

Supporting Information

Fostering Transversal Competences for Sustainable Development: A Podcast-Based Model for Educational Innovation in Higher Education

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Detailed overview of activities and workload estimation for podcast production

The overall activity, as a first implementation, required a significant effort from both teaching staff and students. A detailed overview of the main activities and the associated time commitment for each group is provided in Table S1. The inclusion of this information aims to support replication by increasing awareness of the organisational requirements and expected timeframe. Time estimates for asynchronous student activities are not reported, as these were highly variable across groups and were not systematically tracked. All reported timings refer specifically to the case study presented in this paper. Revision phases are dependent on the number of iterations required and the number of students involved, while recording and editing durations vary according to the length of the produced episodes.

As a reference, it was estimated that approximately one hour of studio recording is required to produce 10 minutes of final audio content, assuming a good level of student preparation and rehearsal of the podcast script.

Table S1. Overview of the podcasting activity, including main phases, delivery mode (synchronous/asynchronous), responsible actors, and estimated time commitment for teaching staff and students.

Activity	Mode	Responsible	Estimated Effort (hours)
Organisation of the podcasting TLA activity and preparation of supporting materials	Asynchronous	Teaching Staff	6
Writing and recording of a pilot episode as an example for students	Asynchronous	Teaching Staff	6
Introductory lecture to present the activity and provide technical guidance for recording	Synchronous	Teaching Staff	1
Script writing	Asynchronous	Students	N/A
In-class plenary review of scripts and peer review	Synchronous	Teaching Staff & Students	4
Asynchronous review of scripts	Asynchronous	Teaching Staff	2
Recording and preliminary editing of the episode for in-class listening	Asynchronous	Students	N/A
Editing and finalisation of the episode for in-class listening	Asynchronous	Teaching Staff	4
In-class listening session of podcast contributions, pair and plenary discussion & feedback provision	Synchronous	Teaching Staff & Students	4
Asynchronous review of final scripts	Asynchronous	Teaching Staff	4
Script refinement	Asynchronous	Students	N/A
Organisation of recording sessions in the studio	Asynchronous	Teaching Staff & Technical Staff	3
Recording sessions and supervision of students in the studio	Synchronous	Teaching Staff & Technical Staff	10
Recording session in the studio	Synchronous	Students	1
Editing of 7 episodes, publication on podcast platforms, and dissemination via social media	Asynchronous	Teaching Staff	25

Podcasting activity evaluation rubric

The evaluation rubric, related to the sole podcast TLA, is detailed in Table S2, providing, for each evaluation criteria, four different grades. Such table was used as a compass to assess and mark the outcoming podcast episodes. The episodes that were evaluated with such evaluation rubric were recorded autonomously by the groups. Given the recording environment, some criteria were excluded from the overall evaluation, as detailed in Table S2.

Table S2. Assessment criteria and evaluation rubric for the podcasting teaching-learning activity.

Relevant evaluation criteria	Weight on grade	Detailed criteria	Evaluation rubric			
			Grade A	Grade B	Grade C	Grade D
Synthesis and re-working	30%	Summarization of the explored topic;	Excellent, it captures the essence of the topic;	Good, the topic is summarized well with minor flaws;	Sufficient. Several parts need further condensation;	Poor, it lacks effective summarization;
		Identification of the key points to be communicated;	All the key points are identified, reworked, and seamlessly integrated;	Most key points are identified; however, minor reworking is needed;	Some key points are identified and/or substantial reworking is required;	The key points are not adequately pinpointed and/or inadequately addressed;
		Overall coherence.	Highly consistent and flows logically.	Generally consistent, with minor flaws.	Some parts are not properly reworked to make them consistent.	Serious lack of internal consistency and uniformity across parts.
Use of explanatory language	30%	Language clarity;	Language is consistently clear;	Language is generally clear, with minor exceptions;	Several parts need revision to improve clarity;	Language is mostly unclear or convoluted; major revisions needed;
		Conversion of academic language into non-technical, generalist language without sacrificing scientific accuracy or resulting in improper simplifications;	Academic aspects are appropriately translated without sacrificing scientific accuracy;	Few academic aspects need partial revision to make them suitable for a general audience. Scientific accuracy is maintained;	Quite extensive revision is required and/or scientific accuracy is not always maintained;	No translation of academic aspects for a general audience. Scientific accuracy is not maintained and/or there are improper simplifications;
		Appropriate and well-balanced use of technical language, applied only when necessary and clearly contextualised.	Whenever used, technical terms are appropriately used and clearly contextualised.	Infrequent unnecessary technical terms, but properly contextualised.	Frequent unnecessary technical terms are used and/or they not properly contextualised.	Overuse or misuse of technical terms and improper contextualisation.
Communication engagement and tone	30%	Topic and case studies presentation in a	Both topic and case studies are presented	The strategy is adequate, with minor	The strategy is adequate, but not effective in	The strategy is neither effective nor adequate for

		compelling manner, using an engaging and adequate communication strategy.	compellingly, effectively engaging and holding the listener's attention.	improvements needed to effectively engage and hold the listener's attention.	engaging and holding the listener's attention.	an outreach podcast.
Active participation	10%	Engagement and proactivity during the podcasting TLA: <ul style="list-style-type: none"> • participation in reviews with the teaching team; • provision of feedback during peer review; • collaboration with other groups. 	High degree of engagement and proactivity throughout all the activities Provide high-quality results, actionable feedback, and expertly integrate diverse perspectives.	High degree of engagement and proactivity in 2 out of 3 activities. Reliable engagement, completing tasks with high-quality input while offering constructive feedback to peers.	High degree of engagement and proactivity in 1 out of 3 activities. Participation mainly when prompted, providing surface-level feedback. Lack of independent initiative when collaborating	The group demonstrates no engagement or proactivity in any phase. Passive or disjointed involvement. Low quality (or absent) peer feedback. No meaningful participation to the group's shared goal

Criteria excluded from evaluation

Mastery of podcasting tool

Confidence and emphasis at the microphone

Audio and editing quality

Written essay evaluations

Average evaluations across multiple cohorts are reported in Figure S1. All the cohorts were assessed through the same evaluation rubric (Table S2). Only the cohort from A.Y. 24-25 underwent the podcast teaching-learning activity.

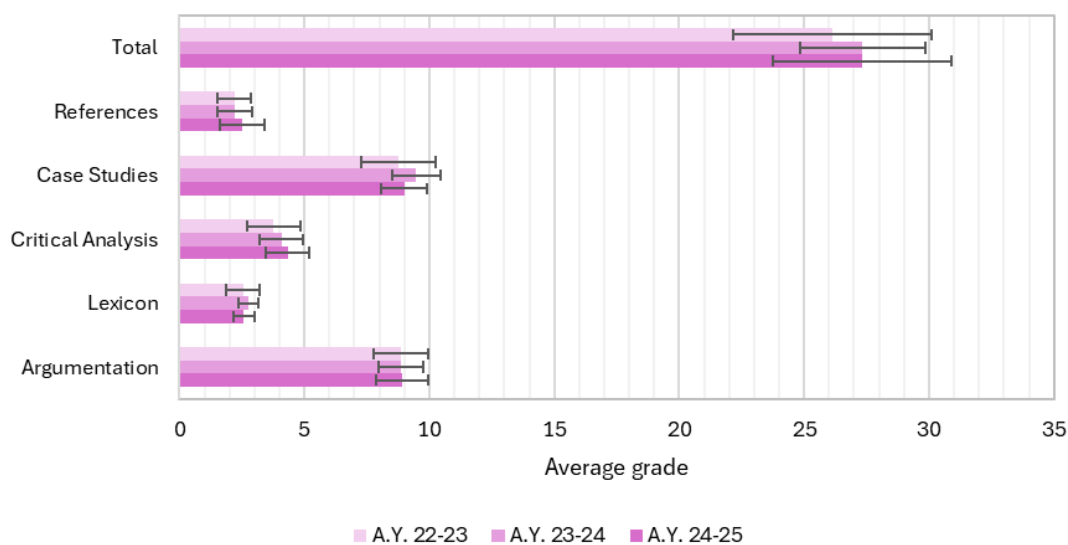


Figure S1. Average and related single standard deviation values for different evaluation criteria and total mark across different years.

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