



Harnessing the self-determination theory in the online class environment

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Autonomy

1. **Labor-based grading (Inoue, 2019)**
Let students contract for less than an A.
2. **Early-access pass**
Open courses 10 days early for organization & orientation
3. **Strength/Goal-based assignments**
Student chooses how to complete assignment



Competence

1. **Playfulness & play**
Reduce anxiety and encourage exploration and experimentation (Forbes, 2021)
2. **Iterative assignments**
Scaffold assignments and opportunity for revision
3. **Retrieval practice**
Mini-quizzes check for learning, guide students & faculty



Relatedness

1. **Peer feedback**
Structured peer feedback and "brain trusts" encourage direct connection
2. **Faculty office hours**
Encourage easy-to-schedule peer to faculty connection
3. **Guest office hours**
Expand student connections to wider world

Challenge

Engaging learners in an online environment where 80% is asynchronous and 20% are synchronous, virtual meetings.

Conceptual framework

Self-determination theory (SDT; Ryan & Deci, 2000) posits that through the constructs of autonomy, individuals can find and develop internal motivation which leads to increased persistence and effort and more directed attention. This theoretical framework has been widely applied within educational research with findings that suggest that adopting SDT perspectives can meaningfully influence student motivation (Lazowski & Hulleman, 2016).

Activities & results

AUTONOMY assumes an internal locus of causality, that an individual has agency to act, arriving at a desired outcome. Within this context, we operationalized autonomy as allowing students choice in how they approach and complete the course.

Labor-based grading allows students to contract to do less work in a course, earning a lower grade (Inoue, 2019). This can be viewed as a compassionate and student-centered stance that allows students explicit choice in the effort they extend and shared understanding. **Findings:** In Fall 2021 course, 46% of students chose to earn a grade less than an A. Qualitative responses from students were overwhelmingly positive.

Early-access pass gave students access to their Summer 2021 course 10 days prior to the start of the term. **Findings:** 85% of students accessed the course early and primarily used the time to plan their term and organize materials.

Strength/goal-based choices allowed students choice in how they complete their assignments. Some courses allow students to choose the topic; others allow student choice in submitting written or oral presentations, playing to their strengths or working toward a goal. **Findings:** Anecdotal feedback suggests that students appreciate the choice; however, it can create extra work for faculty to help students select appropriately and student stress in having to make the decision. Several students have taken coursework implemented their ideas and learning within their workplace (transfer of knowledge; Carpenter, 2012) or shared through scholarship (less frequently).

COMPETENCE describes the intrinsic satisfaction one obtains in successfully meeting a challenge, especially a task not very easily accomplished (Ryan & Moller, 2017). Here we offer ways to help students approach new challenges in a way that inspire effort and persistence.

Playfulness & play in the classroom and lower anxiety while increasing exploration and experimentation (Forbes, 2021). Examples of playfulness include pet show and tell, giving each student a secret mission to complete during class that links to engagement, using gamification tools like Kahoot!, and simulations like FNER and desert survival to illustrate course concepts.

Findings: Students responded positively based on qualitative and unsolicited feedback in course evaluations. Further, students remember the activities when faculty refer to them in future terms. They are "sticky" learning experiences.

Iterative assignments provide students with the opportunity to practice and improve throughout the term. In the communications course, students experience when they practice writing a variety of synthesis paragraphs and apply these styles of several contexts throughout the course, and when they build their paper block-by-block, allowing for revisions throughout the term. The goal is to encourage growth mindset (Dweck, 2015). **Findings:** Student feedback suggests that this practice builds confidence in their academic and professional writing. Faculty evaluation of work suggests that students improve their writing over the term.

Retrieval practice asks students to remember what they have learned, measuring knowledge acquisition and retention (Agarwal & Bain, 2019). Several courses ask students to complete short, automatically marked quizzes about key concepts from that week's content. This allows students to check their understanding and allows faculty to reinforce areas where students struggled. **Findings:** Faculty find this tactic helpful to calibrate courses during the term, identifying areas to revisit to ensure that students understand the material. Faculty who switched from points for completion to correct noticed that students tend to take quizzes more seriously.

RELATEDNESS establishes connections, trusting relationships, and a sense of mutual care (Ryan & Moller, 2017). In this context, we discuss ways to develop these connections between students, between students and faculty, and between students and the wider world.

Peer feedback requires students to connect peer-to-peer; yet, students do not always know how to provide peer feedback. In several courses, students are provided a structured feedback framework based on the work Buckingham and Goodall (2019) that helps to build empathy and accountability. Other assignments in the communications course use prompts based on the assignment instructions. In Fall 2021, students were assigned to a 4-person "brain trust" (Catmull & Wallace, 2014) and met 4 times. During their meetings, they shared their project progress, ask each other helpful questions, and build upon ideas. **Findings:** Students report that having the structured feedback framework helps them provide better feedback. They wanted similar structure in the brain trust groups. However, in the brain trust groups, they also reported using that time to talk about their other courses, something that they said that they would not have done if the exercise had been asynchronous through forums or optional.

Faculty office hours allow students to ask questions and seek guidance in individual or small-group environments. We also wondered if this would help students feel more connected to their faculty and their courses. However, getting students to schedule office hours (or attend open hours) has proved challenging. One faculty has experimented with using an online scheduler for office hours combined with repeated reminders/encouragement to use them and having previous students talk about the benefits of attending office hours. **Findings:** Both the faculty and students found the online calendar easy to use. Students appreciate the choice of phone or video. Once a student attended one office hour, they were more likely to schedule subsequent visits or engage in asynchronous dialog. Student comments about office hours have been overwhelmingly positive.

Guest office hours allow students to hear from experts in the field. In Winter 2022, an adjunct faculty member experimented with inviting guest experts to an open office hour. She hosted a total of 4 over the quarter. Students could earn a small amount of extra credit if they attended one. **Findings:** 15 – 20% of the class attended each session and engaged in lively conversation with the guest. Most who attended one session attended multiple (therefore, extra credit may have encourage initial participation but found enough benefit to continue attending.) Students highlighted this in the course debrief and feedback as a positive addition.

Summary

Applying a framework like SDT can help faculty view their courses from a motivational perspective. As faculty, we want to change students' knowledge, attitudes, and beliefs with hopes that they will take this into their larger world. We do this through how we develop and teach our courses. There is no one answer for a student, a faculty member, a course, or a program. Instead within and across courses, we must employ myriad tactics. Therefore, we have offered a variety of activities that we have found useful and encourage others to share their ideas.

Future research

Much of what we shared here has limited data. These are anecdotal evidence that needs further and more rigorous exploration. Each of these tactics would benefit from further research. Of most interest are: the use of play and playfulness in graduate education, the use of labor-based grading impact on student motivation and performance, and the use of iterative assignments to encourage persistence and growth mindset (Dweck, 2015).

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