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Instructional video use and design in tertiary music education: An exploratory survey of students and educators

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Instructional videos are a widely used pedagogical tool within higher education in Australia, yet their use and design in tertiary music education is an area which remains largely unexplored. Given the central role of independent practice in music learning, instructional videos have considerable potential to support student learning beyond the classroom. This paper reports findings from the first phase of a sequential mixed-methods study investigating instructional video use and perceptions of effective instructional video design among tertiary music students and educators. The survey collected responses from 26 tertiary music students and 17 tertiary music educators. The quantitative data was analysed using descriptive statistics and the open text responses were analysed using thematic analysis. Participants identified several characteristics as important for instructional videos: clear explanations, appropriate video length, multimedia representations, and effective organisation. These findings broadly align with established instructional video design research while also highlighting the need for further investigation into music-specific instructional video design considerations. The findings provide an empirical foundation for subsequent interview and experimental phases investigating music-specific instructional video design.

Keywords: instructional video, cognitive theory of multimedia learning, multimedia learning, music education, tertiary music, teaching music online, survey

Introduction

Instructional video has become an established medium for learning in formal and informal educational settings (Trenholm & Marmolejo-Ramos, 2024). Existing research on instructional video design has largely been informed by cognitivist frameworks, particularly Mayer's (2021) Cognitive Theory of Multimedia Learning (CTML). This body of research has identified a range of multimedia design principles, providing insights into how multimedia instructional materials can be designed to promote learning and improve learning outcomes. Although many of these principles were originally developed through research on multimedia more broadly, recent work has demonstrated growing empirical support for their application to instructional video design specifically (Fyfield et al., 2022). However, their applicability within music education remains largely unexplored.

Music learning often requires learners to coordinate multiple forms of representation simultaneously, including auditory, visual, symbolic (e.g., music notation), and motor information. Coordinating these representations engages specialised cognitive processes associated with music learning, including specialised processing of tonal, auditory, and motor information in trained musicians (Koelsch, 2011; Musacchia et al., 2007). These characteristics suggest that music learning may impose cognitive demands that differ from those of many educational domains in which instructional video and multimedia design principles have been developed and evaluated. Consequently, the applicability of multimedia learning principles warrants empirical investigation, particularly where music learning may place different demands on learners' cognitive processing. Boundary conditions (i.e., exceptions to principles) have been identified in other domains with distinctive cognitive demands, such as second language learning (Lee & Mayer, 2018; Mayer et al., 2014), and thus may also appear in music learning contexts.

Although researchers have explored musicians' use of instructional videos in their learning, this research has largely focused on the sociocultural phenomena and communities of practice surrounding video-based learning rather than instructional video design itself (Hanson, 2018; Waldron, 2013; Whitaker et al., 2014). Thus, while there is some evidence that musicians engage with video-based learning in practice, there remains

a paucity of research examining what constitutes effective instructional video design in music contexts, or of instructional video use in tertiary music education settings.

This paper reports findings from the first phase of a sequential mixed-methods investigation of instructional video design in tertiary music education. Specifically, it examines patterns of instructional video use among tertiary music students and educators and explores participants' perceptions of effective instructional video design through descriptive statistics and thematic analysis.

Methodology

Participants were recruited using convenience and snowball sampling through university music departments, professional music education networks, social media, and advertisements displayed on university campuses. In total, 43 usable survey responses were obtained from tertiary music students (n = 26) and tertiary music educators (n = 17). As the study employed an exploratory, non-probability sample, findings are intended to provide descriptive insights rather than statistically generalisable estimates of broader tertiary music education practices.

Data were collected using an online survey comprising closed- and open-ended questions. Survey items examined instructional video use, instructional video sources, student engagement, perceived benefits and drawbacks of instructional videos, and perceptions of effective instructional video design. Demographic information relating to participants' educational background and teaching or study context was also collected. Quantitative survey data were analysed using descriptive statistics in IBM SPSS Statistics (Version 32.0.0.0). Open-ended survey responses were analysed using thematic analysis (Braun & Clarke, 2006). Responses were coded inductively to identify recurring patterns relating to instructional video design, instructional video use, and educators' pedagogical reasoning. Ethics approval was granted by the Monash University Human Research Ethics Committee (Project ID 49362).

Findings

Use of instructional videos in tertiary music education

Instructional videos were widely used across the sampled tertiary music units. Participants reported on 110 units (i.e., classes, subjects), of which 90 units (81.8%) were described as incorporating instructional videos. Instructional video use was evident across all delivery modes, including 50 of 68 face-to-face units (73.5%), 35 of 36 hybrid units (97.2%), and five of six fully online units (83.3%). These findings suggest that instructional videos are not confined to online delivery but have become an established component of teaching across different tertiary music contexts.

Table 1
Contexts of Instructional Video Use

Unit delivery mode	Face-to-face sessions	Online sessions	LMS
In-Person Face-to-Face only	25	-	39
Remote / Online only	-	4	5
Hybrid (i.e., mix of face-to-face and remote learning)	13	4	33
Total	38	8	77

Note. Units could make use of instructional videos across multiple contexts; therefore, context counts do not sum to the total number of units using instructional video.

Among units using instructional videos, learning management systems (LMSs) represented the primary delivery context (Table 1). Instructional videos were also commonly incorporated into face-to-face teaching, while comparatively few respondents reported the use of videos during synchronous online sessions. Reported frequency of use indicated that videos were commonly used frequently or more as asynchronous resources within LMS environments, either as primary learning materials (37/61 responses, 60.7%) or supplementary resources (48/73 responses, 65.8%). In contrast, frequent use during synchronous teaching was substantially

less common in both face-to-face teaching (10/38 responses, 26.3%) and synchronous online lessons (2/6 responses, 33.3%). Together, these findings suggest that instructional videos are used primarily to support learning beyond scheduled teaching sessions, rather than as a replacement for synchronous instruction.

Instructional video sources

Among educators who reported using instructional videos in their teaching (*n* = 15), 11 educators (73.3%) reported using self-created videos. Open online platforms were used by nine educators (60.0%), followed by institutional libraries (five educators, 33.3%). Use of paid online platforms was uncommon, with only one educator (6.7%) reporting use. Of the nine educators who reported using open online platforms, all indicated that they sourced instructional videos from YouTube (100.0%). Educators indicated that familiarity with platforms or creators, ease of access, cost, perceived video quality, diversity of available content, and cost influenced their choice of instructional video sources. Together, these findings suggest that educators primarily rely on videos they create themselves or freely available online resources that are perceived as accessible, familiar, and of sufficient quality, rather than institutionally provided or commercial video collections.

Student engagement with instructional videos

Student engagement with educator-provided instructional videos was generally high. Of the 20 students who completed this section of the survey, most reported watching educator-provided instructional videos *most of the time* (45.0%) or *always* (25.0%), while relatively few indicated engaging only *sometimes* (15%) or *about half the time* (15.0%). Students most commonly reported that they watched instructional videos because they supported understanding of the course materials (80.0%), were required for assessments (60.0%), provided practical demonstrations (50.0%), or saved them time compared to reading (50.0%). Conversely, the most commonly reported barriers to engagement were that videos were not engaging (50.0%), time constraints (45.0%), and excessive video length (40.0%). Together, these findings suggest that students generally value educator-provided instructional videos, but engagement is influenced by both instructional design and practical considerations.

Perceptions of effective instructional video design

Qualitative responses from both students and educators showed a high degree of convergence, with both groups identifying similar characteristics of effective instructional videos. Consequently, the themes presented below reflect patterns common to both participant groups. Four overarching themes were identified: (1) presentation, (2) content, (3) multimedia design, and (4) organisation. Notably, participants predominantly described general instructional video design characteristics rather than features unique to music education. Collectively, these themes emphasised the idea that effective instructional videos combine engaging presentation, clear and well-supported instructional content, effective multimedia design, and careful organisation to support student learning.

Presentation

Both students and educators consistently valued engaging presentation styles in instructional videos. Effective videos were described as light-hearted, humorous, entertaining, and delivered with a clear, non-monotone voice at an appropriate pace. Conversely, monotonous narration, off-topic anecdotes, rambling, and slow pacing were identified as features that could detract from learning.

Content

Both groups also consistently emphasised the importance of instructional content. Effective instructional videos were described as presenting clear explanations, accurate information, high-quality content, and practical examples that supported understanding and demonstrated the application of concepts. Conversely, confusing explanations or structures, an inappropriate amount of information, inaccurate information, and the absence of relevant examples were commonly identified as features that reduced the effectiveness of instructional videos.

Multimedia design

Across participant groups, multimedia design was viewed as important in supporting learning. Effective instructional videos were described as making use of visual supports, multiple representations, and complementary auditory and visual information to enhance understanding. Participants valued videos that

combined spoken explanations with demonstrations and visual elements, while videos using a single mode of presentation (e.g., talking-head videos) were often perceived as less effective. Notably, participants described these features in general terms rather than referring to music-specific representations such as notation or performance visualisations.

Organisation

Both groups also emphasised the importance of well-organised instructional videos. Appropriate video length, logical segmentation, effective pacing, and learner control were consistently identified as characteristics that supported engagement and learning. Conversely, videos that were too long or were confusingly structured were identified as ineffective.

Discussion

The findings of this phase of the study suggest that participants' perceptions of effective instructional video design broadly align with existing instructional video design research informed by CTML and related research. Characteristics consistently identified by both students and educators – including the inclusion of only key instructional material, reducing the length of videos, the use of complementary visual and verbal information, worked examples, and carefully organised instructional materials – reflect several of the design principles previously associated with effective multimedia learning (Fyfield et al., 2022; Mayer, 2021). For example, participants consistently emphasised the importance of limiting unnecessary information and maintaining concise videos, reflecting recommendations associated with the coherence principle (Mayer, 2021) and research highlighting the benefits of shorter instructional videos (Guo et al., 2014). Similarly, participants valued the integration of visual supports and multiple representations alongside spoken explanations, consistent with the multimedia principle (Mayer, 2021). Notably, participants identified only a relatively small subset of the instructional video design principles described in the broader literature (Fyfield et al., 2022). Several principles that may be particularly relevant when instructional videos involve musical materials (e.g., music notation, musical audio), such as the redundancy, temporal contiguity, background music, audio quality, and transience principles (Fyfield et al., 2022) were not explicitly discussed. Whether the application of these principles differs when instructional videos incorporate musical materials remains an open question for subsequent phases of this research.

Despite the distinct representational demands associated with music learning, comparatively few responses explicitly identified design characteristics unique to music education. Rather, participants largely described characteristics consistent with broader instructional video design research. These descriptions were typically expressed in general terms, using language like "visual supports" or "multiple representations", making it difficult to determine whether participants were referring to music-specific representational features or more general multimedia elements. Notably, participants did not discuss affordances that might be considered distinctive to music instructional videos, such as the integration of notation with audio, performance demonstrations, or the integration of auditory and symbolic representations of music.

One possible explanation for this finding is that participants may have been drawing on experiences with a broad range of instructional video types rather than more music-specific forms of instructional video (Whitaker et al., 2014). These may have included lecture-style presentations, conceptual explanations, software demonstrations, performance demonstrations, or technique-based videos, each of which places different representational demands on learners. Consequently, participants may have focused on characteristics broadly applicable to effective instructional videos rather than affordances associated with particular forms of music instruction. A second, methodological explanation is that limited depth afforded by the exploratory survey design and brief open-ended responses may not have encouraged participants to articulate more nuanced, domain-specific considerations.

While these findings may suggest that multimedia learning principles are broadly applicable within tertiary music education settings, this interpretation should be treated cautiously given the exploratory nature of the present study. Determining whether music-specific instructional video design considerations arise when educators and students discuss particular forms of music instruction remains an important question for future research given the distinctive representational and cognitive demands associated with music learning (Koelsch, 2011; Peretz & Zatorre, 2005). These questions will be explored through the subsequent phases of the

research, where richer qualitative methods such as semi-structured interviews may provide greater insight into how music-specific representational demands influence instructional video design.

The widespread use of instructional videos across the sampled tertiary music education contexts, alongside educators' reliance on self-created and openly available resources, highlights the importance of evidence-informed instructional video design. Together, these findings suggest that established instructional video design principles provide a useful foundation for tertiary music education while also highlighting the need to investigate whether additional music-specific design considerations emerge through richer qualitative inquiry and experimental evaluation. Accordingly, these findings provide an empirical basis for the subsequent interview and experimental phases of this research, which will investigate whether music-specific instructional video design principles are needed to extend or refine existing instructional video design theory.

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References

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Fyfield, M., Henderson, M., & Phillips, M. (2022). Improving instructional video design: A systematic review. *Australasian Journal of Educational Technology*, 150–178. https://doi.org/10.14742/ajet.7296

Guo, P. J., Kim, J., & Rubin, R. (2014). How video production affects student engagement: An empirical study of MOOC videos. *Proceedings of the First ACM Conference on Learning @ Scale Conference*, 41–50. https://doi.org/10.1145/2556325.2566239

Hanson, J. (2018). Assessing the Educational Value of YouTube Videos for Beginning Instrumental Music. *Contributions to Music Education*, *43*, 137–157. https://www.jstor.org/stable/26478003

Koelsch, S. (2011). Toward a neural basis of music perception – A review and updated model. *Frontier in Psychology*, *2*. https://doi.org/10.3389/fpsyg.2011.00110

Lee, H., & Mayer, R. E. (2018). Fostering learning from instructional video in a second language. *Applied Cognitive Psychology*, *32*(5), 648–654. https://doi.org/10.1002/acp.3436

Mayer, R. E. (2021). Cognitive theory of multimedia learning. In R. E. Mayer & L. Fiorella (Eds.), *The Cambridge Handbook of Multimedia Learning* (3rd ed., pp. 57–72). Cambridge University Press. https://doi.org/10.1017/9781108894333.008

Mayer, R. E., Lee, H., & Peebles, A. (2014). Multimedia learning in a second language: A cognitive load perspective. *Applied Cognitive Psychology*, *28*(5), 653–660. https://doi.org/10.1002/acp.3050

Musacchia, G., Sams, M., Skoe, E., & Kraus, N. (2007). Musicians have enhanced subcortical auditory and audiovisual processing of speech and music. *Proceedings of the National Academy of Sciences*, *104*(40), 15894–15898. https://doi.org/10.1073/pnas.0701498104

Peretz, I., & Zatorre, R. J. (2005). Brain organization for music processing. *Annual Review of Psychology*, *56*(1), 89–114. https://doi.org/10.1146/annurev.psych.56.091103.070225

Trenholm, S., & Marmolejo-Ramos, F. (2024). *When Video Improves Learning in Higher Education*. Social Sciences. https://doi.org/10.20944/preprints202401.0247.v1

Waldron, J. (2013). User-generated content, YouTube and participatory culture on the Web: Music learning and teaching in two contrasting online communities. *Music Education Research*, *15*(3), 257–274. https://doi.org/10.1080/14613808.2013.772131

Whitaker, J. A., Orman, E. K., & Yarbrough, C. (2014). Characteristics of "Music Education" videos posted on YouTube. *Update: Applications of Research in Music Education*, *33*(1), 49–56. https://doi.org/10.1177/8755123314540662

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