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# The process of designing for [online] learning: response to Bennett et al.

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## Abstract

This article examines practical implications of the work by Bennett et al. (Educational Technology Research and Development 65(1):125–145, 2017) entitled, "*The process of designing for learning: Understanding university teachers' design work*". It addressed the knowledge gap of design practices of university faculty by conducting an extensive qualitative study with 30 interviewees. Three design practices reported that are incremental and iterative. Understanding these common design practices is critical to effectively and efficiently support faculty with transferring their instruction online when many institutions face the challenge of supporting a large number of inexperienced faculty with transferring instructions online. Based on the findings, three stages of support can be devised for before, during, and after sessions. Given the non-systematic cyclic design process of the teachers, need-based, just-in-time support and resources may be helpful. Although the reported process is not specifically for online learning design, the findings may contribute to establishing best practices for supporting faculty's online learning design.

**Keywords** Online learning · Professional development · Design practice

This article examines practical implications of the work by Bennett et al. (2017) entitled, "*The process of designing for learning: Understanding university teachers' design work*". Bennett et al. (2017) addressed the knowledge gap of design practices of university faculty by conducting an extensive qualitative study. They interviewed 30 teachers from 16 Australian universities on their design processes for new and existing units. Various cases were included in terms of teaching contexts, backgrounds and disciplines, and institutional contexts. Two conceptual frameworks were used for data analysis: Approaches to Teaching (Prosser and Trigwell 1997) and the 3P (presage-process-product) model (Biggs 1993). The findings offer useful insights in supporting faculty with navigating current situations of having to prepare for online learning with limited time, expertise, and experience.

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## Key ideas

The three design practices reported were surprisingly congruent with existing instructional design models such as Dick and Carey' Systematic Design of Instruction (Dick et al. 2015) for their common steps including defining learning outcomes and coming up with assessment strategies and activities and AGILE (Douglas 2006) for its incremental and iterative approach. First, the starting point varied by situations. When designing new units, the interviewees determined the learning outcomes or selected the scope and topics. For revising existing units, it depended on what prompted the revisions, including (1) addressing feedback from students and colleagues, (2) updating the content, (3) addressing problems perceived during teaching, (4) changing the delivery mode, and (5) faculty changes.

Second, design progressed from broad to specific. For new units, those who started with the learning outcomes moved from selecting the scope of the content, assessments, and learning activities. Those who started with the scope and topics moved to learning outcomes, assessment tasks, and learning activities. Bennett et al. (2017) summarized the shared design processes, as in Fig. 1. Unlike the systematic nature of traditional instructional design models, these processes were identified as "a non-systematic cyclic design process" (p. 139) in which design decisions were made in any order that suited the teachers' style and situation.
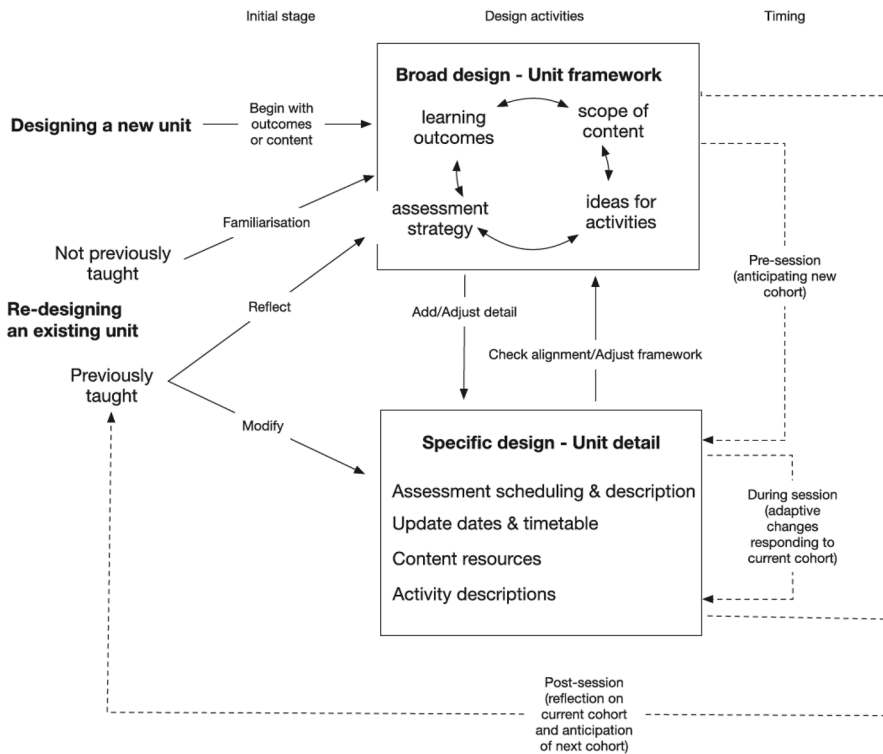


**Fig. 1** A descriptive model of faculty's design processes from Bennett et al. (2017). Reprinted with permission

After broad ideas were established, they designed the specifics, including selecting reading materials, creating content, developing activities, determining timing, and specifying assessment requirements. For existing units, they focused on the specific aspects that needed revisions.

Third, an iterative process occurred before, during, and after implementation. Before the teaching session, the broad-to-specific design occurred. During the session, they revised the unit or added more content or activities. After it, they reflected on how the unit could be improved for the next implementation.

## Challenges, value, and application

COVID-19 pushed educators to adopt online learning. According to the United Nations Educational Scientific and Cultural Organization (2020), more than 160 countries implemented nationwide closures, impacting 87% of the worlds' student population. Like other educational systems, universities transferred their face-to-face instruction to online. Although online education in higher education has continuously grown in the U.S., about 70% of students were taking exclusively residential courses (Seaman et al. 2018). Therefore, faculty face the challenge of moving their instruction online, given a short timeline without much expertise in or experience with online teaching. Institutions face the challenge of supporting a much larger number of inexperienced faculty with limited resources available.

Course design is a key quality indicator in online learning (Valai et al. 2019). Bennett et al. (2017) claimed that "the tools to support teachers' design work are more likely to be adopted if they seek to connect with teachers' existing practices" (p. 126). The findings by Bennett et al. (2017) help institutions to develop strategies to support faculty that are cost- and time-effective based on a fundamental understanding of faculty's common design practices while preventing them from blindly offering mistargeted Professional Development (PD).

Based on the findings, three stages of support can be devised. Given the broad to specific approach, the faculty first needs general ideas as to how content can be delivered online and what online activities and assessment options exist for the broad design. Then, for the specific design, they need to know what particular technology tools exist to support the content delivery, assessment, and activities and how to use them. Third, to support the iterative process, faculty should be mentored and supported regarding online pedagogy and technology during and after implementation. A recent review of PD for online learning emphasized the importance of feedback and support throughout the process (Philipsen et al. 2019). This can be done by establishing a mentoring relationship or supporting group within the same discipline, which was found more effective than across disciplines (Marek 2009).

Also, the non-systematic cyclic design process implies faculty may not go through the same systematic process. Depending on their situation and teaching style, their starting point and following steps may vary. This finding highlights the importance of need-based, just-in-time support or resources that faculty can utilize when they need it. To do so, immediate and customized support should be available. Various resources for the identified tasks should be compiled, and faculty should be able to easily find and use them.

## Limitations and future implications

Bennett et al. (2017) acknowledged the limitations of the study. First, about 75% of the participants were experienced teachers. New or junior faculty may take different approaches. Second, the study is based on retrospective self-reported data. Furthermore, limited details about revising existing units was provided. Moving teaching online involves revisions of existing content, assessments, and activities. Although one of the reported reasons for revising was changes in delivery mode, limited information was shared about the specific revision process.

Nevertheless, the findings contribute to establishing best practices for supporting faculty's online learning design work. The key ideas illuminate faculty's design processes and allow institutions to better support faculty based on a solid understanding of their design practices and needs. Institutions are recommended to use the descriptive model of faculty's design processes as a guide and develop effective strategies that meet various yet common needs of faculty.

## Compliance with ethical standards

**Conflict of interest** The authors declare that they have no conflict of interest.

## References

Bennett, S., Agostinho, S., & Lockyer, L. (2017). The process of designing for learning: Understanding university teachers' design work. *Educational Technology Research and Development, 65*(1), 125–145. https://doi.org/10.1007/s11423-016-9469-y.

Biggs, J. (1993). What do inventories of students' learning processes really measure? A theoretical review and clarification. *British Journal of Educational Psychology, 63*(1), 3–19. https://doi.org/10.1111/j.2044-8279.1993.tb01038.x.

Dick, W., Carey, L., & Carey, J. O. (2015). *The systematic design of instruction* (8th ed.). Boston: Pearson.

Douglas, I. (2006). Issues in software engineering of relevance to instructional design. *TechTrends, 50*(5), 28–35. https://doi.org/10.1007/s11528-006-0035-z.

Marek, K. (2009). Learning to teach online: Creating a culture of support for faculty. *Journal of Education for Library and Information Science, 50*(4), 275–292 www.jstor.org/stable/40732589.

Philipsen, B., Tondeur, J., Pareja Roblin, N., Vanslambrouck, S., & Zhu, C. (2019). Improving teacher professional development for online and blended learning: a systematic meta-aggregative review. *Educational Technology Research and Development, 67*(5), 1145–1174. https://doi.org/10.1007/s11423-019-09645-8.

Prosser, M., & Trigwell, K. (1997). Relations between perceptions of the teaching environment and approaches to teaching. *British Journal of Educational Psychology, 67*(1), 25–35. https://doi.org/10.1111/j.2044-8279.1997.tb01224.x.

Seaman, J. E., Allen, E., & Seaman, J. (2018). *Grade increase: Tracking distance education in the United States*. http://www.onlinelearningsurvey.com/highered.html

United Nations Educational Scientific and Cultural Organization. *Education: From disruption to recovery*. Retrieved October 8, 2020, from https://en.unesco.org/covid19/educationresponse

Valai, A., Schmidt-Crawford, D. A., & Moore, K. J. (2019). Quality indicators for distance learning: A literature review in learners' perceptions of quality. *International Journal on E-Learning, 18*(1), 103–124 https://www.learntechlib.org/primary/p/171392/.

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