Best Practices for Delivering Effective Instruction in Virtual Classrooms

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Abstract: While much has been written on best practices in online education, the majority of advice focuses on asynchronous delivery. With the relatively recent advent of effective synchronous delivery systems such as Adobe Connect © and Elluminate © over the past five years, a number of secondary and higher level institutions are offering virtual courses. While some of the techniques used in asynchronous courses work well in virtual classrooms, it is argued a new set of strategies for synchronous delivery is needed.

The purpose of this presentation will be to provide a set of strategies to support effective teaching and learning in virtual classrooms. These strategies are based on research, feedback from students, and practical experience. Six key areas will be discussed including (a) addressing technical challenges, (b) starting a class, (c) organizing a class, (d) providing effective support materials and tools, (e) creating engaging learning activities, and (f) collecting and offering meaningful evaluation. Both novice and experienced teachers of online education will leave with a set of strategies that will help them conduct stimulating and effective virtual classrooms.

Overview

The strategies I am proposing are partially based on a review of the limited resources available on conducting effective virtual learning (see Clark & Kwinn, 2007; Conrad & Donaldson, 2004; Shank, 2007). The power of the strategies, though, comes from actually teaching in a virtual environment and getting regular feedback from students. Without this feedback, I can assume, but never really know whether a class or strategy was effective.

Strategies Used in Virtual Classrooms

Addressing Technical Challenges

While it is convenient for an instructor to assume that students have read and will meet all the technological requirements to participate in a synchronous online learning environment, I have found that it is helpful and necessary to check these assumptions. Above all, you need to explain to students that not having the right equipment will make learning difficult for them and the rest of the class. Here are some checks that I have students do:

1. Go to a website to check Internet speed (e.g., Speed Test at http://www.speedtest.net/) Ask students to make sure the "download speed" is 5 Mb per second or more. Slower speeds markedly affect the quality of sound and video that can be used.
2. **Never use a wireless connection** - From my experience wireless connections are not adequate to participate in a synchronous - Student have poor audio and have to log out and log in to the course repeatedly.

3. **Use the automatic sound check every time you log on** - Log into the course 5 minutes early and use the automatic sound check to make sure everything is working well.

4. **Close all other programs when you are in the course** - Having multiple programs running can reduce performance in the actually course, especially if the Internet download speed is slower than 5Mps.

5. **Use a head set that has an attached microphone with a USB connection** - do not use speakers as everyone else will hear a very annoying echo.

6. **Check sound by greeting students** - It is helpful to check the sound of students by greeting them when they sign in. This simple check can save them (and their peers) much grief when they move into breakout sessions.

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**Starting at Class**

It is important to set the tone of the class right from the start. If you are fumbling around trying to load "stuff" or appear to be disorganized or unfocussed, this can rub off on the students. I have found the following strategies helpful for starting the class in a positive and focused direction.

1. **Post a list of tasks that the students need to have completed before class** - For example, they may need to have a certain websites loaded, download an organizer or template, or email in some homework. Having these tasks displayed helps everyone be prepared when the class begins *(100% student approval rating)*.

2. Review learning goals for the class - I like to start with the learning goals I am trying to achieve in the class so that students know exactly what is expected. I only spend a few minutes, but it seems to centre the class *(87% student approval rating)*.

3. **Asking the class a "get to know you" question** (e.g., your favourite hobbies, your passions in life). I use the polling questions or chat tool to ask a few personal questions, particularly during the first 3-4 weeks. My goal is to relax students and help build community in a small way *(73% student approval rating)*.

4. **Polling questions where the class votes on a specific issue** - Before we begin discussing an issue, I often poll students (anonymously) to get them thinking about a topic and let them view the wide variety of opinions that might exist about more controversial topics *(93% student approval rating)*.
Organizing a Class

Running a synchronous online course can be a daunting task, particularly with the range of tools available. Trying to load files during class or set up learning tools for students to use can take considerable time, even if you know how to use the course software well. I spend at least 45-60 minutes setting up my course before it starts so that everything is ready and I don't lose momentum during the class. I also have some suggestions about whether to use cameras, static pictures, or just audio in an online session.

1. **Using organized layouts** - I like to have organized sections or layouts (in Adobe Connect) where I conduct specific activities like polling, discussions, chat sessions, and breakout group directions. It helps the class run smoothly and saves time when these areas are prepared ahead of time (100% student approval rating).

2. **Being in a different group each class** - I use pre-assigned groups for each class for two reasons. One, it prevents valuable class time being wasted on students trying to figure out who they should work with. Two, students get to work with a variety of other students each week to gain different perspectives (100% student approval rating).

3. **Do not use the camera feature in class** - In some programs (e.g. Adobe Connect) you can view all students live. In practice, this does not work that well. Slow connection speeds and valuable screen space is wasted. Student were either neutral or agreed that this feature was unnecessary.

4. **Have static pictures of students in breakout rooms** - To make breakout rooms sessions a little more personal, I pre-load pictures of group members in the breakout room discussion sessions (64% student approval rating).

Support Material/Tools

It is my belief that extensive support material needs to be made available to students in an online synchronous course. Considerable work is done outside class and well designed support resources reduce student frustration and the potential deluge of administrative email questions.

1. **Jing videos** - I create numerous videos to explain assignments, procedures needed to complete tasks, give formative and summative feedback, and mini-lessons on specific concepts. These videos make the course far more personal and provide the "Just-in-time" help that student need when they find the time to complete the required tasks assigned to them -see [http://faculty.uoit.ca/kay/educ5104g/resources/res_video.html](http://faculty.uoit.ca/kay/educ5104g/resources/res_video.html) for examples (100% student approval rating).

2. **Class website** (lessons plans, student work, resources, tools) - I create a comprehensive website with a full set of support materials for students. This site has proven invaluable for students - see [http://faculty.uoit.ca/kay/educ5104g/home_frame.html](http://faculty.uoit.ca/kay/educ5104g/home_frame.html) for an example (100% student approval rating).
3. **Limited Use of Discussion Boards** - I rarely use discussion boards in synchronous classes because we have most of our rich discussion online. Students were either neutral or agreed that they did not like using discussion boards, especially when participation was required for course credit. When discussion boards were opened on a volunteer basis, few students chose to use them.

4. **Email reminders** - I sent out weekly reminders about completing required tasks and assignments. Even though I had adult learners, they had very busy lives and I found simple reminders resulted in 100% completion rate of almost all tasks assigned (90% student approval rating).

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**Engaging Class Activities**

Effective in class activities make or break a successful synchronous online learning class. I have found the following activities to be well received by students.

1. **Organized breakout rooms with specific tasks** - I used this strategy often, but I gave students specific tasks to complete within a set time period. Occasionally, when I left the tasks too open-ended, students appeared to spend an inordinate amount of time trying to figure out what was expected. Clear instructions and roles helped focused students toward a unified learning goal. Typical breakout session times ranged from 15 to 45 minutes (100% student approval rating).

2. **Focused class discussions about a specific topic** - I used this strategy to bring ideas together after breakout sessions. Simply conducting a class discussion without breakout discussions did not work well - most students were reluctant to speak out (84% student approval rating).

3. **Asking all students to comment on an issue using the Chat room** - This strategy worked far better for general discussion and brainstorming. Students appeared to be much more comfortable using chat messages vs. actual voice (85% student approval rating).

4. **Polling students about their understanding of material in class** - I would poll students on a number of issues before and after breakout sessions to gain a general feel for whether learning goals were achieved. Students liked answering anonymously and viewing their peers collective responses (83% student approval rating).

5. **Student presentations - short and focused** - Students were asked to present materials in a number of instances and this worked best if they were told to limit the length to 5 minutes or less. I also broke up presentations to limit the time students would spend passively digesting the presentation of material. A series of lengthy presentations tended to bore students (92% student approval rating).
6. **Individual activities that you complete and discuss after words** - Aside from breakout room sessions, I would assign short, focused activities (e.g., rate a WBLT, create a PowerPoint, summarize a short research article) for students to complete individually during class and then return to discuss and compare results *(77 % student approval rating)*.

7. **Home Activity Experts** - I would assign students to research specific topics outside of class and then share their expertise with the rest of the class. Sharing took place with short presentation or in breakout sessions *(84 % student approval rating)*.

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**Collecting and Offering Meaningful Evaluation**

Providing meaningful and regular feedback for students is essential for developing and maintaining community in a synchronous online learning course. It is equally helpful to collect and respond to feedback from students so they feel part of the learning process.

1. **Assignments explained with video clips** - When setting up any assignment, I provide detailed video clips to clearly explain what is expected. Explaining these assignments at the beginning of the course takes considerable class time and appears to go in one ear and out the other. Students need these explanations when they are ready to begin the assignment, so a just-in-time video clips work really well - see [http://faculty.uoit.ca/kay/educ5104g/assign/assign_frame.html](http://faculty.uoit.ca/kay/educ5104g/assign/assign_frame.html) for examples *(100 % student approval rating)*.

2. **Video feedback on home activities and assignments** - I provided video feedback on a number of home activities and assignments throughout the course, particularly in the first 4-6 weeks. Students liked hearing personal feedback from the instructor and were far clearer on my expectations than if I had used only written feedback. I used free screen recording software called Jing and it typically took 10 minutes per student for formative feedback and 30 minutes for assignments *(100 % student approval rating)*.

3. **Students asked to provide regularly feedback on the class** - After every class, I asked students to take 5 minutes and provide feedback on how the class went for them. Typically, I asked about whether the learning goals were met, what they liked, and what suggestions they had for making the class better. This was one of the best strategies I used as it provided valuable feedback and made students an integral part of the learning process.
References

