

**ME Open Forum
WebEx Meeting
December 17, 2020**

Attending:

Alex Chortos	Fredy Rodriguez (guest)	Mike Logan
Amy Marconnet	Fu Zhao	Mike Sherwood
Andrea Vacca	Galen King	Monique McClain
Andres Arrieta	Gordon Pennock	Neera Jain
Anil Bajaj	Greg Shaver	Nicole Key
Benxin Wu	Guillermo Paniagua	Pam Graf
Bert Gramelspacher	Ivan Christov	Partha Mukherjee
Beth Hess	Jackie Baumgardt	Peter Meckl
Betsy Baxter	James Braun	Rebecca Ciez
Bin Yao	Jay Gore	Richard Buckius
Bob Lucht	Jeremy Wampler	Ryan Wagner
Bumsoo Han	Jim Jones	Salil Bapat
Cathy Elwell	Jong Hyun Choi	Sameer Naik
Chris Goldenstein	Julia King	Sheri Tague
Chuck Krousgrill	Kay Shephard	Sheryl Willison
Cindy Cory	Kejie Zhao	Song Zhang
Dave Cappelleri	Klod Kokini	Steve Kessler
David Warsinger	Kristi Moses	Steve Wereley
Davide Ziviani	Kristin Deckard Dawson	Tami Armstrong
DHR Sarma	Kyle Rice	Terry Meyer
Eckhard Groll	Laura Blumenschein	Thomas Siegmund
Ed Berger	Liang Pan	Tina Denson
Elizabeth Briody (guest)	Lizhi Shang	Todd Nelson
Elizabeth Henning	LouAnna Eichrodt	Veeraraghava Hasti
Emma Cox	Marcial Gonzalez	Xiaomin Qian
Eric Nauman	Marisol Koslowski	Xiulin Ruan
Fabio Semperlotti	Martha Lucht	Yan Chen

Minutes

1. Share a value, make a point – Eckhard

- Thanked and congratulated everyone for making through the semester
 - Got to a successful conclusion!
 - Stress levels up, people are worn out.
 - Encourages everyone to take the break.

- No official busy will be scheduled or conducted during the break.
- Recognized support from the ME Leadership Team regarding preparing a report for Dean Chiang.

Action item: Eckhard will share the report with everyone.

2. Announcements – Eckhard

- Reminder: Virtual ME Holiday Event today (Thursday, Dec. 17) at 5:00 pm
- Reminder: Purdue University will close on Friday, Dec. 18, EOB and reopen on Monday, Jan. 4
 - Make sure you take a break!
- Purdue Service Anniversaries:
 - 10 years: Kristin Deckard Dawson and Steve Kessler
 - 15 years: Bert Gramelspacher and Michelle Sarault
 - 20 years: Robert McGuire
 - 25 years: Cathy Elwell and Kwok “Frank” Lee
 - 35 years: Mike Black
 - 40 years: Mike Sherwood
 - Congratulations to everyone!

3. Peter Meckl to take a sabbatical – Eckhard

- Peter will be on sabbatical for the spring semester 2021
- Amy Marconnet will be the Acting Assistant Head for Facilities during Peter’s sabbatical
 - Amy will help with the new building master plan.

4. University Senate Wave 4 Survey Analysis – ME Senators

- Survey was conducted and an analysis was done
- The ME Senates will give an update.
 - The ME Senate reps are: Thomas Siegmund, Terry Meyer, and Klod Kokini.
- Website to review the previous Town Hall recordings, survey results, and resources: <https://www.purdue.edu/senate/meetings/pandemic-information.php>
- The Senate did the surveys to keep a “pulse” on 2020
- Surveys, Townhalls

- Information made available across campus showing how we feel affected by the current situation
- Used the survey information to inform administration and BoT
- Wave 4 results for 5,140 faculty, staff, Post Docs, and all students
- Demographic information:
 - 58.1% female, 36.9% male, 4.9% other or not provided.
 - 0.6% American Indian or Alaska native, 9.4% Asian, 2.4% Black or African American, 0.1% Hawaiian or Pacific Islander, 4.2% Latinx or Hispanic, 0.8% Middle Eastern or North African, 80.4% White, 0.6% other, 6.2% preferred not to answer.
 - Employee status: 51.0% staff, 17.7% faculty, 13.8% Graduate students and Post Docs, 12.0% Undergraduate students, 5.5% other and retired.
 - 63.0% live with a partner, spouse, or significant other. 12.8% live by self, 11.9% live with a friend or friends, 6.1% live with adult children, 20.3% live with minor children, 11.6% live with someone else or preferred not to answer.
 - All units were represented.
- Additional information on the Wave 4 results includes working hours of the responders, and changes in distribution of work hours by type of work (PreCovid to Fall 2020)

Comments:

Eckhard: appreciates the Senate reps service and keeping the school updated.

5. Graduate Student Research Experiences during COVID19 – Elizabeth Briody, Fredy Rodriquez, and Ed Berger

Fredy Rodriquez:

- Collected data from both faculty and students this past summer who took online classes
- Data findings:
 - Summer classes were fully online.
 - Pre-recorded videos of lectures and virtual tutorial rooms became commonplace.
 - Faculty repeatedly sought student feedback to improve instruction.
 - TA's helped bridge the social and academic sides of learning.

- Strategies were implemented to eliminate opportunities for academic dishonesty.
- Workload increased significantly for instructors.
- Faculty sought to maximize learning:
 - Many organized weekly assignments, TA check-ins, and discussion forums to provide students with some structure.
 - Some faculty followed the lead of experienced instructors and sought advice when possible.
 - Others used the Express Room to produce high quality pre-recorded lectures.
- Students recognized the teaching challenges
 - Appreciated the structure, clear expectations, and flexibility in assessments.
 - Quite satisfied with the pre-recorded lectures.
 - Valued the virtual office hours format.
 - Thankful that professors listened to their concerns.

Elizabeth Briody:

- Did anything fall through the cracks? Yes.
 - What do we observe in this visual?
 - Were instructors or students able to articulate any shortcomings?
 - How did the anthropologists figure out what was missing?
- Knew from earlier research that study groups are a key form of peer-to-peer collaboration and learning
 - Characteristics:
 - Created informally, typically at instructor's suggestions.
 - Vary in size from 2-8 students on average.
 - Involve 1/3 – 1/2 of student studying time on average.
 - Function as a resource pool.
 - Benefits:
 - Help address workload and time management issues.
 - Teach teamwork and reciprocity.
 - Improve problem-solving.
 - Serve as a form of peer support.
 - Reduce amount of instructor time with students.
 - Summary

- Problem: Peer-to-peer collaboration, a foundation of Purdue's ME program and linked with achievement, was at risk.
 - Context: No mention of study groups emerged in summer 2020 interviews with instructors and students.
 - Explanation: COVID not only led to physical isolation from peers, but disrupted a key learning practice on which students relied.
 - Solution: Create ways for students to interact and participate in virtual and hybrid study groups, particularly in sophomore and junior ME courses.
- Questions for us today:
 - Were students able to work in study groups this fall?
 - If so, how did the students find their study group partners?
 - Did instructors face additional challenges in Fall 2020?
 - What are some teaching elements from Spring/Summer 2020 that helped you prepare for Fall 2020? What did you learn?

Comments:

Jim: This fall we saw a lot of these things. Very few students came to the ME building this fall. Those instructors that did offer face-to-face recognized a steady decline in attendance by the end of the semester. They are perpetuating the very problem they are describing. On the Zoom classes, a lot of students did not want to turn on their videos. There are some opportunities that the students are not taking advantage of.

Terry: Did break out sessions in his class. One student wrote that their group would remain silent. May need to think about something better.

Jim: Would try to get the conversations going, but when he would leave the room, they would become silent again.

Andres: Noticed a lack of engagement with the students and lectures. Noticed that the number of views the lecture had received would be higher based on the number of views. We had very well attended office hours. We may not be doing a good job of recording our lecturers.

Elizabeth: Thinks students are reaching out to one another via text.

Eckhard: Are there any studies on what makes a good size Zoom meeting? What would be the right size? From our experience, the larger meetings make it difficult for people to speak.

Elizabeth: Study group sizes from their earlier research ranged from 2-8 people on average. This is consistent with break-out groups that Jim talked about. You

would think that students would feel more comfortable in smaller groups. We need to look at what else can be done to facilitate learning? Elizabeth asked how the grades have been? Are grades down from a year ago (relative to COVID).

Jim: Doesn't know if they have gone up or down. Some individual courses have gone up and some down. On average, they are probably the same. The Fluids area were trying to be very flexible and the grades are probably higher, ME270 grades are reasonable, ME200 grades may be lower, students struggled with the Physics 241 grades (not under our control), and some of the math course grades not that good.

Eric: For the math grades, COVID caused some challenges there. In Math they assume there will be a normal distribution of grades. It played out poorly over the summer and fall. At one point a "B" in one math class was 97 score (only got an "A" for a 98 score or above).

Jeff: there was some significant Chegg issue. It impacted grades in some of the Math classes as well.

Greg: Was the lead instructor for ME375. Has data comparing Fall 2019 to Fall 2020. Homework average was 91% in 2019 and 73% in 2020. Lab score was 93% in 2019 and 90% in 2020. Labs were face-to-face and students didn't work in teams. The drop in homework scores could be due to no face-to-face office hours and the decline of attendance in the course. Quiz scores dropped from 93% to 89.5%. Exam scores are hard to compare because year to year they may not be as hard or as easy. Shows us face-to-face is important.

Ed Berger:

- Student experiences of 'implementation' during COVID
 - Ed's student, David Evenhouse (PhD ENE '20 / MS ME '20) completed his dissertation this past month. Part of his study was initiated during the spring 2020 session. He did a series of interviews with students trying to understand how students implement educational innovations. When faculty come up with a new innovation or process, the students go through adaptation themselves.
 - David's research questions:
 - In what ways do students experience the process of implementation when they encounter educational innovations?
 - In what ways can we represent students' experiences of implementation to inform future course design?

- Results are reported in David's dissertation as well as a piece for ASEE in their [Connections newsletter](#).
- Results: Student experiences
 - Scheduling and time management dominated.
 - Students had to 'start over' in terms of schedule and logistics around academic responsibilities when they moved home.
 - Home life presented many challenges for some students: family commitments, family rhythm (meal time, chores, etc.), availability of study space.
 - Scaffolding and setting expectations eases transition.
 - Scaffolding refers to both 'content' scaffolding (as you normally would) but also 'resource' scaffolding (how can students be successful in the new circumstances).
 - Students appreciated when instructors 'over-communicated' about expectations, resources, etc.
- These first two items worked together:
 - Students who knew and understood clear expectations and holistic scaffolding from instructors could explain this to their families, in an effort to better manage their dual home/academic commitments.
 - Loss of community inhibits collaboration and reduces motivation.
 - Students didn't necessarily realize how important their informal, impromptu interactions with peers (in the atrium, between classes, etc.) were for their experience and success.
 - The community and camaraderie also helped motivate individual students—in other research we learned that students hold a spirit of 'communitas', and this seems central to the UG experience in ME.
 - Individual needs and preference drive decisions and habits.
 - Student agency enables them to make choices about resources, collaboration, etc.
 - These choices happen within the context of individual classes, their requirements and assessments, and their overall workload.

- Conclusions:
 - Students undergo a complex process of ‘implementation’ in each class, and with respect to their ‘home’ environment.
 - Scaffolding of instructional resources/practices and content is important for student success.
 - Instructors should (over-?) communicate with students so that expectations are clear.

Comments:

Eckhard: Wonders if we could use some of this information as guidance for developing the syllabus for best practices (how do you learn?).

Ed: We could do that. To be fair everybody was making this up as we went along back in March. We could come up with some standard language for the syllabi.

Andres: How can we get our students to read the syllabus? Can we use this crisis to instill new study habits and bring attention in to reading the books and reading in general?

Ed: All these things are multifaceted. Instructors should repeat the things they want the student to do. As one tool, the syllabus could be useful, but a routine recommendation from faculty or reminder are appropriate. It is hard to enforce some of these behaviors even if we think they would be good for students to engage in.

Neera: Even doing things in class that serve as reminders to the students, could be helpful.

Andres: And we all have to do it (all professors).

Xiulin: Agree with the discussions. Two things that work for 315 are using GroupMe (peers answer questions), especially before homework or exams. The other is that for quizzes, after each lecture, they will watch the video. These worked well.

(Additional comments from the Chatroom listed below)

From the chatroom:

from David E M Warsinger to everyone: For ME 315 we had Brightspace quizzes for almost every single lecture that helped us increase lecture attendance. It was more work for everyone but I think it helped a lot with watching recordings.

from David J Cappelleri to everyone: For ME 354, most students just watched the videos the day before HW was due.

from Andres Arrieta to everyone: An observation from ME 274 (Basic Mechanics II): We had a significant difference in grades between the "in-person" and "Distance/Online" sections. The differential in average was larger than 15% in favor of Distance/Online section

from Thomas H Siegmund to everyone: In ME 489 I also found that the online section did overall very well, but I also had one online case that completely fell off and failed

from Amy Marconnet to everyone: my friend who is an assist dean for students in a different university said they organized "watch parties" for online lectures for asynchronous courses. student could watch video lectures in large lecture hall without faculty this fall. in this way they could meet other students in the class. even "virtual watch parties" could be helpful for that

from Marcial Gonzalez to everyone: Let me add information about ME 323, which has a total of ~350 students. The students did equally well as in past semester. There was no statistical difference between the distance and on-campus students. The recoded lectures for my face-to-face (80) and online students (33) had more than 9,000 views in total.

from Elizabeth to everyone: Thank you all for the comments in the Chat. I have noted them down. I appreciate all of these examples.

from Xiulin Ruan to everyone: GroupMe chat has worked well for ME 315. Questions were answered by their peers or faculty.

from Thomas H Siegmund to everyone: Does GroupMe lower the barrier to interactions relative to do this in Brightspace directly, or MS Teams etc.?

from Laura Helen Blumenschein to everyone: I've also used Piazza in the past as a group forum for classes

from David E M Warsinger to everyone: Yes, we had tons of messages on GroupMe. Very low barrier to communication

from Xiulin Ruan to everyone: GroupMe is very easy to use and has notifications. Brightspace Discussion Board does not have notification I believe.

from Laura Helen Blumenschein to everyone: (Seconded Xiulin's comment here, we tried Brightspace Discussion Board but it was very difficult to keep up with so we fell off quickly)

from Thomas H Siegmund to everyone: Makes sense. I felt that students found that if I am in the chat group that they did not want to communicate as much. Maybe only have a TA in the chat

from Davide Ziviani to everyone: Slack worked well for me in ME200