

EXPERIENTIAL WORK IN A VIRTUAL WORLD: IMPACTFUL AND SOCIALLY RELEVANT EXPERIENTIAL LEARNING

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ABSTRACT

Learning designs that facilitate real-time, online experiential learning have, up to now, received sparse attention. This study scrutinized an online, experiential, synchronous classroom session that featured an exercise designed to highlight the dynamics of competition and collaboration, group-as-a-whole understanding, and psychodynamic processes. A naturally occurring experiential classroom experience was recorded and transcribed. This research indicates that provocative experiential learning exercises can be translated effectively to a synchronous virtual classroom environment. This research also found that group dynamic issues of competition-collaboration, establishing moral high-ground, and winning surfaced, even when group participants were interacting via small squares on a screen. This research views the issues that emerged in the study through the lens of a parallel process that reflects the issues occurring in the society at large.

Keywords: virtual learning, online experiential learning, group dynamics, parallel process

INTRODUCTION

This article examines an online experiential group exercise designed to help graduate students learn about the psychodynamics of group and subgroup interactions, collaboration, competition, and group-as-a-whole concepts. As more and more courses move to an online environment due to the COVID-19 pandemic, there is a need to better understand whether teaching modalities other than lectures and discussions can be translated to an online environment (Dhawan, 2020). Is it possible for students to engage in group experiences, experiential learning, and simulations in a world of online classrooms and remote contact? This article describes an experiential exercise that was translated successfully to an online classroom in an attempt to better understand how this type of education can enhance engagement and learning.

The class session turned out to be a naturally

occurring opportunity to examine an experiential exercise in a virtual class environment. The class took place after the university had abruptly closed all in-person classes because of the COVID-19 pandemic, and the session occurred during the group's fourth virtual meeting. After the class session, we realized that what had taken place was not only fascinating in terms of the group dynamics, but it was also an example of the complex and deep experiential work that can be implemented in a virtual environment. This discovery seems especially timely and relevant, as many university courses will be taught online for the foreseeable future. This paper examines the class as a naturally occurring qualitative research project.

The group dynamics class in the description that follows was predicated on in-person experiences of group interactions, along with follow-up analysis and debrief. It is our belief and

practice that an experiential approach is ideally suited to teaching group dynamics. The only way to fully understand what happens in a group is to experience being part of one, with the opportunity for an immediate follow-up debrief and discussion afterwards (Smith & Berg, 1995). The best way to learn about groups is to participate in many and have the chance to examine each experience in a systematic way (Smith & Berg, 1995).

RELEVANT LITERATURE

When the pandemic hit and the majority of graduate school classes made an immediate and abrupt switch to the online environment, many professors were unprepared for this (Mishra et al., 2020). Even though there was over a thirty years' history of online courses, many instructors just moved their in-person content and pedagogy to the online environment (Mayer, 2019). Looking back at the literature in which researchers examined the pros and cons of hybrid courses seems like looking in the rear-view mirror as we speed ahead into the era of mandatory Zoom classes (Mansour & Mupinga, 2007). In the early years of online teaching, researchers regularly advocated the need to move beyond conventional classroom instruction when teaching online (Howell et al., 2003), and not surprisingly, many instructors and students quickly became frustrated when face-to-face instructional techniques were transferred to an online environment (Howell et al., 2003). Researchers frequently spoke about the need to situate online learning in real-world problems (Huang, 2002), and among other issues there was a call to understand how group projects work online (Ekblaw, 2016).

In the early 2000s there was a great deal of research on distance education as a scalable method to deliver learning (Moore, 2007). The convenience and cost savings involved with online learning was attractive (Jung & Rha, 2000; Wiley et al., 2012). Online learning began as an asynchronous adventure, and synchronous learning has been introduced slowly (Moore, 2007). Over time, the importance of interaction to enhance asynchronous learning became clear (Park & Bonk, 2007). Interaction in the form of chat rooms or places for students to comment on course material grew as the most common method of interaction in online learning (Moore, 2007). Maor (2003), for example,

explored the extent to which teachers can promote a collaborative, reflective and interactive learning environment. Teachers were able to increase collaboration through facilitating online responses and assigning students to lead peers in discussions (Maor, 2003).

There has been a proliferation of research on online business simulation games (Hernández-Lara & Serradell-López, 2018). Simulation games provided “opportunities for learning about complex and risky real-life processes” (Siewiorek et al., 2013, p. 1013). This was a major advance in online learning. Buil et al. (2019) found that business simulation games are one of the most “effective tools for motivating and engaging players actively in learning experiences” (p. 162). Business simulation games clearly paved the way for other methods of experiential learning online. Not only were they engaging, but they helped players develop an understanding of the issues they were likely to confront in their business lives. However, the ability to transfer what we have learned from online business simulations to a synchronous video, online environment is not clear, since many business simulation games are asynchronous (Hwang & Cruthirds, 2017). A further complicating issue is that some of the research on online business simulation games is unclear as to whether the game was conducted asynchronously, in a hybrid format (both asynchronous and synchronous), and whether there was synchronous video involved. However, Huwang & Cruthirds (2017) did find that students who participated in business simulation games using Zoom really liked that feature.

For a period of time Second Life seemed to afford a way of involving students in a live synchronous experience that was both engaging and complex (Childress & Braswell, 2006). One advantage of Second Life that was often touted was that students, through the use of avatars, could remain anonymous. This was also seen as an advantage of solely text-based courses and simulations. However, we question the advantages of students remaining anonymous. Does anonymous learning promote the lowering of respectful boundaries in which students sometimes feel free to express prejudice and anger in ways that are detrimental to the trust needed in a learning environment? Nevertheless, Second Life allowed the exploration

of ways of interacting that went beyond a purely text-based environment.

Different aspects of online technology were scrutinized to understand its influence on learning (Teng et al., 2012; Warden et al., 2013). One study looked at the advantages and disadvantages of video streaming as a component of asynchronous online learning (Hartsell and Yuen, 2006). Hansch, et. al. (2015) emphasized the disadvantages of video, particularly for MOOCs, and encouraged online learning producers to question the extensive use of video at the expense of other interactive pedagogical alternatives.

As instructors searched for ways to enhance online learning they (Bondi et al., 2016) explored dialogues in which students and instructors reflect on in-class events to optimize teaching and learning. These cogenerative dialogues outside of the classroom were found to be an effective mechanism for enhancing connections among graduate students. The dialogues also led to an increase in motivation and engagement according to student self-reports (Bondi et al., 2016). Furthermore, learner-to-teacher interaction was found to be an important factor in learner outcomes and student satisfaction in face-to-face, satellite broadcasted, and live-streamed video classes (Abdous & Yen, 2010). The research on social presence supported these findings (Oztok & Brett, 2011).

Theorists seeking to understand the impact of online learning have been exploring social presence in mediated environments for some time (Akcaoglu & Lee, 2016; Cobb, 2009; Oztok & Brett, 2011). Social presence has become a way to better understand how a sense of community develops online, how individuals' feelings of engagement and identity develop, and how feelings of satisfaction and success can be experienced in an online setting (Oztok & Brett, 2011).

Some research has explored the differences between asynchronous and synchronous learning environments. As already noted, asynchronous business simulations have long been an online feature, and this was one of the early forms of online learning that were considered experiential (McFarland, 2017). Studies that explore the differences between asynchronous and synchronous online learning have generally found that synchronous formats encourage more engagement and produce more student satisfaction

(Bower et al., 2015; Clark et al., 2015). Research clearly indicates that when students have the opportunity to participate actively in the learning process, they remember a great deal more than they would from sitting passively during a lecture (Deslauriers et al., 2019; DiPiro, 2009).

With new platforms and formats for video learning available today, opportunities to make online learning more engaging and interactive are increasing (Dhawan, 2020). Martin et al. (2012) examined interactivity in synchronous virtual classrooms and suggested that student interaction was aided by live communication during virtual classes. In their study, they highlighted best practices when conducting an interactive virtual classroom session, including the use of breakout rooms to facilitate small group discussion and increase learner-to-learner and learner-to-content interactions.

One of the more comprehensive studies on synchronous learning was conducted by Martin et al. (2017), in which they reviewed 157 articles related to research on synchronous online learning. However, they developed a broad definition for synchronous learning and included articles describing live messaging, or chat, audio conferencing, and videoconferencing under the synchronous learning umbrella, which stretches the definition of synchronous learning in our view.

While studies have explored the social interactions in synchronous online learning, there is a need for research on synchronous learning related to specific subject areas (Martin and Parker, 2014; Wallace, 2003). Furthermore, additional studies are needed in the area of synchronous online learning and specific experiential designs that facilitate real-time engagement and learning (Racheva, 2018). Although a good deal of research has focused on students' perceptions of online learning, there is much less research on faculties' and administrators' perceptions of online learning (Martin et al., 2017).

As online instruction developed, it was clear that more and more instructors and researchers believed that there was a need to develop more interactive forms of online learning. For example, Boyer et al. (2006) called for "deeper learning experiences associated with interaction, dialogue and reflection" (p. 336). They also emphasized that online learning needed to move from a teacher-centered perspective to a learner-centered perspective. Along with many

researchers who focus on online learning, they took a social constructivist perspective and argued that learning happens in collaboration with others (Boyer et al., 2006).

It became increasingly clear that interaction was the most important aspect of successful online courses (Martin et al., 2012). Researchers learned that interaction in online courses is a way to keep students engaged and achieving (Deschaine & Whale, 2017). With research illustrating the importance of interaction, synchronous aspects of online instruction came to the forefront. As the online classroom gained wider use and acceptance, the use of experiential learning became an important feature of online environments.

Experiential learning emphasizes some of the key ways of learning that online researchers and practitioners had come to see as essential for the online environment to succeed. First, they emphasized a social-constructivist orientation, which meant they were interested in how learners build their understanding and knowledge (Allison & Seaman, 2017). They also understood the importance of learners' involvement in their own learning and suggested that experiential learning requires a move away from teacher-centered learning to learner-centered learning (Allison & Seaman, 2017). Experiential learning focuses on the here-and-now and reflection and feedback (Smith, 2013), which add further engagement to online classroom activities. Allison and Seaman (2017) noted that Dewey provided a clear way of thinking about experiential learning: "The problem [should] require students to develop plans and experiment with those plans to varying degrees and then commit to action. Following action of some kind, reflection and abstraction lead to addressing future problems" (p. 3).

Experiential learners argue that without engagement, learning will not happen (Yardley et al., 2012). Engagement inevitably leads to interaction, and at times resistance and conflict. Not only are these aspects of our lives outside the classroom, but they help to engender learning (Illeris, 2007). Experiential learning theorists and practitioners also emphasize that it helps students give voice to their opinions, which enlivens and enhances learning (Matey, 2014). Experiential learning also complicates and problematizes our

learning experiences and helps develop critical thinking skills (Eyler, 2009).

Experiential learning has many other advantages that serve to enrich the online learning environment. Not only does it address real-world problems in ways "designed to address inequalities" (Meyers, 2008, p. 12), but in its progressive tradition it emphasizes responsibility towards society (Saddington, 2000). Furthermore, it goes beyond games and simulations by emphasizing "authentic" learning experiences (Herrington et al., 2003).

Though research on experiential learning is extensive (Seaman et al., 2017), as of yet there has been little research on what happens when experiential learning migrates to a synchronous virtual world. Due to the COVID-19 pandemic many, if not most, undergraduate and graduate courses have migrated online. Experiential learning has proven its effectiveness in creating engagement, making learning more memorable, and creating learning communities (Gosen & Washbush, 2004; Kolb & Kolb, 2005). Migrating experiential learning to an online environment makes it possible to translate these benefits to the virtual classroom. Without experiential learning, the online classroom environment can easily become a closed-off place, losing much of its tie to the world outside the virtual classroom. Yardley et al. (2012) put it succinctly and well: "In its most simple form, experiential learning is constructing knowledge and meaning from real-life experience" (p. 161). It is essential that such knowledge construction not be lost to students in a virtual environment.

Although many informal blog posts about using experiential learning in a virtual classroom are available online, there is little research examining experiential learning in an online environment. Carver et al. (2007) provides a preliminary model of experiential learning. They brought the issues of agency, belongingness, and competence into the discussion of how experiential education is to be evaluated in its online environment. This needs further exploration, as authenticity, voice, agency, and belongingness appear to be essential to full engagement in the online classroom. As noted above, researchers have called for more studies in specific subject areas to test the efficacy of online learning. This research addresses that issue. This study extends the current research by using faculty

observation of online learning instead of the more common method of student self-ratings. Most importantly, this research examines an experiential exercise in an online environment that resulted in a rich learning experience, an approach that, to date, has received little research attention (Park & Bonk, 2007).

METHODS

We used qualitative methodology for collecting the data for this study and for analyzing the transcript of the class. Although we had not planned in advance to collect data from this class session, we realized after the class that we had seen a naturally occurring experiential learning experience that was worth examining systematically. As the class session had been recorded (with the students' knowledge and consent), we had the opportunity to make a transcript of the class and examine the transcript through a qualitative lens. We were interested in understanding what evolved during the class and how the participants reflected on their experience, so a qualitative methodology was the appropriate choice (Ravitch & Carl, 2016). The research question that guided our thematic coding and theme development was: How does an experiential exercise in a virtual classroom influence graduate student learning and understanding of group dynamic concepts?

Setting & Sample

The course, Group and Team Dynamics, is a graduate level course in a master's degree program designed for adults who are working full time. The course took place at a large Ivy League university in the Northeast, which has about 10,000 graduate students enrolled at any given time. The program that this course is a part of has roughly three hundred students enrolled in courses each semester. Sixteen students were enrolled in this course, which was held during the winter term of 2020. The class had met eight times in person before all classes moved to a virtual platform (Zoom) because of COVID-19. By April 2, 2020, on the night of this exercise, two women from China had traveled back to China and one male student was also absent. This left thirteen graduate students—ten women and three men—to participate in the class session described in this paper. Of those in attendance, eleven were working full-time, while two were full-time international students. Five

were white women, two women were from India, two women were from China, and one woman was Chinese American. All three men were white. Their ages ranged from 25 to 53 years, with a mean of 35.5 years. The majority of students (ten) were clustered between the ages of 25 and 33. The years of work experience of the thirteen students ranged from one to twenty-three years, with a mean of ten years. Three of the students had less than three years of work experience, while seven were clustered between six and ten years of work experience. Over half the students (seven) had no prior experience with online courses, and the other six students had between one and eight years of experience with online classes. All but one of these students had one to four years' experience with classes online.

At the start of the course, the class had been directed to divide itself into four self-managed teams that were diverse in gender, age, culture, etc. These teams worked together on various exercises throughout the course, so on the night of this exercise, team members had prior experience working together. On the night of this exercise, with three members of the class missing, three groups had three members in attendance, and the fourth group had four members.

Experiential Exercise

The experiential group exercise was based on principles of a power lab (Oshry, 1992, 1996, 1999; Smith, 1982, 2003), paradoxical approaches to groups (Smith & Berg, 1987), and psychodynamic approaches to groups (Hayden & Molenkamp, 2004).

At the beginning of the class session, we talked briefly about the importance of viewing groups as more than an assemblage of individual personalities. Some members of this class were having ongoing difficulty shifting from an understanding of groups as a collection of individuals to grasping a group-as-a-whole perspective (Berg, 2015; Wells, 1980). The purpose of this exercise was to help them to see group-as-a-whole in action.

After we moved the teams into virtual breakout rooms, we went to each breakout room and told the group what proportion of the \$100 they had been allotted. Group A (two women and two men) was allotted \$15, Group B (three women) was allotted \$30, Group C (three women) was allotted \$20, and Group D (two women and one man) was allotted

\$35. The subgroups were given different amounts of money in order to see how that would influence their subsequent participation and negotiation with the other groups. After the allotted twenty minutes, all four self-managed teams were returned to the

TABLE 1: INSTRUCTIONS TO THE CLASS

Each self-managed team will be given some portion of a pot of money containing \$100.
Once the exercise begins, you will meet in your self-managed teams (Zoom easily allows the host to move people into virtual breakout rooms).
The groups will have twenty minutes to decide on a local charity to which to contribute your portion of the \$100.
Each group is required to pick a negotiator, someone who will represent your group when we reconvene as a whole group.
Each group will also choose one member to serve as a Chief Reflection Officer (CRO). This person is to observe your group, to say what your group is ignoring or avoiding, and to help your group avoid jumping to premature conclusions. Because each group is small, the CRO will have a dual role and will also participate in the group's life and decisions.
After twenty-minutes, all the self-managed teams will return to the whole group. At that time the groups will have a chance to negotiate among themselves to see if they want to collaborate and make a joint contribution to the same local charity.
If all the teams agree to collaborate and agree on what charity to contribute to, the contribution will be doubled to \$200.

virtual whole group.

Analysis

A thematic analysis approach was used to analyze the transcript of the class (Vaismoradi et al., 2013). Since this was a naturally occurring experience, members of the class were not consented ahead of time; however, all of the graduate students gave their permission to record the session, and all of them signed a consent form a week after the class, once we had decided to write up this experiential work. Graduate students were also asked to pick a first name pseudonym to be used in writing up the research. The Institutional Review Board (IRB) provided a letter stating that this research is exempt from IRB examination.

A detailed transcript was made from the recorded class session. After several readings of the transcript, we developed codes that were aligned with the research question (“How does an experiential exercise in a virtual classroom influence graduate student learning and understanding of group dynamic concepts?”). From the codes we developed three themes (Braun & Clarke, 2006;

Castleberry & Nolen, 2018; Fereday & Muir-Cochrane, 2006; Ravitch & Carl, 2016; Vaismoradi et al., 2013). The development of themes was aided by our understanding of parallel process (Smith & Zane, 1999), as the themes recapitulated what was happening in the social world.

RESULTS

The results of this naturally occurring qualitative research are divided into three themes: 1) Collaboration Quickly Turns to Competition, 2) A Higher Moral Ground, and 3) Winning. The results are presented through a narrative account that summarizes the main conflicts that surfaced during the experiential exercise and relies heavily on quotes to bring the research to life.

Collaboration Quickly Turns to Competition

After the four subgroups returned to the whole group, each negotiator made a brief statement. The first person to speak was Ashley (a white woman) from Group B. “The most important thing is that we have a consensus and can contribute the \$200.” She added that although her group had some ideas about what charities they would like to contribute to, the charity was not as important as reaching consensus in order to access the full contribution of \$200.

Sasha (a woman from India) spoke next for Group A. “We agree. Reaching consensus to contribute the \$200 is the main goal. We want to collaborate with other groups.”

Jean (a Chinese woman) from Group C spoke next. She also emphasized the importance of collaborating and added that the important thing was to contribute to a charity that reaches the “most forgotten in our society—the homeless.” She also added that she would like the other groups to “join us” and “show our humanity at this time.”

Amanda (a white woman), from Group D, similarly started with, “We also think collaboration is our priority,” and added, “We want our contribution to go to a well-known local food pantry, or an organization that delivers meals to the homebound.”

After these opening statements, the discussion shifted quickly from an emphasis on collaboration as each group began advocating for the specific charities they had prioritized. Two of the groups (C & D) led this conversation, advocating for the charities they identified as most important. This precipitated a lively discussion. Two groups (B & C) advocated for charities that serve the homeless,

although group B was interested in donating to a homeless charity that serves youth. Sasha, the negotiator from group A, asked if anyone had specifics about the impact their money would have on a particular group (i.e., how many people would they be able to feed for \$200?). Jean (group C) made a long statement, re-emphasizing the importance of contributing to help the homeless. She named a particular charity and said that she was familiar with their strategy. “They are really looking out for people at the bottom.” She also noted that they are careful about sanitation. To group B she said, “I am not clear on your strategy ... but I am clear about the charity I picked, so would you like to join us and combine money?”

In reflecting on what happened during these negotiations, Ashley (Group B) noted (with laughter in the background): “Only because all of us, all four groups started this by saying we all have the same goal of reaching consensus; and so it was surprising to me how difficult that actually ended up being.”

As this summary and these quotes illustrate, each group began by stating their desire to collaborate, but quickly pivoted to strongly recommending a specific charity. One group (C) became vocal advocates for contributing to charities that support the homeless after an initial statement about the importance of collaboration. This stance is discussed in more detail in the next section.

A Higher Moral Ground

The initial statements negotiators made about their choice of group or charity quickly blossomed into trying to convince the other groups about the importance of their choice. Amanda (group D) advocated for two charities that were well known to all group members. She noted, “There are real numbers to back it up.” She also said she agreed about the homeless, but then added that the two charities her group was advocating for “have established infrastructures.”

Sasha (group A) joined the conversation and stressed the importance of knowing where the money was going to end up. Although she affirmed the importance of the homeless as a vulnerable population, she added that, “People with serious illnesses are also very vulnerable right now.”

Amanda (group D) stressed that the benefits of one of the charities that her group picked is that it has the ability to reach a “broader group.”

Jean (group C) emphasized that other populations are likely to survive the next eight weeks of the pandemic, but the homeless “... can’t even find food in the dumpsters. The most critical time is to help those people survive—the homeless people.”

Amanda (group D) responded and emphasized that the charity her group was advocating for would help the homeless, as well.

Ashley (group B) entered back into the conversation. She tried to bring out commonalities among the different groups:

I think what we are running up against here is that our values are overlapping a little. Half of the groups are advocating for homeless and half are advocating for food. Each of these organizations will probably help both of these groups.

She then went further and tried to help the groups see their common interests:

So, what I am hearing all of us doing right now is advocating for our own organization that we have picked. I am not sure what is the best strategy to move forward, but I have heard some of us point out that we are looking for which organization has the most impact.

She then provided some actual numbers about how many meals their \$200 would provide from one of the organizations and added, “From a purely, taking our values out of this, which seems a bit heartless, Charity P would technically have a bigger impact than the others.”

This did not seem to influence Jean (group C) who more urgently pointed out the importance of helping the homeless:

For the next four weeks we should really target homeless people, because no one is helping them. Low income people are going to get stimulation money, and they also have some savings, and family members can help them. I think it is the homeless people who really need help right now.

During the debrief the strong feelings about what type of charity to select surfaced again, and Juhi and Jean reiterated the position of their groups most emphatically.

Juhi (group C) began the debrief by describing

in detail how her group arrived at their agreement to focus on the homeless. Of note, she spent a good deal of time talking about their negotiator, Jean:

I really liked the way Jean spoke out her points and stood up to what views we had. The homeless are the people who don't even have the basic needs to shelter or water, and they don't have anything to fight the virus... By the end we agreed to contribute-collaborate with the others, because we do believe that humanity is beyond everything, so that is why we want to do a change, help in changing things and preserve humanity against this crisis.

Jean (group C) took the debrief in a different direction:

Our team reached agreement immediately. We want to help the people at the bottom and the most basic necessity needs, which is to make their stomach full with food. Food is a big need, so we also want to reach consensus because we can double the money and help the people we really want to help. We have strong beliefs that homeless people are the ones with actual needs right now, so when I was negotiating with two other teams who had the same goal, and we really want them to join us. But by the end I realized it all goes to the same, and we want to reach the same people, so we were able to be unanimous.

This part of the discussion about charities highlights the way in which two groups battled to convince each other that their focus was more important. Two groups (C & D) became increasingly oppositional through to the end of the exercise.

Winning

During the debrief, members of the class described the ways in which their desire to “win” increased as the exercise went on. We asked about winning and losing, since the issue had been raised. David (group A) described it as competition:

One of the things I definitely felt like: there was competition ... In the second breakout there was a concept of someone winning just to win, win for the greater whole. So, it definitely seemed like competition throughout, and it was not just others.

Estella (group B) agreed. “I feel like in the first round, it feels like a battle between the negotiators, but everybody had their opinion and everybody had their resistance.”

Christina (Group D) described very explicitly what her group experienced:

We knew right off the bat that we wanted to do something related to what is going on right now. We found ourselves saying, “Let's do this big food charity.” Amanda's zoom kept cutting out, and when she came back, first we decided, “Go get them, Amanda. Whatever we decide you are going to get it, just go in there.” ... It is hard when you are doing nonprofits. Emotions naturally attach to it. It is hard when you are doing negotiations because you want to win ... And we got really excited when we were like “winning,” more so than I thought we would, but when we went back into the breakouts, we said, “Yea!”

Christina (group D) continued by talking about the role that Ashley took on:

One of the things that I thought was really interesting right away was that Ashley pretty quickly took on a moderator role, more so like a negotiator at the table. I thought instantly this was a very powerful move, and kind of threw me off a little, as it wasn't what we thought would happen. Ashley continued to use that powerful mediator/convener kind of position throughout the whole thing. Even though our team got the majority to agree with our charity, I still felt like Ashley kind of won.

For at least two of the subgroups (C & D) winning took over and that became more important than collaborating until near the end of the exercise.

DISCUSSION

The richness of the group interactions described above clearly indicates that experiential work can be used productively in virtual classes, and taking it further, it can also be debriefed to provide learning that is engaging and thought-provoking. This kind of powerful, real-time learning is not available through lectures and

discussions, which is the format most often used in virtual settings. Some of the differences include that the design involved a real-life problem to solve, small and large group interactions, and the need for collaboration in order to be effective.

As we were thinking through the design of this exercise in preparation for the virtual class setting, we thought it was quite likely that the exercise would last only a few minutes and then be over. It seemed likely to us that during a pandemic, with most of these students now working full time at home and some raising small children, there would be an incentive to collaborate and get the exercise over with quickly and efficiently. In addition, we reasoned that being able to contribute to a charity without using their own money would motivate the graduate students, since some were likely wanting to reach out and help others during this time. We were not alone in this assumption. During the debrief Katie (group C) echoed this expectation by indicating, “I thought this was not going to take very long.” The exercise instead was an opportunity for the graduate students to play out and express a range of feelings related to working at home, as well as reflecting on their feelings of uncertainty and loss. Below we examine the various ways people’s feelings about the pandemic surfaced during their interactions in the experiential exercise.

Collaboration Quickly Turns to Competition

When the four groups first emerged from their breakout time, during which they had an initial discussion about what charity they wanted to contribute to, all of them made statements about the desire to collaborate. Although all the negotiators started by affirming the importance of collaboration, even in these opening statements two of the groups (C & D) indicated that they were staking out different positions regarding what charity to contribute to. Some observers of the group negotiations concluded that the early collaborative statements were disingenuous because some groups quickly devolved into disagreement and conflict. Yet, these expressions of a desire to collaborate and to find common interest gave the negotiating groups agreed-upon boundaries and a framework on which they all planned to base their negotiations. It appeared that the statements confirming the groups’ desire to collaborate gave the groups permission to compete. Without these

opening statements, there would have likely been less trust and a lack of common purpose.

Nevertheless, even as these groups agreed to collaborate, two of the groups indicated in their initial statements that they had particular interests they were going to pursue. Jean (group C) immediately staked out the territory of contributing to the homeless. It is worth noting that in her opening comments she emphasized that the homeless are the most vulnerable. Amanda (group D) announced the importance of picking a charity that was well known and had a wide reach. These two different positions represented the two dominant themes that would occupy the group in their discussions for the rest of the class.

Collaboration and competition are often considered to be opposites, and we tend to treat them as though they cannot exist together. On the contrary, we would argue that one is not possible without the other, and this experiential exercise provides support for this proposition. Collaboration contains elements of competition, as illustrated above. When negotiators were stating their desire to collaborate, they were also beginning to stake out their competitive claims. In addition, even when they were competing throughout most of the exercise, they were often also seeking ways to collaborate and/or reach consensus.

A Higher Moral Ground

One of the ways that groups differentiate themselves is through taking moral stances and competing for status as the most moral group (Robles & Castor, 2019). This is especially true in the current climate in the United States, where there is increased polarization and groups vie for status as the superior moral authority (Richardson, 2018). Jean, the negotiator for group C, reiterated the importance of contributing to a charity that reaches the homeless. Jean emphasized in her statements that the homeless are the most in need. “[they] can’t even find food in the dumpsters. The most critical time is to help those people survive—the homeless people.” Jean reminded the group that they should not be focusing on “luxury foods” but basic “bread and butter.”

Jean repeatedly emphasized that the homeless were the most vulnerable and while others would survive this pandemic, the homeless may not. She sought to paint a portrait of the homeless as being in a totally different category from those who had

lost their jobs but still had a place to live and who may have been able to count on family, friends, and neighbors to help them. She argued against the two better-known charities that two of the other groups were interested in contributing to. Those groups, she noted, were well funded and would survive this pandemic, but the charities that reach the homeless might not. In her tone and wording, she infused her position with moral authority and asked why any of the groups would consider contributing to any other charity.

When one group claimed moral authority, the other groups in the system became angered and defensive. Amanda (group D) started to interrupt Jean (group C) as Jean continued to advocate and push for her group's focus on the homeless. As Jean increased the pressure, Amanda became more combative for her group's position. On the surface, the conflict in this exercise appeared to be between contributing to a charity that would reach the homeless and contributing to a charity that was well-known and had a broader reach. However, we suggest that the actual underlying competition was about who could claim moral superiority.

At another level, we came to see the positions that two of the groups took as a parallel process (Bloom, 2010; Smith & Zane, 1999). The themes and struggles that arise in groups mirror what is happening in the organization or larger system of which they are a part (Bloom, 2010; Smith & Zane, 1999). At the time this class was held, the national debate was centering around the question of whether shutting down the economy and requiring people to stay at home to prevent greater deaths from COVID-19 was the right thing to do, or if shutting down the economy would result in worse repercussions than preventing deaths from COVID-19. Very quickly at least two moral camps developed: 1) human lives are important beyond all else, 2) without the economy running well, the human suffering will be greater than the deaths prevented by staying at home. Below the surface, these two positions were based on moral good, and those holding each of the positions portrayed themselves as having greater moral authority than the other group.

The moral positions that were competing on the national stage were mirrored in the group exercise that is described in this article. One of the groups took the position that the most vulnerable were

the most important group to take care of. This is equivalent in many respects to the moral position that saving human lives is the moral priority. The other group argued that maximizing the benefits of the contribution (i.e., reaching the most people) was the moral priority, which is similar to those emphasizing the importance of the economy during the pandemic.

Disagreements about morality and about who is being more moral than others inevitably lead to polarization. No one person, group, organization, or nation wants to be considered morally inferior to other individuals, groups, organizations, and countries. The groups in this exercise may have been playing out larger social themes (parallel process) for the country as a whole (Bloom, 2010; Smith & Zane, 1999).

Winning

Even though winning in this experiential exercise was initially defined as collaborating to make the \$200 donation possible, when competition took over, winning was redefined to mean the group whose charity won the day. Christina (group D) said, "It is hard when you are doing negotiations because you want to win and we got really excited when we were like 'winning,'" Members of group D discussed openly and honestly during the debrief that for them it had become about winning, not collaborating. This can be clearly seen in Amanda's behavior during the negotiation when one group decided to join them in the charity they supported. Amanda said, "Thank you," a gracious acknowledgement of her group's winning the other group over to their side.

During a pandemic, in which wins feel few and far between people many experience a lack of control, this experiential exercise became the repository for acting out competition and the desire to win. For some of the groups, winning seemed to represent a triumph over bad odds and accomplishing something despite the pandemic. It is worth considering whether feelings of competition have been heightened during the pandemic when people don't have the usual outlets for competence at the gym, in local sporting events, or watching professional sports competitions.

LIMITATIONS

There are many limitations to this research. First, it includes a very small, nonrandom sample.

Second, since it was a naturally occurring experience, it was not as controlled as a laboratory experiment would be. Although this is a limitation in one sense, we see it as an advantage, since much of the group and team research that is done in the laboratory lacks context (Voors et al., 2012). This naturally occurring experience sheds light on how groups interact during an actual online class. Third, since this course already emphasized experiential education and had included other experiential work and simulations, it is not possible to generalize as to whether this type of experiential education would work in courses that are not experientially based. Fourth, because it was a naturally occurring experiment, the research question was designed post hoc and is biased in this regard. One of the many things the pandemic has taught us, however, is that we need to be prepared to adapt and adjust suddenly to changing circumstances. Although the limitations to this research are important to bear in mind, we believe that, despite its limitations, the chance to learn from a naturally occurring experiential online class is worthwhile.

FUTURE RESEARCH

The need for research on conducting experiential education online is urgent—now more than ever. Too little research exists that examines experiential learning in an online environment (Carver et al., 2007). Many of the studies conducted thus far involve asynchronous solutions (Moore, 2007) that are limited and often neglect an understanding of the level of involvement and complexity that comes with synchronous classroom environments. More studies that compare and contrast asynchronous and synchronous online classrooms are needed to examine what is working and what is not. Anecdotally, we have heard that when the current pandemic began, many professors moved their courses online with little adjustment to the context of online learning, and subsequently sometimes experienced poor results. In addition, many naturally occurring online classroom experiments are currently going on that we know little about. It would be worthwhile to collect more data about these innovations to see what the pandemic has spawned and what practitioners have found works well (Dhawan, 2020). More research into online experiential education might also begin to reduce

some of the transfer of sub par, in-person classroom practices to the online world.

CONCLUSION

This naturally occurring research setting provides strong evidence that innovative experiential exercises translate well to an online environment, at least in courses that have an experiential orientation. However, this research goes further than just illustrating that experiential work can be done in an online classroom: It also indicates that issues as complex as collaboration and competition, competing for the moral high ground, and the dominance of winning as opposed to collaborative exchanges, can be actively engaged online.

All too frequently, especially for those unfamiliar with the online classroom environment, professors rely only on what has worked in the in-person classroom. This neglects to take into account that the online classroom is different along many dimensions. For example, we have been conditioned through television, films, YouTube, and other platforms to experience online environments as fast-paced and visually stimulating (Ross, et al., 2008). Graduate students who watch an immobile professor staring at the camera, speaking with few breaks, providing little visual stimuli, and offering few opportunities for the kinds of verbal and nonverbal reactions that occur in the in-person classroom environment, can end up with a deadening of engagement and intellectual curiosity.

The rich learnings that occurred during this synchronous virtual class session support the idea that not only can experiential work be successful in an online setting, but it can also increase engagement, learning, and insight into group processes. This research also indicates that classroom experiential learning, in this case a virtual classroom, mirrors what is happening in the larger social system. The issues of collaboration and competition, seeking a higher moral ground, and winning are some of the main societal conflicts that we are battling during this historical pandemic. Including this type of experiential learning online brings the world into the classroom in a richer way than often happens. We are reminded of the quote from Deleuze and Guattari (1972), “It smells stuffy in here—some relation to the outside, if you please” (p. 357). This research further confirms the importance of experiential education and the way

in which it brings to the forefront important social issues and societal struggles as well as engaging students in a live, emotion-filled, and reflective learning exercise.

REFERENCES

- Abdous, M., & Yen, C- J. (2010). A predictive study of learner satisfaction and outcomes in face-to-face, satellite broadcast, and live video-streaming learning environments. *The Internet and Higher Education*, 13(4), 248–257. <https://doi.org/10.1016/j.iheduc.2010.04.005>
- Akcaoglu, M., & Lee, E. (2016, April). Increasing social presence in online learning through small group discussions. *International Review of Research in Open and Distributed Learning*, 17(3). <https://doi.org/10.19173/irrodl.v17i3.2293>
- Allison, P., & Seaman, J. (2017). Experiential education. In M. A. Peters (Ed.), *Encyclopedia of educational philosophy and theory*. https://doi.org/10.1007/978-981-287-532-7_449-1
- Berg, D. N. (2015). Levels of analysis: Diagnosis & intervention. https://ysph.yale.edu/ghli/what/research/4g.%20Levels%20of%20Analysis_411168_153_41654_v1.pdf
- Bloom, S. L. (2010). Trauma-organized systems and parallel process. In N. Tehrani (Ed.), *Managing trauma in the workplace: Supporting workers and organisations* (pp. 139–152). Routledge.
- Bondi, S., Daher, T., Holland, A., Smith, A. R., & Dam, S. (2016). Learning through personal connections: Cogenerative dialogues in synchronous virtual spaces. *Teaching in Higher Education*, 21(3), 301–312. <https://doi.org/10.1080/13562517.2016.1141288>
- Bower, M., Dalgarno, B., Kennedy, G. E., Lee, M. J. W., & Kenney, J. (2015). Design and implementation factors in blended synchronous learning environments: Outcomes from a cross-case analysis. *Computers & Education*, 86, 1–17. <https://doi.org/10.1016/j.compedu.2015.03.006>
- Boyer, N. R., Maher, P. A., & Kirkman, S. (2006). Transformative learning in online settings: The use of self-direction, metacognition, and collaborative learning. *Journal of Transformative Education*, 4(4), 335–361. <https://doi.org/10.1177/1541344606295318>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Buil, I., Catalán, S., & Martínez, E. (2019). Encouraging intrinsic motivation in management training: The use of business simulations games. *The International Journal of Management Education*, 17(2), 162–171. <https://doi.org/10.1016/j.ijme.2019.02.002>
- Carver, R., King, R., Hannum, W., & Fowler, B. (2007). Toward a model of experiential E-learning. *MERLOT Journal of Online Learning and Teaching*, 3(3), 247–256.
- Castleberry, A., & Nolen, A. (2018). Thematic analysis of qualitative research data: Is it as easy as it sounds? *Currents in Pharmacy Teaching and Learning*, 10(6), 807–815. <https://doi.org/10.1016/j.cptl.2018.03.019>
- Childress, M. D., & Braswell, R. (2006). Using massively multiplayer online role-playing games for online learning. *Distance Education*, 27(2), 187–196. <https://doi.org/10.1080/01587910600789522>
- Clark, C., Strudler, N., & Grove, K. (2015). Comparing asynchronous and synchronous video vs. text based discussions in an online teacher education course. *Online Learning*, 19(3), 48–69. <https://doi.org/10.24059/olj.v19i3.510>
- Cobb, S. C. (2009, Winter). Social presence and online learning: A current view from a research perspective. *Journal of Interactive Online Learning*, 8(3), 241–254.
- Deleuze, G., & Guattari, F. (1972). *Anti-Oedipus: Capitalism and schizophrenia*. Viking Press.
- Deschaine, M. E., & Whale, D. E. (2017). Increasing student engagement in online educational leadership courses. *Journal of Educators Online*, 14(1). https://www.thejeo.com/archive/2017_14_1/deschaine_whale
- Deslauriers, L., McCarty, L. S., Miller, K., Callaghan, K., & Kestin, G. (2019). Measuring actual learning versus feeling of learning in response to being actively engaged in the classroom. *Proceedings of the National Academy of Sciences*, 116(39), 19251–19257. <https://doi.org/10.1073/pnas.1821936116>
- Dhawan, S. (2020). Online learning: A panacea in the time of COVID-19 crisis. *Journal of Educational Technology Systems*, 49(1), 5–22. <https://doi.org/10.1177/0047239520934018>
- DiPiro, J. T. (2009). Viewpoints: Why do we still lecture? *American Journal of Pharmaceutical Education*, 73(8), 137. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2828296/>
- Ekblaw, R. (2016). Effective use of group projects in online learning. *Contemporary Issues in Education Research*, 9(3), 121–128. <https://doi.org/10.19030/cier.v9i3.9707>
- Eyler, J. (2009). The power of experiential education. *Liberal Education*, 95(4), 24–31.
- Fereday, J., & Muir-Cochrane, E. (2006). Demonstrating rigor using thematic analysis: A hybrid approach of inductive and deductive coding and theme development. *International Journal of Qualitative Methods*, 5(1), 80–92. <https://doi.org/10.1177/160940690600500107>
- Gosen, J., & Washbush, J. (2004). A review of scholarship on assessing experiential learning effectiveness. *Simulation & Gaming*, 35(2), 270–293. <https://doi.org/10.1177/1046878104263544>

- Hansch, A., Hillers, L., McConachie, K., Newman, C., Schildhauer, T., & Schmidt, J. P. (2015). Video and online learning: Critical reflections and findings from the field. *HIIG Discussion Paper Series No. 2015-02*. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2577882
- Hartzell, T., & Yuen, S. C. Y. (2006). Video streaming in online learning. *AACE Journal*, 14(1), 31–43. <https://www.learntechlib.org/primary/p/6152/>.
- Hayden, C., & Molenkamp, R. (2004). Tavistock primer II. In S. Cytrynbaum & D. A. Noumair (Eds.), *Group dynamics, organizational irrationality, and social complexity: Group relations reader 3* (pp. 135–158). A. K. Rice Institute.
- Hernández-Lara, A. B., & Serradell-López, E. (2018). Student interactions in online discussion forums: Their perception on learning with business simulation games. *Behaviour & Information Technology*, 37(4), 419–429. <https://doi.org/10.1080/0144929X.2018.1441326>
- Herrington, J., Oliver, R., & Reeves, T. C. (2003). Patterns of engagement in authentic online learning environments. *Australasian Journal of Educational Technology*, 19(1), 59–71. <https://doi.org/10.14742/ajet.1701>
- Howell, S. L., Williams, P. B., & Lindsay, N. K. (2003, Fall). Thirty-two trends affecting distance education: An informed foundation for strategic planning. *Online Journal of Distance Learning Administration*, 6(3). <https://www.westga.edu/~distance/ojdla/fall63/howell63.html>
- Huang, H.-M. (2002). Toward constructivism for adult learners in online learning environment. *British Journal of Educational Technology*, 33(1), 27–37. <https://doi.org/10.1111/1467-8535.00236>
- Hwang, M., & Cruthirds, K. (2017). Impact of an ERP simulation game on online learning. *The International Journal of Management Education*, 15, 60–66. <https://doi.org/10.1016/j.ijme.2017.01.004>
- Illeris, K. (2007). What do we actually mean by experiential learning? *Human Resource Development Review*, 6(1), 84–95.
- Jung, I., & Rha, I. (2000). Effectiveness and cost-effectiveness of online education: A review of the literature. *Educational Technology*, 40(4), 57–60. <https://www.jstor.org/stable/44428629>
- Kolb, A. Y., & Kolb, D. A. (2005). Learning styles and learning spaces: Enhancing experiential learning in higher education. *Academy of Management Learning & Education*, 4(2), 193–212. <https://doi.org/10.5465/amle.2005.17268566>
- Mansour, B. E., & Mupinga, D. M. (2007). Students' positive and negative experiences in hybrid online classes. *College Student Journal*, 14(1), 242–248.
- Maor, D. (2003). The teacher's role in developing interaction and reflection in an online learning community. *Educational Media International*, 40(1–2), 127–138. <https://doi.org/10.1080/0952398032000092170>
- Martin, F., Ahlgrim-Delzell, L., & Budhrani, K. (2017). Systematic review of two decades (1995 to 2014) of research on synchronous online learning. *American Journal of Distance Education*, 31(1), 3–19. <https://doi.org/10.1080/08923647.2017.1264807>
- Martin, F., & Parker, M. A. (2014). Use of synchronous virtual classrooms: Why, who, and how. *MERLOT Journal of Online Learning and Teaching*, 10(2), 192–210.
- Martin, F., Parker, M. A., & Deale, D. F. (2012). Examining interactivity in synchronous virtual classrooms. *International Review of Research in Open and Distributed Learning*, 13(3), 227–261. <https://doi.org/10.19173/irrodl.v13i3.1174>
- Matey, G., Fickell, J. (2014). Experiential learning—A review of some literature. In V. Neal (ed.), *Experiential learning casebook*. <https://tlcentre.pressbooks.com/back-matter/experiential-learning-a-reivew-of-some-literature/>
- Mayer, R. E. (2019). Thirty years of research on online learning. *Applied Cognitive Psychology*, 33(2), 152–159. <https://doi.org/10.1002/acp.3482>
- McFarland, K. (2017). Entrepreneurship education and experiential E-learning: A literature review. *Developments in Business Simulation and Experiential Learning*, 44. <https://journals.tdl.org/absel/index.php/absel/article/view/3102>
- Meyers, S. A. (2008, Fall). Using transformative pedagogy when teaching online. *College Teaching*, 56(4), 219–224. <https://doi.org/10.3200/CTCH.56.4.219-224>
- Mishra, L., Gupta, T., & Shree, A. (2020). Online teaching-learning in higher education during lockdown period of COVID-19 pandemic. *International Journal of Education Research Open*, 1. <https://doi.org/10.1016/j.ijedro.2020.100012>
- Moore, M. G., (Ed.). (2007). *Handbook of distance education* (2nd ed.). Routledge.
- Oshry, B. (1992). *The possibilities of organization. Power & Systems*.
- Oshry, B. (1996). *Seeing systems: Unlocking the mysteries of organizational life*. Berrett-Koehler, Publishers.
- Oshry, B. (1999). *Leading systems: Lessons from the power lab*. Berrett-Koehler, Publishers.
- Oztok, M., & Brett, C. (2011). Social presence and online learning: A review of research. *The Journal of Distance Education*, 25(3), 1–10.

- Park, Y. J., & Bonk, C. J. (2007). Is online learning a breeze? A case study for promoting synchronous learning in a blended graduate course. *MERLOT Journal of Online Learning and Teaching*, 3(3), 307–323.
- Racheva, V. (2018). Social aspects of synchronous virtual learning environments. In *Proceedings of the 44th International Conference on Applications of Mathematics in Engineering and Economics*. AIP Publishing. <https://doi.org/10.1063/1.5082050>
- Ravitch, S., & Carl, N. M. (2016). *Qualitative research: Bridging the conceptual, theoretical, and methodological*. Sage.
- Richardson, H. S. (2018, Fall). Moral reasoning. In E. N. Zalta (Ed.), *The Stanford encyclopedia of philosophy*. The Metaphysics Research Lab. <https://plato.stanford.edu/archives/fall2018/entries/reasoning-moral/>
- Robles, J. S., & Castor, T. (2019). Taking the moral high ground: Practices for being uncompromisingly principled. *Journal of Pragmatics*, 141, 116–129. <https://doi.org/10.1016/j.pragma.2018.12.015>
- Ross, R. M., McNair, N. A., Fairhall, S. L., Clapp, W. C., Hamm, J. P., Teyler, T. J., & Kirk, I. J. (2008). Induction of orientation-specific LTP-like change in human visual evoked potentials by rapid sensory stimulation. *Brain Research Bulletin*, 76, 97–101. <https://doi.org/10.1016/j.brainresbull.2008.01.021>
- Saddington, T. (2000). The roots and branches of experiential learning. *National Society for Experiential Education (NSEE) Quarterly*, 26(1), 2–6.
- Seaman, J. O., Brown, M., & Quay, J. (2017). The evolution of experiential learning: Traces lines of research in the JEE. *Journal of Experiential Education*, 40 (Suppl.), 1–20. <https://doi.org/10.1177/1053825916689268>
- Siewiorek, A., Gegenfurtner, A., Lainema, T., Saarinen, E., & Lehtinen, E. (2013). The effects of computer-simulation game training on participants' opinions on leadership styles. *British Journal of Educational Technology*, 44(6), 1012–1035. <https://doi.org/10.1111/bjet.12084>
- Smith, K. K. (1982). *Groups in conflict: Prisons in disguise*. Kendall/Hunt Publishing.
- Smith, K. K. (2003). *Yearning for home in troubled times*. Pilgrim Press.
- Smith, K. K., & Berg, D. N. (1987). *Paradoxes of group life: Understanding conflict, paralysis, and movement in group dynamics*. Jossey-Bass Publishers.
- Smith, K. K., & Berg, D. N. (1995). A paradoxical approach to teaching group dynamics: First thoughts, first findings. *Journal of Applied Behavioral Science*, 31(4), 398–414. <https://doi.org/10.1177/0021886395314001>
- Smith, K. K., & Zane, N. (1999). Organizational reflection: Parallel processes at work in a dual consultation. *The Journal of Applied Behavioral Science*, 35(2), 145–162. <https://doi.org/10.1177/0021886399352002>
- Smith, M. K. (2013). David A. Kolb on experiential learning. In *The encyclopedia of pedagogy and informal education*. <https://infed.org/mobi/david-a-kolb-on-experiential-learning/>
- Teng, D. C.-E., Chen, N.-S., Kinshuk, & Leo, T. (2012). Exploring students' learning experience in an international online research seminar in the synchronous cyber classroom. *Computers & Education*, 58(3), 918–930. <https://doi.org/10.1016/j.compedu.2011.10.018>
- Vaismoradi, M., Turunen, H., & Bondas, T. (2013). Content analysis and thematic analysis: Implications for conducting a qualitative descriptive study. *Nursing and Health Sciences*, 15(3), 398–405. <https://doi.org/10.1111/nhs.12048>
- Voors, M., Turley, T., Kontoleon, A., Bulte, E., & List, J. A. (2012). Exploring whether behavior in context-free experiments is predictive of behavior in the field. Evidence from lab and field experiments in rural Sierra Leone. *Economics Letters*, 114(3), 308–311. <https://doi.org/10.1016/j.econlet.2011.10.016>
- Wallace, R. M. (2003). Online learning in higher education: A review of research on interactions among teachers and students. *Education, Communication & Information*, 3(2), 241–280. <https://doi.org/10.1080/14636310303143>
- Warden, C. A., Stanworth, J. O., Ren, J. B., & Warden, A. R. (2013). Synchronous learning best practices: An action research study. *Computers & Education*, 63, 197–207. <https://doi.org/10.1016/j.compedu.2012.11.010>
- Wells, L. (1980). The group-as-a-whole: A systemic socio-analytic perspective on interpersonal and group relations. In C. P. Alderfer & C. L. Cooper (Eds.), *Advances in experiential social processes* (Vol. 1). John Wiley & Sons.
- Wiley, D., Hilton, J. L., Ellington, S., & Hall, T. (2012). A preliminary examination of the cost savings and learning impacts of using open textbooks in middle and high school science classes. *International Review of Research in Open and Distributed Learning*, 13(3), 262–276. <https://doi.org/10.19173/irrodl.v13i3.1153>
- Yardley, S., Teunissen, P. W., & Dornan, T. (2012). Experiential learning: AMEE guide No. 63. *Medical Teacher*, 34(2), e102–e115. <https://doi.org/10.3109/0142159X.2012.650741>