ASCILITE 2026

The Future is Connection:

Collaboration, Creativity and Compassion in a Digital Society

Tools at the tempo of teaching: Vibe engineering an LMS-embedded Fishbowl tool

Zoe Zhang, Nikolai Alksnis, Simone Garafillis, Siobhan Hannan, Habibah Ghazali
Victoria University

Background

The Fishbowl is a discussion format: an inner ring discusses a prompt while an outer ring observes and swaps in (Bermudez, n.d.). When it runs well, the interaction reaches the interactive tier of Chi and Wylie's (2014) ICAP framework, most strongly linked to deep learning. Novice teachers struggle to orchestrate so complex a discussion and often avoid it or run it as procedural theatre (Dillenbourg, 2002), while students lack the scaffolding to grasp what good discussion looks like or to notice their participation in real time. Fixed-seat rooms make the concentric-ring layout harder to set up.

The shift

An LMS-embedded learning tool can address these problems by scaffolding through the interface itself: built-in phase sequencing and role-specific views support teachers as drivers rather than executors (Dillenbourg, 2013), while giving students concrete moves for good discussion and cues to notice their participation. Such a tool was never technically impossible, only unjustifiable, requiring a software team and budget cycle for one learning activity. Generative AI now lets a single learning designer (LD) author and revise a version between deliveries, so refinement moves at the tempo of teaching rather than procurement. However, unmediated "vibe coding" is fragile across accessibility, security, and pedagogical validity. Vibe engineering (Willison, 2025) is the discipline that makes the speed safe.

Development snapshot

Vibe engineering can be brought to education by drawing on Computer-Supported Collaborative Learning (CSCL) orchestration and collaboration-script theory (Fischer et al., 2013; Kollar et al., 2006): balancing under- and over-scripting (Dillenbourg, 2002), preserving intrinsic script constraints (Dillenbourg & Tchounikine, 2007), and scaffolding transactive discourse (Fischer et al., 2013). Each version is audited in a separate AI session against accessibility and security checklists, while pedagogical validity is judged by the LD through CSCL orchestration principles and classroom observation. Every update ships as one small static HTML file, stored centrally with no student data and no runtime AI, so it propagates automatically to every unit that uses it.

Poster experience

- Live demonstration on two adjacent devices: the projected Fishbowl discussion phase (teacher-facing) alongside the private ideas phase (student-facing).
- Annotated walkthrough of core design elements with their theoretical warrants.
- A few major versions showing how the tool evolved, with a QR link to selected prompt history.
- The accessibility and security checklists, with a QR link to the open-source versions.

Relevance to the theme: Human-centred learning design

The Fishbowl builds connection through structured dialogue, and the tool preserves that priority. It orchestrates the room without mediating the conversation, and the interface directs student

attention to peers rather than screens. The approach is not specific to one activity: in principle, any collaboration script an LD can specify pedagogically could be authored at teaching tempo (cf. Holstein et al., 2019).

Next steps

The tool will run across teaching periods in 2026, with observations of orchestration load, participation, and facilitator experience feeding back into design rationales, checklists, and successive versions. The two checklists will be released as open-source, citable Markdown artefacts for the LD community.

Keywords: Vibe engineering, vibe coding, Generative AI, learning designer authorship, collaborative learning, Fishbowl discussion, orchestration support, CSCL, design checklist

References

Bermudez, P. (n.d.). *Modeling the Consultancy Protocol using an interactive fishbowl*. Center for Leadership and Educational Equity. https://www.clee.org/resources/modeling-the-consultancy-protocol-using-an-interactive-fishbowl/

Chi, M. T. H., & Wylie, R. (2014). The ICAP framework: Linking cognitive engagement to active learning outcomes. *Educational Psychologist*, *49*(4), 219–243. https://doi.org/10.1080/00461520.2014.965823

Dillenbourg, P. (2002). Over-scripting CSCL: The risks of blending collaborative learning with instructional design. In P. A. Kirschner (Ed.), *Three worlds of CSCL: Can we support CSCL?* (pp. 61–91). Open Universiteit Nederland. https://telearn.hal.science/hal-00190230v1

Dillenbourg, P. (2013). Design for classroom orchestration. *Computers & Education*, *69*, 485–492. https://doi.org/10.1016/j.compedu.2013.04.013

Dillenbourg, P., & Tchounikine, P. (2007). Flexibility in macro-scripts for computer-supported collaborative learning. *Journal of Computer Assisted Learning*, *23*(1), 1–13. https://doi.org/10.1111/j.1365-2729.2007.00191.x

Fischer, F., Kollar, I., Stegmann, K., & Wecker, C. (2013). Toward a script theory of guidance in computer-supported collaborative learning. *Educational Psychologist*, *48*(1), 56–66. https://doi.org/10.1080/00461520.2012.748005

Holstein, K., McLaren, B. M., & Aleven, V. (2019). Co-designing a real-time classroom orchestration tool to support teacher–AI complementarity. *Journal of Learning Analytics*, *6*(2), 27–52. https://doi.org/10.18608/jla.2019.62.3

Kollar, I., Fischer, F., & Hesse, F. W. (2006). Collaboration scripts – A conceptual analysis. *Educational Psychology Review*, *18*(2), 159–185. https://doi.org/10.1007/s10648-006-9007-2

Willison, S. (2025, October 7). Vibe engineering. Simon Willison's Weblog. https://simonwillison.net/2025/Oct/7/vibe-engineering/

Zhang, Z., Alksnis, N., Garafillis, S., Hannan, S. & Ghazali, H. (2026, Nov 29 – Dec 2). Tools at the tempo of teaching: Vibe engineering an LMS-embedded Fishbowl tool [Poster]. In Cochrane, T., Narayan, V., Poole, T., Lai, P., Lake, P., Moore, O., & Li, L. (Eds.), *The Future is Connection: Collaboration, Creativity and Compassion in a Digital Society*. Proceedings ASCILITE 2026. Brisbane (pp. 70–71). https://doi.org/10.65106/apubs.2026.3347

Note: All published papers are refereed, having undergone a double-blind peer-review process.
The author(s) assign a Creative Commons by attribution license enabling others to distribute, remix, tweak, and build upon their work, even commercially, as long as credit is given to the author(s) for the original creation.

© Zhang, Z., Alksnis, N., Garafillis, S., Hannan, S. & Ghazali, H. 2026