Sustaining Instructional Practices in Challenging Times

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LAUNCHPAD

EXPLORING PROFESSIONAL DEVELOPMENT FOR EARLY-CAREER ACADEMICS

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Overview

The Covid-19 pandemic created unprecedented disruptions to people's routines, work, and lives.

Durable change of instructional practices depends heavily on instructors' ability to sustain the use of new practices in challenging times.

Understanding **how instructors adapted to pandemic teaching conditions** provides insight into the durability of their use of evidence-based instructional practices during a challenging era

Research Questions

1) What instructional practices did instructors maintain, revert to, or attempt during this phase?
2) What technology and institutional supports did instructors find helpful for teaching online?
3) When instructors attempted new instructional practices out of necessity, what, if any, of those practices did they hope to retain for in-person, post-pandemic teaching?

Data Collection

When: *Spring, summer, early fall 2020* online teaching phase of the pandemic

Who: *Instructors* who were already participating in professional development, number of respondents *n=130*

What: Quantitative: Multiple choice questions about *instructional practices used before and after the switch to online learning,* and

Qualitative: open response questions about *professional learning, technological support and new instructional strategies used online*

Open Response Key Takeaways

Technological Supports: Many people portrayed independence, self-sufficiency, or that they didn't need or didn't use technical support; many also said training and resources were unavailable, limited or insufficient.

Professional Learning: Frequently described as insufficient, limited or ineffective; approximately twice as many people said institutional support was available than technical support

Most common online instructional strategies that people anticipate continuing in person: flipped classes, video-recorded lectures
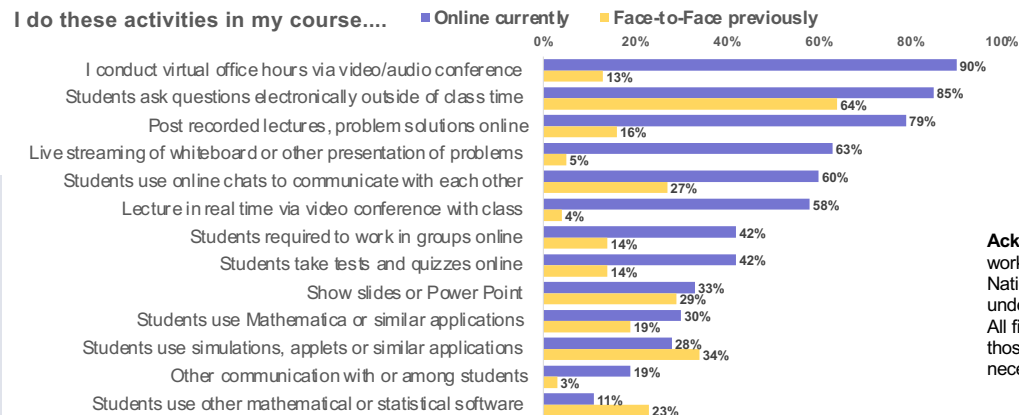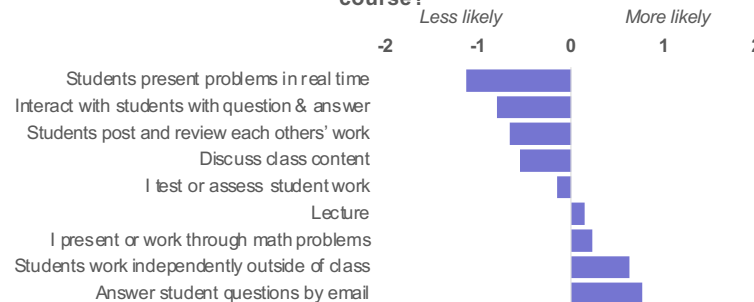
Shifts in Teaching Practices

Compared to your previous face-to-face classes, how would you estimate the amount of time you or your students spend doing the following in your online course?

Less likely   More likely
-2   -1   0   1   2

- Students present problems in real time
- Interact with students with question & answer
- Students post and review each others' work
- Discuss class content
- I test or assess student work
- Lecture
- I present or work through math problems
- Students work independently outside of class
- Answer student questions by email

I do these activities in my course.... ■ Online currently ■ Face-to-Face previously

0%   20%   40%   60%   80%   100%

Activity	Online currently	Face-to-Face previously
I conduct virtual office hours via video/audio conference	90%	13%
Students ask questions electronically outside of class time	85%	64%
Post recorded lectures, problem solutions online	79%	16%
Live streaming of whiteboard or other presentation of problems	63%	5%
Students use online chats to communicate with each other	60%	27%
Lecture in real time via video conference with class	58%	4%
Students required to work in groups online	42%	14%
Students take tests and quizzes online	42%	14%
Show slides or Power Point	33%	29%
Students use Mathematica or similar applications	30%	19%
Students use simulations, applets or similar applications	28%	34%
Other communication with or among students	19%	3%
Students use other mathematical or statistical software	11%	23%

Key Insights

RQs 1 and 3: Lecturing, posting video recorded lectures increased online;

and instructors predicted they would continue to provide video recorded lectures post covid

Quote: "I would like to see my lectures moving completely online (outside of class time) so that my class time can be focused on problem-solving and discussion of topics."

RQ 2: Many instructors described technological and institutional support as inadequate. Some claimed they didn't need technical supports.

Quote: "I didn't receive any technical support, but I also didn't ask."

Overall Observation: Findings align with Hora & Hunter (2016): planning by fine-tuning existing materials and consistency of bringing lecture notes and/or Powerpoint slides to class

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