

A Collection of Teaching Tips: Teaching through the Pandemic

The Human-Centered Design Approach for Online Teaching

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This teaching brief describes an approach we developed in response to the shifting needs resulting from the Covid-19 pandemic. The human-centered design (HCD) approach, helped to shape our online course design and teaching strategies during these unique times.

Teaching and learning context

The unprecedented and emergency transition to remote teaching in Spring 2020 created a critical need for preparing graduate students with knowledge and skills related to effective online teaching in a variety of contexts (e.g., K-12 teaching settings and higher education environments). Designing and teaching online courses during the pandemic required a pedagogical shift that prioritized teachers' and students' needs, well-being, and changing contexts.

As a response to the pedagogical needs during the pandemic, we developed a human-centered design (HCD) approach that guided our online learning design practices in the time of crises (Baran & AlZoubi, 2020). We implemented the approach in the design and delivery of EDUC-507 during Summer 2020.

EDUC-507: Principles and Practices of Distance Learning (3 credits) is a graduate course offered in the School of Education's Educational Technology program. This course aimed to provide students with practical experiences in designing, developing, and evaluating online learning environments.

Twelve students enrolled in a variety of graduate programs across campus (e.g., educational technology, human computer interaction, industrial design, agricultural education, apparel design and merchandising) took the course in the Summer 2020 semester. The course objectives described the following skills, knowledge and attitudes that students were expected to gain upon completion:

1. Analyze trends related to online learning research and practice;
2. Evaluate affordances of online learning technologies;
3. Discuss frameworks, approaches, and critical views on online learning and teaching;
4. Design online learning materials and resources in a variety of educational settings;
5. Engage in professional dialogue on online learning;
6. Report design considerations regarding effective online learning and teaching; an
7. Participate in the content creation of online learning.

The course included a semester-long project that guided students in the design of an online learning module for a specific learner target audience.

Applied teaching strategy: Designing and teaching online courses with the HCD approach

The HCD focuses on understanding people's needs and creating innovative solutions that are rooted in these actual needs (Cooley, 2000; Karakaya, 2020). Our HCD approach for online teaching included four premises:

1. Establishing an online community of inquiry;
2. Building empathy;
3. Engaging in pedagogical problem solving, and
4. Universal Design for Learning (See Figure 1: HCD approach for online teaching).

Establishing an online community of inquiry

We structured our course following the Community of Inquiry (COI) framework (Garrison, Anderson, & Archer, 2000) to establish cognitive, teaching, and social presence, and design quality online learning experiences. We designed the course content around 5 modules that followed a consistent and systematic structure (See Figure 2 for the course visual overview). Each module consisted of a Readings page, an Overview page followed by Collaboration, Discussion, and Reflection activities (See Figure 3 for the example module content). The Overview page shared each module's content, objectives, resources, and the list of activities. Students participated in a series of online collaboration, discussion, and reflection activities included in each module (See Figure 4 for sample course online activities). Weekly summaries were shared at the end of each module to present the instructor's analysis of module activities and outline additional resources. The instructor scaffolded learning through posting module overview and summary videos, providing individual and team feedback, facilitating online discussions, and leading live class meetings.

Building empathy

The core tenet of our pedagogical approach was to empathize with learners and gain deeper understanding of their needs and problems they face. For their projects, students created learner personas to practice empathy-building with their target audience. Creating personas helped them understand the needs, expectations, goals, and frustrations of online learners and teachers. Students had conversations with the sample members of their project audience groups, gathered details about their interests, values, needs, desires, and patterns of behavior. They then shared these personas on an embedded Padlet board and reflected on their empathy processes.

Engaging in pedagogical problem solving

Students designed pedagogical solutions for a specific learner group through their semester-long design project. They identified a real educational need that required an online learning platform as a solution, brainstormed on potential solutions, prototyped the solutions, and received feedback from the classroom community.

Universal Design for Learning

We followed the Universal Design for Learning (UDL) guidelines to improve and optimize learning for all students (CAST, 2018). Our HCD approach focused on providing students with multiple means of engagement,

representation, action, and expression.

Connection to course-learning objectives

Focusing on the practice of online learning environment design, the course aimed to expose students to a range of online learning cases, models, tools, learner, designer, teacher, and institution perspectives. The COVID-19 pandemic moved institutional teaching and learning practices to remote, hybrid, and online solutions. EDUC 507 was offered as a response to the emergent need for preparing graduate students with knowledge and skills for effective online course design and teaching. The unique challenges presented by the pandemic shifted our pedagogical practice to a human-centered online teaching pedagogy that centered learner needs and values at the core of our pedagogical decisions.

Why this strategy worked

Students' success in the course was demonstrated through several measures. All students developed an online learning environment designed for a real audience (e.g., K-12 students, higher education faculty). These platforms were implemented after the course in real contexts and received positive response. Students also shared their projects in different venues (e.g., Karakaya et al., 2020). Students collaborated on a series of documents to curate and create resources on online learning and teaching that were compiled on the class Google Site and shared as open educational resources (OER).

Additional context for this strategy

Our HCD approach for online teaching was developed and implemented in a number of courses, including EDUC 507 and other graduate and undergraduate courses we taught during the COVID-19 pandemic. Building on our previous research on successful online teaching (Baran et al., 2013), and more recent work on open pedagogy (Baran & AlZoubi, 2020a) and human centered design (Baran & AlZoubi, 2020b), we found that our approach is applicable to most settings and students. Our approach can be used to enhance students' learning experiences in online and hybrid courses in any level and discipline.

References

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Figures and links

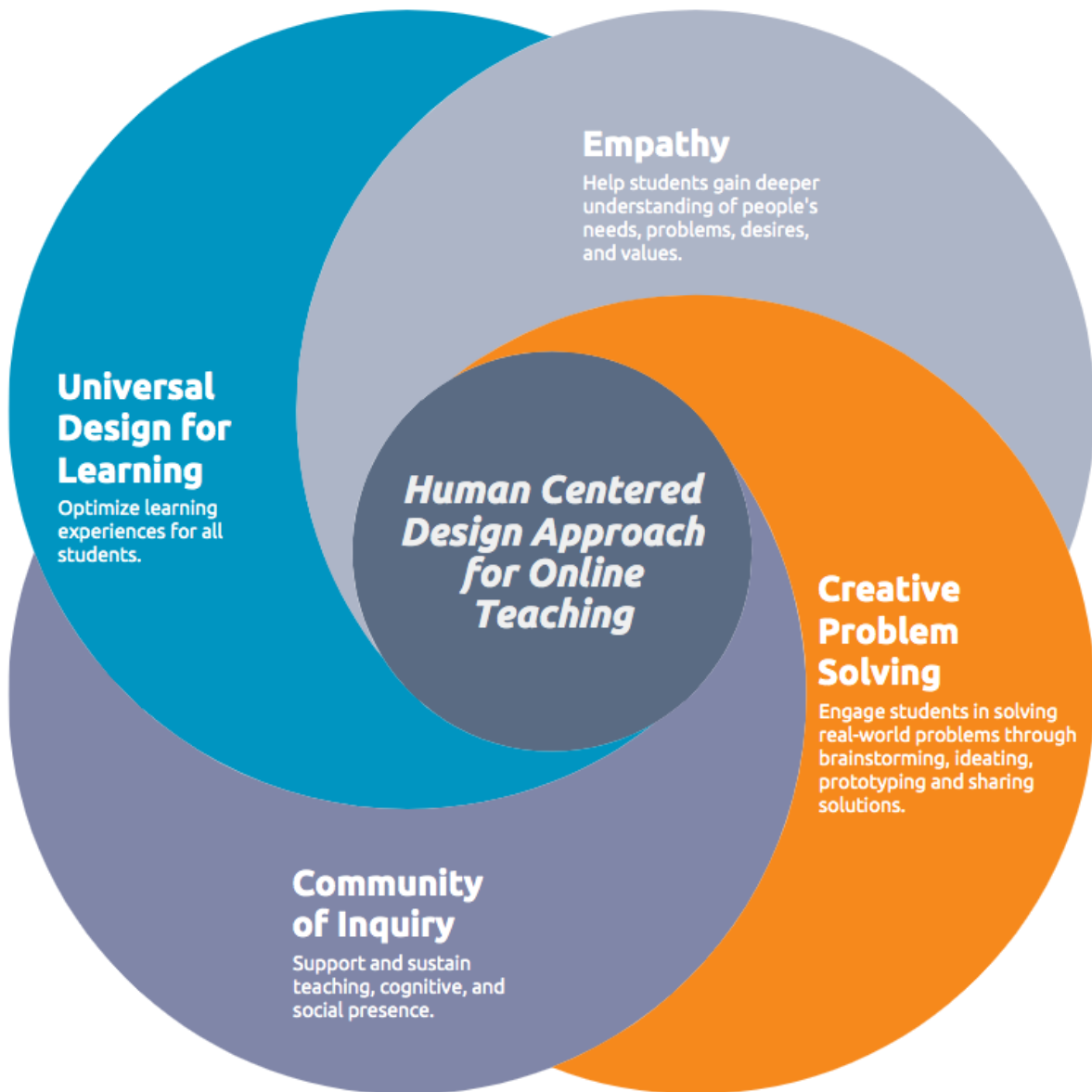


Figure 1: Human Centered Design Approach for Online Teaching

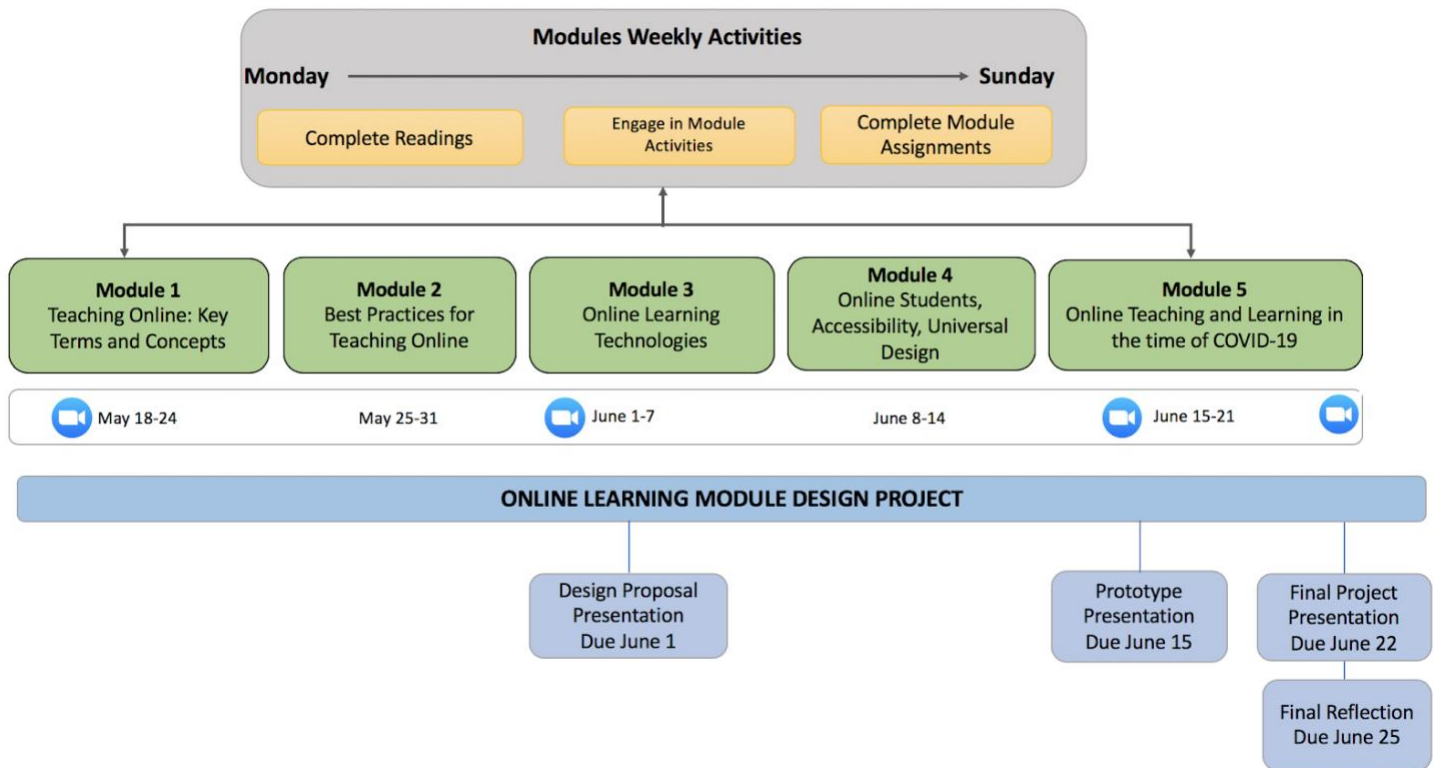


Figure 2: Course visual overview

▼ MODULE 1: TEACHING ONLINE-KEY TERMS & CONCEPTS [May 18-24]	⋮
📄 Module 1 Readings	⋮
📄 Module 1 Overview	⋮
📄 Transitioning to Online Teaching	⋮
📄 COLLABORATION ACTIVITY: Online Learning Common Terms and Examples May 24 5 pts	⋮
🗣️ DISCUSSION: Learning Theories and Online Education May 24 10 pts	⋮
🗣️ REFLECTION: Building plans for teaching online May 24 5 pts	⋮
📄 Module 1: Summary	⋮

Figure 3: Example module content



Figure 4: Online course activity examples

Online Learning Toolbox: A collection of resources created by the students taking EDUC-507: Principles and Practices of Distance Learning course offered in Summer 2020. View this resource: <https://bit.ly/3cIDSqo>.