individual assessments all the way up to institutional strategies. The integrated nature of this theoretical framework emphasises how all dimensions of assessment feedback are related to one another.

This article describes how we have used the EAT assessment framework and the associated EAT assessment engagement scale (Evans & Zhu, 2023) to empower students to improve their own work and contribute to the development of academic practices in two Russell Group higher education institutions in the UK. The case study describes a series of student-led activities based on the EAT Framework. The term ‘student-led’ in this study means that students were involved in both the design and delivery of the interventions. EAT ‘wheels’ were used as a simple, practical tool to collect student and staff perceptions of the quality of assessments on a Bioscience degree programme. Interviews with undergraduate students were conducted by student researchers to explore challenges to assessment in greater depth. Based on the quantitative and qualitative findings, student researchers designed and delivered an intervention, which involved online and in-person student-led collaborative learning sessions, with the goal of enhancing student assessment literacy and assessment feedback for a novel assessment type. This intervention was evaluated using a pre/post-intervention survey also designed and analysed by our student researchers. These interventions highlight the benefits of involving students as active partners in developing and enhancing assessment and feedback practices.

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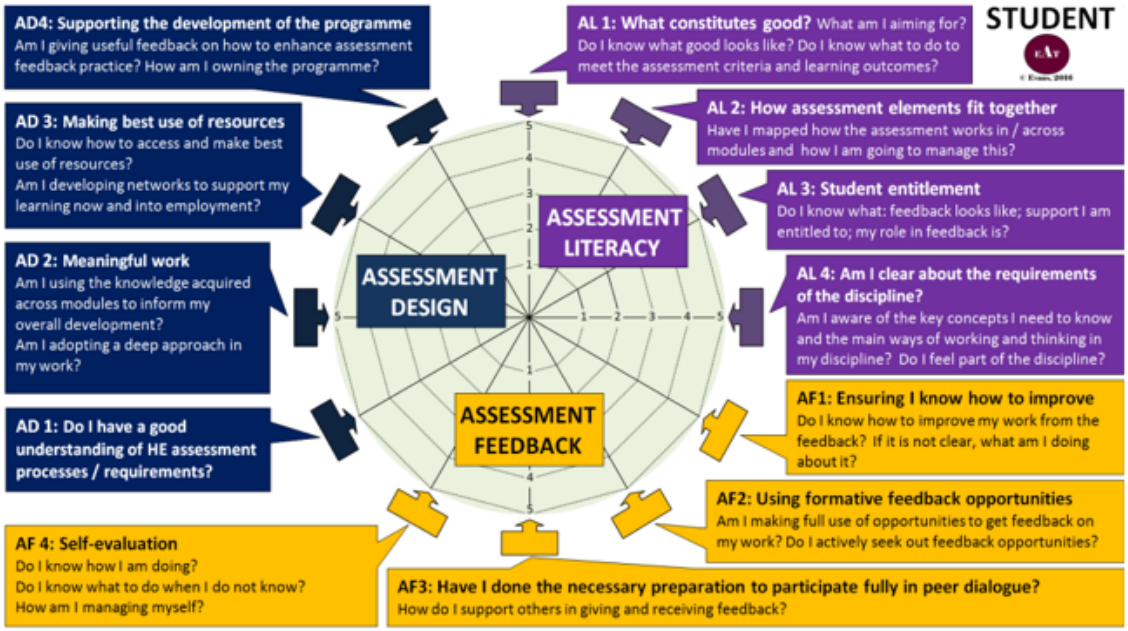

(B) ACADEMIC STAFF VERSION

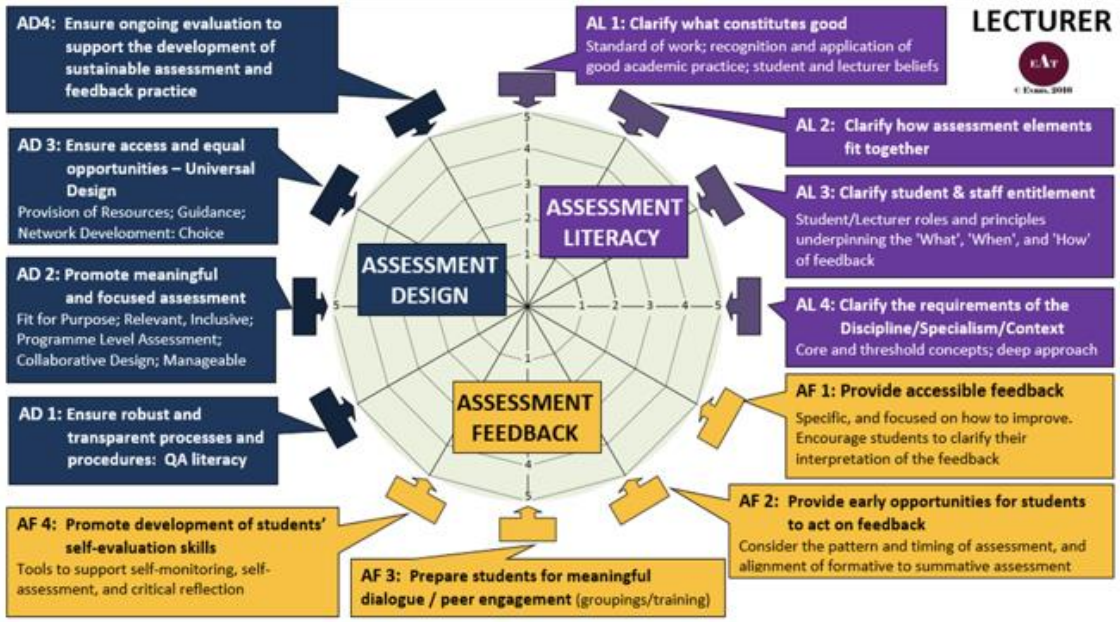

Figure 1. **The 'EAT Wheel' reviewing tool** contains 3 core dimensions: Assessment Design (AD), Assessment Literacy (AL) and Assessment Feedback (AF). Each of these dimensions are subdivided further into 4 sub-dimensions. Differently worded EAT wheel diagrams, targeted at either students or academic staff, were used in this research study as a tool to compare perceptions of (A) students and (B) staff of individual assessments (taken from Evans, 2016).

Methods

Participants

Participants included academics and student researchers based in the same institution as their research participants. Interviews were conducted by student researchers in senior year groups with the student participants, with no conflict of interest. All student researchers received formal training in qualitative research methodology, mixed methods and ethics prior to conducting interviews and performing analysis.

Ethics

Ethical approval was obtained from the Research Ethics Committees of the School of Biosciences at Cardiff University (for the assessment review and interview) and the Faculty of Life Sciences at the University of Bristol (for the assessment literacy intervention and survey).

Quantitative data from the EAT wheel study were anonymous, with no student identifiers on the hard copies returned during data collection. Students were given information regarding the study prior to the circulation of hard copy forms, and participation was voluntary. The identity of student participants in interviews was anonymised using pseudonyms. All interview participants signed formal consent forms and were informed how they could withdraw from the study at any time. Transcripts and data were stored securely according to institutional data protection guidelines. The identity of staff participants in the quantitative data analysis was also anonymised.

Student researchers and participants were not paid for their involvement in this study because our student researchers were doing this work as part of their final year projects. The student participants in interviews benefited from reflecting on their learning processes. Student participation in the intervention study provided additional support for preparing summative assessment, including peer-feedback. Students completing EAT wheels and engaging in conversations with staff were able to contribute to the improvement of assessments on their own course.

Assessment review using the EAT framework

EAT wheels (Figure 1) were used as a practical tool to rank student and staff perceptions of how specific assessments performed in each of the 12 subdomains: Assessment Literacy (AL1-4), Assessment Feedback (AF1-4) and Assessment Design (AD1-4). There are two versions of this wheel with the same information expressed in differing language. The student wheel (Figure 1A) uses fewer technical terms and is phrased around student perceptions of an assessment using rhetorical questions. The language used in the staff version (Figure 1B) of the wheel uses common academic terminology and focuses on assessment practices. The EAT wheel has identified the 12 components from a comprehensive analysis of research and use in practice across disciplines, institutions and countries. The language of the wheel can be adapted to a specific disciplinary context and cohort of students to ensure full access to the approach.

Participants were recruited via announcements in core teaching sessions, distribution of participant information sheets and completion of consent forms. Participants undertook paper-based reviews in a facilitated session outside of core teaching. In this session, run by the student researcher, each sub-dimension was explained to the participants. Using paper copies of the diagram shown in Figure 1A, student participants were asked to rate 6 different Year 1 Biosciences assessments from 4 Bioscience modules/units for the 12 sub-dimensions. Each sub-dimension was rated from 1-5, where 1 signified the assignment did not address the sub-dimension and 5 signified that the assessment addressed the sub-dimension in full. The lecturer version of the framework (Figure 1B) was provided to the staff who designed and/or set the assessments to enable later comparison with the students' views. Student ratings were compiled, and a mean value was taken for each sub-dimension to compare with the staff response.

Interviews with undergraduate students

Student researchers from Cardiff University (final year undergraduate project students, trained in conducting semi-structured interviews) used a series of open questions (see Appendix 1) to explore the experiences and perceptions of 17 undergraduate Biosciences students (6 first years, 4 second years and 7 third years) relating to their Year 1 assessments. Interviews were audio-recorded and transcribed by the student researchers. All transcripts were anonymised, with pseudonyms applied to the participants to ensure anonymity. Informed consent was obtained in writing from all participants.

Qualitative Analysis

Inductive thematic analysis (Braun and Clarke 2006; Braun and Clarke 2013) was used to analyse interview transcripts. Coding was undertaken by a minimum of two independent student researchers to identify codes that appeared to be of significance to the interviewees without any prior determination of themes. This approach was adopted to avoid any preconceptions of expected outcomes from the coding. Transcripts were coded using NVivo software (version 11; Lumivero, Denver, USA). Individually generated codes were discussed between the coders, and an overall set of codes was agreed upon by consensus between them. These codes were then clustered by the coders into categories, and those categories formed overarching themes.

Student-led assessment literacy intervention

Building on the student-staff perception gaps identified using the EAT wheels (Figure 2) and 'affordances for effective assessment' identified from our qualitative data (Figure 3), we co-designed an assessment literacy intervention to scaffold some timely dialogue and feedback that students could use to feedforward to inform preparation for a summative assessment. First-year undergraduate students at the University of Bristol who were about to undertake a 'scientific graphical abstract' assessment, a new type of assessment for them, were invited to take part in an optional student-led collaborative learning session. Students were informed that this optional session would be run by final year undergraduate students, who had made some example answers for the assessment they were about to undertake. The first years were advised that the session would involve them using the marking criteria to give feedback on exemplar submissions, and that they would have the

opportunity to ask questions about the assessment. A traditional instructor-authored written assessment brief was distributed to all first-year students one week before being given the opportunity to attend this optional session. Seven collaborative learning sessions were run in total to accommodate the 87 student participants (from a cohort of 250 = 35% engagement), so sessions could be run in small groups to give more opportunity for dialogue with senior peers. To make the intervention more inclusive, participants were given the option to join an online collaborative learning group or an in-person session.

Pre- and post-intervention survey

A short online survey was designed by a student researcher at the University of Bristol based on their interpretation of the sub-dimensions of the EAT framework. The student researcher chose to focus the survey questions on sub-dimensions within assessment literacy (AL) because they considered these to be most essential for supporting students to understand how assessments work at university. This focus is mirrored in other studies using student groups where students have identified assessment literacy as a priority (Evans et al., 2019).

The survey consisted of 6 questions: (1) Do you know what a good abstract looks like? (2) Do you know the assessment criteria and learning outcomes for this assessment? (3) Do you know how this assessment links with other assessments in the future? (4) Do you know how to get support with this assessment? (5) Do you know what is expected from you? (6) Overall, do you know how to complete this assessment? A scale of 1 to 10 was employed for students to quantify their understanding of the assessment requirements and confidence (1 = minimal understanding and 10 = full understanding). A 10-point scale was chosen by the student researcher to provide more nuance in the responses than a typical 5- or 7-point Likert scale would provide. The students who attended the collaborative learning session were asked to complete the survey before engaging in the 'marking' of exemplars and discussion. All participants were then sent an exact replica of the survey via email the following day. 69 participants completed the survey before the intervention, and 45 completed it again in the week following the intervention. Pre- and post- intervention responses were analysed using an unpaired Student's t-test. An unpaired t-test was used, as, due to anonymity considerations, it was not possible to pair up survey responses for individuals before and after the intervention.

Findings

Using the EAT framework

Student and staff perceptions of how individual assessments were rated for each of the 12 sub-domains of the EAT framework were collated, and the findings for 6 separate assessments are shown in Figure 2. Student and academic staff responses are overlain to identify variations between student and staff perceptions. We evaluated different modes of generic skills assessment: a group presentation, coursework essay, and numeracy exam (Figure 2A-C, respectively) and three discipline-specific skills-based assessments (Figure 2D-F). Participating in the EAT wheel activities was a voluntary exercise, with only 15% of the Year 1 student cohort completing these tasks, so it is important to note that the views of participating students represent an engaged subset who may be less representative of the overall cohort.

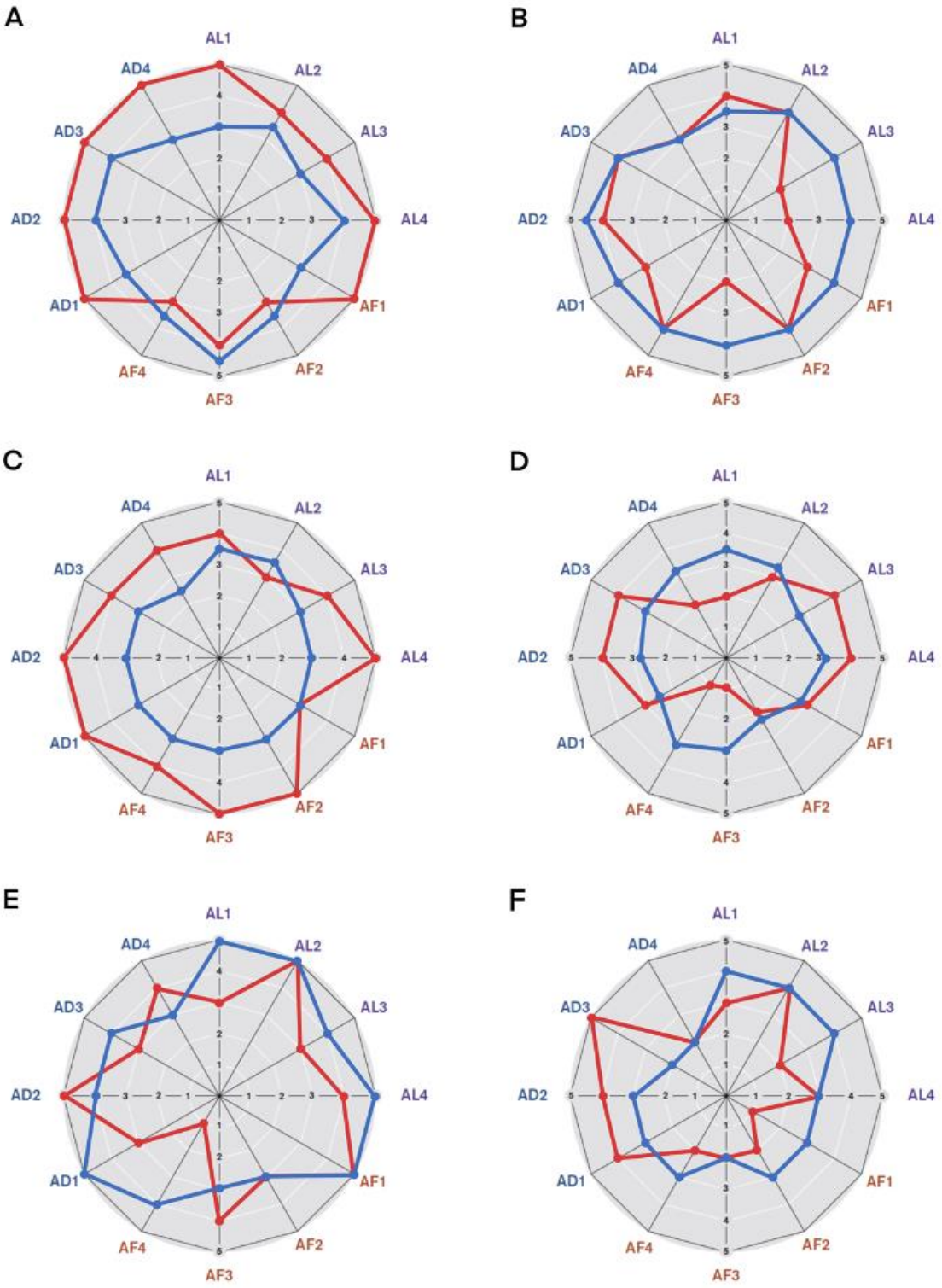

Figure 2. **Combined Lecturer and Student EAT wheels**. Simplified EAT framework with student (blue; averages n=12) and staff (red) rankings overlain for a range of Year 1 assessment types: (A) Group presentation, (B) discipline-specific essay, (C) practical-based numeracy, and discipline-specific skills-based assessments in Cell Biology (D), Anatomy and Physiology (E) and Organisms and Environment (F). There are 4 sub-dimensions of EAT within each dimension of AL = Assessment Literacy, AF = Assessment Feedback, and AD = Assessment Design. For details of subdimensions, see Figure 1. A rating of '1' indicated low

agreement/disagreement and, '5' indicated strong agreement.

An observation of note was that there was no consistent pattern observed across all assessments, and there were no sub-dimensions of assessment practice that were consistently scored as very high (5) or very low (1), by either lecturers or students. In the assessments that focused on presentation, essay writing and numeracy skills (Fig 2A-C), students and lecturers did not perceive any of the sub-dimensions as especially weak, but some of the dimensions relating to feedback on the subject-specific assessments (Fig 2D-F) were ranked very low by staff but not students. Lecturers tended to score 'promoting meaningful focused assessment' (AD2) and 'ensuring access and equal opportunities' (AD3) highly. 'Understanding how assessment elements fit together' (AL2) was the only dimension of the framework that students consistently scored highly. The biggest gaps between staff and student perceptions of the dimensions of the EAT framework were in 'clarifying student and staff entitlement' (AL3), 'preparing students for meaningful dialogue/peer engagement' (AF3) and 'ensuring robust and transparent processes' (AD1).

Staff were generally more positive than students, overall, in their ratings of the group presentation and numeracy skills assessments (Fig 2A and 2C); whereas students were more positive than staff in their ratings of the essay skills assignment (Fig 2B). Student and staff rankings were very mixed for the 3 subject-specific assessments (Figs 2D-F), and there were sub-dimensions in all assessments where the students rated the assessment worse than the staff. The opposite also occurred, where students were satisfied with areas that the lecturer rated poorly. These discrepancies in perception were extremely useful conversation-starters for reviews of the individual assessments with students and staff for future iterations.

Follow-up of EAT analysis - Interviews to explore the EAT outcomes in more depth.

After coding the data from 17 interviews, several themes emerged, which are summarised in Figure 3. The meta themes identified for effective assessment affordances were: Scaffolded opportunities with dialogic and timely feedback, positive staff-student relationships and interactivity and integration to support feedforward.

Assessment Affordances

Scaffolded opportunities with dialogic and timely feedback

Scaffolded activities involved both staff- and student-led activities delivered in an iterative way through a process of ongoing engagement. Principles of constructive alignment (Biggs,1987) and reducing cognitive load (Sweller, 2011) by breaking down tasks into manageable elements were adopted in the design of the assessment. Students especially valued iterative and timely feedback: *"It is useful to have quick feedback as you associate it so closely with the assessment, its' not like you completed it months ago and now you get the feedback you barely even remember what the assessment was about".* The importance of student engagement in the process was also noted: *"doing it bit by bit … as long as you engage in the process, … gained a lot from it."*

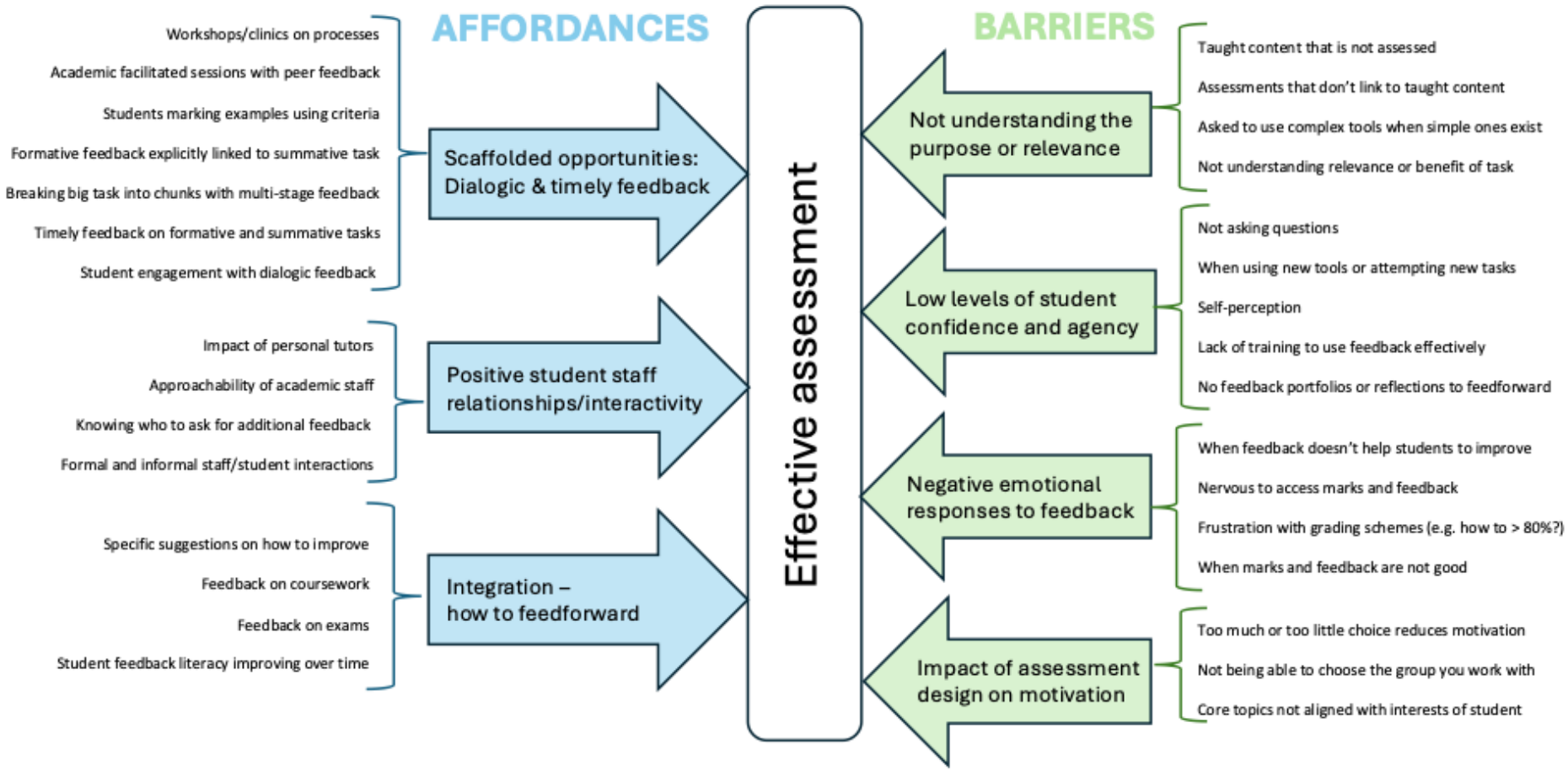

Figure 3. **Key themes derived from coding interviews with undergraduates** highlight the main affordances and barriers to effective assessment. Blue arrows indicate themes for perceived affordances which supported effective assessment; green arrows represent perceived barriers that restricted effective assessment. Each arrow has a summary list of the categories from which that theme was constructed, after inductive thematic analysis.

Positive student-staff relationships/interactivity

The importance of effective self-regulatory skills in knowing who to contact for feedback is highlighted, along with focused feedback on how to improve: *"I just had a meeting now, and she [lecturer] told me how to improve it for the one that counts"*.
Students also highlighted variability in the approachability of lecturers: *"A lot of [lecturers] say you can ask questions or post questions and make you feel comfortable getting in touch … but some are quite intimidating, so there is a difference"*. The EAT Framework highlights the importance of consistency in the quality of support to enable students to effectively regulate assessment for themselves and with others.

Integration – how to feedforward

Students found opportunities to practice knowledge and skills valuable in supporting their understanding of end-of-module assessment requirements: *"I liked the mid-module exams, they are really useful for getting to know what will happen in the end-of-module exam"*. A key element of the EAT Framework is in supporting students' development of feedback literacy skills in being able to recognise important cues to support the development of their work and see the relevance of feedback and how to apply it to future work: *"I thought about it, which was useful to apply the feedback to do better … It's like you have a head start for next year"*.

Barriers to effective assessment

Barriers included students not understanding the purpose or relevance of the assessment task, low levels of student confidence and agency, negative emotional responses to feedback, and the impact of assessment design on student motivation (Fig 3). A recurrent suggestion from students was for staff to introduce assessments personally, during lectures, to clarify expectations.

Students not understanding the purpose or relevance of the assessment task

Addressing student assessment literacy, being mindful of the complexities associated with student transition into and through university, is central to the EAT Framework. Students involved in the research study corroborated the importance of the need for transparency and clear explanation of assessment tasks from lecturers. For example, illustrative feedback from students included:

- *"I don't see the relevance … It wasn't explained very well …"*
- *"I was used to having an introduction to assessments during sixth form, so not having an introduction to it during lectures was new, I felt a bit out of the loop."*
- *"I think with assessments it would be good to have a workshop when one is set which just goes through the instructions and the lecturer can make it clear what they are looking for … and maybe the same sort of thing afterwards with getting people in a group to peer assess and have a lecturer go through what was good and bad so that the students know what to improve for next time"*.

Low levels of student confidence and agency

Students in interviews made frequent references to the 'purpose of' some assessments being unclear, and a general lack of student confidence and agency: *"I don't really ask questions", "I don't know if we got feedback or not" and "I don't know how a good work and feedback should look like"*. This indicates a requirement for assessment literacy interventions that increase transparency and clarity about what students are expected to do (which aligns with AL dimensions of EAT).

To support student agency and autonomy in assessment, the EAT Framework highlights the importance of co-ownership of assessment with students. It is important that students are inducted into how assessment works and what their role in assessment is. A self-regulatory assessment and feedback approach highlights the need to design assessment environments that enable students to take greater responsibility for their learning so that they can internalise the requirements of assessment (Evans & Waring, 2024). Evans (2016, 2022) concept of agentic engagement is central in supporting this so that students can adapt their learning contexts to make assessment more accessible to them. Students need to be trained to do this, and self-regulatory practice must be embedded into assessment design from the outset.

Negative emotional responses to feedback

Many students expressed negative responses to feedback, indicating a need for greater consistency with feedback: *"Feedback is quite varied; I've had some great and some quite unhelpful feedback"*. Students also wanted more accessible feedback (aligned with the AF dimensions of EAT). The following quote highlights a receipt model of feedback: *"Most of it [feedback] is just written down, which is hard to access and is usually very impersonal and brief. It would help to have face-to-face feedback"*. The need for feedback to be transparent and specific is identified. However, as noted in the EAT Framework, for feedback to be most effective, it requires students to engage with assessment criteria and apply them to work themselves directly with lecturer's support. Lecturer feedback without explicit examples of what is meant may be of limited value to many students.

Students also requested greater choice to increase inclusivity and engagement with assessment; however, where choice is provided, the quality of assessment design must be carefully managed to ensure students can achieve equivalence in outcomes related to assessment criteria. The EAT framework highlights the need for negotiated choice with students, as too much choice can be difficult for students whose regulatory skills are not well developed.

Impact of assessment design on student motivation

Students' perceptions of whether assessments are relevant and manageable can have a significant impact on outcomes (Evans, 2016, 2022): *"I just felt like they gave us tasks which were not beneficial, and it made me feel so overloaded and I could not be bothered to do things that are not beneficial"*. Students identified the need for assessment approaches that supported their perceptions of self-efficacy: *"I think we should have more presentations, they boost your confidence"*. The EAT Framework highlights the importance of lecturers choosing the most suitable assessments to demonstrate students' meeting of the learning

outcomes, which needs to be supported by frequent opportunities to test their understanding and to build confidence across a range of assessments.

Student-led assessment literacy intervention

The outputs from the EAT evaluations above were used to inform the development of a student-led intervention to support first-year undergraduate students in preparing for a novel assessment. Insightfully, in alignment with the student interview findings noted above, our student researchers chose to focus on sub-dimensions associated with assessment literacy and feedback, rather than assessment design. Discussions between the supervisor and student researchers identified that this choice was based on the students' feeling they would have more agency in supporting other students with assessment literacy and some aspects of feedback, opposed to assessment design, which they viewed as being totally 'staff-driven'. The intervention created by the student researchers provided a scaffolded opportunity for dialogic and timely feedback. Final year undergraduate student researchers created exemplar answers (graphical abstracts) and facilitated optional sessions for year 1 students to grade and give feedback on these using the marking criteria. During these sessions, the student researchers clearly explained the purpose and relevance of the assessment task and emphasised that the choice of research articles/topics was intended to increase student motivation and agency. The intervention provided an opportunity for the Year 1 students to ask questions about the assessment brief and for us to ensure the requirements were understood.

To provide a pre- and post-intervention comparison, participants were asked to complete a survey outlining their confidence in the assessment task before and after the activity. Analysis of the survey results confirmed that the data were normally distributed, and an unpaired Student's t-test identified that there was a significant difference in participants' responses pre- and post-test. An unpaired t-test needed to be used since students were not asked to identify themselves on the survey responses, and more students completed the test before the intervention. The results showed a significant increase in student confidence across all six areas evaluated: (1) knowing what a 'good' abstract looks like; (2) understanding assessment criteria and learning outcomes; (3) understanding how the assessment links to future work; (4) knowing how to access support for the assignment; (5) knowing what is expected of them; and (6) understanding how to complete the assignment. Cohen's d was used to determine the effect size (Table 1). Additionally, the student researchers who led this intervention informally reported increased confidence in their own communication skills, subject knowledge, team skills, and understanding of assessment literacy because of engaging in this research project.

	BEFORE		AFTER				
	Mean	+/- SD	Mean	+/- SD	p-value	t-value	Effect size (d)
1. Knowing what a 'good' graphical abstract looks like.	3.86	2.44	7.78	1.08	< 0.01	-10.14	1.34
2. Understanding assessment criteria and learning outcomes.	4.96	2.42	7.80	1.29	< 0.01	- 7.2	1.08
3. Understanding how the assessment links to future work.	3.23	2.09	6.62	2.00	< 0.01	- 8.61	1.25
4. Knowing how to access support for the assignment.	4.28	2.16	7.02	1.66	< 0.01	- 7.24	1.08
5. Knowing what is expected of them.	4.77	2.03	7.78	1.48	< 0.01	- 8.57	1.21
6. Understanding how to complete the assignment.	4.45	2.17	7.76	1.54	< 0.01	- 8.87	1.25

Table 1. Comparison of student assessment literacy pre- and post-intervention. Participant assessment literacy before (n=69) and after (n= 45) the intervention. Each survey item was graded on a 10-point scale with 1 = very low confidence to 10 = very high confidence. Statistical analysis results of unpaired samples t-test (112 degrees of freedom) demonstrating a large effect size (Cohen's d >0.8 for each item).

Discussion of impact

This study highlights the potential benefits of engaging students as active partners in both the review of and the support of assessments. Using the EAT framework to compare staff and student perceptions of assessments (Figure 2) and themes emerging from interviews with undergraduate students (Figure 3) helped identify specific areas to enhance for individual assessments.

Arguably, one of the most interesting findings of this study was the consistent difference in how students and staff perceived their engagement in different dimensions of assessment as identified using the EAT wheels. To maximise impact, it is essential that staff and students have shared understandings of their roles in assessment and feedback. This requires staff to make expectations of the student role in assessment explicit and to design assessments that enable students to participate actively in assessment design. Building student confidence and competence in the requirements of assessment is an important element of this.

The EAT Framework is a useful conceptual and pragmatic framework which is easy to implement and transferable to any discipline at the undergraduate or postgraduate level. It can also be used at a range of different assessment types, from individual assessments to module/course/programme levels. Our research found that staff and student perceptions of assessments were significantly different. Therefore, identifying gaps in these perceptions can highlight where productive work can be done to better align expectations and make the assessment processes more transparent and accessible to students. This review process, as outlined above, also provides an easy opportunity for students and staff to collaborate in enhancing assessment and feedback processes. It also helps to identify weaknesses in assessment design, which can support significant enhancements in overall curriculum design.

The EAT Framework evaluation process helped focus attention on key elements of the individual assessments, which then facilitated focused and meaningful dialogue between unit/module leaders and student participants. For example, in the EAT wheel for the group presentation (Figure 2A), students ranked all sub-dimensions lower than the staff did, except for AF2-4, which received equal rankings. The three areas of greatest discrepancy between staff and student perceptions were AF1 (understanding what 'good' looks like), AF1 (knowing how to improve) and AD4 (ongoing evaluation to support development of A&F practices). These areas are crucial in supporting student ownership and self-management of their assessments. Discussions were facilitated between the academic running the assessment and the students to generate some ideas for closing these gaps. As a result of these discussions, example presentations were shared with the next cohort of students, together with marking criteria explaining how to achieve a 'good' mark. Minor changes were made to the feedback form, which forced all markers to provide explicit feedback on how the students could improve. The process of discussing this assessment and the changes made as a result naturally addressed AD4 since this process promoted co-evaluation of assessment and feedback practices on this unit.

Students were more positive than staff in their ratings of the essay skills assignment (Figure 2B). This could be because essays are more in line with what students expect, and what they are used to, rather than different, 'more authentic' assessments, but this would need more in-depth qualitative evaluation to make any conclusions. Although students scored most sub-dimensions highly, the discussions with staff resulted in the co-development of new essay writing tutorials.

The practical-based numeracy assessment was scored lower by students in AL4 (requirements of the discipline), AF2 and AF3 (early opportunities for peer feedback and peer dialogue), and AD1 and AD2 (quality assurance literacy and meaningful assessment) (Figure 2C). Subsequent discussions between students and staff resulted in more numeracy tasks being embedded into coursework and practical classes to make these tasks more meaningful, help students understand why these skills are relevant to the discipline and to give opportunities for earlier feedback, including peer-feedback. Additional workshops were also introduced in the curriculum to focus on key problem areas such as data analysis. Ensuring students are clear about the purposes of assessment is essential to enable them to focus their goals appropriately.

The rankings for the subject-specific assessments (Fig 2D-F) were mixed, but discussions were had with each of the academics who led these assessments to discuss how the assessment and feedback could be improved, and changes were made as a result, e.g., being more explicit about student entitlement in feedback, and introducing opportunities for peer-dialogue and self-evaluation into these units/modules.

In response to student suggestions from the interview data, short verbal assessment briefings were introduced into lectures to increase assessment literacy. Staff were initially reluctant to give up time in lectures to talk about assessments, but found that it saved them time in the long run by preventing multiple emails from students about the assessment. The order of assessments in the timetable was adjusted to reduce the cognitive load on students, and the weightings of assessments were altered to emphasise the importance of certain skills deemed most important within courses. This engagement of students in the review and enhancement of assessment procedures provided benefit to all parties, reinforcing the findings of Bovill et al. (2021). These insights and discussions were unlikely to have occurred, or been as focused as they were, without the scaffolding provided by the comparative 'EAT Wheel' exercise.

The student-led workshops/interventions ran at the University of Bristol, which supported Year 1 students to compare, discuss, mark, and give feedback on a range of student-authored exemplars, increased student confidence in the assessment task (Table 1). Providing feedback to others (either to a peer or through producing an exemplar) enables learners to internalise standards and facilitates skills for the generation of 'internal feedback' (Jones & Alcock, 2014; Nicol et al., 2014; Nicol, 2021). Peer review/marking of student-authored exemplars had a positive impact on the students undertaking the assignment and has since been incorporated as a standard activity in the unit/curriculum. Our case study highlights the potential in giving students agency in designing and leading on solutions to assessment and feedback issues which they themselves have identified. The use of a structured framework, such as EAT, benefited the students in this case, as it provided them with a scaffolded structure through which they could dissect the assessment and guide other students through it.

An unexpected observation from the student interviews and the student-designed and led workshops was that the students felt they had more agency in working to enhance assessment literacy. Assessment design and feedback practices were seen by students as being the purview of academic staff and not open to students to help change. However, students do have valid roles to play in assessment design (Matthews & Cook-Sather, 2021) and enhancing feedback practices, if this barrier can be overcome. This finding highlights the potential limitation of students' initial perceptions of what elements they potentially have agency over and suggests that greater active inclusion of students in the design of assessments would be beneficial. This also requires significant training of academic staff to address prevailing and embedded perceptions of the role of students in assessment (Evans et al., 2024).

A key benefit that the use of the EAT framework provided was a research-informed process by which both students and staff could focus on aspects of assessment enhancement which would have the most positive impact on students' learning. In areas where there was agreement between staff and students that a sub-dimension of assessment was well

developed, this suggested that less emphasis was needed on this aspect for enhancement. However, where there was agreement between students and staff that the sub-dimension was not well-developed, or where there was a discrepancy between student and staff perceptions of the sub-dimension, this was highlighted as a priority area for development. By using an objective process, such as the 'EAT wheel' exercise, these perceptions were surfaced and led to fruitful discussions for potential improvements.

We found that both the facilitators and participants of the student-led support sessions benefitted greatly from the activity. The student facilitators informally reported gaining confidence in their subject knowledge and in leadership and communication skills. The participants gained an opportunity to further explore the criteria and parameters of the assessment, and internalise the standards required. As cohorts follow through this exercise in future, the process will become self-sustaining, as students who experienced the workshops will be able to become workshop facilitators in the future.

Conclusions and recommendations

The EAT framework (Evans, 2016, 2022) provides a research-informed and validated (Evans & Zhu, 2023) scaffold for examining assessment and feedback procedures. The framework provides a useful heuristic and objective starting point for discussions between students and unit/module leaders. The 'using EAT in practice' guide also provides a useful source of support for those wishing to develop their assessment practice with students (Evans et al., 2022). This study focuses on individual assessments; however, the framework could be used more widely and formally to evaluate and enhance assessment and feedback practices across a school/department/faculty, and university (Evans & Bunescu, 2020) to determine broad areas of assessment and feedback that require enhancement. Follow-up activities, such as conducting staff-student focus groups with questions framed around the identified mismatches in staff and student perceptions, student-staff partnerships can work towards genuinely co-developing solutions to assessment and feedback issues at programme and/or institutional levels.

Engaging student researchers to facilitate the gathering of data, students are engaged as partners in both the identification of the issues and their solutions. Emphasis needs to be placed on the potential agency that students possess in all areas of the assessment enhancement process, not just areas around assessment literacy. Encouraging students to play an active role in enhancing the quality of feedback provision, including the learning potential of peer- and self-feedback provision, enhancing inclusive practices and authentic assessment design, and transparency of the assessment process, are all areas where students can play active and prominent roles. Students' active engagement in the assessment feedback process is contingent on academics providing high-quality training for students so that they can engage meaningfully and in a genuine co-partnership role (Evans, 2022).

Future work

Future research could use the EAT wheels at the degree/programme level to evaluate existing gaps in broader perceptions of students and staff on assessment and feedback, and involve students as partners for the enhancement of academic practices. Evaluations could

include changes in student perceptions of practices, the level of student engagement, and perceptions of agency.

An important factor to investigate would be identifying perceptions of academic staff acting as barriers to engaging with students as partners for assessment design review and enhancement. Additionally, it would be useful to identify the holistic impact of using the EAT framework on assessment and feedback literacies. Specifically, does the use of the EAT framework enhance student and staff understandings of the aspects of assessment defined by the 12 EAT sub-dimensions?

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Appendix 1

Interview questions:

How well prepared did you feel for your first assignment at university and how did you feel about the assignment itself? (Prompt: do you think it was fair? Why or why not?)

You received a welcome pack at the start of year 1 with assessment information and dates. How useful was this to you, and do you have any suggestions for improving it?

How do you feel the style of assessment in year 1 was different to your previous education? (Prompts: Was anything better about the assessment style at college/school? What has been better about the assessments at university so far?)

What are your general thoughts about feedback at university? (Prompts: What different forms have you experienced? How well do you feel you can access feedback and use it effectively to improve your work?)

How has feedback you have received on assessments been useful for future purposes? (Prompt: e.g. Has feedback on year 1 essays and/or reports increased your confidence to write good essays/reports in the future? What aspects of feedback are useful / not?)

What types of feedback do you feel would be helpful for your learning and understanding? (Prompt: Do you have any suggestions for what you would personally find useful other than just text saying what was correct and incorrect?)

Do you prefer coursework or exams and what is the reason for this?

Which skills do you feel you have explored and developed during the assessments so far at university? (Prompt: how well supported do you feel in terms of developing key skills like referencing, collecting good sources, formatting correctly etc.?)

Which of your assessments so far do you feel has been the most successful at developing your skills and understanding and why? (Prompt: you can go further than just the skills component assessments)

Can you discuss the academic qualities which you would like to have developed by the end of year 1 and by the end of your course? (Prompt: Do you feel like any skills are underdeveloped on this course?)

Can you describe your least favourite assignment so far and what was bad about it? (Prompt: Did you feel any of the assessments were not beneficial to you? Why?)

Can you provide an example of when you were happy with the quality of feedback you received? What made it valuable?

Do you have any other comments or suggestions relating to feedback and assessment?