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Work in Progress: Cultures of Collaboration in Emergency Remote Teaching and Beyond

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Areas of Expertise Dr. Ottman focuses on organizational behavior, management, leadership, continuous improvement, and team dynamics. A specific area of interest is virtual teams, which she incorporates into the hybrid courses she teaches. She is a certified administrator of the MBTI, which she uses to aid in leadership and team development.

Currently, Dr. Ottman teaches full time graduate courses and conducts leadership seminars. She developed the Doing Business in China program. Prior to joining MSOE, she taught for eight years at the University of Wisconsin-Milwaukee in the traditional undergraduate and graduate programs, and the Executive USA and China MBA degree programs, and she conducted leadership programs for industry leaders from around the world. In 2005, she was awarded the Outstanding Teaching Award for Academic Staff for the University of Wisconsin-Milwaukee.

Dr. Ottman also provides independent consultation to local, national and international executive leaders, leadership teams, and management groups from an array of industries and professions. She has conducted onsite consultation and education to Asia-Pacific leadership teams.

Professional Activities Dr. Ottman has 13 years of experience in health care as a manager, an administrator, and a vice president. She served on various local, state, and national professional boards, including serving as President of the Milwaukee area Association of Health Care Executives, as a Board of Examiners for the Wisconsin Forward Award and as President of ALPs (Accelerated Learning Programs) in Oshkosh. Among her current volunteer activities, she serves as a quality consultant for Oshkosh Public Schools, as a leadership consultant to Christine Ann Domestic Abuse Services and is on the Advisory Board for the VNA (Visiting Nurse Association) of Wisconsin.

Cultures of Collaboration in Emergency Remote Teaching and Beyond

Introduction

We pride ourselves on teaching through hands-on learning and being available to students and colleagues in campus offices. In part, these elements make us good teachers. Prior to March 2020, face-to-face interaction was the way we taught, collaborated, served and learned. Then, COVID-19 became real and, within a week, we could no longer be physically present with our students and peers. We shifted instruction to Emergency Remote Teaching (ERT). We also shifted the way we collaborated in our scholarship and service. Informed by research, this paper highlights aspects of our journey, challenges along the way and lessons learned to apply to the future.

As educators in a predominately engineering university, the courses we teach address identified gaps in traditional engineering education and focus on the "soft skills" [1]. Team-based learning and team projects are central to our teaching pedagogy. In moving to ERT, we had many questions centering on retaining our pedagogy in a completely online environment. This dilemma required us to become collaborative learners ourselves, demonstrating an entrepreneurial mindset [2]. Specifically, we took risks to explore ways to create an online structure to enable students to reach course learning objectives. Within our own discovery process, we developed stronger collegial relationships and applied our learning not just to the classroom, but to our service and scholarship work. Moving online in ERT changed the way we lived out our culture and provided new collaboration tools that benefited all aspects of our work as faculty. These benefits can extend beyond the ERT period. As we look to the future, we must ask ourselves, how can we intentionally take these lessons learned and apply them to our practices as educators and as colleagues to promote collaboration and learning?

Emergency remote teaching and team-based learning

The goal to retain a team-based learning pedagogy in ERT set this journey in motion. We recognize that teaching is more than transmitting information, it must challenge students to actively connect with the material [3]. A basic tenet of team-based pedagogy is that student work promotes learning of the topic, as well as team development [4]. In retaining the team-based pedagogy, most formative and summative work were completed collaboratively, with individual student prework completed before meeting with teammates.

At the beginning of ERT, students delivered team products through traditional written formats of Word and Google Docs. Holding onto what had worked well in the past, it appeared that completing team-based work was limited with reliance on "cut-and-paste" methods.

New tools that reflected a virtual environment were needed to shift the focus to collaborative learning. In a just-in-time fashion, faculty learned and utilized tools such as JamBoard [5] and Mural [6]. These tools provided platforms for students to discuss, learn from each other, and still produce a product. They also allowed the faculty to see students' collaborative processes, while still having a finished product to assess with rubric criteria.

Students, used to face-to-face interactions, needed new strategies and processes to connect and collaborate in a virtual world. Assigned virtual team roles, the creation of virtual team norms, and process feedback systems were employed at the graduate and undergraduate levels under ERT. As we move out of ERT, but still need to maintain social distancing, continued application has occurred.

Observations of students and new strategies

For students, the process of learning course materials, while developing a virtual team provided a social connection when physical distancing was required. Discussing challenging course topics such as emotions, values and attitudes, diversity, equity and inclusion, conflicting views, among others, is difficult in a face-to-face environment. Yet, as observed by the faculty and reported by students, in the ERT environment, a greater depth of disclosure was demonstrated. This is consistent with research that has examined interactions between people who have just met. The research has found that self-disclosure is often greater online than face-to-face. In experiments, people randomly assigned to interact over the Internet (versus face-to-face) were better able to express their true qualities. Generally, strangers online, as opposed to in-person, reveal more about themselves in terms of both the depth of the disclosure and the breadth of the different topics discussed [7]. Scholars believe that these differences are due to the reduced social cues available online. People feel more anonymous, more in control, and more able to open-up without feeling self-conscious [8].

When developing teams, self-disclosure promotes trust, which is foundational to team development [9]. Trust is also essential for knowledge sharing, which requires open communication [10]. In team-based learning environments, open communication and knowledge sharing promote learning. Consistently, in the virtual team-based classroom, students report sharing more with each other. They also report that the teams promote their learning.

Across multiple courses, discussion of the concepts of introversion and extroversion occurred. In most courses, students learned about and took the Myers Briggs Type Indicator (MBTI) to explore introversion and extroversion in greater detail. Given the student population, over 75 percent of the students self-identified as introverts. At the start of the term, they also identified as preferring to work alone as opposed to in groups. This is consistent with findings of engineering students in experimental courses where introverts are less likely to prefer group work [11]. Yet, it appears based on course work, self-reflection, and end-of-term team feedback meetings, that introverts in a 10-week term developed trust and gained comfort in their virtual teams and valued their team-based learning. Students consistently reported that what promoted their learning in the courses was the team collaborations.

Shifting to an online environment using Microsoft Teams and Zoom, students reported developing friendships with their peers. In end-of-term team feedback sessions, students at both the undergraduate and graduate levels shared that they disclosed more with their newly formed online teams than they had with prior friend groups. Some reported that this was the first “real” team they had experienced in a school setting. As opposed to just working in a group to

accomplish assignments, elements of teamwork that students reported include caring for each other and putting the team above oneself. In many situations, their connections extended beyond just the class assignments to supporting each other in other aspects of life, including internships, jobs, roommates and significant others.

Although the author has used team-based learning in traditional graduate and undergraduate courses before ERT, moving solely to an online team environment was new with COVID-19. Given the observations and student feedback, continued use of online virtual teams will be explored post COVID-19. Research is also recommended to support the value of online teams in a post COVID-19 era.

Beyond the tools, processes also needed to be revised. To promote collaboration online, virtual student team roles were established. These provided new leadership opportunities and ways to promote accountability in a virtual world. Each team designated a Point-of-Contact person and a Poster. The Point of Contact was the student that communicated with the faculty member. They also became the hub for the team. The Poster was the person to submit work virtually. Over time, a virtual team Initiator role was developed to set up and start virtual team meetings. As processes evolved, the Reminder role was created by some teams. Due to a lack of face-to-face contact that students normally use to remind each other of due dates or team meetings, this role was suggested by multiple teams.

New processes were also developed. To promote the richest virtual communication, webcams were encouraged for all team meetings. To prompt this, team photographs were required for all team meetings and were sent to the professor. This created a way to track attendance, as well as encourage rich communication methods.

Virtual meeting evaluations occurred at the end of each weekly team meeting. The evaluations encouraged students to learn and continually improve how they functioned in this new virtual team world. Students completed brief evaluations at the end of their meetings using primarily two methods– Keep Stop Start (KSS) and Fist of 5. The KSS feedback process asked students to identify what worked well that they want to keep doing, what did not work well that they need to stop doing, and what should they start doing to improve their team process. The Fist of 5 asked students to rate the effectiveness of their virtual meeting on a scale of 1 (low) - 5 (high). They did a "rock-paper-scissors" action and showed their hand with their rating on their webcam. They then shared what needed to be done to reach a five score. The results of their end of virtual team meeting feedback, along with the team photograph, were sent by the Point of Contact to the faculty. Often a short exchange over text or email occurred to encourage ongoing team development. From a student perspective, this promoted virtual team learning and development. From a faculty perspective, this exchange also provided just-in-time learning and allowed rapid adjustments based on the student virtual team feedback processes.

From this feedback process, assigning prework that students submitted in advance of team meetings to each other became essential to the collaborative process. Prework templates that promoted collaboration in the virtual environment were developed. Helping the students to focus on sharing, discussing, debating and learning, instead of spending time formatting and filling in

documents was essential to the virtual collaborative work. Mural templates were developed with embedded directions. Consistent with the just-in-time learning in the ERT process, struggling students developed templates to promote discussions that were then adapted and made standard in future classes.

Flow of discussion was a noted challenge for many students. Prework helped students to come to the team prepared to discuss. Strategies such as naming a facilitator, having a rotating speaking order and the current speaker calling on the next person to share were employed. The online environment appeared to create more support for experimenting with and embracing new communication strategies and norms.

The KSS process was applied to peer-to-peer feedback, a tenet of team-based learning. At the midterm, students reflected on their team collaborations and gave KSS feedback to each other. The feedback was written, as part of prework, and shared verbally in a virtual team meeting. This was found to be pivotal to the collaborative learning process. At the end of the term, the process was repeated, with the faculty observing. Students were required to add how they used the midterm reflection and KSS feedback. Through observation and reading the individual and team reflections, team-based learning occurred. More importantly, individual students gained confidence in their team skills and gained new skills that are transferable to face-to-face and virtual environments. Research on the role of virtual teams and collaboration as a foundation for face-to-face team development is encouraged.

Overall, from a faculty perspective, the depth of the feedback was greater than observed in face-to-face formats. Investigation is needed to determine if social distancing and COVID-19 isolation promoted more self-reflection, or if the online format promoted a safer environment for self-disclosure, communication norms, and directness in feedback to peers. An unintended outcome during ERT was the students' rehearsal and confidence in using collaboration tools as they developed a new set of problem-solving skills to add to their professional practice. Any activity that develops the capacity to approach conditions of uncertainty prepares our students for addressing complex problems [12].

Faculty Perspectives

Just-in-time learning was required to teach in ERT. Learning new tools is one thing, using them to teach is another. Extending this, it was a challenge to not only teach students with the tools but to teach the tools to students so they could use the tools to collaborate. As faculty, this required finding appropriate tools, learning them, adapting course assignments to incorporate the tools, teaching course concepts through the them, teaching the them to students and then, having students apply the tools. The key was tools could not become the focus of learning. Instead, the focus needed to remain centered on course topics that students learn through collaboration, while the tool remained the means to accomplish collaborative learning.

Exploring tools to implement occurred at the same time as converting content online. Our stress level was high and was made higher knowing we did not want to create more tension for our students, who were also stressed by living in the new world of COVID-19. Organically, a small group of cross-disciplinary peers started to connect and support each other. Via new virtual

means that sometimes fell outside of "normal" office hours, stronger peer connections were established. Consistent with change theory and team cohesion, we bonded quickly to overcome a barrier and solve a problem [13]. We had frequent, scheduled, and random exchanges, and created test groups so we could try tools/strategies with each other, taking turns teaching and being the student. Although not recommended as standard operating practice, this author, had a practice lesson on a Sunday night at 10:30 pm to ensure greater confidence in teaching at 9:00 a.m. on Monday. Like students' experiences, shifting to a virtual collegial environment provided a social connection for faculty during a time of physical distancing. Greater self-disclosure, risk-taking, collaboration, and feedback also appeared in these organic cross-disciplinary faculty groups.

Lessons learned from discovering new collaboration tools were also applied to our formal faculty committee/service work. Through using the tools to promote peer collaboration, other faculty also experienced them and have considered ways to employ these new tools in classrooms.

Additionally, through the virtual tools, more “voices” appear to have been heard. Consistent with studies of leadership in virtual teams, power and leadership are not bound by traditional roles and often shift to focus on the purpose of meeting [14]. With everyone occupying the same “Zoom square”, collaboration has greater potential, especially in the often-hierarchical world of rank, title and department found in academics.

Challenges

Unexpected and unprecedented change occurred with COVID-19 and the movement to ERT. With a growth mindset, new learning occurred. Yet, this was not without challenges. New learning took time and energy. Fatigue was experienced, as were moments of panic when the best-laid plans did not unfold as expected and rapid adjustments needed to occur. A motto of “fun, flexible, and forgiveness” was used at the start of each class session and hung on the wall as a backdrop for one faculty member.

Having tools to promote collaboration is only one element to success. Establishing new ways of interacting, with new routines and practices were needed. Yet, as the business saying goes, "Culture eats strategy for lunch." With tools and strategies in place to promote collaboration, in a few instances, the old cultures and habits were too strong. At the student level, stress and fear of failure meant that some students occasionally reverted to the cut and paste method to "just get it done." At the faculty level, power structures got in the way and extinguished some online collaborations. As with any learning, change can be uncomfortable and encouraging acceptance of new tools, systems, and culture was required, but not always possible. As we move forward, growing new cultures of online collaboration must be intentional for the cultures to flourish.

Intentional future

Collegial development has promoted the exploration of collaborative scholarship. New questions are being explored to include how we can maintain our hands-on teaching culture while enhancing virtual collaboration and deeper learning with our students, ourselves, and our peers. As we return to traditional classroom spaces, how can we intentionally bring our learning

forward? Value in virtual collaboration was observed and experienced. Students reported virtual teams promoted their learning. From a faculty perspective, virtual collaboration appears to have promoted team development and learning in our students. We also experienced this in our peer-to-peer collaborations. As we move beyond required social distancing, how can we continue to embrace the value of virtual collaborations in our teaching and our faculty work? Ground in our unexpected shift to ERT, use of new tools and processes, and our lessons learned, we need to be intentional as we move forward to create cultures of collaboration that embrace our recent and distant pasts and are supported with our scholarship.

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