

# MAKING GAMES TO LEARN MUSIC: AN INTERSECTION OF TWINE, ACTIVITY-CENTRED LEARNING AND CREATIVE PEOPLE.

**Meghann O’Neill**

School of Computing  
Macquarie University  
meghann.oneill@hdr.mq.edu.au

**Dr Malcolm Ryan**

School of Computing - malcolm.ryan@mq.edu.au

**Dr Sarah Powell**

School of Education - sarah.powell@mq.edu.au

**Dr Cameron Edmond**

School of Computing - cameron.edmond@mq.edu.au

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digital game-based learning, music education, activity-centred analysis and design, Twine, ethnography, audio implementation, web-based games

## **INTRODUCTION**

At the Sydney Conservatorium of Music, my tertiary students make original games to enrich their experience of learning music composition. This is possible because of the accessible game engine, Twine<sup>1</sup>. I designed this mandatory Composing for Games unit<sup>2</sup> based on a firm, personal belief, which mirrors an important cultural perspective raised in Anna Anthropy’s instructional Twine guide (Anthropy, 2019): that games have always been used for learning, and *everyone* makes games (p. XVIII).

This research addresses a gap identified by Kafai and Burke’s review of 55 studies focused on game-making in education: that game-making is often researched as a discrete rather than integrated learning activity (Kafai & Burke, 2015, pp. 325-327). To support students’ game-making activity in the Composing for Games unit, I curate example content, maintain game engine templates<sup>3</sup>, and facilitate playtests. The integrated nature of this learning experience can be described by the Activity-Centred Analysis and Design framework (Goodyear et al., 2021), to emphasise where learning is shared between teacher and students, in terms of these physically, epistemically and socially situated elements.

Kangas et al. also found that the wider pedagogical context provided for digital game-based learning, is ‘somewhat missing’ (Kangas et al., 2016, p. 452). The structural complexity of the game medium challenges conventional composition practice, and games require bespoke, contextual solutions for music, design and implementation. So, I aim to encourage experimentation and creativity, in support of students’ future practice, to ensure that they are motivated to engage in ways that may not be typical of their usual classroom experience. This is especially important considering a recent, mandated swing towards conservative, ‘explicit’ teaching methods, in New South Wales secondary schools (Fuller & Humberstone, 2022, pp. 263-264).

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In response to Kafai and Burke’s review, Denham and Guyotte further propose that a ‘connected’ approach could cast students as ‘critical makers’ (Denham & Guyotte, 2018, p. 31), and that students can make games via ‘ill defined, nebulous, emergent and open’ processes, by borrowing from the arts (p. 36).

However, my strategy is open to further scrutiny: Can making games really make for better composers of music?

Six students from the 2023 Composing for Games cohort were interviewed for this study. They described their music learning, game output, and desire to share their games with each other, and more widely. Students highlighted the challenges that arise: when making games outside of a formal game education program, difficulties in prototyping for web audio, and wanting to make games that are more complex than Twine will generally allow. Through a process of open coding, I identified further themes: the relevance of students’ prior experiences composing to a brief, and how their diverse game literacies influence their use of Twine. These insights have informed iterations on the design and delivery of the unit in 2024, by positioning accessibility and empowerment as central to learning.

Consider this study’s subtitle: *An intersection of Twine, activity-centred learning and creative people*. Even the humble word ‘an’ shows that scope is limited to one music classroom, and one game engine. ‘Intersection’ implies that the learning that happens when students create original games is ultimately decided by *students*, not teacher. Yet, these findings apply broadly to digital game-based learning, and can inform educators whose students also make games via interdisciplinary, activity-centred approaches. The original games that students create in the Composing for Games unit are important cultural artefacts: a testament to where foundational music learning meets their game-making ideas, and this unique moment in time for digital media.

## BIO

I teach music composition via an original game-making, activity-based approach that I designed and iterate upon, at the Sydney Conservatorium of Music, and the Australian Institute of Music. My professional work also includes reviewing games, formerly for PC Powerplay magazine, over 15 years, and presently for GamesHub, as well as composing music for games, including *Wildfire* (Sneaky Bastards, 2020). I also have a strong interest in tutorialisation, and created the words and logic that became the Hint-Tron 3000 in *Thimbleweed Park* (Terrible Toybox, 2017), and the interactive, official guide for *Hero-U: Rogue to Redemption* (Transolar Games, 2018).

## ACKNOWLEDGMENTS

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## ENDNOTES

<sup>1</sup> Twine (Klimas, 2009) is an open-source toolset for creating text-based games, formed from interconnected passages, and compiled from HTML. I have used version 1.4.2 to this point.

<sup>2</sup> ‘Composing for Games’ runs under the unit codes CMPN3336 and CMPN2223, and can be found on the University of Sydney website at <https://www.sydney.edu.au/units/CMPN3336> and <https://www.sydney.edu.au/units/CMPN2223>.

<sup>3</sup> Access the Twine 1.4.2 template collections created for the Composing for Game class here. [https://github.com/Firky/make\\_your\\_twine\\_fancy](https://github.com/Firky/make_your_twine_fancy), [https://github.com/Firky/twine\\_howler\\_v3](https://github.com/Firky/twine_howler_v3)

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