Can you hear me now?
Creating and maintaining an effective synchronous online learning environment

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Faculty-to-student and student-to-student interactions are fundamental components of effective instruction. In fact, quality interactive instruction has been found to increase comprehension, achievement, student satisfaction, and retention (cf., Cole, 2007; Fulford & Zhang, 1993; Pica, Young, & Doughty, 1987; Tinto, 2007). The issue at hand for online educators is how to effectively facilitate meaningful interaction in online formats.

This paper supports the weekly use of the web-conferencing software package, Wimba Live Classroom (WLC), to provide real-time course discussion. It is the author’s contention that this synchronous instructional method (SIM) is a user-friendly and essential complement to asynchronous instructional methods (AIMs) which ultimately results in more effective online instruction and increased student satisfaction. In addition to research-supported rationale for WLC implementation, this paper will offer challenges, solutions, and best practices for the use of WLC as an effective SIM and medium for online instruction.

Located within the Tools/Communications link on your standard Blackboard course shell, WLC is a web-conferencing tool designed by educators for educators. As a result, the focus is on the content and the speaker and not the technology. Through WLC, the instructor has the ability to use the web, a whiteboard, and most importantly, PowerPoint in combination with real-time audio and video to facilitate an interactive domain similar to a face-to-face (F2F) course. In addition, the instructor can create breakout rooms for group work and automatically record and archive class sessions for future student reference. Students have the ability to interact with the instructor and their peers through real-time audio, an instant messaging function, and feedback operations such as answering yes or no questions, hand raising, clapping, smiling, giving a thumb’s up, and more. All that is needed from both the student and instructor perspective is a microphone, a computer, and a strong internet connection. The result of which is a virtual classroom designed for two-way communication, a fundamental component for fostering student interaction.

Importance of Student Interaction

Online/distance education has flourished in part behind the notion of “anytime, anywhere.” As a result, AIMs have prospered to allow students to learn at their own pace. SIMs, on the other hand, require real-time interaction similar to F2F instruction. Limitations such as time constraints and technological requirements have hindered the effectiveness of SIMs in online formats. However, AIMs have fundamental flaws as well. Most notably, student isolation both physically and psychologically and a lack of spontaneous and real time exchanges have
been reported for decades as a major determinant in course withdrawal (Grint, 1989; Hiltz & Wellman, 1997; Lake, 1990). As a result, online education experts have advocated for more synchronous communication as a complement to online courses (Schullo et al., 2005).

In a comparison of AIMs and SIMs in online instruction formats, Skylar (2009) concluded that both types of lectures were effective in delivering instruction, yet three-fourths of the students surveyed would rather take an online course that used SIMs lecture formats. In addition, Levin, He, and Robbins (2006) pre- and post-tested preservice teachers with regard to an online SIMs discussion and while the majority of participants believed they would prefer the AIMs delivery format, the majority indicated they actually preferred the SIMs discussion. Reasons provided included the real-time nature of the discussion, the immediate feedback, the challenge of thinking critically and learning from peers, and the convenience of having a chat in one sitting.

For upper-level undergraduate and graduate courses in the social sciences, more often than not the concepts and topics are abstract and/or evolving on a daily basis. Thus, student comprehension is gained through a synthesis of theoretical concepts, practical application, and discussion. This synthesis is fostered by critical thinking skills that are a function of several variables. For instance, previous experience, biases, opinions, practical examples, and shared beliefs all represent factors affecting a student’s learning process. The opportunity to both vocalize these personal experiences and listen to similar situations experienced by faculty and classmates is highly-valued by students.

From our program’s perspective, WLC is an important element of our online courses, but it is still only one component. Combined with AIMs such as self-guided learning, weekly assignments, and readings and evaluative components such as exams, papers, and other graded projects, WLC provides a central meeting place for shared ideas, discussion, and collaboration. Our program uses WLC as a once per week two-hour, required meeting time that typically begins with a current events discussion and is followed by a short lecture and discussion of assigned readings, group projects, and/or weekly assignments.

For the instructor, this combination of methods cannot be overstated or undervalued. As mentioned above, it is our program’s goal that our students gain practical knowledge, critical thinking skills, and an appreciation for lifelong learning. To do so, the student must be prepared for the WLC each week, stay active and engaged during the meeting time, and be evaluated throughout the semester. Thus, the application of SIMs, AIMs, and evaluative methods are fundamental to creating and maintaining an effective online learning environment.

In addition, from our experience, the student-to-student interaction has been a pleasant surprise. We anticipated the faculty-to-student interactions to be beneficial to both parties, but the opportunity to network on a weekly basis with other professionals in the field has been a noted benefit. Not only have friendships been struck as a result of student-to-student interactions,
but business connections and, most importantly, job opportunities. For instance, four years ago a student/high school physical education (PE) instructor from Wisconsin was partnered with another online student whom was an upper-level administrator for Duke University Athletics. As a result of a bond created through group work and course interactions, the PE teacher was offered a highly-sought after full-time internship with Duke Athletics with which he has parlayed into a successful tenure with the university. He is currently their Director for Corporate Sales.

Challenges, Solutions, and Best Practices

Like all technology, WLC is not without faults. The following section highlights the most prevalent issues surrounding WLC from both a pedagogical and technical standpoint. The issues were compiled based on over six years of experience with the software from an instructor’s, student’s, and administrator’s perspective. While this is not an exhaustive list, it should provide a basic guide to the software for those interested in implementing WLC in the future.

Pedagogical Issues and Solutions

Nonverbal communication. For those instructors who have only taught F2F courses, the hardest transition to using WLC will come in the form of nonverbal communication and the lack thereof. As instructors, we take for granted the ability to read the posture, facial expressions, and the general demeanor of our students. Direct eye contact, a head nod, or casual smile can go a long way determining if the students are following along. On the other hand, a puzzled look or quizzical gesture may prompt us to slow down. In WLC, nonverbal communication does not exist, so an instructor must take the time to verbalize what are usually instinctual decisions. For instance, asking for general questions or for the students to apply a concept is an important step to ensure students are still following along. Taking longer pauses between topics for the students to comprehend and think of questions is also important. At times, these pauses feel like an eternity, but most often, a question will result. Ultimately, the instructor must become a master facilitator in addition to educator. With a solid topic and student preparation, the potential is there for an excellent discussion, but it is the instructor’s job to provide the roadmap for the students.

Using humor can also be tricky. Once again, I think we take for granted the significance of our nonverbal in telling a joke or using sarcasm. Just a warning, what you may think is witty and humorous in the classroom will be lost in WLC translation. So, take that for what it is worth.

Timing. Somewhat related to nonverbal communication, the timing of who is speaking and when can be confusing. WLC has a great feature that provides a numeric order to when students raise their hands, so you can be assured to call on the right person. However, when asking a general question to the class, which is very common in F2F learning, a loud eruption can result if numerous students respond at once. Also, determining when a student has finished his/her statement is difficult, so once again, longer pauses may result. To solve this issue, once again, the instructor must act as a clear and decisive facilitator of the discussion. If by chance
you would like to ask an open question to the class, be sure that they know to click the raise hand function before speaking. Also, the author has to take a leap of faith that students are prepared and proceed in just calling on the students individually. This serves two-fold: (1) it clearly identifies the speaker, and (2) it keeps the students on their feet, which leads to the next issue.

Active participation among all students. From our experience in F2F classrooms, we know that students can hide pretty easily in a large class. Well, in online web conferencing, it is much easier for a student to hide no matter the class size. In addition, a few students can dominate the discussion which may alienate less vocal students. Strong facilitation skills can help resolve this issue to ensure students are actively sitting at their computer, but also building in required participation weekly whether it is something prepared (assignment) or something random (toss-up debate). Student interaction should be the goal; thus, students must participate. From my experience, even the shyest online student will participate if they know when they are required to speak up.

Technical Issues

Java updates and browser compatibility. Arguably the biggest technical issue with WLC is Java. Java is a programming language from which WLC was built. It is phenomenal in that it makes this technology possible, but it is frustrating in that it requires constant updating and downloads. Not a problem if you have administrative rights to your computer, but if you do not, it can be a hassle. Also, some internet browsers (e.g., Mozilla Firefox, Safari, and Chrome) are not the most compatible with the Java updates. Thus, if you update your Java on your computer via an automatic download, but your browser has not updated its coding, you will receive an error message. It is this user’s opinion that Internet Explorer is the best browser for WLC and to make it through an entire semester of Java updates, you will need to get administrative rights of your computer and/or work closely with someone who does. As a best practice, always test your live classroom hours before your actual meeting time. This helps identify any issues. Just because your WLC worked greatly last week does NOT mean it will work this week.

Connectivity. Intra-class connectivity can also become an issue. Put simply, yet not completely understood, yourself as the instructor and/or anyone of your students may lose connection to WLC at any time. It is similar to the rolling blackout of a few years ago. I would say 98% time, you will have no issue with connectivity, but at some point you may. My advice, do not spend the time to try to figure out why. Just close out of the dialog box and re-enter the live classroom. Also, pass this information on to the students on the first day of class. Nearly 100% of the time re-entering the room will solve the connection issue. Sometimes, you may need to restart your computer. Letting your students know that if you disappear from class, you will be back in a few minutes.

Video feed. While WLC boasts improved and enhanced video feeds, it is the author’s contention that it is still not worth the trouble. Often times, the video and audio do not match up
and it leads to more problems than it is worth. Not to mention, staring at a giant head for two
hours is not engaging for the students nor flattering to the instructor. Bottom-line: Stick to audio
and the e-board for content, skip the video function.

.Audio dropout and microphone feedback. In the last two semesters, a few students and
instructors have complained about random audio drops during a WLC session. That is, while still
connected and able to navigate other live classroom functions, the ability to talk will disappear.
The best way to remedy this problem is to close out of WLC and re-enter the live classroom from
your Blackboard shell.

.Student presentations. Providing students the opportunity to present on prepared material
is a must in online formats such as WLC. Unfortunately, it is not well-equipped to let the
students run the show. For instance, only the instructor has the ability to speak without clicking
and holding the talk button to speak. Also, only the instructor can navigate PowerPoint slides.
There is no real solution to the talk button issue, but the best way to sidestep the e-board problem
is to have the presenting student send his/her presentation materials to you in advance so that you
may upload them to the WLC. Once the presentation has started, have the student audibly guide
your navigation of the materials.

.Web video (i.e., Youtube.com). Any sort of video, whether web-based or downloaded,
does not translate well in WLC. If you want to use video in your course, the best practice is to
have the students watch the video before class.

Conclusion

In all, whether your course includes two students or 32, WLC is a powerful tool designed
to foster more meaningful interaction between all parties, and when used in collaboration with
AIMs and evaluative methods, creates a more impactful online learning environment. Technical
glitches and software malfunctions unfortunately do occur from time-to-time, but the benefits far
outweigh the cost. From the standpoint of this instructor, the ability to facilitate real-time
discussion is the most beneficial outcome, and according to current and former students, the
ability to question, add to, and debate course content in real-time has helped increase week-to-
week motivation and overall program retention.
Synchronous Environments

References


