



## **Voices in forensics: exploring student perceptions of oral presentations and podcasts as assessment tools in forensic science education**

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### ***Abstract***

Innovative assessment methods are increasingly being explored to enhance student engagement and learning outcomes. This study examines the effectiveness of podcast assessments as an alternative to traditional written and oral assessments in higher education for forensic science. A mixed-methods approach was used to analyse student perceptions through thematic and Likert-scale feedback on a podcast assessment. Results (n=13) showed that students generally found podcast assessments highly engaging and preferred them over traditional written and oral assessments. Qualitative feedback highlighted deeper engagement, creative expression and a more conversational and flexible format. However, challenges included technical skills, structuring content and the lack of immediate audience feedback. While the majority supported integrating more podcast assessments into future coursework, a minority preferred traditional presentations for their public-speaking benefits. These findings suggest that podcast assessments provide an engaging and student-centred alternative to conventional formats, aligning with contemporary shifts in higher education pedagogy. To maximise their effectiveness, educators should offer structural and technical support while considering hybrid or flexible assessment models. Future research should explore the long-term impact of podcast assessments on learning outcomes across various disciplines.

**Keywords:** podcast; assessments; communication; presentation; higher education.

## ***Introduction***

The development of effective communication skills is a cornerstone of higher education and professional success, particularly in scientific disciplines. The field of forensic sciences requires professionals to frequently communicate complex scientific findings to diverse audiences, including law enforcement, legal professionals and jurors (Cameron et al., 2013). This demands not only technical accuracy but also the ability to convey information clearly, persuasively, and confidently (Marciano and Maynard, 2023; Preece, 2024). In forensic science education in the United Kingdom, assessment methods must align with professional competencies outlined by organisations such as the Chartered Society of Forensic Sciences (CSFS). Public speaking and oral presentations are key examples of transferable skills that can significantly improve employability (Clokie and Fourie, 2016). As such, higher education institutions must emphasise oral presentations as a core component of assessment to foster these essential skills (Clokie and Fourie, 2016; Ireland, 2016; Tsang, 2020; Suardika et al., 2023). While oral communication skills are widely recognised as crucial for student development, traditional oral presentations may not be the most effective method for all learners. Given the increasing integration of digital media in forensic science education and practice, understanding the role of podcasting as an assessment tool is crucial (Kummer et al., 2022). As forensic science relies on concise communication of complex information, podcast assessments offer a flexible way to enhance these skills while adapting to modern educational approaches (Cameron et al., 2013; Wakefield, Pike and Amici-Dargan, 2023).

## ***Oral presentations in higher education***

Traditional oral presentations have long been a staple of university-level assessments. Typically delivered in a live setting before peers or instructors, presentations are designed to evaluate students' abilities to synthesise information, organise ideas, and articulate their understanding under time-constrained conditions (Živković, 2014). While effective in developing public speaking skills, traditional oral presentations also present significant challenges. Several studies have shown that anxiety and lack of confidence can hinder performance, with a survey by Russell and Topham (2012) finding that over 80% of students viewed oral presentations as a major source of social anxiety. Similar findings were reported by Grieve et al. (2021), Ireland (2016) and Tsang (2020). These stressors

may disproportionately impact certain groups, such as introverted students or those with specific learning difficulties, potentially limiting the inclusivity of this assessment format.

### ***Alternative approaches to oral presentations***

In response to the challenges discussed, educational researchers have explored alternative approaches to oral presentations (Kho and Ting, 2023). Consequently, practitioners have pursued different strategies aimed at alleviating the anxiety associated with oral presentations, including the use of shorter presentations (Heideman and Laury, 2022). Another alternative is the use of student-created podcasts, which have gained popularity in recent years due to their accessibility, versatility and alignment with modern digital communication practices (Wakefield, Pike and Amici-Dargan, 2023). The popularity of true crime podcasts, such as *Serial* and *The Teacher's Pet*, has demonstrated how forensic science can be effectively communicated to broad audiences (Pâquet, 2021). Podcasts provide a platform for disseminating forensic knowledge to both professionals and the general public, breaking down barriers to traditional academic resources (Persohn et al., 2024). By covering real-world cases and forensic methodologies, including deoxyribose nucleic acid (DNA) analysis, fingerprinting and toxicology, these podcasts help demystify forensic science while fostering public interest (Berry, 2015; Greer, 2017; Sherrill, 2022). For forensic professionals, podcasts offer continued educational and networking opportunities, featuring guest experts and discussions on emerging trends (Armstrong, Tucker and Massad, 2009; Paterson et al., 2015; Mullhall, 2023).

### ***Podcast-based assessments in higher education***

Podcast-based assessments involve students recording and submitting audio presentations on assigned topics, allowing them to engage with course material and communicate their ideas without the immediate pressure of live audience feedback (Powell and Robson, 2014). This format shifts the focus from public speaking performance to content quality and clarity, potentially creating a more equitable assessment environment. Podcasts also align with digital literacy skills, increasingly recognised as essential for professional and academic success, especially with digital forensics becoming a more prominent field (Casey, 2011; Holm, 2024; Yuan et al., 2024). Whilst many studies have

discussed the use of podcasts as a way of disseminating information, few focus on them as core assessments (Chan and Lee, 2005; Dale, 2007; McGarr, 2009; McSwiggan and Campbell, 2017). Byrne (2016) found that students in an undergraduate history course engaged more deeply with content and improved their critical thinking skills. However, the study also highlighted technical challenges and time constraints as potential barriers to implementation. Similarly, Kemp et al. (2012) found that student-produced podcasts in geomorphology promoted creativity and engagement, although some students expressed concerns about the additional workload. Powell and Robson (2014) found that students enjoyed the format but, like the other studies in this area, struggled with technical skills.

### ***Inclusive podcast assessments***

Podcasting offers a flexible and potentially more inclusive alternative to traditional oral presentations. This benefits students with anxiety, neurodivergence or linguistic differences (Ibrahim and Daud, 2013; Hamilton and Petty, 2023). Additionally, while some students thrive using recorded formats, others may struggle with a lack of technical knowledge (Kemp et al., 2012). Chan and Lee (2005) showed that podcasts helped reduce students' pre-class anxiety about accessing or understanding course information. This suggests that pre-recorded audio formats create a less intimidating learning environment, and a similar finding was noted by Perry (2024). Hitchcock et al., (2021) found that students in social work education felt more comfortable expressing ideas in recorded formats, as opposed to live presentations. Despite the benefits, some studies raise concerns about accessibility and authentic assessment validity. Hew (2009) found inconsistent methodologies in evaluating the effectiveness of podcasts, and Frydenberg (2008) cautioned that podcasts should not replace face-to-face interactions in disciplines requiring real-time communication. Similar findings were noted in Abt and Barry (2007) and Hopkins (2012). These studies show that, whilst student-generated podcasts offer advantages such as increased engagement, reduced anxiety about public speaking and alignment with digital literacy skills, they are not without challenges.

Given the mixed findings with regard to using podcasts as an assessment method, more research should explore how to best integrate podcast-based assessments in a way that supports diverse student needs while maintaining academic rigour (McGarr, 2009; Holm, 2024). Gathering feedback from students on their authentic assessments is paramount to

understanding their efficacy and impact. Authentic assessment, which emphasises real-world application and competence (Gulikers, Bastiaens and Kirschner, 2004), has been increasingly recognised as a means of bridging the gap between theoretical knowledge and professional practice (Sokhanvar, Salehi and Sokhanvar, 2021; Ajjawi et al., 2024). Educators must also consider how best to scaffold technical skills to ensure all students can participate equitably in podcast-based assessments. However, implementing newer, more modern assessments may garner more engagement. Brooks and Solheim (2014) demonstrated that incorporating emergent or more contemporary approaches to teaching and assessment can have positive and significant effects on student learning for all levels of abilities. Overall, questions remain about students developing their own podcasts to display their own learning and enhance their oral communication skills (Emanuel, 2005). Understanding these factors is crucial for educators seeking to implement authentic assessment practices that cater to diverse student needs and promote inclusivity (Dunlosky et al., 2013).

## ***Aims and objectives***

The potential benefits of podcast assessments are not limited to stress reduction. They also encourage students to engage with the subject matter in a meaningful way (McGarr, 2009). The process of planning, scripting and recording a podcast requires careful consideration of audience, structure and delivery, which are essential components of effective communication (Emanuel, 2005). In the context of forensic science education, the use of podcasts as an assessment tool holds particular promise (Hackman, 2021). Forensic science students must develop strong oral communication skills to succeed in real-world scenarios such as presenting expert testimony in court or collaborating with multidisciplinary teams (Hackman, 2021; Preece, 2024). By providing a platform for students to practise and refine their communication skills in a less intimidating setting, podcast assessments could serve as an effective stepping stone toward more confident public speaking. This study seeks to examine forensic science students' preferences regarding academic assessments using oral presentation techniques (McGarr, 2009). Key questions to address include:

- Do students perceive podcasts as a preferable alternative to traditional oral presentations?

- How do podcasts impact student engagement, learning outcomes and skill development?
- What challenges do students encounter when creating podcasts and how can these be mitigated?

Answering these questions will provide valuable insights into the feasibility and impact of podcast assessments in higher education. The significance of this study extends beyond the specific context of forensic science education. Its findings will contribute to the broader field of educational research by providing evidence-based insights into the use of podcasts as an assessment tool in forensic science (Wakefield, Pike and Amici-Dargan, 2023). As universities continue to adapt to the evolving needs of students and the demands of the modern workforce, innovative approaches to oral assessments are essential (Bartman and Quinlan, 2024).

## ***Methodology***

### **Ethical approval**

Ethical approval for this study was granted by the Faculty of Health Sciences at the University of Hull (Ethics No 24-25.027). To ensure participant confidentiality, all responses were collected anonymously through an online questionnaire, with no identifying information recorded. Students were informed that participation was voluntary, and participants' consent was given explicitly in completing the questionnaire.

### **Study design and participants**

This study employs a mixed-methods approach, integrating both quantitative and qualitative methodologies to evaluate student perceptions of a podcast-based assessment. The assessment was introduced within a newly developed final-year module, Environmental Forensic Science, as part of the BSc Forensic Science programme, within a UK-based higher education institution. The module enrolled a total of 17 students, all of whom were required to complete a podcast as part of their oral communication assessment, contributing 40% to their overall module grade. The sample size was determined based on feasibility and the qualitative nature of the study, in which in-depth insights were prioritised over statistical generalisability. Participants represented a diverse

range of experiences within the course, ensuring a breadth of perspectives despite the limited number. Students were given the autonomy to form groups of up to three individuals and select a topic relevant to the module content, including areas such as ecotoxicology or entomology. To facilitate the production of their podcasts, students received guidance on recording techniques, available software and the assessment criteria. While the structure of the podcast was left open to student creativity, examples were provided, such as case study discussions inspired by the *Serial* podcast or panel-style discussions. This flexibility allowed students to engage with the material in an innovative and personalised manner. Students were also told to make the podcasts accessible to someone without a scientific background but with an interest in the subject they were presenting. Upon completion of the assessment, students were invited to participate in an anonymous questionnaire designed to capture their experiences and perceptions regarding the podcast format. This feedback serves to evaluate the effectiveness of podcasts as an alternative to traditional oral presentations in forensic science education.

### **Data collection**

The questionnaires were made available to all students enrolled on the module. This was an online questionnaire, which was released after the assessment deadline had passed, and participants were encouraged to submit their responses anonymously. This approach was designed to ensure confidentiality and encourage honest and unbiased feedback from respondents (DeJonckheere et al., 2024). The questionnaire included a combination of open-ended and rating-scale questions to gather both qualitative and quantitative data. The open-ended questions provided participants with an opportunity to express their thoughts and opinions in more detail, allowing for a richer understanding of their experiences. Meanwhile, the rating questions used a Likert scale format, through which respondents could indicate their level of agreement or disagreement with various statements (Batterton and Hale, 2017). The Likert scale ranged from 1 (strongly agree) to 5 (strongly disagree), with a neutral option (3) in the middle. These questions, which are presented in Table 1, covered a range of topics related to the assessment process and participants' experiences, aiming to identify areas of strength and opportunities for improvement.

**Table 1. Questionnaire on student perceptions of podcast and oral presentation assessments.**

Question No	Question	Likert/ Open-ended
1	Creating a podcast kept me engaged with the course material	Likert
2	I found the podcast assignment more interesting than traditional written assignments.	
3	I found the podcast assignment more interesting than traditional oral assessments (such as presentations).	
4	The assignment improved my verbal communication skills.	
5	I would like to see more podcast assignments in future courses.	
6	I felt that the podcast/oral presentation format allowed me to be more creative in presenting my ideas.	
7	I found the podcast/oral presentation assignment less stressful than traditional oral presentations.	
8	In what ways did creating a podcast/oral presentation enhance your understanding of the course material? Please provide specific examples.	Open-ended
9	What challenges did you face in understanding the content while preparing your podcast/oral presentation, and how did you overcome them?	
10	Where appropriate, what factors influence your preference for a podcast, or a traditional oral presentation?	
11	How do you think podcast/oral presentation assignments could be improved to better suit your learning style and preferences?	
12	Is there anything else you would like to share about your experience with podcast/oral presentation assignments that hasn't been covered in previous questions?	

**Data analysis**

A thematic analysis was conducted following Braun and Clarke's (2006) framework.

Thematic analysis was applied to open-ended questionnaire responses, allowing for the

extraction of key themes related to student perceptions of the assessment (Christou, 2022). Unlike content analysis, which primarily focuses on quantifying responses, thematic analysis allows for a more interpretative approach, identifying patterns and underlying themes that emerge organically from student reflections (DeJonckheere et al., 2024). Additionally, this method is well-suited for small sample sizes, ensuring that rich, detailed responses are not overlooked in favour of rigid coding structures (Saunders et al., 2023). The reliability of this approach was enhanced by triangulating the data with the quantitative survey results, allowing for a more comprehensive understanding of student perceptions (Creswell and Plano Clark, 2017). Likert-scale responses were analysed by calculating mean scores and standard deviations to determine overall trends in student attitudes (Batterton and Hale, 2017; Sullivan and Artino, 2013).

## Results

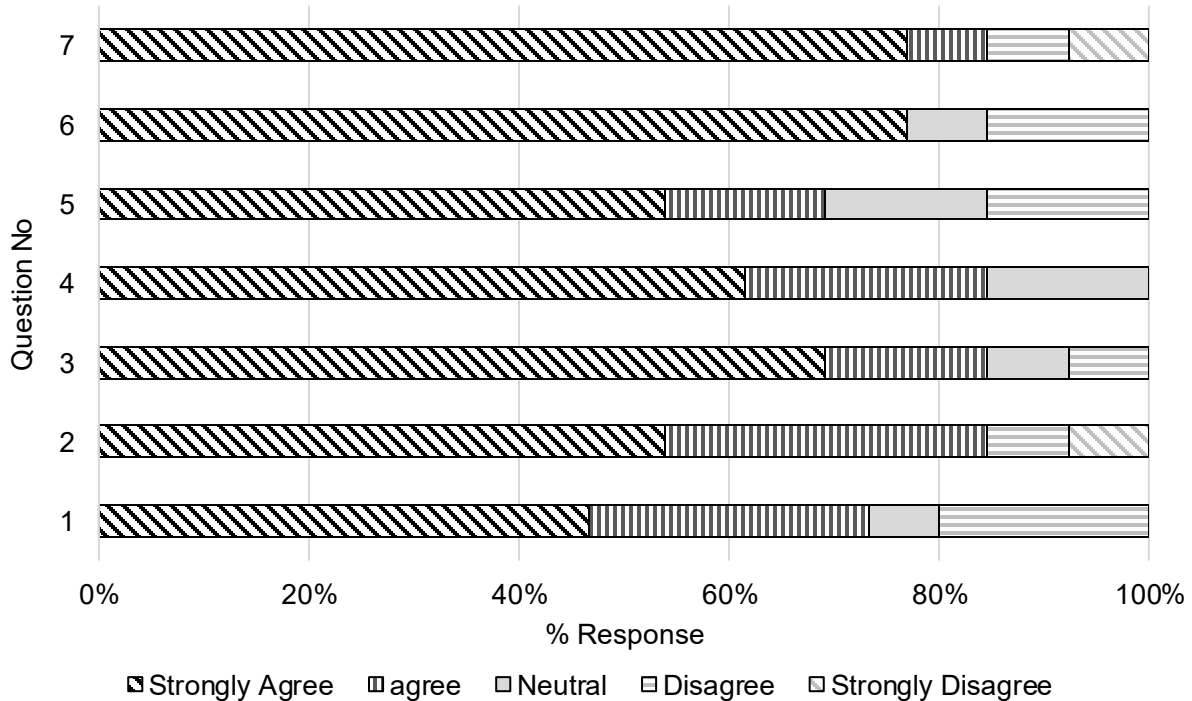
Of the possible 17 responses, 13 participants contributed to the questionnaire. The results of the first seven questions, involving the Likert scale, are shown in Table 2. Figure 1 shows the % response for each of the questions 1-7.

**Table 2. Descriptive statistics for Likert scale responses on podcast and oral presentation assessments.**

Question No	Question	Mean	± Standard Deviation
1	Creating a podcast kept me engaged with the course material.	1.69	0.95
2	I found the podcast assignment more interesting than traditional written assignments.	1.85	1.28
3	I found the podcast assignment more interesting than traditional oral assessments (such as presentations).	1.54	0.97
4	The assignment improved my verbal communication skills.	1.54	0.78
5	I would like to see more podcast assignments in future courses.	1.92	1.19
6	I felt that the podcast/oral presentation format allowed me to be more creative in presenting my ideas.	1.62	1.19
7	I found the podcast/oral presentation assignment less stressful than traditional oral presentations.	1.62	1.33

The Likert scale ranged from 1 (strongly agree) to 5 (strongly disagree), with a neutral option (3) in the middle.

**Figure 1. Results of responses to each of the questions on the Likert scale.**



Corresponding questions can be found in Table 1 and Table 2.

The results suggest that students strongly agreed that the podcast assessment maintained their engagement with the course material ( $1.69 \pm 0.95$ ). Students also preferred this format over written assignments ( $1.85 \pm 1.28$ ) and oral presentations ( $1.54 \pm 0.97$ ), indicating that podcasts were perceived as both engaging and preferable. Skill development, particularly in verbal communication, was also highlighted, with a mean response of  $1.54 (\pm 0.78)$ , suggesting students found the format beneficial for articulating ideas effectively. Furthermore, students valued the creativity allowed by podcasts ( $1.62 \pm 1.19$ ) and found the assignment format less stressful than traditional oral presentations ( $1.62 \pm 1.33$ ). A strong willingness to see more podcast assessments in future courses was also evident ( $1.92 \pm 1.19$ ). Only one instance of ‘strongly disagree’ was recorded, in response to question seven: ‘I found the podcast/oral presentation assignment less stressful than traditional oral presentations’. The student who disagreed indicated a personal preference for traditional classroom presentations.

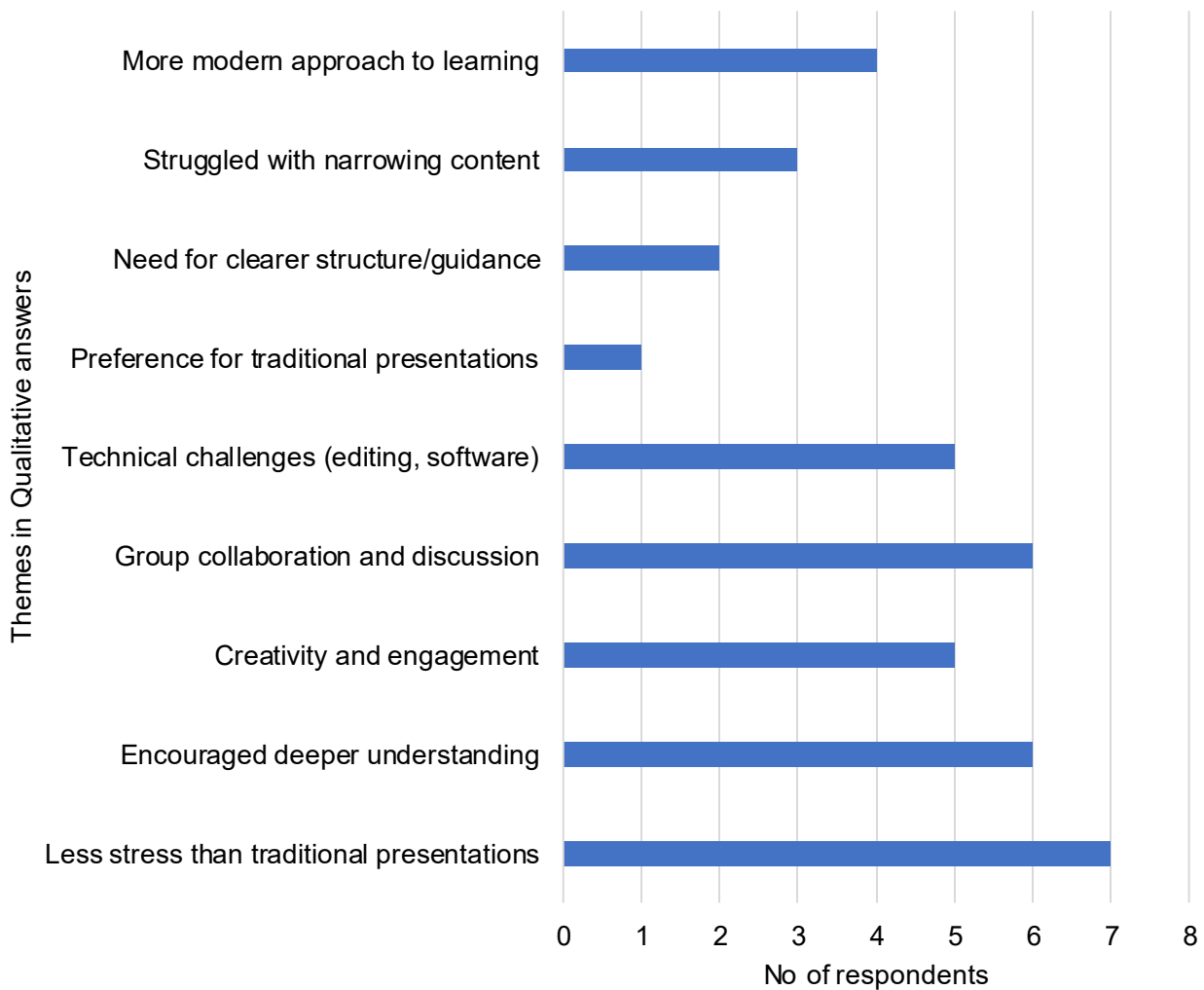
### Thematic analysis

The remaining questions in the questionnaire were worded to receive open-ended responses. Table 3 shows some of the themes and sub-themes that were noted in participants' answers, numerically represented in Figure 2. These provided further insights into students' experiences with the oral podcast assessments.

**Table 3. Thematic analysis of the open-ended responses on podcast and oral presentation assessments.**

Theme	Frequency	Example Quote	Positive/ Negative
Less stress than traditional presentations	7	'A podcast is less intimidating as there isn't really an audience and it can be edited to ensure the best work.'	Positive
Encouraged deeper understanding	6	'Making the podcast helped me go deeper into the content because I had to explain things clearly.'	Positive
Creativity and engagement	5	'It gave me a chance to be creative and engage with materials in a way traditional assignments wouldn't allow.'	Positive
Group collaboration and discussion	6	'As a group, we could bounce off each other, which made it more engaging and easier to understand the topic.'	Positive
Technical challenges (editing, software)	5	'Editing was a bit tricky, and working out how to transcribe it was nothing short of a nightmare.'	Negative
Preference for traditional presentations	1	'I actually prefer standing in front of a crowd, as I find it easier to speak when presenting to an audience.'	Negative
Need for clearer structure/guidance	2	'It would help if there were some guidance on how to structure the podcast early on, like an outline or template.'	Negative
Struggled with narrowing content	3	'As a group, we found it tricky to narrow down what was most important to include in the podcast.'	Negative
More modern approach to learning	4	'I think it has improved my oral skills and made the course feel more modern.'	Positive

**Figure 2. Frequency of the thematic themes identified from the open-ended responses on podcast and oral presentation assessments.**



**Engagement and learning**

Many students reported that the podcasts enhanced their understanding of course material by encouraging deeper engagement. Some likened the experience to ‘teaching’, reinforcing their grasp of the content by explaining it in their own words. Students expressed that the ability to listen to their own recordings helped them reflect on their ideas and refine their communication skills. When asked about how the podcast enhanced understanding, many of the responses related how they did more in-depth research. One student stated:

Making the podcast helped me go deeper into the content because I had to explain things clearly for my 'cohosts' to understand and ask questions. It was like teaching someone else, which really helped me understand the concepts better.

Others appreciated the opportunity to listen back to their own recordings, which helped refine their communication skills.

### **Comparison to traditional presentations**

Students expressed mixed opinions on how podcast assessments compared to traditional presentations. Most of the respondents said they like the flexibility of the podcast, allowing for a more relaxed atmosphere without an audience, and allowing a better quality of presentation. Making the work a more conversational, and more of a teaching opportunity rather than it feeling like a scrutinised assessment in front of peers and assessors made the assessment less daunting. One student stated:

I do not like traditional presentations as I spend a lot of time preparing slides and trying to make them perfect. The podcast was more free-flowing, and we were allowed to take it wherever we wished, which made it much more natural and less rehearsed.

Another student explained that the podcast format enabled them to better highlight their knowledge without feeling 'under the microscope'. However, some students still valued traditional presentations for the immediate feedback and public speaking experience they provide. 'I prefer traditional oral presentations as I find it easier to speak when I'm doing it directed towards someone, such as how I would when presenting evidence in the courtroom', one student explained. Three of the students did appreciate the need for the traditional presenting style, noting that public speaking, and presenting in front of peers, is still a vital skill.

### **Creativity and expression**

A number of students highlighted the creative potential of podcasting, appreciating the opportunity to experiment with tone, structure and sound elements. 'The podcast allowed me to present my ideas in a more unique and engaging way, without being constrained by PowerPoint slides or scripted speech', one student commented. Another student noted, 'We were able to add music and sound effects, making our presentation feel more like a professional production rather than a standard presentation'. The ability to infuse personality and conversational style into their work was seen as a key advantage. 'I felt like I could express myself more naturally, rather than just reading off a script or

memorising lines', stated another student. However, some found balancing creativity with academic rigour challenging, requiring clear structuring of their content.

### **Technical challenges**

Some students found the technical aspects of podcasting – such as recording, editing and adding effects – difficult, especially those unfamiliar with audio software. Others struggled to organise their content effectively, particularly when structuring their discussion in a clear and engaging manner. Additionally, topic selection was a challenge for some students, as they found it difficult to narrow their focus within the given time constraints.

### **Discussion**

The results of this study suggest that podcast assessments were overwhelmingly well received by students, particularly in terms of engagement, interest and skill development. The consistently low mean scores (1= strongly agree with the statements) across all questions indicate strong agreement with the benefits of this format of assessment. The engagement score (1.69) and preference over written (1.85) and oral assessments (1.54) suggest that students found podcasts to be a more enjoyable and motivating assessment method. This aligns with findings from Perry (2024), who demonstrated that podcasting as an assessment tool increased student motivation and reduced anxiety compared to traditional oral presentations. The findings of this study agree with similarly published literature in different fields, where podcasts are generally favoured over the traditional formats of oral presentations (Chan and Lee, 2005; Abt and Barry, 2007; Frydenberg, 2008; Hew, 2009; Hopkins, 2012; Kemp et al., 2012; Powell and Robson, 2014; Perry, 2024). Unlike traditional oral presentations within the field of forensic science, which simulate expert witness testimony and case briefings, podcasts offer a structured but less pressured environment for students to refine their verbal communication (Hackman, 2021).

A key trend observed in the data was the link between creativity and engagement. Students who felt that the podcast format allowed for more creativity (1.62) were also more likely to report higher engagement levels. This is consistent with Powell and Robson's (2014) finding that students appreciated the opportunity to experiment with different styles in learner-generated podcasts, leading to enhanced enjoyment and motivation.

Additionally, Byrne (2016) noted that podcasting encouraged deeper critical thinking and analytical skills, which may also explain why students in this study reported greater engagement when given creative freedom.

The results further indicate that students felt podcast assessments strongly improved their verbal communication skills (1.54), with many reporting that the format helped them articulate ideas more clearly and develop confidence in their speaking abilities. These findings reinforce the arguments made by Hitchcock et al., (2021), who emphasise the experiential learning benefits of podcasting in social work education. The ability to record and edit their work likely contributed to this sense of confidence, as students could refine their delivery before submission. A notable advantage of podcast assessments over traditional oral presentations was the reduction in stress levels, with a mean score of 1.62. This supports previous research by Chan and Lee (2005), who found that recorded audio formats reduced pre-class anxiety among undergraduate students. By allowing students to present in a pre-recorded format, podcast assessments appear to mitigate some of these challenges, making them a more inclusive, and authentic alternative assessment. In this study, students were not marked on sound effects or addition of any other material. Students were graded on their clarity in communicating difficult scientific concepts to a non-scientific audience and the accuracy of the information.

Despite the advantages, technical difficulties and content organisation challenges emerged as key concerns for some students. These findings mirror those of Powell and Robson (2014) and Chan and Lee (2005), who noted that while students found podcasting engaging, some struggled with the additional workload and technical requirements.

In this study, approximately half of the participants expressed concerns about podcasts as an assessment tool. Some students highlighted the importance of developing live presentation skills, arguing that the ability to articulate ideas in real time is a vital professional competency, similar to findings by Apat et al. (2023). Several students also expressed concerns about the lack of real-time audience interaction, skills that are essential for professional communication. There is a similar finding noted in Frydenberg, (2008). In oral presentations, there is instant audience feedback in the form of facial and bodily cues, which are missing from podcasts (Sümer et al., 2021; Sagliano et al., 2022). It is also possible that the students use that feedback as an indication of how well their presentation has gone, giving them a sense of the grade they can obtain. Hence, their

preference for, or understanding of the need for, live presentations. While traditional oral presentations remain an essential skill-building exercise, integrating podcasts as a complementary assessment could provide a more inclusive and flexible approach that accommodates diverse learning styles (Darling-Hammond and Snyder, 2000). Future studies should explore the long-term impact of podcast assessments on student confidence, academic performance and professional communication skills, as suggested by Holm (2024) and McGarr (2009).

### ***Limitations and future considerations***

While the findings provide valuable insights into student perceptions of podcast assessments, some limitations must be acknowledged. The sample size (n=13) was relatively small, limiting the generalisability of findings. Although qualitative research prioritises depth over breadth, a larger and more diverse sample could enhance representativeness and provide a broader understanding of student experiences (Creswell and Plano Clark, 2017). Additionally, the self-selecting nature of participants may introduce response bias, as students with particularly strong opinions – positive or negative – may have been more likely to participate (Mazor et al., 2002; Yarrington and Craske, 2024). Furthermore, as the study was conducted within a single UK higher education institution, the findings are influenced by the specific pedagogical frameworks, assessment standards and student demographics of that setting. Different institutions or international contexts may yield varying perspectives on the use of podcasts as an assessment method within the different disciplines of forensic science (Hopkins, 2012). Another limitation is the study's short-term focus, capturing student perceptions at a single point in time without evaluating the long-term impact of podcast assessments on learning outcomes or skill development (Wang and Cheng, 2020). Larger multi-institutional studies and alternative data collection methods could enhance understanding of podcast assessments' effectiveness and challenges in higher education. Comparing traditional oral assessments with the more novel podcast creation assessments would help capture more realistic results from students.

While most students supported the idea of incorporating more podcast assessments in future courses, some suggested that additional support should be provided to help them navigate the technical and structural challenges of creating a podcast. These findings are

consistent with Powell and Robson (2014), who found disparities in student confidence regarding technical skills when producing podcasts. Providing structural guidance in the form of templates, outlines or sample podcasts could help students develop a clearer framework for their work. Additionally, offering technical support, such as resources or workshops on recording and editing, would alleviate concerns about the technical aspects of production, a recommendation echoed by Frydenberg (2008). Some students also expressed an interest in hybrid formats, such as combining podcasts with interactive elements like live discussions or question-and-answer sessions. This aligns with Perry (2024), who highlighted the potential for blended assessments that incorporate both recorded and live components to maximise student engagement. Moreover, allowing students to choose between podcast assessments and traditional oral presentations could accommodate diverse learning styles, a recommendation supported by Ireland (2016) and Tsang (2020), who argue that assessment flexibility enhances inclusivity in higher education.

One student suggested 'possibly combining a podcast with visuals if possible—like a video podcast'. This is a way forward for aiding student engagement and allowing a greater show of skill, research and understanding. Students also asked for feedback on a draft. This would be very time consuming, but some compromise could be reached, such as looking over a draft layout of the podcast and adding an element of marking to this to encourage more engagement. This suggestion highlights the potential for more dynamic multimedia assessments, aligning with Letón et al. (2018), who examined the effectiveness of incorporating visuals into audio-based learning. Refining podcast assessments with these considerations would boost engagement while upholding academic standards. Future research should explore their integration across forensic disciplines, comparing them with oral presentation assessments, and assess their long-term effectiveness.

## **Conclusion**

The results of this study reveal that students consistently rated podcast assessments highly for engagement, creativity and stress reduction. The low standard deviations for verbal communication and engagement responses indicate a strong consensus among students regarding these benefits. Many preferred podcast assessments over traditional

written and oral formats, signalling a shift toward more dynamic, student-centred evaluation methods. However, a slightly higher standard deviation in the willingness to see more podcast assignments suggests some variability in opinions, with a minority expressing reservations. Overall, the findings suggest that podcast assessments enhance student engagement and creative expression while providing a compelling alternative to traditional methods. Given the professional demands of forensic science, in which effective communication to both expert and lay audiences is crucial, podcasts should complement live presentations in assessments to better prepare students for oral examinations.

Despite their positive reception, some students noted challenges, such as the lack of immediate audience feedback and technical production issues, indicating that podcasting may not be the universally preferred method to present forensic science. Addressing these concerns and offering flexible assessment options could further enhance effective use of podcasts as an assessment. These results contribute to the growing support for innovative assessment methods in forensic science education that align with the evolving pedagogical landscape. Future research should explore the long-term impact these assessments have on student learning outcomes and effectiveness across various disciplines within forensic science, encouraging deeper engagement and equipping students with essential skills for success.

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