

## MICLASSROOM 2017 PROGRAM REPORT

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### EXECUTIVE SUMMARY

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The MiClassroom program funded participation in technology explorations by a total of seven faculty, and engaged a total of 17 faculty in presentations related to the program. It also funded participation in the Magna Teaching with Technology Conference in October 2017 by one faculty member, and the SXSW Edu conference by 3 faculty in March 2018. It also funded cameras, microphones, software and other technology for faculty participating in the program.

Four groups of faculty successfully completed evaluations of technology for the program. Each group's experiences are included in this report. The groups focused on sandbox classrooms, Moodle forum, Nearpod, and instructional video.

Rather than comprehensive summations of particular learning technologies, these reflections and evaluations represent individual faculty's experiences while integrating a new tool or technique. They are meant to guide new users of these tools rather than comprehensive empirical studies of their efficacy. Each group identified strengths and weaknesses of their tools, these are elaborated on in the following pages of this report.

If there was one common element that all groups were seeking in their deployment of instructional technology, it was student cognitive engagement with the content of their course. Without regard to the tool being used, every faculty group indicated in their statement of purpose that they intended to increase the frequency and quality of their students' cognitive engagement with material.

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## COLLABORATIVE FACULTY GROUPS

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### TEACHING IN A SANDBOX CLASSROOM

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#### STATEMENT OF PURPOSE

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The purpose of this group is to identify, clarify, refine and document the effective pedagogical strategies that can be used across disciplines when teaching in a sandbox-style classroom. We aim to provide guidance to future users of the sandbox classrooms so as to better utilize the space and integrate the technology with the primary goal being active student engagement at all levels of Bloom's Taxonomy.

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#### EVALUATION RUBRIC

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1. Student Engagement
    - a. What is the quality of peer-to-peer engagement?
    - b. Describe the type of peer-to-peer engagement observed.
    - c. Do the peer-to-peer interactions allow student a low floor & high ceiling to engagement with the content?
    - d. What levels of engagement are made possible by the technology in the classroom? (thinking Bloom's here)
    - e. Describe the observed activities that encourage students to remember and understand.
    - f. Describe the observed activities that encourage students to apply.
    - g. Describe the observed activities that encourage students to analyze.
    - h. Describe the observed activities that encourage students to evaluate.
    - i. Describe the observed activities that encourage students to create.
    - j. Does the technology assist/allow for seamless transitions? What sort of transitions?
  2. Necessity/Visibility/Invisibility/Flexibility of the Technology
    - a. Is the technology necessary for the given lesson? (Necessity)
    - b. Does the technology overshadow/upstage/interfere with or enhance the learning goals? (Visibility/Invisibility)
    - c. Does the technology available in the space allow for various pedagogical styles/approaches/lessons? (flexibility)
  3. Opportunities for Assessment and Differentiated Instruction
    - a. Does the technology available allow the instructor to the opportunity for formative assessment of student engagement?
    - b. Does the technology and use of the technology allow the instructor the opportunity for differentiated instruction? How and at what levels? Individual? Small group? Large group?
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#### EVALUATIONS

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#### REVIEWS OF SANDBOX DURING DR. ERIC SULLIVAN'S CLASS

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##### REVIEW BY DR. KATHERINE GREINER – MARCH 21, 2017

I observed Eric's Differential Equations course on March 21, 2017. The course was taught in OC106. Over the course of the class, Eric introduced the class to various problems. Using the phrase "Go find...," he instructed the students to work on these problems in their small groups and display their work using the various screens available in OC106. Eric visited each group, offered comments, instruction, and asked guiding questions. It was clear that the students were engaged with one another and with the material. Eric's use of the technology in the space allowed for various

differentiated instruction that was certainly student-centered and student-driven, but still guided by the instructor. It also created seamless transitions between each of the forms of instruction. For example, after small groups had worked on the first problem, Eric called their attention to the front of the room and set the goal for the day. He informed them that the work they would begin to make the connection between the two major themes of the class, set out at the beginning of the semester. Because the students' screens were still visible, he referenced several of the screens, asking the owners of that screen to explain what they had done. He also asked the other students to look at the work on the various screens and to affirm or correct the solution they observed. This allowed Eric to call attention to screens that reflected the "wrong" answer yet showed logical reasoning, based on the students' knowledge up to that particular point. Because of the technology available in the room, Eric was able to assess and provide feedback in real time. Students seemed comfortable with this type of feedback. There was not as much focus on right or wrong answers as there was on the problem solving itself. The various screens and technology available made it possible for Eric to help the students make connections between previously learned content and the new material. It also gave students who were clearly struggling an opportunity to learn from their peers. Additionally, because Eric can see the students' work in real time, he is able to assess where each student is at in terms of his/her level of comprehension.

#### REVIEW BY DR. ELVIRA RONCALLI - APRIL 18, 2017

1. Student Engagement
  - a. During my visit to Eric's class, I observed students in teams of 2 to 4 working together to resolve problems that had been assigned to them. My impression was that students were expected to think through the problems and be able to find a way to address the questions posed by Eric. Students were working collaboratively within each team and appeared to be engaged at a high cognitive level. The class was structured in such a way that students were directly engaging the content of the day's course. Eric Sullivan guided them through the problems, asked them questions, redirected them, when they veered from the most "sensible" path, but on the whole, I was impressed with the high level of student engagement. Students were practically "in charge", which means they had to understand what was asked of them, had to think about the problem, evaluate how to resolve it and did so by discussing this with one another. It was interesting to see that different teams offered different solutions to the various problems, and while some did not work too well, it allowed for the possibility for creative approaches, which is great!
  - b. Teams of students were working on different whiteboards in the classroom (there were many!) and used their own laptop to project their work in graphs, so that it was visible to all. The use of technology was pretty much seamless and, as far as I could see, very effective in aiding/supporting student work.
2. Necessity/Visibility/Invisibility/Flexibility of the Technology
  - a. The technology was clearly an important component of the lesson and well integrated. In fact, I'd say, the lesson was centered around using the technology and making it an integral part of it. The use of technology clearly changes the use of space: rather than being static, with students sitting down in the same spot, it makes for a more dynamic classroom with students, moving around, standing, visibly interacting with one another. The use of technology does allow for more flexible pedagogical approaches, overall it allows for more interaction among students and direct engagement of course content. I found myself looking all around the classroom: behind me, on my left, on my right, in other words, I kept turning around. Clearly, multiple learning activity spots, not just one.
3. Opportunities for Assessment and Differentiated Instruction
  - a. It is clear that, in light of what I was able to observe in Eric Sullivan's class, technology allows for formative assessment of student engagement. It seems to me that students engaged in activities where they have to think through a mathematical problem and devise the best way to resolve it, relying on what they have learned in that class, and discussing their approach with their peers, will be better able to retain what they have learned. There is a direct engagement that is not as evident when the interaction with other students is limited. This also attests to the flexibility in pedagogy that technology allows for. As mentioned earlier, it allows to move from a static environment to a dynamic one, where interaction among students is promoted through work in small groups and as a class.

#### 4. Overall Thoughts

1. I was very impressed with the high level of student engagement and with Eric's pedagogical style of getting students to work the problems. I was trying to think about how that approach would translate in the field of philosophy. Philosophy has its own kind of formulas just as mathematics does. They are concepts and definitions, that philosophers have come up with, to better understand the world we live in. It would be good to have students identifying such formulas within the work of the philosophers we study and "test" them to see if they "hold" or "break down." It would also be good to have students come up with their own formulas to address a problem/issue philosophers have identified. The question is: how would you put that on a graph? Regardless, This would encourage students to be creative and explorative. The key is to allow students to participate in the learning process as much as possible.

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#### REVIEWS OF SANDBOX DURING DR. KATHERINE GREINER'S CLASS

##### REVIEW BY DR. ERIC SULLIVAN – MARCH 24, 2017

1. Student Engagement:
  - a. What is the quality of peer-to-peer engagement?
  - b. Describe the type of peer-to-peer engagement observed.
  - c. Do the peer-to-peer interactions allow student a low floor & high ceiling to engagement with the content?

Response: I observed students working in small groups on pre-selected prompts. Students were using the screens in the Sandbox classroom to fill out their answers to the prompts. One student per group was assigned as a scribe while the others contributed orally to the writing. Students were engaged in the process, and the use of the projectors was appropriate since I observed student groups reading other groups' responses to better gauge their own thinking.

2. What levels of engagement are made possible by the technology in the classroom? (thinking Bloom's here)
  - a. Describe the observed activities that encourage students to remember and understand.
  - b. Describe the observed activities that encourage students to apply.
  - c. Describe the observed activities that encourage students to analyze.
  - d. Describe the observed activities that encourage students to evaluate.
  - e. Describe the observed activities that encourage students to create.

Response: Students are working to remember, understand, and apply their understanding of prior readings while writing their responses to the initial prompts. When called up, students are asked to analyze their thoughts more deeply so as to articulate them to the class. Katherine does a nice job sequencing the student responses so that she can draw out certain points.

3. Does the technology assist/allow for seamless transitions? What sort of transitions?

Response: The technology was used appropriately and consistently during the class. Students seemed to find it natural to be in a class where the discussion lead the pace of the course and the written work was on display for all to see. I would suggest jigsawing student groups for discussion and using the projectors to guide the discussions in the jigsawed groups. This would help to minimize the (small) number of students who were disengaged with the material during the larger group discussions.

4. Necessity/Visibility/Invisibility/Flexibility of the Technology
  - a. Is the technology necessary for the given lesson? (Necessity)

- b. Does the technology overshadow/upstage/interfere with or enhance the learning goals? (Visibility/Invisibility)
- c. Does the technology available in the space allow for various pedagogical styles/approaches/lessons? (flexibility)

Response: The technology in the room was used in an appropriate way and appeared as a necessary component of the day's lesson. To answer the question "could the lesson have happened without the technology" I would have to say both yes and no. I don't know that it was absolutely necessary to have the students' Word documents on display for all to see, but the pedagogical gains in doing so were substantial. In particular, I point out again that I observed several students taking advantage of the displayed work from other groups to guide their thinking.

5. Opportunities for Assessment and Differentiated Instruction

- a. Does the technology available allow the instructor to the opportunity for formative assessment of student engagement?
- b. Does the technology and use of the technology allow the instructor the opportunity for differentiated instruction? How and at what levels? Individual? Small group? Large group?

Response: This is where Katherine really shined during this lesson. She let them work in small groups for a large majority of the class. Much of her time was spent doing differentiated instruction: "what do you think", "can you write more about that", "how does that answer tie to how [book character] reacted to [book plot line]?", etc. Katherine's skill in redirecting and differentiated instruction was clear and the students were obviously comfortable with this level of interaction. The technology allowed for this sort of differentiated instruction in that Katherine could actually read work from across the room before she approached the groups.

6. Overall Thoughts:

Response: I was impressed by Katherine's class and the level of discussion, deep thinking, and engagement that she fostered. The students were all engaged and when engagement seemed to wane I suggest that Katherine jigsaw or subdivide the groups to all for deeper small group discussion.

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FINAL REFLECTIONS

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DR. ERIC SULLIVAN

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I taught in a Sandbox-style classroom for this first time this semester and it fundamentally changed the way that I had the students engaging with the material. I found that I had to be very intentional about the daily planning that went into the course and if I wasn't then I would inevitably fall back on a more lecture-based pedagogy. What I thoroughly enjoyed about teaching in this classroom was the ability to switch between a lecture and student-centered active learning environment seamlessly with the technology aiding the transition. Being able to see all of the student groups' work allowed me to give formative feedback and differentiated instruction throughout every class. I think that made the class more engaging for the students and it certainly gave me a better sense of where each student was with the material; hence further guiding my instruction and assessment.

DR. KATHERINE GREINER

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Teaching in the Sandbox provided me with pedagogical opportunities that I never would have considered before. The unique layout of the classroom forced me to think through my use of class time in new ways, stretching my pedagogical muscles. I found I was able to integrate differentiated learning in ways that are challenging in traditional classrooms. Letting the students take over the screens and walls and work in small groups gave me an opportunity to hear from more students—especially students who tend to avoid participating in larger group discussions. It also

changed my orientation to the classroom space. The small group set up was a tangible reminder to be student-centered in my teaching. The TV on one wall of the classroom enabled me to have one screen for my material. This way, students could reference my directions or I could call their attention to new information. The moveable furniture made it easy to change the set-up of the room. The white boards are my favorite part of the room. They allow for creative, spontaneous display that allows for quick feedback. I loved looking at the work that had been done at the end of class.

Some of the weaknesses of the space is that it can feel cramped and hot—especially after two class periods. Also, there can be a temptation—especially at the beginning—to try and use all the technology available in every class session. This can be overwhelming and not very helpful to students. The best way to learn how to use and teach in the Sandbox is to just start teaching in the Sandbox. The space itself will encourage pedagogical creativity.

DR. ELVIRA RONCALLI

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I have taught in the Sandbox classroom for a few years and most recently in the Spring 2017. In order to make the most of it, I try to learn new ways by which to incorporate technology in the classroom. It is not immediately evident how to teach by integrating technology because it requires shifting the teaching style from a lecture-centered to a more student-centered model. As a teacher, I see myself as a facilitator in the learning process: I'm there to provide guidance and create the best environment possible for students to learn by engaging the subject matter directly and that is all about the "how." The point is to continue to search for the approach that facilitates learning the best. This is where technology comes in: it has enabled me to do more things, new things, that I would not be able to do in a traditional classroom. It has also challenged me to think of different ways of teaching, and try new things. The benefit of technology in the classroom, as I see it, is that it allows for more direct student engagement of whatever we're doing. It makes the class more dynamic, flexible and participated. Wherever students are directly involved in the learning process, that is precisely when the learning "sticks," it stays with them. Hence, variation of activities and pedagogical styles is the more fruitful strategy, in my experience. The key is not so much using technology to do what I have been doing in a traditional lecture, i.e. use a power-point presentation to highlight the key-points in my lecture, rather than just lecturing without power-point. This approach has its benefits, especially in fields where a lot of informational content is to be acquired; however, the real shift happens when it is the students who take charge of the learning process and are able to own it, it literally becomes their own. This is when learning becomes less monolithic, it takes up different forms that reflect the participants' engagement and less indifferent to the person engaging it. In learning and making something our own, we affect both the knowledge at stake and ourselves. In short, technology provides the means by which we are able to engage actively in the learning process and do so in a variety of ways.

USING MOODLE FORUM FOR CLINICAL NURSING JOURNALS

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STATEMENT OF PURPOSE

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We are using Moodle forum as a journaling tool to group, manage, track, assess, and interact with students during their Capstone clinical experiences. Students will use Forum to analyze and evaluate their clinical experiences and interact with one another, posing significant questions about their direct experience in the clinical setting. These journals will help bridge the gap between clinical experiences and course outcomes while helping students develop professional communication skills with their peers.

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EVALUATION RUBRIC

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Criteria √	Grade>	1	2	3
a	Forum allows for effective tracking and assessment of participation.	Grading and tracking was more difficult in Forum than it would have been on paper.	Grading and tracking in Forum took about the same amount of time as it would have on paper.	Grading and tracking in Forum was easier and more efficient than on paper.
b	Forum encourages effective peer to peer interactions.	Students did not interact with one another in the forum activity.	Students' interaction with one another was infrequent or of lower quality than expected.	Student interaction was robust and of high quality.
c	Students reflect on their nursing clinical experiences and connected them to course outcomes.	Students provided a weak reflection on their clinical experiences by neglecting to adequately connect the course outcome to the clinical experience.	Students generally reflected on their clinical experience by providing a limited analysis of the course outcomes.	Students deeply and thoughtfully reflected on their clinical experiences by providing a thorough analysis of the course outcomes.
d	Students utilized appropriate communication skills as evidenced by use of professional language.	Students utilized unprofessional communication skills and/or inappropriate language.	Students utilized professional communication skills and generally used appropriate language.	Students consistently utilized professional communication skills and always used appropriate language.

EVALUATIONS

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DONNA GREENWOOD, MSN, RN – MOODLE FORUM JOURNALING EVALUATION, SPRING 2017

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Rubric:



Criteria V	Grade>	1	2	3
a	Forum allows for effective tracking and assessment of participation.	Grading and tracking was more difficult in Forum than it would have been on paper.	Grading and tracking in Forum took about the same amount of time as it would have on paper.	Grading and tracking in Forum was easier and more efficient than on paper.
b	Forum encourages effective peer to peer interactions.	Students did not interact with one another in the forum activity.	Students' interaction with one another was infrequent or of lower quality than expected.	Student interaction was robust and of high quality.
c	Students reflect on their nursing clinical experiences and connected them to course outcomes.	Students provided a weak reflection on their clinical experiences by neglecting to adequately connect the course outcome to the clinical experience.	Students generally reflected on their clinical experience by providing a limited analysis of the course outcomes.	Students deeply and thoughtfully reflected on their clinical experiences by providing a thorough analysis of the course outcomes.
d	Students utilized appropriate communication skills as evidenced by use of professional language.	Students utilized unprofessional communication skills and/or inappropriate language.	Students utilized professional communication skills and generally used appropriate language.	Students consistently utilized professional communication skills and always used appropriate language.

Justification for rankings of grading rubric:

**Criteria A: Forum allows for effective tracking and assessment of participation Rank 1**

The Moodle forum was an effective means for students to communicate with their cohort and with the instructor. Due to the nature of the course however, it was difficult to assign points every week as per the design of the forum. The forum was set up to require the allocation of points for each journal entry and points for each student response to that entry every week. Students were required to complete 120 hours of clinical for the course. This in reality, was not necessarily equally divided among the weeks of the semester. The student's schedule was dependent upon the availability/schedule of the preceptor. This being said, there were some weeks a student did not work thus could not make an entry and therefore, her/ peers could not earn response points. In order to not penalize students for this, students were instructed to just make an entry stating there were no clinical hours and then each student would respond with a comment such as "noted" so that points could be assigned on the forum. The Moodle grading system could be very efficient if a means to address this issue is identified. One possibility might be that rather than requiring students make entries and respond weekly, that students are required to make a predefined number of entries throughout the semester, For some students this may mean once

per week and for others there may be some weeks with more than one entry and some weeks with no entries. One suggestion might be that there are 10 entries required; one for each course outcome.

Clearly having the opportunity to grade each response and have it recorded is a positive feature of the Moodle forum for both the instructor and for the students as the total points earned is always up to date and available to both the instructor and the student.

Allocating points for the question response entries was an issue. There were many times I would like to have had the option to differentiate between a high level question/response. The scoring option for responses was 0 = no response or 1 = response and question. With this scoring it was not possible to differentiate between a high level thoughtful response and a superficial one. I recommend that the forum be set up with the following point allocations: 0 = no entry, 1 = responded to blog but superficial reflection, 2 = thoughtful response and question with evidence of critical reflection.

#### **Criteria B: Forum encourages effective peer to peer interactions: Rank 2**

I would have liked to have ranked this criteria as a 2.5. The quality of interactions ranked between low quality (2) and robust with high quality (3). For the most part students did put thought into their Moodle entries and their passion for their area of practice was evident. Specific clinical examples were used. Each peer was required to reflect upon the entry, respond and ask a question of the blogger related to the entry. About 50% of the questions were thoughtful and evidence of critical thinking. The other 50%, were very basic factual questions that did not require deep reflection. Questions may or may not relate specifically to the entry. For example one student asked: "How many RNs do you have on duty each shift? It appeared this type of question was asked just to fulfill the course requirement of asking a question of each student each week.

The last two weeks of clinical the faculty agreed that in addition to having a student pose a question on Moodle, the blogger was required to answer the questions. For whatever reason, whether it was because students were more skilled in their ability to use the forum OR if it was because they were required to answer the question, the questions seemed to be at a higher level. Closing the communication loop to actually require responses seemed to elevate the conversation.

The forum discussions set the stage for class seminar discussions that followed each week. I found that the students came prepared to the clinical seminar and were ready to contribute to the discussions because they had some familiarity with each student's clinical experience. Each week there were many conversation starters that happened because of the Moodle forum. "Tell me more about what happened with....." "How did that experience impact your ability to de-stress when you got home?"

#### **Criteria C: Students reflect on their nursing clinical experiences and connected them to course outcomes: Rank 2**

The requirements for journal entries were as follows:

1. The program outcome(s) that was/were demonstrated with this event
2. A concise description of the situation/clinical experience
3. Your thoughts, feelings and perceptions about the experience
4. Your level of nursing knowledge and application of that knowledge
5. The outcome of the situation

Some students occasionally struggled with making a clear connection between the chosen course outcome and the clinical examples/ activity. For example student A.A. used the following course outcome on April 7: "Demonstrate excellence in communication, including interprofessional communication and collaboration for improving patient health outcomes." Although a well written description of a clinical experience with a hospice patient, it did not address any specific communication theory or skill. In short, the student just did not connect the dots! One suggestion is to rewrite the criteria journal criteria 2 (above) to: "Describe a clinical situation and your rationale of why this experience relates to the course outcome."

Another deficit observed was addressing the criteria/outline for journal entries "4. Your level of nursing knowledge and application of that knowledge" For example, student M.F. addressed the above element by simply stating: "basic level of nursing knowledge" This, like the above example, is not a Moodle issue but rather a course

development and orientation issue. In class practice writing journal entries followed with instructor and peer feedback may help. Further, providing a written set of guidelines with examples of excellent, acceptable and poor journal entries may help students comprehend the level of writing that professors expect. A potential unintended consequence of providing written examples is that it could destroy student creativity and independent thinking. Suggesting that students review and utilize Patricia Benner's theory *From Novice to Expert* may help in improving the level of understanding and documentation of this criteria.

**Criteria D Student utilized appropriate communication skills as evidenced by use of professional language. Rank 2**

Students were careful to maintain privacy and confidentiality of patients, family and staff as mandated by the profession. The National Council of State Boards of Nursing White Paper on the use of Social Media is integrated into our course orientations early on and students learn the importance of confidentiality and privacy when using computer and internet technology to communicate.

Although the journal entries I reviewed did not contain unprofessional or unethical statements as was the case for my colleagues, I did see the results of not proof reading carefully. For example there were occasional incomplete sentences and misspelled words. The use of informal register, slang and text message terms was common. In my analysis this is the greatest rationale for why the forum is necessary. For many students, this may be their first experience of using media technology for professional vs social communication and elevating the level of conversation is not intuitive.

MARIA BROSNAN, MSN, APRN, ACNP-BC, CNE – MOODLE FORUM JOURNALING EVALUATION – SPRING 2017

**Rubric:**

Criteria	Grade	1	2	3
a	Forum allows for effective tracking and assessment of participation.	Grading and tracking was more difficult in Forum than it would have been on paper.	Grading and tracking in Forum took about the same amount of time as it would have on paper.	Grading and tracking in Forum was easier and more efficient than on paper.
b	Forum encourages effective peer to peer interactions.	Students did not interact with one another in the forum activity.	Students' interaction with one another was infrequent or of lower quality than expected.	Student interaction was robust and of high quality.
c	Students reflect on their nursing clinical experiences and connected them to course outcomes.	Students provided a weak reflection on their clinical experiences by neglecting to adequately connect the course outcome to the clinical experience.	Students generally reflected on their clinical experience by providing a limited analysis of the course outcomes.	Students deeply and thoughtfully reflected on their clinical experiences by providing a thorough analysis of the course outcomes.
d	Students utilized appropriate communication skills as evidenced by use of professional language.	Students utilized unprofessional communication skills and/or inappropriate language.	Students utilized professional communication skills and generally used appropriate language.	Students consistently utilized professional communication skills and always used appropriate language.

For this Technology Review, I reviewed six student's posts for the week of April 3<sup>rd</sup>-9<sup>th</sup>, 2017. I chose to review multiple posts because as I review the Rubric above, I felt that Criteria c & d could be

student dependent and therefore, I felt a more comprehensive review of the technology would require viewing multiple student posts.

**Criteria a: Forum allows for effective tracking and assessment of participation.**

I assigned a grade of 2 on the rubric for *Criteria a*. This was a difficult to assign a grade for this criterion, because I really wanted to assign it a 2.5. I definitely found that it was easier, in one respect, to grade journal entries and student responses when utilizing the Rating Scale on Moodle. It was easier because I was able to immediately assess the students' work and enter my evaluation just after reading their post. I felt that this immediacy provided a more accurate assessment than entering it later in the Moodle grade book. Also, I felt it was easier and perhaps even more accurate, because in the past when grading the student journal entries, I would enter an "overall grade" for their entries and responses. When utilizing the rating scale, however, I could assess their individual responses and journal entries separately. This provided an opportunity to individualize their grade for each response and each journal entry, which provided a more accurate assessment in my grading and comments, than when grading on paper or previously via the Moodle gradebook. I feel that this also provided better feedback for the students than entering one grade for both their journal entry and responses. For example, I had entered a "5/8" for a student's journal entry and "5/5" for their responses. The student was able to identify easily that the reason she had not received a full credit (13 points) for that week's entries was due to her journal entry and not her responses to her peers. The student then approached me and requested additional feedback on how to improve her journal entries.

Additionally, utilizing the rating scale provided the opportunity for the grade to be immediately posted in the Moodle gradebook. I definitely found that this decreased my workload and felt that it increased my efficiency of grading and providing student feedback. I was able to have grades post in Moodle while grading, so even if I only had time to read one or two posts, these grades were transferred immediately into the gradebook, thus eliminating the need to take an extra step to enter these grades later. It also eliminates potential inaccuracies that can occur with the time-delay in reading the posts and then entering into the gradebook that can occur with interruptions.

My rationale for not assigning *Criteria a* the grade of 3 is related to an issue that my colleagues and I discovered after beginning to use the rating scale. Because the points were divided by the number of weeks of the course, we found that even if a student didn't enter a journal entry, which would occur if they were not attending clinical that week, we still needed to assign them the full points. If we didn't assign the full points for the journal entry, the result would be a deficit in their overall grade for the course. Additionally, if one student did not enter a journal entry that week, then their peers did not have a post to respond to, thus resulting in their peers also missing points for that week. I found this frustrating because I was having to assign students points even though there was no work completed, so that their overall grade would not be penalized. I think with more careful planning of the Moodle gradebook, we could possibly rectify this situation.

Another reason that I did not assign a grade of 3 for *Criteria a* was because the rating scale for the student responses allowed for only whole numbers to be assigned. Each student was to receive one point for each response to their peers' journal entries. Each student could potentially receive up to five points per week. Since the rating scale only allowed for whole numbers, it was only possible to grade a student's response at a 0 or 1. This limited my ability to thoroughly assess a student's performance and accurately assign a rating. I found that I would often be assigning a grade of 1 to all students, who entered a peer response, although there were variations in the quality of their responses. I think this too could be rectified in the future by perhaps changing the number of points for each student response, perhaps to 3 or 5 points per student response. This would allow the faculty the ability to assign points based on the quality of their responses by grading on a scale from 0-3 or 0-5.

**Criteria b: Forum encourages effective peer to peer interactions.**

I graded *Criteria b* as a 2 on the Rubric. I found assessing this criterion a bit of a challenge. The students utilized the forum as instructed by the faculty as they entered one journal entry and responded once to each of their peers. Therefore, I do feel that the student interaction was infrequent, but it was due to our instruction and not due to the technology.

We did have one week that we altered the assignment and students were required to respond to each of their peers' responses. This particular week I noticed that the quality of the students' interactions was better. So as I evaluate this criterion, I think that when there was a lack of robust student interaction, it was not due to the technology but due to our course requirement. I feel the grade of 2 is appropriate for the week of April 3-9<sup>th</sup> but I feel that this score would be a three during the week when we changed the assignment as evidenced by the improved interaction between students.

Criteria c: Students reflect on their nursing clinical experiences and connected them to course outcomes.

The forum allowed students the opportunity to reflect on their clinical experiences by addressing several specified topics related to their clinical day. The syllabus instructed students to choose at least one course outcome for each clinical journal entry and then provide a description of one clinical experience from the day that supported and explained how they met this course outcome. Additionally, students were to address their thoughts/feelings related to that particular clinical experience, as well as what they learned from the situation and the outcome of the clinical situation.

The Moodle forum provides an excellent mechanism for students to enter these clinical reflections. The forum allows a convenient opportunity for the faculty and peers to read the journal entries and provide feedback. This is key in this type of a seminar course. The Capstone Clinical course meets only once a week in a seminar format, so having the opportunity to communicate with faculty and peers in an alternate format leads to increased interaction, support and communication.

In my evaluation of student entries on the week of April 3-9<sup>th</sup>, I assessed that the journal entries were informative and demonstrated thoughtful engagement and reflection of the student's part. In general, most (4 of 6) of these students' journal entries were well-written and provided evidence of critical analysis. They provided substantial evidence that they had successfully fulfilled those course outcomes. Each of the students addressed all seven criteria as requested in the syllabus. There were two students that demonstrated less than optimal writing skills for a senior college student, but they still made appropriate connections between their clinical experience and the course outcomes.

Criteria d: Students utilized appropriate communication skills as evidenced by use of professional language.

I assigned a grade of 2 for *Criteria d*. The majority of the students assessed during the week of April 3-9<sup>th</sup>, utilized professional language and communication skills. However, there were two students in particular that I found utilized poor writing skills. The students did not use inappropriate language or overtly unprofessional language, instead I assessed that the students utilized a relaxed form of written communication. For example, one student wrote: "Your description of the carotid endarterectomy you got to see on Friday was very interesting! " I am unsure however if this issue is related to the technology. As faculty, we have stressed that the forum is not "FaceBook" or a social media site, however, we do ask students to provide peer support and speak about their feelings/emotions. So, I am pleased that students were not using unprofessional or inappropriate language, but I would hope that we could help students improve their writing skills in the future perhaps with additional clarification and feedback.

MEREDITH KRUTAR, MSN, FNP-BC – MOODLE FORUM JOURNALING EVALUATION – SPRING 2017

Rubric:

1	Forum allows for effective tracking and assessment of participation.	Grading and tracking was more difficult in Forum than it would have been on paper.	Grading and tracking in Forum took about the same amount of time as it would have on paper.	Grading and tracking in Forum was easier and more efficient than on paper.
2	Forum encourages effective peer to peer interactions.	Students did not interact with one another in the forum activity.	Students' interaction with one another was infrequent or of lower quality than expected.	Student interaction was robust and of high quality.

3	<b>Students reflect on their nursing clinical experiences and connected them to course outcomes.</b>	Students provided a weak reflection on their clinical experiences by neglecting to adequately connect the course outcome to the clinical experience.	Students generally reflected on their clinical experience by providing a limited analysis of the course outcomes.	Students deeply and thoughtfully reflected on their clinical experiences by providing a thorough analysis of the course outcomes.
4	<b>Students utilized appropriate communication skills as evidenced by use of professional language.</b>	Students utilized unprofessional communication skills and/or inappropriate language.	Students utilized-professional communication skills and generally used appropriate language.	Students consistently utilized professional communication skills and always used appropriate language.

I reviewed a clinical log from student, LZ, dated February, 2017. She had written three journal entries for three different clinical days. The student followed all of the mechanical directions related to answering the questions asked and addressing the outcomes. Each of her seven peers then responded to all three entries with one pertinent clinical question (as directed in the course syllabus). The rating system was used in the forum to allow for immediate grading. Based on the points allocated for the logs in the syllabus, we divided up the total points accordingly. Each student was awarded points for both writing their clinical logs and then responding to their peers' entries. I will address each component of the rubric.

"Grading and tracking in Forum took about the same amount of time as it would on paper." The grading system has great potential for being more efficient for grading on paper. The benefit is that the teacher can grade the entry immediately after reading the post, by awarding points on a scale, and then once graded—this number is immediately saved into the Moodle gradebook. In other words, this allows the system that is ordinarily a two-step process to become a one-step process. However, we discovered a few problems with the scaled system. First, we were obligated to award points even if the students did not have an entry for the given week. We decided that this is a flaw of the course design rather than the tool. Having said that, if one student did not participate in clinical for that given week—it created a void in the students grade as well as the peers' grade since there was no opportunity for the peers to reflect on the original post. In order to address this, we basically had to award points on many occasions when there was no work completed. Second, I felt that the points for the peer responses were inadequate. Due to point structure, we decided on awarding either a "0" or a "1". In essence, they received one point just for doing something—regardless of the quality. I felt this did not adequately address what we were asking the students to do. There were many occasions where the students had below average work but I felt they need to be awarded at least one point for reading and responding to the original post. I would want to change this in the future so that the grader has more flexibility with awarding points. Third, the grader still had to double check the gradebook at the end of the week to ensure that those that did the work received all of their points and those that did the work but turned it in past the deadline, did not receive their points. I would like to inquire as to whether or not you can set a "deadline" of sorts so that after the deadline for the assignment has past, the student would still have to participate but would not receive points. Finally, if the grader read and graded a partial list of the assignments, the gradebook would reflect this as the student receiving "partial" credit. At this point, the students would occasionally write and inquire about their grade. I would have to reassure them that I was not finished and that the gradebook was not finalized. This is a small inconvenience and I would simply caution the user to wait until the deadline and then grade all entries at once if possible, to avoid this confusion and inconvenience.

I had trouble deciding between "Students' interaction with one another was infrequent or of lower quality than expected." And "Student interaction was robust and of high quality." The frequency with which the students interacted was not the problem. However, in retrospect we have decided to change the assignment to give the students better opportunity to respond to their peers' entries. In this particular class, the students were asked to read their peer's clinical log and respond with one pertinent clinical question. As is the case in the log I refer to for this assignment, the student had 36-hour's worth of clinical time to discuss. Given this, her peers were not able to

adequately address this “robust” log with one clinical question. On two occasions, we actually asked the student to respond to the clinical questions within the forum. We were not doing this initially because we felt we would use the time spent in seminar to answer the questions. However, due to scheduling conflicts, seminar was cancelled and so we utilized the forum to allow the students to actually answer the questions of their peers. These two weeks proved to have a higher quality of response than the others in which the students were not answering the questions. Further, one might ask the question that if the student knows that their question will be answered on the forum-then does that in it of itself increase the quality of the question asked? I would think that it would. Certainly, the potential for “robust student interaction” is there but we need to make a few changes to the assignment to optimize the results.

“Students deeply and thoughtfully reflected on their clinical experiences by providing a thorough analysis of the course outcomes.” As instructors of the course, we provided a template of questions that the student was to address in their clinical log on forum. Most the time, and certainly in this example that I address, the students did this very well. There were asked this set of questions:

Program Outcome Addressed

Description of Situation/Clinical Experience

Thoughts and Feelings

Outcomes of Situation

Nursing Knowledge

What I learned

Progress Towards Personal Goals

There are ten overall program outcomes for the course and the students were expected to address each one at least once over the course of the semester. However, each week, the students might all be responding to a different outcome. This worked just fine but it made for tracking somewhat difficult (in order to make sure each of the students addressed each outcome). In the future, we discussed how we would assign a program outcome and each student would respond to the same outcome each week. I think this would be beneficial in demonstrating how the outcomes can likely be achieved on any and all clinical shifts that are worked. Further, it will motivate to student to seek out meeting these outcomes in situations where they might not ordinarily do this. It also gives the faculty greater control to emphasize certain program outcomes more than others. For example, “Demonstrate excellence in communication, including interprofessional communication and collaboration for improving patient health outcomes.” Is an outcome that should be met every day the student reports to clinical. This can be emphasized if we prioritize the program outcome before the student enters the clinical area. To further address the reflection piece, I do believe this occurred with the utilization of Forum. It was most evident as the student detailed their “thoughts and feelings” surrounding the clinical day. Having said that—most students took advantage of the opportunity by digging deep into the difficult social, emotional, psychological challenges presented in the clinical area—whereas a few spent far less time and likely did not benefit as much as the rest. Here are two examples of what was provided in the forum:

**Thoughts/Feelings:** It was hard having a kid that needed the help that Shodair provides but knowing it could be days before a bed became available. I know that Shodair has a limited amount of space and it is sad/hard that they can’t keep up with the amount of kids that need treatment.

**Thoughts, feelings and perceptions about the experience:** At times, I felt frustrated today because the provider did not order an echocardiogram or any other exams on the twin with bradycardic/apneic episodes, mottled trunk and extremities and wide pulse pressures. It’s difficult to want answers and continue to see the parents frustrated and hoping for answers. Part of me knows that the assessments and care we were providing as nurses was great and necessary. We were helping him grow and mature, we were recording trends, monitoring vitals, and educating the parents as much as we could about what was happening. I needed to be okay with that being enough. The other part of me hoped for a more active investigation into the reasons why he was not thriving like his sister. In the little spare time we had, we researched his symptoms and hoped that might lead us somewhere.

“Students utilized unprofessional communication skills and/or inappropriate language.” This was not the norm. However, it did happen and there was a not a direct way, within forum, to address this. I would like to explore this

further. At the beginning of the semester, we spent a significant amount of time discussing “appropriate” and “professional” language. We contrasted a professional clinical log and the expectations associated with this versus a Facebook page, as an example. I would say that the students rose to challenge about 90% of the time. In my experience, they were always supportive and affirming of each other. However, there were occasions where they detailed their clinical experience and the quality of the conversation lapsed as they referenced their patients and/or the staff in the clinical area. On the few occasions where the language was inappropriate, I requested a meeting with the student and addressed it in person in my office. In the future, one consideration might be to have the students do a peer evaluation on the quality of the writing within the forum using the rubric developed for this project.

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## FINAL REFLECTIONS

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### MEREDITH KRUTAR, MSN, FNP-BC

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I would recommend using the Forum for clinical log entries. We discovered a few inefficiencies that I would change in the future. However, utilizing the tool and evaluating it will allow us to improve it for next years’ course. Many of the strengths and weaknesses are detailed in the technology review posted on Moodle. I will briefly list them here.

First, I will detail the weaknesses. The grading system proved to be much more difficult and confusing than I had hoped. Much of this is related to the fact that we had irregular posting times. Given this, some students were posting more than others and at times, some students have no posts to complete. Given this, we had to “artificially” create a post and give them points for doing nothing. This is not a weakness of the forum itself but required us to consider alternate ways to address this. Second, the interaction between the students for each individual post was limited and could be expounded upon in the future. Requiring the students to respond to peers would increase the quality of the responses and I think we will do this in the future. Third, if all the grades were not completed at the same time, students would immediately recognize they had partial credit and question the teacher as to why they did not receive full credit. It is important the teacher understand the grading needs to be completed all at once to prevent this miscommunication. Finally, and perhaps most importantly—it was hard to come up with the appropriate point values for the rating system. We used a 0-1 rating system for the responses and I later decided this was not adequate enough to properly evaluate the students’ response. Basically, they either got credit for doing it or not. We were not able to objectively address if they responded but the response was weak or inadequate. However, in considering how to change this in the set-up process, we could not figure it out. Needless to say, that evaluation method remained but was not ideal. As a result, students likely received more credit than they should have for lack of ability to do anything different.

Several positive outcomes were noted in using forum. Given the design of the course—this was a fantastic way to follow what the students were doing during the week in the clinical setting. Many were working out of town and this was a way to stay in touch with their progress despite the fact that the seminar only met once per week. It also gave them an avenue to professionally dialogue with their peers about their patients in the hospital. This is a much-needed exercise in the profession of nursing—how to write and converse objectively without using opinion or judgement. I really appreciate being able to grade the entries immediately after reading them and then this grade would transfer directly into the gradebook. Finally, it provided an avenue for the students to address the course outcomes in a weekly format that was easy to follow and evaluate.

In summary, the benefits outweighed the problems we encountered. We are eager to further refine the process for next year

### MARIA BROSANAN, MSN, APRN, ACNP-BC, CNE

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I would recommend utilizing the Moodle forum and the rating scale for future use in the senior nursing capstone course. However, I look forward to modifying our requirements and possibly the rating scale in the future. I think the Moodle forum provided an effective method for students to communicate with one another & faculty, especially in a course that only meets in-person once a week for the seminar. Additionally, it provided an opportunity for all students to share their clinical experiences, when, unfortunately, our seminars often ran out of time for all students to speak. Also, several of our students are traveling for their clinical experiences and communication with the faculty is key, so we can follow their progress closely.



One issue that I found with the Moodle forum was the quality of the peer to peer interaction and the peer to faculty interaction. Meredith, Donna and I discussed this at length. I would hope that in the future we could design an improved assignment and set of questions to elevate & develop the level of peer interactions and students' critical thinking. I think I would like to also require students to respond to their peers' responses to increase the peer to peer interaction.

The rating scale offered a convenient method for grading each journal clinical entry as well as the student responses. However, during my evaluation and use of the rating scale, I noted a few deficiencies. One such deficiency, would be the limited ability of the faculty to rate student responses based on the quality of the response, because we could only rate either a 0 or 1. I would recommend increasing the point value assigned to the responses to perhaps 3 or 5 to allow for further delineation of their grade.

Another difficulty with the rating scale occurred as a result of how we allocated points in the Moodle grade book. We were having to give points to students although they had not entered a journal post for that week. Also, since a student may not have entered a journal entry, their peers lost points because they were unable to respond to a journal entry. Thus, as faculty, we ended up giving points essentially without work completed. I think this issue could be eliminated by re-working our grade book or by altering our assignment. For example, we could require each student to address one student learning outcome per week, rather than making journal entries dependent on their clinical hours. I think this would keep all students engaged in the discussion forum throughout the semester as well as allow faculty to assign points per week.

I would definitely recommend continuing to utilize these tools with some of the above recommendations.

Thank you for this opportunity!

DONNA GREENWOOD, MSN, RN

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Utilizing Moodle forum has great potential for senior nursing Capstone students. With modifications this could be a very effective tool to foster student reflection, critical thinking, interprofessional dialog and collaboration. For me the most valuable part of this project was the opportunity to engage in conversation with Meredith and Maria to discuss patterns and trends. From these conversations, I gained insight into how social media has shaped the mindset and "culture" Generational Z. The transition from using media technology for personal/informal communication to using it for professional communication does not happen intuitively. The role of faculty in guiding, role modeling and supporting this is critical.

A major part of the transition of student to professional comes from self-reflection, evaluation and the sharing of challenges and triumphs with colleagues. The Moodle forum pushed students to think and reflect upon the meaning of their experiences and to receive support and encouragement from their peers.

Without a doubt I highly support the Moodle forum as an efficient and useful tool to achieve these goals. Based on my experiences with this class, following are some recommendations to strengthen the experience:

1. Create a structure for the journal entries that are consistent with faculty expectations of high level critical thinking. (Briefly modify journal criteria.)
2. Provide an in-depth orientation to the forum process and expectations including an opportunity to review examples of high, acceptable and poor quality work (this may be done as an online video so class time does not need to be used)
3. Design the Moodle forum in a way that allows for flexibility in making entries when students realistically cannot make an entry every week
4. Require responses to student proposed questions to complete the communication loop
5. Increase scoring possibilities for responses to differentiate between an acceptable/average entry and an exceptional entry.

NEARPOD

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STATEMENT OF PURPOSE

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Our group seeks to evaluate Nearpod’s effectiveness as a tool for assessing student progress and participation in the classroom. Specifically, we are interested in how we might leverage Nearpod to both monitor student understanding and encourage classroom discussion. Through the use of Nearpod, we hope to better reach students who are reluctant to ask for needed clarification or to participate in class discussion due to either the fear of giving wrong answers or the sensitivity of the subject matter. If effective, Nearpod will enhance our abilities to tailor lessons to student needs in real time, engage a broader range of students, and generate more open and fruitful classroom discussions.

EVALUATION RUBRIC

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Nearpod Goals	Exceeds	Meets	Does Not Meet
Quality of student submissions	-Evidence of thoughtful application and integration of materials	-Evidence of some application and integration of materials	-Limited application and integration of materials
Overall student progress in understanding material	-Students progress towards high levels of comprehension and/or depth of understanding	-Students progress towards adequate levels of comprehension and/or depth of understanding	-Students show little progress towards comprehension and/or depth of understanding
Student preparation and willingness to discuss or ask questions regarding challenging or sensitive subjects	-Evidence of much reflection and preparation during discussion -Students provide thoughtful contributions to difficult and/or controversial discussion topics and questions posed -Participation enhanced and further developed discussion	-Evidence of preparation during discussion -Students are willing to respectfully contribute to difficult and/or controversial discussion topics and questions posed -Participation supported and continued discussion	-Little or no evidence of preparation during discussion -Students are reluctant to contribute during difficult and/or controversial discussion topics and questions posed -Distracting or disruptive behavior

<p>Evidence of active participation, particularly among more reserved students</p>	<ul style="list-style-type: none"> <li>-More than half of students voluntarily contribute in a given class</li> <li>-Evidence of regular contributions to discussion from multiple students</li> <li>-Students are actively engaged in discussion even when not participating</li> </ul>	<ul style="list-style-type: none"> <li>-More than a quarter of students participate in a given class</li> <li>-Evidence of regular contributions to discussion from some students</li> <li>-Students are attentive during discussion even when not participating</li> </ul>	<ul style="list-style-type: none"> <li>-Less than a quarter of students participate in a given class</li> <li>-Few voluntary contributions</li> <li>-Students are inattentive and disengaged</li> </ul>
<p>Instructor encourages breadth of student responses</p>	<ul style="list-style-type: none"> <li>-Instructor engages a wide array of student responses</li> </ul>	<ul style="list-style-type: none"> <li>-Instructor engages some student responses</li> </ul>	<ul style="list-style-type: none"> <li>-Instructor engages few or no student responses</li> </ul>
<p>Instructor engages student submissions in a way that is conducive to student learning</p>	<ul style="list-style-type: none"> <li>-Instructor creatively incorporates student submissions in a way that encourages active, thoughtful engagement and learning</li> </ul>	<ul style="list-style-type: none"> <li>-Instructor incorporates student submissions in a way that adequately supports student learning</li> </ul>	<ul style="list-style-type: none"> <li>-Instructor fails to incorporate student submissions to appropriately or effectively support student learning</li> </ul>

EVALUATIONS

REVIEWS OF NEARPOD DURING DR. LESLIE ANGEL'S CLASS

REVIEW BY DR. EDWARD GLOWEINKA – NOVEMBER 6, 2017

Nearpod Goals	Exceeds	Meets	Does Not Meet
<ul style="list-style-type: none"> <li>Quality of student submissions</li> </ul>	-Evidence of thoughtful application and integration of materials	-Evidence of some application and integration of materials	-Limited application and integration of materials
<ul style="list-style-type: none"> <li>Overall student progress in understanding material</li> </ul>	-Students progress towards high levels of comprehension and/or depth of understanding	-Students progress towards adequate levels of comprehension and/or depth of understanding	-Students show little progress towards comprehension and/or depth of understanding
<ul style="list-style-type: none"> <li>Student preparation and willingness to discuss or ask questions regarding challenging or sensitive subjects</li> </ul>	-Evidence of much reflection and preparation during discussion -Students provide thoughtful contributions to difficult and/or controversial discussion topics and questions posed -Participation enhanced and further developed discussion	-Evidence of preparation during discussion -Students are willing to respectfully contribute to difficult and/or controversial discussion topics and questions posed -Participation supported and continued discussion	-Little or no evidence of preparation during discussion -Students are reluctant to contribute during difficult and/or controversial discussion topics and questions posed -Distracting or disruptive behavior
<ul style="list-style-type: none"> <li>Evidence of active participation, particularly among more reserved students</li> </ul>	-More than half of students voluntarily contribute in a given class -Evidence of regular contributions to discussion from multiple students -Students are actively engaged in discussion even when not participating	-More than a quarter of students participate in a given class -Evidence of regular contributions to discussion from some students -Students are attentive during discussion even when not participating	-Less than a quarter of students participate in a given class -Few voluntary contributions -Students are inattentive and disengaged

<ul style="list-style-type: none"> <li>• Instructor encourages breadth of student responses</li> </ul>	-Instructor engages a wide array of student responses	-Instructor engages some student responses	-Instructor engages few or no student responses
<ul style="list-style-type: none"> <li>• Instructor engages student submissions in a way that is conducive to student learning</li> </ul>	-Instructor creatively incorporates student submissions in a way that encourages active, thoughtful engagement and learning	-Instructor incorporates student submissions in a way that adequately supports student learning	-Instructor fails to incorporate student submissions to appropriately or effectively support student learning

**Comments:**

Dr. Angel makes excellent use of Nearpod in her classroom. By integrating polls and open-ended questions into the normal sequence of informational slides, she makes Nearpod a seamless part of her presentation. She receives high levels of participation in her activities. I could tell that students enjoy the real-time feedback and commentary Dr. Angel provides. Given that many of the questions she asked in this day’s discussion were of a personal nature—for instance, asking students whether they intend to (or do) speak to their children about sex as their parents spoke to them—I thought Nearpod furthered Dr. Angel’s goals in two specific ways. For one, the anonymous submissions (students used pseudonyms) provided students with a comfortable format for broaching such personal material. Secondly, the instant poll data demonstrated for students that their own experience was shared by many of their peers, further reinforcing the collective comfort-level with the material. Student submissions on open-ended questions were on point and mostly of high quality. Dr. Angel did an admirable job processing and organizing students responses in the moment. Overall, I left Dr. Angel’s class feeling like she uses Nearpod as it should be used. At the very least, she uses it as our study group intends it to be used, to “enhance our abilities to tailor lessons to student needs in real time, facilitate student cognitive engagement with our disciplines, and generate open and fruitful classroom discussions.” I learned quite a bit from watching her teach, as I use mostly the “Draw It” feature and less the poll or open-ended question features. I hope to model some of her usage in my own classroom.

In crafting our group’s mission statement, Dr. Angel often mentioned her desire to facilitate more class discussion, especially on sensitive topics. Though I could sense that the use of Nearpod created a climate in which answering otherwise sensitive questions became a matter of course and in which students were completing the cognitive tasks assigned to them, I observed that in this particular class period the more sensitive questions were asked through polls. The topics were not then discussed, but students were encouraged to reflect more on these questions in an upcoming writing assignment. Likewise, for the questions that did generate discussion, it was unclear whether the answers submitted differed in substance from those one would expect in other discussion formats. I mention this not in criticism of Dr. Angel—using Nearpod to prime an assignment is just as appropriate as using it to prime discussion—but I encourage her in her final report to reflect on whether Nearpod has helped her to achieve her goal of fostering more open discussion on especially sensitive subjects. To that end, I can say that insofar as the subject matter of her class is in many ways *one big* sensitive subject, she effectively uses Nearpod to engage students in such subjects at the macro level.

SELF-REVIEW BY DR. LESLIE ANGEL – NOVEMBER 6, 2017

Note: my rubric assessment is shown in orange below where it differs from Ed’s

Nearpod Goals	Exceeds	Meets	Does Not Meet
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<ul style="list-style-type: none"> <li>Quality of student submissions</li> </ul>	<p>-Evidence of thoughtful application and integration of materials</p>	<p>-Evidence of some application and integration of materials</p>	<p>-Limited application and integration of materials</p>
<ul style="list-style-type: none"> <li>Overall student progress in understanding material</li> </ul>	<p>-Students progress towards high levels of comprehension and/or depth of understanding</p>	<p>-Students progress towards adequate levels of comprehension and/or depth of understanding</p>	<p>-Students show little progress towards comprehension and/or depth of understanding</p>
<ul style="list-style-type: none"> <li>Student preparation and willingness to discuss or ask questions regarding challenging or sensitive subjects</li> </ul>	<p>-Evidence of much reflection and preparation during discussion -Students provide thoughtful contributions to difficult and/or controversial discussion topics and questions posed -Participation enhanced and further developed discussion</p>	<p>-Evidence of preparation during discussion -Students are willing to respectfully contribute to difficult and/or controversial discussion topics and questions posed -Participation supported and continued discussion</p>	<p>-Little or no evidence of preparation during discussion -Students are reluctant to contribute during difficult and/or controversial discussion topics and questions posed -Distracting or disruptive behavior</p>
<ul style="list-style-type: none"> <li>Evidence of active participation, particularly among more reserved students</li> </ul>	<p>-More than half of students voluntarily contribute in a given class -Evidence of regular contributions to discussion from multiple students -Students are actively engaged in discussion even when not participating</p>	<p>-More than a quarter of students participate in a given class -Evidence of regular contributions to discussion from some students -Students are attentive during discussion even when not participating</p>	<p>-Less than a quarter of students participate in a given class -Few voluntary contributions -Students are inattentive and disengaged</p>

<ul style="list-style-type: none"> <li>• <b>Instructor encourages breadth of student responses</b></li> </ul>	-Instructor engages a wide array of student responses	-Instructor engages some student responses	-Instructor engages few or no student responses
<ul style="list-style-type: none"> <li>• <b>Instructor engages student submissions in a way that is conducive to student learning</b></li> </ul>	-Instructor creatively incorporates student submissions in a way that encourages active, thoughtful engagement and learning	-Instructor incorporates student submissions in a way that adequately supports student learning	-Instructor fails to incorporate student submissions in a way that adequately or effectively support student learning

**Comments:**

In reflecting on Dr. Ed Glowienka’s evaluation of my use of Nearpod, I think he importantly suggests limitations in my use of Nearpod in developing class discussion. I used Nearpod on this particular day to ask students polled and open-ended questions pertaining to sensitive topics (i.e., topics related to when and how to discuss sexuality with one’s child). One question, in particular, asked students whether they would discuss information similarly or differently from the way in which their family of origin discussed sex. Because these are sensitive topics, use of Nearpod gave students an opportunity to respond to these questions anonymously and to see how many students in the class responded similarly. Students later reflect on this class lecture and activity by completing a writing assignment on the topic to discuss the specific ways in which they would talk to their future or current child about sex. While Nearpod allowed students to think about this topic prior to the assignment and to evaluate their response relative to other students, it did not allow us to engage, as a class, in further discussion on the topic. Ed’s feedback helped me to think about ways to use the Nearpod tool to solicit further interest in a topic so that it could be used as a springboard to generate student-led discussion. I was able to cultivate this in two subsequent classes which I will discuss in my final review.

REVIEWS OF NEARPOD DURING DR. EDWARD GLOWEINKA’S CLASS

REVIEW BY DR. LESLIE ANGEL – NOVEMBER 2, 2017

Nearpod Goals	Exceeds	Meets	Does Not Meet
<ul style="list-style-type: none"> <li>• <b>Quality of student submissions</b></li> </ul>	-Evidence of thoughtful application and integration of materials	-Evidence of some application and integration of materials	-Limited application and integration of materials

<ul style="list-style-type: none"> <li>Overall student progress in understanding material</li> </ul>	<ul style="list-style-type: none"> <li>-Students progress towards high levels of comprehension and/or depth of understanding</li> </ul>	<ul style="list-style-type: none"> <li>-Students progress towards adequate levels of comprehension and/or depth of understanding</li> </ul>	<ul style="list-style-type: none"> <li>-Students show little progress towards comprehension and/or depth of understanding</li> </ul>
<ul style="list-style-type: none"> <li>Student preparation and willingness to discuss or ask questions regarding challenging or sensitive subjects</li> </ul>	<ul style="list-style-type: none"> <li>-Evidence of much reflection and preparation during discussion</li> <li>-Students provide thoughtful contributions to difficult and/or controversial discussion topics and questions posed</li> <li>-Participation enhanced and further developed discussion</li> </ul>	<ul style="list-style-type: none"> <li>-Evidence of preparation during discussion</li> <li>-Students are willing to respectfully contribute to difficult and/or controversial discussion topics and questions posed</li> <li>-Participation supported and continued discussion</li> </ul>	<ul style="list-style-type: none"> <li>-Little or no evidence of preparation during discussion</li> <li>-Students are reluctant to contribute during difficult and/or controversial discussion topics and questions posed</li> <li>-Distracting or disruptive behavior</li> </ul>
<ul style="list-style-type: none"> <li>Evidence of active participation, particularly among more reserved students</li> </ul>	<ul style="list-style-type: none"> <li>-More than half of students voluntarily contribute in a given class</li> <li>-Evidence of regular contributions to discussion from multiple students</li> <li>-Students are actively engaged in discussion even when not participating</li> </ul>	<ul style="list-style-type: none"> <li>-More than a quarter of students participate in a given class</li> <li>-Evidence of regular contributions to discussion from some students</li> <li>-Students are attentive during discussion even when not participating</li> </ul>	<ul style="list-style-type: none"> <li>-Less than a quarter of students participate in a given class</li> <li>-Few voluntary contributions</li> <li>-Students are inattentive and disengaged</li> </ul>
<ul style="list-style-type: none"> <li>Instructor encourages breadth of student responses</li> </ul>	<ul style="list-style-type: none"> <li>-Instructor engages a wide array of student responses</li> </ul>	<ul style="list-style-type: none"> <li>-Instructor engages some student responses</li> </ul>	<ul style="list-style-type: none"> <li>-Instructor engages few or no student responses</li> </ul>



<ul style="list-style-type: none"> <li>● <b>Instructor engages student submissions in a way that is conducive to student learning</b></li> </ul>	<p>-Instructor creatively incorporates student submissions in a way that encourages active, thoughtful engagement and learning</p>	<p><b>-Instructor incorporates student submissions in a way that adequately supports student learning</b></p>	<p>-Instructor fails to incorporate student submissions to appropriately or effectively support student learning</p>
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**Comments:**

Dr. Edward Glowienka utilized Nearpod during the final thirty minutes of the class period I attended to work through logic problems with his class. The Nearpod opportunity allowed students to gain experience practicing the four new inference rules added to the student’s “tool box” during the lecture component of his class that day. This was an effective use of Nearpod that met Dr. Glowienka’s stated goals in several ways. First, all students in the class were given an opportunity to respond to each problem. Students were focused, engaged, and clearly seemed to enjoy the challenge of working through the problems. Further, the students worked through the problems together at the same pace, giving all students in the class ample time to engage with the material in a hands on approach. Dr. Glowienka warned students when they had a couple minutes left so that they would each have time to submit their work. Additionally, Dr. Glowienka did a nice job reviewing the student submissions in a timely manner and an excellent job selecting samples that demonstrated a wide array of responses. He selected work that wasn’t quite right to illustrate common mistakes, but he was careful in his discussion of these problem areas, making sure to praise the student’s attempt, as well as other areas of success. Even though the students were not identified to the class, only to the professor, this seemed like an effective approach. Specifically, as an observer, I felt Dr. Glowienka’s way of using mistakes as learning opportunities while finding elements of each response to praise was particularly important in encouraging additional participation among the students who were struggling. No one felt singled out, but rather, the challenges of the work were explored by all. In addition, by allowing all students to participate, Dr. Glowienka was able to see all solution attempts from students. This struck me as an advantage to simply working through problem sets on the board, since more reluctant students and particularly those struggling, may be hesitant to respond and later challenges may only be identified through homework or exams.

I felt that Dr. Glowienka’s use of Nearpod effectively met each of his stated goals, although I still have some questions about whether the use of Nearpod surpasses alternatives, such as working through homework problems in class, moving around to student desks, peer work, etc. First, Nearpod takes some additional time in class as it requires all students to work through the problems at the slowest student’s pace. While this encourages greater participation among struggling students, I wonder if the payoff is worth the extra time. If Dr. Glowienka were to teach the class using Nearpod again, it might be worth developing some assessments, such as a questionnaire to seek student feedback, comparisons of homework and exam performance with and without Nearpod, etc. This could be particularly helpful in determining if the quality of student submissions and the student progress in understanding material improved, two categories that were difficult for me to assess in one class period, and perhaps, areas that would be difficult for Dr. Glowienka to assess in a single semester. Secondly, while not identifying the student behind the submissions fit with Dr. Glowienka’s stated goal of increasing preparation and willingness to participate in challenging work, I wonder if it might not be beneficial to use the tool, at times, to engage more quiet students by calling on them to discuss their work. This would give those students a voice in class and if implemented carefully, could encourage further participation. The tool still would give each student a chance to work through the material at their own pace, so slower students would not feel unprepared in answering, but it would allow more quiet students a chance to be even further engaged and participatory. Again, this doesn’t

specifically fit with goals outlined by Dr. Glowienka, but this may be something worth considering if he were to adopt Nearpod in future classes.

SELF-REVIEW BY DR. EDWARD GLOWEINKA – NOVEMBER 2, 2017

Self Evaluation for Class Period 11/2/17.

Edward Glowienka

Nearpod Goals	Exceeds	Meets	Does Not Meet
<ul style="list-style-type: none"> <li>Quality of student submissions</li> </ul>	-Evidence of thoughtful application and integration of materials	-Evidence of some application and integration of materials	-Limited application and integration of materials
<ul style="list-style-type: none"> <li>Overall student progress in understanding material</li> </ul>	-Students progress towards high levels of comprehension and/or depth of understanding	-Students progress towards adequate levels of comprehension and/or depth of understanding	-Students show little progress towards comprehension and/or depth of understanding
<ul style="list-style-type: none"> <li>Student preparation and willingness to discuss or ask questions regarding challenging or sensitive subjects</li> </ul>	-Evidence of much reflection and preparation during discussion -Students provide thoughtful contributions to difficult and/or controversial discussion topics and questions posed -Participation enhanced and further developed discussion	-Evidence of preparation during discussion -Students are willing to respectfully contribute to difficult and/or controversial discussion topics and questions posed -Participation supported and continued discussion	-Little or no evidence of preparation during discussion -Students are reluctant to contribute during difficult and/or controversial discussion topics and questions posed -Distracting or disruptive behavior

<ul style="list-style-type: none"> <li>• Evidence of active participation, particularly among more reserved students</li> </ul>	<ul style="list-style-type: none"> <li>-More than half of students voluntarily contribute in a given class</li> <li>-Evidence of regular contributions to discussion from multiple students</li> <li>-Students are actively engaged in discussion even when not participating</li> </ul>	<ul style="list-style-type: none"> <li>-More than a quarter of students participate in a given class</li> <li>-Evidence of regular contributions to discussion from some students</li> <li>-Students are attentive during discussion even when not participating</li> </ul>	<ul style="list-style-type: none"> <li>-Less than a quarter of students participate in a given class</li> <li>-Few voluntary contributions</li> <li>-Students are inattentive and disengaged</li> </ul>
<ul style="list-style-type: none"> <li>• Instructor encourages breadth of student responses</li> </ul>	<ul style="list-style-type: none"> <li>-Instructor engages a wide array of student responses</li> </ul>	<ul style="list-style-type: none"> <li>-Instructor engages some student responses</li> </ul>	<ul style="list-style-type: none"> <li>-Instructor engages few or no student responses</li> </ul>
<ul style="list-style-type: none"> <li>• Instructor engages student submissions in a way that is conducive to student learning</li> </ul>	<ul style="list-style-type: none"> <li>-Instructor creatively incorporates student submissions in a way that encourages active, thoughtful engagement and learning</li> </ul>	<ul style="list-style-type: none"> <li>-Instructor incorporates student submissions in a way that adequately supports student learning</li> </ul>	<ul style="list-style-type: none"> <li>-Instructor fails to incorporate student submissions to appropriately or effectively support student learning</li> </ul>

I prepared this so as to compare my impressions of the class on 2 November with Dr. Angel's. Since we are in broad agreement in our assessment, I omit a narrative self-evaluation at this point. I will incorporate elements of our discussion into my final narrative assessment.

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FINAL REFLECTIONS

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DR. LESLIE ANGEL

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I integrated Nearpod in my PSY 310: Human Sexuality course this term, primarily, as a tool for encouraging student participation and discussion. As one might imagine, this course involves inherently sensitive topics that have the potential to dissuade student participation. I used Nearpod in the class about every two weeks. I utilized polls and open-ended questions to query the class on sensitive topics. Nearpod gave students an opportunity to respond to these questions anonymously and to compare themselves to their classmates' responses. One intended effect of

using the technology was to help the class recognize the diversity in sexuality and to, effectively, normalize student responses. While I cannot say that Nearpod was the causal link, this class was certainly more participatory than most other Human Sexuality classes I've taught at Carroll, with a more diverse range of responses from more students. Students also self-reported their enjoyment of Nearpod and frequently expressed excitement if it was a day we would be using this technology. Nearpod, therefore, may also have increased student engagement in the course.

Dr. Ed Glowienka visited my class part way through the semester. I used Nearpod on this particular day to ask students polled and open-ended questions related to when and how to discuss sexuality with one's child. One question, in particular, asked students whether they would discuss information similarly or differently from the way in which their family of origin discussed sex. Students later reflected on this class lecture and activity by completing a writing assignment on the topic to discuss the specific ways in which they would talk to their future or current child about sex. While Ed found that my use of Nearpod effectively provided students with an opportunity to think about this topic prior to the assignment and to evaluate their responses relative to other students, Ed pointed out limitations in my use of Nearpod as a tool to cultivate class discussion. Ed's feedback helped me to think about ways to use the Nearpod tool to solicit further interest in and awareness of a topic so that it could be used as a springboard to generate student-led discussion. Subsequently, I attempted to use Nearpod for this purpose. I asked students to reflect on hookup culture on campus through polled questions following readings about research on the topic, as well as a recent podcast on hookup culture in the U.S. Students were asked to take each of these steps to prepare for a discussion day. Previously, I have been hesitant to introduce discussions in my classes, particularly in classes in which sensitive and even controversial subjects are being discussed, as it means giving up some control of and preparation for the topic. However, this particular class discussion was respectful, open, and guided by thoughtful reflection on the research and classroom polling. I was also struck by the number of students who responded and the variety of student responses. While I don't have a true baseline measure to compare to, Nearpod certainly aided in my own comfort in moving to the larger group to talk about this subject and, I believe, allowed students to feel more comfortable sharing their views even if they differed from those that were initially stated in the discussion. Students knew about opposing views from the polling data and knew that they were not alone if they shared those views. According to several reflections from students in class, polling prior to discussion gave them the confidence to respond differently from their classmates in the larger group. In these ways, I believe Nearpod met my intended goals of including additional student voices and generating more thoughtful classroom discussion. Further, I found Nearpod lectures to be quick and convenient to set up. Unfortunately, while PowerPoint presentations were easy to load on the Nearpod website, they were not easy to modify. Therefore, I had to curb my tendency to tweak lectures prior to each class period. I found this restrictive for the way that I typically prep my courses, although not impossible to work around. I also had several struggles with getting the technology to work in the classroom and had at least two classes in which I intended to use the program that it was not functioning. Nevertheless, despite these glitches, I felt that the benefits of using Nearpod outweighed the challenges for this particular class. I do plan to use it again for this course and to find additional ways to generate classroom discussion through the use of Nearpod. I would also like to find a more formal way to assess my goals in using Nearpod and to create true comparator groups of Nearpod users versus others to see if I am meeting course objectives through the use of this technology.

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#### DR. EDWARD GLOWEINKA

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I adopted Nearpod for use in my Formal Logic class (Phil 113). Logic is a problem-heavy course and Nearpod appealed as a means for accessing student work in real time. In the past, when I have assigned problems to be completed in class, I have found myself caught between two undesirable options. I can either have students volunteer to share their work, orally or on the board, and risk hearing only from competent or otherwise confident students, or I can call on students randomly and risk embarrassing or discouraging students. I have addressed this dilemma in the past by walking around the classroom and visiting with students individually, but time does not always allow for me to do this well and, frankly, not all classrooms at Carroll are conducive to this approach. My hope was that Nearpod would allow me to monitor student progress more efficiently and to correct mistakes in a less intimidating climate.

Nearpod met these needs. I integrated Nearpod into my class on six occasions this semester. Each time, I enjoyed how easy it was to check student comprehension, share sample work, and highlight noteworthy responses. Though the instructor manages the sharing of responses, Nearpod retains a peer-to-peer element. As someone who

believes in the importance of peer-to-peer modeling and exchange, I appreciate this aspect of the Nearpod experience. From what I can tell, students also found Nearpod a satisfactory tool. During the final class of the semester, I polled (through Nearpod) students on the question:

I have experimented with Nearpod on a limited basis this semester. My goal has been to better assess your comprehension of material in class and to give some feedback on practice problems before setting you loose on homework. How would you best describe your views on the use of Nearpod in this class?

42.1% of students responded, "Nearpod is very useful for these purposes and Dr. Glow should consider using it more often." 31.6% of students responded "Nearpod is useful for these purposes in small doses. Dr. Glow should continue using it as he has been." 15.1% of students responded, "I am neutral on Nearpod. Class is discussion without it is no better and no worse." No students choose the response, "Nearpod is not useful for these purposes and I discourage Dr. Glow from using it in future logic classes," though 10.5% of students abstained from submitting an answer. The sample size is small and the poll unscientific, but I nonetheless find the high percentage of positive responses encouraging.

I used nearly exclusively Nearpod's "Draw It" function. I appreciate that in a single click one can turn a PDF into a canvas for students. I had some initial concern that students accessing Nearpod on their smartphones would have a hard time with the drawing function, but students did not encounter any difficulties. While I mainly relied on "Draw It" because it suited my needs, on two occasions I turned to it by default due to my frustration with the "Open Ended Question" function. One cannot, as far as I can tell, put line breaks in an open-ended question, which renders it useless for certain non-narrative questions (in my case, listing the initial premises in a logic proof).

My biggest struggle with Nearpod, and the issue which forced me to consistently scrutinize my use of it, was time management. Since my goal was to address common mistakes and particularly to access the work of otherwise quiet or struggling students, the pace of the class became determined by the slowest responder. I would not share out responses until everyone, or nearly everyone, responded.<sup>1</sup> In many instances, since students were practicing a new method or type of problem for the first time, the wait would be quite lengthy. In practice, this meant that I could not use Nearpod, as I had naively envisioned, for extended in-class problem sets; better in these instances to walk around the class and make visits. Nearpod, I found, is suited for no more than two or three consecutive logic problems. I found it most effective for use either at the end of class, as a means to point out mistakes and highlight good work before students were set loose to tackle homework, or at the beginning of class, as a means to see if students could answer questions "cold." When just a few problems were in play, the slight loss in "cognitively engaged" time for fast responders waiting on their peers seemed more than offset by the overall increase in cognitive engagement for the class.

I should note that my time management issue would not recreate itself in all uses of Nearpod. I visited Dr. Angel's Human Sexuality class where she relies more on Nearpod's polling and open-ended question functions. In her case, the expedient feedback that Nearpod allows helps keep a lively pace in the class. In fact, I believe her use of Nearpod is the kind for which the tool is best suited, though I believe my experience shows that it has pedagogical benefits even when its integration is not seamless.

I plan to continue using Nearpod in my logic classes. In light of my observation of Dr. Angel, I will consider integrating it into other classes as well. I recommend Nearpod to my colleagues as an effective tool for enhancing student engagement, assessing student comprehension, and decreasing student anxiety. Given my experience, my advice is to integrate Nearpod gradually, even slowly, and to keep close tab on how it affects the pacing and rhythm of one's class.

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<sup>1</sup> I say "nearly everyone" because there was one student in particular who would regularly refrain from responding, even if I gave the class lots of time and implored them to submit *something*. Nearpod does not or itself overcome all reluctance by reticent or shy students.

INTEGRATING VIDEO PRODUCTION FOR CONTENT DELIVERY

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STATEMENT OF PURPOSE

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The purpose of this group is to create, deploy, and assess videos as tools for direct instruction and supplemental instruction in higher education. The creation of online lectures focuses on cognition at the level of understanding, allowing students to interact with a text, a thinker, a process, and their application prior to coming to class. In turn, this fosters the capacity to spend time on issues in class regarding not merely understanding the content of the lectures and readings but assessing such in terms of truth, utility, application, and efficiency. Such assessment becomes the goal to the use of technology in and out of the classroom: leveraging more acute and better understanding so that we might more capably be able to discuss, analyze, and apply the content in class. These videos also serve to bolster understanding and correct misunderstanding through reviewability and interactivity, allowing students to readily review content at their leisure.

EVALUATION RUBRIC

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	1	2	3	4	5
The time chunks of each video are manageable, giving students time to rest and think in between	Videos extend vastly over 10 minutes each and sets over 30 minutes		Videos extend over the 10 minute mark and sets over 30 minutes		Videos are within the 10 minute mark and sets within 30 minutes
The exercises attached to the lectures form an important, and synthetic means for students to think through the main points of the lectures further	Exercise peripherally draws out the insights of the lecture but fosters more rote memorization		Exercise draws out the important insights of the lecture and allows students to creatively apply them within a new context		Exercise draws out the important insights of the lecture and allows students to creatively apply them within a new context
The lectures cohere with but don't mimic the book material, giving ample chance for understanding from many different angles	Lectures pertain little to the books		Lectures repeat the materials within the books		Lectures offer similar material as the books only within new contexts
The lectures are filled with many pertinent and understanding-inducing examples	Lecture only discuss at the level of concept with no examples		Lectures use and rely on examples from within the text		Lectures draw out new and helpful examples through which to apply the materials.
Online lectures foster an ability for students to see the logic between lecture sets and the narrative of the class as a whole.	Lectures fail help draw a cohesive structure.		Lectures acknowledge the need to build connections between previous and future lectures but do so only peripherally.		Lectures build a sense of course coherence, drawing a meta-narrative throughout.

Students were able to incorporate ideas within the lectures into class discussions	Students were not able to understand the lectures or use them to clarify or discuss in class.		Students were able to bring up lectures but did need clarification on the ideas within the lecture, only nominally using them to assess and discuss in class.		Students seemed to fluidly interact with the lecture materials, using them to assess the classroom discussion and deepen it.
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EVALUATIONS

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EVALUATIONS OF VIDEOS IN DR. ERIC HALL'S CLASS

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EVALUATION BY DR. SHAUN SCOTT

The time chunks of each video are manageable, giving students time to rest and think in between	Videos extend vastly over 10 minutes each and sets over 30 minutes		Videos extend over the 10 minute mark and sets over 30 minutes	Videos are within the 10 minute mark and sets within 30 minutes	4	It would be better if the videos were between 7 and 9 minutes. The videos ran at 10 and 12 minutes. A little long but certainly workable.
The exercises attached to the lectures form an important, and synthetic means for students to think through the main points of the lectures further	Exercise peripherally draws out the insights of the lecture but fosters more rote memorization		Exercise draws out the important insights of the lecture and allows students to creatively apply them within a new context	Exercise draws out the important insights of the lecture and allows students to creatively apply them within a new context	5	I think the videos do a good job of allowing students to creatively apply insights within a new context.
The lectures cohere with but don't mimic the book material, giving ample chance for understanding from many different angles	Lectures pertain little to the books		Lectures repeat the materials within the books	Lectures offer similar material as the books only within new contexts	5	I suspect the material is supplemental to the text.

The lectures are filled with many pertinent and understanding-inducing examples	Lecture only discuss at the level of concept with no examples		Lectures use and rely on examples from within the text	Lectures draw out new and helpful examples through which to apply the materials.	5	I suspect the lectures draw out new and helpful examples, not only the examples referenced within the text.	
Online lectures foster an ability for students to see the logic between lecture sets and the narrative of the class as a whole.	Lectures fail to help draw a cohesive structure.		Lectures acknowledge the need to build connections between previous and future lectures but do so only peripherally.	Lectures build a sense of course coherence, drawing a meta-narrative throughout.	4	Without additional knowledge of the course I suspect these lectures are connected to and provides course coherence.	
Students were able to incorporate ideas within the lectures into class discussions	Students were not able to understand the lectures or use them to clarify or discuss in class.		Students were able to bring up lectures but did need clarification on the ideas within the lecture, only nominally using them to assess and discuss in class.	Students seemed to fluidly interact with the lecture materials, using them to assess the classroom discussion and deepen it.	4	I suspect students may need some additional clarification on the ideas within the lecture.	
<b>General Comments:</b>				<b>Earned Value:</b>	<b>27</b>	<b>of 30 points possible</b>	
	* Good job overall - it was clearly stated and to the point.						
	* Good narrative - can be a really good podcast						
	* In order to gain the benefit of video, you might add images of Kong Zi, etc...Doing so could bring the video more to life.						
	* The videos just "end", a recap and conclusion would be helpful.						



EVALUATION BY DR. TRAVIS ALMQUIST

The time chunks of each video are manageable, giving students time to rest and think in between	Videos extend vastly over 10 minutes each and sets over 30 minutes	Videos extend over the 10 minute mark and sets over 30 minutes	Videos are within the 10 minute mark and sets within 30 minutes	3
The exercises attached to the lectures form an important, and synthetic means for students to think through the main points of the lectures further	Exercise peripherally draws out the insights of the lecture but fosters more rote memorization	Exercise draws out the important insights of the lecture and allows students to creatively apply them within a new context	Exercise draws out the important insights of the lecture and allows students to creatively apply them within a new context	2
The lectures cohere with but don't mimic the book material, giving ample chance for understanding from many different angles	Lectures pertain little to the books	Lectures repeat the materials within the books	Lectures offer similar material as the books only within new contexts	4
The lectures are filled with many pertinent and understanding-inducing examples	Lecture only discuss at the level of concept with no examples	Lectures use and rely on exmples from within the text	Lectures draw out new and helpful examples through which to apply the materials.	4
Online lectures foster an ability for students to see the logic between lecture sets and the narrative of the class as a whole.	Lectures fail to help draw a cohesive structure.	Lectures acknowledge the need to build connections between previous and future lectures but do so only peripherally.	Lectures build a sense of course coherence, drawing a meta-narrative throughout.	4

Students were able to incorporate ideas within the lectures into class discussions	Students were not able to understand the lectures or use them to clarify or discuss in class.		Students were able to bring up lectures but did need clarification on the ideas within the lecture, only nominally using them to assess and discuss in class.		Students seemed to fluidly interact with the lecture materials, using them to assess the classroom discussion and deepen it.	4
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Two of the three videos were slightly longer than 10 minutes, and the total time for the section is marginally over 30 minutes. Cutting a few examples could easily cut the time down without losing too much material. The exercises attached are quizzes used to assess the material from the lectures. The quizzes are more of a check on completion than an addition to the material. However, it is clear even from the videos that additional discussion and expansion of the ideas occurs during other class time. The videos do fulfill the apparent goal of introducing students to the basic concepts prior to additional activities. The lectures do a good job defining the basic concepts, and then providing "traditional" examples and also current examples that students can relate to. I thought that the lectures formed a coherent string and I could tell where it related to other class material. Even though I had no background on the topic, I could see the logical process that tied the entire class together. In this section, several of the concepts had additional layers added in subsequent videos. Latter videos would use the concepts learned previously, which enhances the learning of those concepts, while simultaneously creating a strong narrative. Finally, while I was unable to observe the use of this material in later classes by students, it seems clear to me that it would be easy to incorporate the learned concepts into more in-depth class discussion. I found myself asking questions which I can envision being expanded on later.

#### EVALUATIONS OF VIDEOS IN DR. TRAVIS ALMQUIST'S CLASS

##### EVALUATION BY DR. SHAUN SCOTT

The time chunks of each video are manageable, giving students time to rest and think in between	Videos extend vastly over 10 minutes each and sets over 30 minutes	Videos extend over the 10 minute mark and sets over 30 minutes	Videos are within the 10 minute mark and sets within 30 minutes	5	Both videos I reviewed were under the 10 minute mark.
The exercises attached to the lectures form an important, and synthetic means for students to think through the main points of the lectures further	Exercise peripherally draws out the insights of the lecture but fosters more rote memorization	Exercise draws out the important insights of the lecture and allows students to creatively apply them within a new context	Exercise draws out the important insights of the lecture and allows students to creatively apply them within a new context	3	The rubric incorrectly has the same criteria in both the "3" and "5" options. I'll edit the "3" option as follows:

The lectures cohere with but don't mimic the book material, giving ample chance for understanding from many different angles	Lectures pertain little to the books	Lectures repeat the materials within the books	Lectures offer similar material as the books only within new contexts	n/a	There is no way for an external reviewer to know this without reviewing a pdf of the text.
The lectures are filled with many pertinent and understanding-inducing examples	Lecture only discuss at the level of concept with no examples	Lectures use and rely on examples from within the text	Lectures draw out new and helpful examples through which to apply the materials.	5	Without knowledge of the text I am assuming the lecture applies new, non text, material.
Online lectures foster an ability for students to see the logic between lecture sets and the narrative of the class as a whole.	Lectures fail to help draw a cohesive structure.	Lectures acknowledge the need to build connections between previous and future lectures but do so only peripherally.	Lectures build a sense of course coherence, drawing a meta-narrative throughout.	1	Good lecture but I didn't see the connection between previous or to future lectures. Perhaps, as included in my general comments below, a more thorough intro and conclusion tying previous to present to future could be included.
Students were able to incorporate ideas within the lectures into class discussions	Students were not able to understand the lectures or use them to clarify or discuss in class.	Students were able to bring up lectures but did need clarification on the ideas within the lecture, only nominally using them to assess and discuss in class.	Students seemed to fluidly interact with the lecture materials, using them to assess the classroom discussion and deepen it.	5	I think these videos would serve as a strong basis for further classroom discussion.
<b>General Comments:</b>			<b>Earned Value:</b>	<b>19</b>	<b>of 30 points possible</b>
	* Increase audio (decibal gain)				

	* 8:00 min - good time frame				
	* Maybe prepare a script				
	* look at the camera more - It's kind of hard to get use to but it makes the lesson more personable, more one-on-one				
	* Maybe even outline on paper a reminder about things like hand gestures, expressions, other examples, things that your presentation might not discuss				
	* Play the PowerPoint so we don't see the red underlines for words that aren't in the PowerPoint dictionary.				
	* close your video with a conclusion or some kind of concluding statement like "In this video we covered ... So you should understand more about ....! Thank you"				

EVALUATION OF VIDEOS IN DR. SHAUN SCOTT'S CLASS

EVALUATION BY DR. TRAVIS ALMQUIST

The time chunks of each video are manageable, giving students time to rest and think in between	Videos extend vastly over 10 minutes each and sets over 30 minutes	Videos extend over the 10 minute mark and sets over 30 minutes	Videos are within the 10 minute mark and sets within 30 minutes	5
The exercises attached to the lectures form an important, and synthetic means for students to think through the main points of the lectures further	Exercise peripherally draws out the insights of the lecture but fosters more rote memorization	Exercise draws out the important insights of the lecture and allows students to creatively apply them within a new context	Exercise draws out the important insights of the lecture and allows students to creatively apply them within a new context	4
The lectures cohere with but don't mimic the book material, giving ample chance for understanding from many different angles	Lectures pertain little to the books	Lectures repeat the materials within the books	Lectures offer similar material as the books only within new contexts	4
The lectures are filled with many pertinent and understanding-inducing examples	Lecture only discuss at the level of concept with no examples	Lectures use and rely on examples from within the text	Lectures draw out new and helpful examples through which to apply the materials.	3

Online lectures foster an ability for students to see the logic between lecture sets and the narrative of the class as a whole.	Lectures fail to help draw a cohesive structure.	Lectures acknowledge the need to build connections between previous and future lectures but do so only peripherally.	Lectures build a sense of course coherence, drawing a meta-narrative throughout.	3
Students were able to incorporate ideas within the lectures into class discussions	Students were not able to understand the lectures or use them to clarify or discuss in class.	Students were able to bring up lectures but did need clarification on the ideas within the lecture, only nominally using them to assess and discuss in class.	Students seemed to fluidly interact with the lecture materials, using them to assess the classroom discussion and deepen it.	4

This is a review of the supplemental use of video instructional technology for Shaun Scott's CS213 course. Shaun used his videos in this section to provide a step-by step explanation for the use of database queries. Students had already discussed the concept of databases in class, so these videos allow for an interactive and engaged assignment which the students could follow along with. Each of the videos in this section were a good length. Each briefly introduced the concept being covered and then discussed each component in a brief, but appropriate time. The videos referenced and used a real database, which is great. Following the introduction of several different types of query commands, the assignment allowed the students to complete the commands using the same dataset, but forced them to try the commands in a new way. The videos use the same PowerPoint slides that were posted for the students. However, the videos took a concept from class and allow the students to follow along with a new process and then attempt to complete it on their own. This set of videos does a good job of setting a baseline for the basics of the topic, but it was a little unclear how this would relate to past material or would be used in more complex concepts later in the course. However, I suspect that students in the course have a very clear connection between these videos and the rest of the material. The last question in this assessment is difficult to rate. The students were clearly able to utilize the information in active assignments. It seems that they would be able to discuss more complex uses for the topic, or additional reasons someone might want to query databases in this way. Overall, this unit of videos did a great job introducing the active use of databases. It surely provides more class time for other material, and this successfully pulls out some content so students can follow along and complete the work at their own pace.

EVALUATION BY DR. ERIC HALL

<p>The time chunks of each video are manageable, giving students time to rest and think in between</p>	<p>Videos extend vastly over 10 minutes each and sets over 30 minutes</p>	<p>Videos extend over the 10 minute mark and sets over 30 minutes</p>	<p>Videos are within the 10 minute mark and sets within 30 minutes</p>
<p>The exercises attached to the lectures form an important, and synthetic means for students to think through the main points of the lectures further</p>	<p>Exercise peripherally draws out the insights of the lecture but fosters more rote memorization</p>	<p>Exercise draws out the important insights of the lecture and allows students to creatively apply them within a new context</p>	<p>Exercise draws out the important insights of the lecture and allows students to creatively apply them within a new context</p>
<p>The lectures cohere with but don't mimic the book material, giving ample chance for understanding from many different angles</p>	<p>Lectures pertain little to the books</p>	<p>Lectures repeat the materials within the books</p>	<p>Lectures offer similar material as the books only within new contexts</p>
<p>The lectures are filled with many pertinent and understanding-inducing examples</p>	<p>Lecture only discuss at the level of concept with no examples</p>	<p>Lectures use and rely on examples from within the text</p>	<p>Lectures draw out new and helpful examples through which to apply the materials.</p>
<p>Online lectures foster an ability for students to see the logic between lecture sets and the narrative of the class as a whole.</p>	<p>Lectures fail help draw a cohesive structure.</p>	<p>Lectures acknowledge the need to build connections between previous and future lectures but do so only peripherally.</p>	<p>Lectures build a sense of course coherence, drawing a meta-narrative throughout.</p>
<p>Students were able to incorporate ideas within the lectures into class discussions</p>	<p>Students were not able to understand the lectures or use them to clarify or discuss in class.</p>	<p>Students were able to bring up lectures but did needed clarification on the ideas within the lecture, only nominally using them to assess and discuss in class.</p>	<p>Students seemed to fluidly interact with the lecture materials, using them to assess the classroom discussion and deepen it.</p>

I gave Shaun fairly high marks on his lecture assignment, and while I looked at his interactive presentation, I did not assess it. Overall Shaun's presentations were very well put together and helpful. I'm not sure he was bringing anything new beyond the book, which are some of the only points I subtracted, but I'm also not sure that the material of the class fosters such discussion. Whether or not the students could bring lecture materials to class is entirely non-assessable in this case. I imagine that they could.

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## FINAL REFLECTIONS

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### DR. SHAUN SCOTT

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The instructional video project was initiated to, as stated in the Statement of Purpose, to create, deploy, and assess videos as tools for direct instruction and supplemental instruction in higher education. The creation of online lectures focuses on cognition at the level of understanding, allowing students to interact with a text, a thinker, a process, and their application prior to coming to class.

I have been developing instructional video for the classroom for more than 10 years with an increasing focus on video development in the last 8 years. I think, to that point, the "Instructional Technology" emphasis within my C&I Ed.D. (2008) really provided the impetus for me to be an early adopter of instructional video within the classroom. Although a current technology it appears instructional video is not currently being used, at least not to any great extent, at Carroll College. As such I thought it would be interesting to be a part of a group developing instructional video and using that video innovatively in a blended classroom setting.

Part of my participation within this project is in that I think since video instruction includes both video and audio components it tends to be more effective, especially when teaching Gen Zers and Millennials, who have grown up in a media culture. Since the typical Carroll student is traditional I believe that if we can teach how they learn, we'll do a better job teaching.

I think this project was marginally successful. Everyone is so busy...I believe that for the facilitator Ryan it was difficult for him to provide the foundation and long-term guidance we, as the participating group members, needed to be more successful. For my part, I and we, as group members, did not do our job as well as we should have researched and shared information with one another such as best practices in instructional video development, communication with one another, helping one another through the storyboarding and videoing process, developing definition and rubrics around the various curricular applications of instructional video, taking time to develop a cohesive research and development unit, and in having that vision and working together to create a product. There is far more potential for instructional video than we realized within this project. With my background in instructional technology I could have picked up the ball. Regardless of how others feel, I feel I dropped the ball.

With that said, we have had successes. Instructional video has been developed that leverages various teaching and learning strategies ultimately improving the classroom. I feel our group members now have a feel for the various issues around instructional video development, how to storyboard, how to work with video, and how to deliver instructional video to the classroom. It's a start!

I have found that, and research reflects, if a student can more fully participate in their learning and become active participants, they will retain more. For me personally, I intend to incorporate more interactive video into my classroom in the future. I think interactive video, specifically through the use of H5P interactive elements, can help to create an environment where students can learn and retain more. As part of this effort I have identified several MIS course modules where interactive H5P enhanced instructional video plus extensive hands-on research, synthesis, and presentation, will improve student's knowledge and skill retention. In short, I want students to spend more time in class researching and thinking and less time listening to me "teach" the conceptual foundation in class. My intent is to flip the content of these modules by assigning the viewing of H5P enhanced interactive videos which will teach then test prerequisite content knowledge using a pretest / posttest methodology incorporated within the video. Students will view the video and complete the interactive quiz just prior to the start of the module. The goal

is to use instructional video to get students up-to-speed and ensure a knowledge level through testing before they step into the classroom and start the research project.

To summarize I believe the project was worthwhile. With more direction and with more participation from our group members, myself included, I think the project could have been more useful and productive for Carroll College.

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#### DR. TRAVIS ALMQUIST

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I came into this activity having done very little in the way of supplemental video or electronic course material in the past. Being able to use the groups' rubric to plan and carry out various lectures was extremely helpful for me. I now find myself identifying certain course components that would be well suited to being delivered in this format. For example, I can take one stand-alone concept, term, or process, and explain it in 8 minutes with a video. This replaces what might be 20-30 minutes in class, because it allows the students to review it in their own time and pace. I can then more easily incorporate additional exercises or discussion to get at what we are really interested in during class. In general, I found the technology very easy to use and fairly intuitive. It allowed me to get more creative with the videos as I became more comfortable. The largest hurdle I encountered was just the time I spent learning and making videos. This helped to force me to think critically about what material was best suited to this type of delivery method. In addition, changing material from other formats to this format is somewhat time consuming. But now that I have the experience, I think it will be much easier to make new material from scratch in the format from the get go. For me, one of the most critical components of this process was how to get students to interact with the material. This makes the linked assignments/activities important. As I made more videos, I got better at developing assignments that enhance the learning. I really wanted to avoid simply replacing class lectures with online videos. By selecting only certain material to cover, I got better at coming up with engaged and diverse activities to supplement the lectures. This exercise also allowed me to see what others are doing with videos and other supplemental material, and how they incorporate or link it with in class lectures or discussions. I am more aware of not only various delivery methods, but of various uses for online video delivery as well. Although a lot of time is front loaded in planning and developing the material to give students access, there are many benefits. It has allowed me to spend more time thinking about how to connect the course into a single narrative and be able to weave together many related but separate concepts. It also will be time invested in future courses since I only have to do the videos once. This will let me produce additional material or cover extra topics I might otherwise skip. Finally, I think these exercises have helped me think about the delivery of all my course material (and how students interact with that material) in a new light. I expect to continue to work with similar types of supplemental delivery of course material and I am looking forward to the potential ways this opens up my courses.

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#### DR. ERIC HALL

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The exercise in thinking this content through was very useful and has helped to solidify in me a set of categories through which I will think about the content of the videos produced, which I would take to be the most helpful aspect of the exercise. The question, however, is whether or not the exercise was as helpful to others given my strong role in helping to create the rubric, which the other participants were not uninvolved but certainly less involved. The question is whether the internalization of the criterion has come from assessment or creation. The answer is likely both such that, regardless of one's help in creating the rubric, it could still be helpful--with exemplary videos as references--in fostering in faculty who desire to produce such videos the capacity to do so.

One of the ideas that has manifested itself pertains both to the assessment of videos themselves and to some comments that we've shared with one another in email form. For the most part, I had constructed much of the rubric in current production based on where I was having some successes and mishaps in my own classroom. But my classroom has come, at least in flipped classes, to be focused around these videos, using them as the means of lecture-delivery and some of the courses' main content. Neither Shaun nor Travis use video-production in the same manner, which I've found to be a relatively similar stance held by many of my colleagues in the STEM fields. Indeed, our uses of these technologies seem flip-flopped. I use them to deliver content, allowing us to practice and suss out the implications of the content in class. Many in the STEM fields use these lectures to deliver a very specific



approach to a specific question--an equation, an understanding and development of a database--which they'll then incorporate into the broader content of the course during class time.

It is an intriguing and important difference, making me think that we should envision at least two types of rubrics: those pertaining to "flipped" classrooms in the strong sense of the term, whereby meta-content and ideas are delivered via video; and those pertaining to exemplary (hopefully in both sense of the term) uses of videos to draw students deeper into a specific phenomenon. We obviously dealt with the former.

Moreover, what I'd now really like to see is a rubric designed around a set of best practices that offers guidelines for the development of quality videos, namely, pertaining to video production. As is obvious in my videos, this is where I struggle the most, and yet the quality of these videos may be the difference between students taking them seriously and not. This project is one for a future time.

## CONCLUSION

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Overall, the 2017 MiClassroom program was a success. The preceding report includes many insights provided by faculty that participated in this program that otherwise may have passed by unwritten or without reflection. Most reflections indicate that the extra work it takes to incorporate new technology was worth the effort. As faculty explore new methodologies for delivering content and assessing student progress, it is important to remember that every technology or methodology is not worth using. We should strive to discard those techniques and tools that do not serve our students or the faculty members teaching them. While nothing in this report merits completely being discarded, there are several important modifications to the method of deployment or application for several technologies. It is the hope of Carroll Academic Technology that these modifications be heeded by future faculty deploying the technologies in question, so as to ease their deployment and maximize their benefit to both students and faculty.

In 2018, we plan to narrow the focus of this project to sandbox teaching, video production, and active engagement systems, with a particular focus on sandbox teaching. The purpose of this focus is to spend time and resources developing the rubrics we have in place, since many faculty reflected that development of the rubrics was difficult before undertaking their projects. In this way we hope to snowball each of these fields and develop strong, uniform rubrics for assessment in these areas in the projects to come. Given that the sandbox classroom has become a lynchpin of Carroll's unique identity as a teaching college, further development of these skills will help distinguish Carroll college and its faculty as leaders in innovative teaching strategies.

To this end, we plan to reach out directly to faculty scheduled to teach in sandbox classrooms to recruit for future participation in MiClassroom. We also plan to incorporate the work of previous sandbox teachers in this project to direct and assist future faculty in their teaching endeavors in these environments.