Overall the majority of the students found both the Tegrity Lectures and the Pre Laboratory Videos helpful in their learning of the course material and in their understanding of laboratory procedures. This is supported by the results of the student survey (above). Once the responses were adjusted to

response for each of the questions asked. The statements with the lowest scores were #2 I did not view the Tegrity lecture before class even though I knew it was required where 77.5% said they strongly disagreed/ disagreed. This means that 77.5% of the students *did* watch the Tegrity lectures. In the overall cou

the statistics tracking offered via the Tegrity software it was never a week where 100% of the students watched the Tegrity lectures even though they all took the Tegrity quiz. Apparently, some of the students did not feel the Tegrity lecture was necessary in order to complete the Tegrity quiz or to participate in the in cla iewing the prerecorded Tegrity lecture was essential to successfully completing the in class activity

enjoyed being able to view the Tegrity lecture prior to the scheduled class as opposed to live class lecture.

he instructors made meaningful connections between the topics in the pre-recorded lecture and the in class activities. Further analysis of the data is required to frame the shots before you begin. We did not draw up any actual storyboards but we did verbally plan out the shots and the sequences in which they were to be shot. One additional piece of advice is to make sure to communicate with our actor the parameters of the shot. For example, there were

out of frame.

Tegrity Lectures

While over 75% of the students felt the Tegrity lectures were useful and they enjoyed watching them, some of the students felt the Tegrity lectures were too long and that they were too similar to looking at a PowerPoint without voiceover. This is something that each instructor needs to improve upon, creating effective and engaging Tegrity lectures. In addition, the Tegrity quizzes did not seem to be as effective in ensuring the students watch the lectures. As stated above some felt they were not necessary for participating in the in class activity. Perhaps having the students take the quiz in class would provide more motivation to carefully watch the lectures and to take notes. Another reason the Tegrity quizzes may not have been effective is that, as one student stated in the course evaluation,

was entirely my fault. I must have not set up the parameters for quizzes correctly on Blackboard.

78.4% of the students felt the Tegrity lectures were necessary for completing the in class case studies. As the primary investigator, I would like to see this number improve. I believe this number could be low due to the size of the class and the composition of the classroom. There were 44 students in the class and the classroom was capable of holding 50 students. The students sat at long tables that were not easily movable. This made it difficult to break the students into groups for group problem solving. It also made it difficult as an instructor to ensure the students were on task. I would be interested to see if the scores improve with a smaller class size.

It also became apparent that I (the primary investigator) needed more practice in leading and facilitating group work/discussion.

As with any semester there were obstacles that fell outside of our control that impacted student perception. For example, there were a few days that needed to be rearranged in the course schedule. This caused some confusion among the students. Since CLS100 is an introductory course that traditionally and purposefully uses a variety of teaching styles the students were confused as to what was expected of them when the schedule was rearranged. This resulted in a few weeks of traditional lecture in a row and when the students were expected to resume watching the Tegrity lectures and Pre-Laboratory videos, they failed to do so (even though I sent out an announcement reminding them of what they were to accomplish before class).

Laboratory Activities

Students were required to view these prior to attending the associated laboratory and then completed a laboratory exercise reflecting objectives stated in the online lecture and video. Statistically, there was weak to moderate positive correlation between percent of online lecture watched and laboratory or quiz performance, but not both. This spotty association indicates a need to better align all course components. A comparison of student performance on laboratory activities using the traditional lecture model versus the flipped classroom model was performed using SAS9.3 and a Pooled or Satterthwaite independent samples T-test showed no statistical improvement. In fact, student scores on one laboratory activity significantly decreased.

Additional Questions

With regard to different teaching styles, it would also be interesting to see which type of learning styles favors the flipped classroom model of instruction. In the comments section of the course

evaluation

As stated above, it would be interesting to investigate the role class size plays on the effectiveness of the flipped classroom model of instruction.