

Using online meeting technology to create non-instructional opportunities for online students

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Abstract: Participation in campus-based non-instructional activities plays an important role in student academic success (Karp, 2011). However, non-instructional activities are less accessible to distance education students, who often turn to online classes because of the flexibility (Allen & Seaman, 2015). During the 2015/16 school year, Wake Technical Community College piloted a new program to make non-instructional resources more accessible to online students by live streaming eight meetings for the campus Social Science Club. Online student participation at club events was robust, with online student attendance nearly matching seated attendance at these club events. Furthermore, student survey data suggested that remote participants found these events to be very valuable, and that most could not have attended these meetings had they not been live streamed. This paper will discuss live streamed club activities and the data gathered from them during the fall, and describe Wake Tech's ongoing project to expand interactive live streaming services to two additional non-instructional resources.

The problem and an opportunity

Online education continues to grow as a powerful force in the educational landscape (Allen & Seaman, 2015). One reason for this growth is the flexibility and convenience of online education that allow students to balance coursework with other responsibilities. However, this flexibility comes at a cost, as the reasons that lead students into online education are often the reasons that prevent them from taking advantage of campus-based non-instructional resources such as the library, tutoring centers, and club activities. In developing non-instructional resources for online students, the typical approach employed by colleges is what might be called the "separate but equal" model, in which mirrors of campus resources are provided for online students on the school's website. Examples of this might include library links that simulate campus library resources, tutoring links that simulate the tutoring center and blogs and webpages that report on club activities. Like other attempts working under the "separate but equal" premise, these web-based resources are relatively limited compared to the resources they attempt to mimic. One limitation of online resources is the lack of social interaction, which is often vital to the educational process. One might even argue that one of the best aspects of attending non-instructional activities is the sense of integration and connectedness that comes with social interaction. For this reason, the effect of these non-instructional resources may be diminished compared to campus-based resources.

An alternative to this model is the "blended experience" model, which uses meeting technology to create interactive live streams of campus events where remote attendees can experience productive social interaction with other meeting attendees, both live and remote. Interactive live streaming is different than, and superior to, live streaming for two reasons. First, while the typical live stream allows one way communication (the stream out), interactive live streaming allows for all meeting attendees to stream their image and communicate in a live, shared discussion. Second, interactive live stream technology allows for the sharing of educational objects such as PowerPoint presentations, YouTube videos, websites, and files that meeting attendees can work on collaboratively. Despite these powerful advantages, interactive live streaming requires no special equipment or programs for the end user.

In conjunction with a First in the World Grant to improve minority performance in online courses, Wake Technical Community College is using the "blended experience" model to create interactive live stream versions of non-instructional resources for online students using online meeting technology. Research on minority male experiences in higher education suggest that social activities such as mentoring, developing relationships with

instructors, and the gathering of social capital are important to the success for historically disadvantaged minorities (Harper, 2012). These social networking opportunities important to minority student success are exactly the kinds of qualities that cannot be conveyed in the “separate but equal” model of non-instructional resources. This is where the “blended experience” model provides an advantage for students. In fact, a network of live-streamed, fully-interactive, non-instructional resources/activities might be especially valuable to the minority online student. Wake Tech’s first step toward this “blended experience” campus model was to expand a pre-existing live stream club experience already used in the Social Science department.

Wake Tech Virtual Club Community

During the 2015/16 school year, the social science department at Wake Tech piloted a new program to make non-instructional resources more accessible to online students by providing interactive live streams for eight campus club meetings. Online student participation at these club events was robust, with online student attendance nearly matching seated attendance (Roddenberry & Kallimanis, 2016). Furthermore, student survey responses suggested that remote participants found these interactive events to be very valuable, and that most could not have attended these meetings had they not been live streamed.

As a result of these successes, Wake Tech created the Virtual Club Community (VCC) in the fall of 2016 to develop a program of live-streamed interdisciplinary club events during the 2016/17 school year. Committee members included faculty members from several disciplines within the Arts and Humanities division, and staff from multiple campus support units. By pooling the efforts of this interdisciplinary committee, Wake Tech hoped to provide a more diverse program of events that were better promoted, better attended, more interactive, and of higher technical quality than previous interactive live streams. The committee also hoped to gather data comparing the experiences of online and campus-based attendees. Three different club events were live streamed through the first two months of the fall semester; a career exploration event held by the Social Science Club, a motivational speaker hosted by the Pathways mentoring club, and an invited talk by NC State psychologist, Dr. Rupert Nacoste, which was hosted by Wake Tech’s Think Center. These events varied in location type and audience size from the relatively intimate crowd of 27 students in a classroom to an ambitious campus-wide “triple-cast” incorporating 304 attendees in three different audiences; a live audience, a simulcast audience on another campus, and an audience of remote viewers attending via computers and mobile devices. Online attendance at these three club events was robust with 191 of the 405 students (47%) attending remotely.

Quantifying the value of the VCC

Survey links were given to meeting attendees at all events to assess the quality and importance of these live streams, with 115 attendees (29%) completing the surveys. Survey data across the three events demonstrated no significant difference between campus-based and remote attendees’ ratings of how *valuable* or *engaging* the events were. Over 95% of all attendees rated the event as very or somewhat valuable and very or somewhat engaging, regardless of how they attended the events. More striking, the live stream appeared to serve a valuable purpose for remote attendees. Both remote and campus attendees were asked if they would be willing to “attend a future club event if they had to come to campus?”, and if they would be willing to “attend a future club event if it was available via live stream?” Simple X^2 analyses showed that, for the students attending live, the location of future meetings was not important in their willingness to return [$X^2(1)=.35$, $p=.55$]. Most campus attendees suggested they would be likely to attend a future club event, regardless of whether it was online (88%) or on campus (100%). However, for online students, willingness to participate in future club events was dependent on the location of that event [$X^2(1)=.15.61$, $p<.001$]. While most remote attendees said they would be likely to attend a future club event if it were live streamed (90%), they were much less likely to say they would attend a future event if it meant coming to campus (65%).

Expanding the blended experience to other resources

Beginning in the spring 2017 semester, Wake Tech will expand their “blended experience” model to include two other non-instructional resources; the Individualized Learning Center (ILC), and the Social Science Resource Center (SSRC). The ILC is the main campus academic support center, providing students with assistance in study skills, writing, math, science, and computing. Two blended experience opportunities will be available to students in the spring. These two opportunities include the ability for students to attend live streams of campus

workshops, and the ability for students to schedule live streamed individual consultations with staff members from the writing ILC. The SSRC is an open lab for Social Science students, staffed by anthropology, sociology, and psychology instructors. This lounge is often the center of where instructors hold impromptu study sessions or give short lectures to their students. Several instructors have expressed a willingness to live stream some of these extracurricular events for a wider online audience during the spring semester.

Evaluation of “blended experience” learning

The challenge of the blended experience model is overcoming the limitations of the online meeting software. While these limitations are often related to bandwidth issues and minor compared to other synchronous meeting technologies (virtual reality environments like Second Life and Active Worlds have many limiting factors), they must be addressed in developing successful programming.

Streaming remote attendee images is usually impossible, especially in events with many remote attendees as the video streams quickly overwhelm all but the largest internet bandwidth. Furthermore, in situations with bandwidth problems, the main video stream quality must be adjusted down by the meeting host to avoid audio dropout. This reduced video clarity makes it difficult for remote users to see details in the live stream. However, this lack of clarity is limited to the live streaming video image. PowerPoints, polls, images and other objects used by presenters can be uploaded to the meeting software and presented with no degradation in quality.

It can be difficult maintaining a consistently high audio and video experience for remote users, especially when streaming large events with large numbers of remote attendees. Live events large enough to require public address equipment (microphones, speakers in the room) must be pre-tested prior to live events to figure out the technical configuration that creates the best sound quality for the end user. Also, remote attendees’ microphones must be carefully monitored to prevent distractions in the live stream room itself. An unwitting remote attendee can create unintentional sound problems with a barking dog, crying baby, or television in the background. One successful strategy for dealing with this problem is disabling attendees’ microphones during parts of the meeting where interaction is minimal.

It is hard to quantify the impact of individual, non-instructional events on a student’s likelihood of academic success. Most likely, the link between non-instructional activities and success is incremental, with improvement rising as the student becomes more engaged with the academic environment. Furthermore, as experimentation with live streaming in academic settings continues, some areas will prove more conducive to blended experience activities than others. Like any innovation, development will proceed by a steady progression of trial and error with mistakes and insights from these mistakes informing the process. However, while there is no doubt that online education has long been an isolating endeavor, it is time for educators to leverage technology to engage students with the interaction necessary for learning.

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