TECHNOLOGY TOOLS FOR COMMUNICATION AND COLLABORATION

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Synopsis

Today's technology has the power to transform the way we communicate with each other. With the proliferation of technology, education is no longer bound to traditional classroom methods and the limitations that come with them. It allows educators and students to collaborate and revolutionize the learning communication process. The ability to provide feedback in real time and influence interaction make collaboration technologies invaluable tools in the higher education environment.

In this hands-on workshop, we will focus on IVLE communication tools — the chat and discussion forum — that are widely-used on campus, the IVLE chat and forum. We will also explore the use of Google Hangouts, a video conferencing tool which enables you to do video/audio chat.

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Tools for Online Discussion and Collaboration

If you teach online, you might want to employ either a synchronous model – "same time, different place" – or you might use a combination of tools to meet a variety of scholarly needs or an asynchronous model – "different time, different place".

Most of the learning management systems have integrated collaboration tools – asynchronous tools and synchronous tools– within the delivery platform. IVLE has the IVLE Discussion Forum and the IVLE Chat Room tools that let you create and participate in real-time lessons and discussions with your students. Instructors can put these tools to a wide variety of uses. Although there are still software, hardware, and bandwidth requirements for these tools, the requirements are likely not as cost-prohibitive as those required for video conferencing and virtual classroom tools. Other than IVLE, you can also explore online tools that will be appropriate when you facilitate an online class. This includes Google chat, Skype, Google Hangout, etc.

The use of synchronous and asynchronously e-learning tools depends on how you plan your learning activities. For discussion of complex issues, synchronous e-learning tools such as videoconferencing, instant messaging and chat, and arranging face-to-face meetings as a complement, may be essential as support for students to get to know each other and for planning the tasks at hand. However, when discussing complex issues, in which time for reflection is needed, it seems preferable to switch to asynchronous such as using e-mail, discussion forum, and blogs.

Synchronous Discussions

IVLE Chat

The IVLE Chat tool gives you the ability to record archives that you can make available to students and is a simpler tool designed to only let you and your students participate in chat sessions.

The IVLE chat can be also used to hold office hours online. Virtual office hours can be offered during a set time, on a regular basis, or they may be scheduled as drop-in or by appointment.

Virtual office hours are beneficial and productive in that they allow us to:

- Increase overall student success in your modules.
- Encourage more contact with students during eLearning weeks and when you or the students are off campus.
- Provide comfortable and productive access for students who might be reluctant to approach you in person.
- Manage your classes effectively.
- Ease your own schedules and open up new possibilities for how you "do" office hours.
- Encourage and participate in the use of technology for effective communication.

Technology Tools for Communication and Collaboration

In conjunction with the American Association of Higher Education's "Seven Principles for Good Practice in Undergraduate Education" the Virtual Classroom:

- Encourages student-faculty contact
- Encourages cooperation among students
- Encourages active learning
- Gives prompt feedback
- Emphasizes time on task
- Communicates high expectations
- Respects diverse talents and ways of learning

You can use the IVLE Chat in a variety of ways. You might use it to involve students in active learning or to create a more personal environment. You might find that it allows you to work more effectively with students of diverse needs and backgrounds. The IVLE Chat is also effective for "hot topic" conversations. Think about ways that you can put this unique learning environment to good use.

In the IVLE Chat, you can facilitate or you can hand the floor over to a student facilitator. You can designate "workgroups" so that, for instance, groups take turns in their conversation roles -- one group poses key questions from a reading or lecture, and another group provides feedback or ideas. As you rotate through the groups and roles, the conversation gets increasingly sophisticated as students build on the ideas of others.

A wide range of students benefit from being able to access your office hours through a chat environment, and virtual office hours can be used even with classes that do not otherwise carry an online component. In particular, you'll find that virtual office hours work well for:

- Personal interaction and connection.
- A chance for students to show their interest and engagement.
- Demonstrations, explanations, and clarifications of course concepts.
- A private atmosphere for conversation.
- Approval of ideas and approaches.
- Virtual office hours also work well with an established course

When students ask a question that has been resolved in the FAQ (policies on late papers, for instance, or formatting issues), you can refer them there, and use your one-on-one chat time with them to work on issues that are individual to their learning (developing a thesis statement or brainstorming potential sources for a research paper).

How can you stimulate students to access virtual office hours? Consider one or more of these techniques:

- Put it in your syllabus.
- Mention it in class, often.
- Schedule regular hours (open to everyone) and appointments (such as midterm conferences).
- Be available (unscheduled) as much as possible during peak times.

- Feed the culture by getting students to use the chat feature with one another for projects, questions, etc.
- Make it fun.

So, what are the potential problems? Be sure you that you are comfortable dealing with:

- Technical difficulties disallowing you from logging on during scheduled times.
- Students bringing nonproductive "Instant Messaging culture" into your virtual office.
- Some fumbling at the onset as you learn how to use the technology most effectively.
- Dealing with the difficulties of written communication.
- Slow typing – theirs and yours.

Asynchronous Discussions

Research studies involving interactivity in online classes reveal that students value opportunities to communicate with their peers and instructors. As Palloff and Pratt relate "what the virtual student wants and needs is very clear: communication and feedback, interactivity and a sense of community, and adequate direction and empowerment to carry out the tasks required for the course". Wiesenberg and Hutton conclude that building social interaction is of critical importance to the creation of a successful computer-mediated learning environment. Online courses that provide a variety of interactive activities, such as polling, debates, reflection, and critique, are able to develop and sustain strong online communities with rich social interaction. However, these interactions do not occur without some challenges.

The availability of learning management system (IVLE) has brought easy access for instructors to online communication tools. Increasingly, these tools are being integrated into educational settings to extend learning activities beyond the traditional classroom time and space. For example, the IVLE discussion forum, an asynchronous computer-mediated communication system, provides any time/any place communication. But the difficulty now lies in grappling with how best to use these tools for teaching thereby maximizing students' learning.

There are a number of advantages to having discussions online – the potential to promote collaborative learning among students outside the classroom; to facilitate and support interaction in learning communities. Online discussion forums provide an array of benefits for learners. For example, they provide learners with equal opportunities to participate in discussion considering their varying oral language skills (Zhang & Mu, 2003) and also facilitate more balanced participation, with speakers sharing the floor more equally compared to face-to-face discussions that tend to be relatively unbalanced with one or two participants dominating the floor or determining the topic (Warschauer, 1996). The more complex and formal language used during online discussions proved to be potentially beneficial to all the students, since it assists them in acquiring more sophisticated communication skills. It helps them keep a text-based digital record of thoughts, concepts, plans, answers, and strategies which have been addressed during the online discussion (Hara, Bonk, & Angeli,

2000). Students can reflect on their thoughts in a more formal format, which may foster their metacognitive (McDuffie & Slavit, 2003) and critical thinking (Jeong, 2003) skills.

Hence online discussions might be incorporated in order to:

- Enable discussion to extend beyond the allotted class time
- Provide an alternative form of communication to in-class, verbal discussion — whether simply to provide variety in the subject, to meet the different needs and preferences of individuals, or to allow students time to reflect on the debate and consider their response before contributing
- Support and assist students in different groups discuss based on different topics
- Assist staff and students communicate
- Respond to students' widespread and increasing use of online communication

Asynchronous Tools

Asynchronous communication is more popular model for your classes and tutorials, as the requirements and implementation is fairly simple. However, it does have its own drawbacks — they are less timely and efficient. However, if planned well the use of asynchronous tools can be easily turned into synchronous discussion. If the students, the TAs and the instructors are all logged into a discussion forum at the same time, conversation can happen in near-real time.

Common examples of asynchronous tools include:

- Discussion forums: Well-managed discussion forums can produce incredibly rich conversations about the topics.
- Blogs: These allow for communication between students in other classes at other institutions who are studying the same topics.
- Social Networking Sites: Facebook and Twitter can play important roles in your asynchronous communications strategy.
- E-mail/Distribution Lists: Email threads like Google Group discussions is a threaded discussion board that can also take place via e-mail.

Facilitating an effective online discussion

Instructors who are new to using online discussions often wonder:

- When and for what will an online discussion be useful?
- How do I get the students actively involved in online discussions?
- How do I keep my students engaged in the discussions?
- Is there an acceptable delay before one can expect replies to a question?
- How long should I wait before I interfere in a discussion

Postgraduate students may particularly value online discussions. In most institutions, postgraduates are the student group most likely to be studying part-time, and are likely to

have more experience of higher education and hence have the necessary level of confidence to actively engage in extended discussions and debate, and the interest to pursue ideas beyond the 'boundaries' of the module itself.

When facilitating and managing online discussions, it is important to strike a balance in your interaction, so as to make the forum focus on learning issues while keeping it interesting. Following some simple guidelines will make this process easier.

Balancing your workload

The first time you start using a discussion forum would demand more of your time when compared to your subsequent attempts. You can manage your discussion forum by:

1. **Preempting questions**
   Make regular announcements or provide relevant text and readings to the module.

2. **Taking time to induct students to the forums during the first two weeks**
   Be prepared to spend some time during the first week helping students access and navigate the forum. Do not expect all your students to be successfully reading and participating in the first week of the term.

3. **Setting aside specific times to monitor/ respond to the postings**
   This can help you to plan how much time you will take to respond to posts. Logging in more than once a day can be ineffective as there may not be any new contributions to read while waiting several days may result in an overwhelming number of discussion contributions to read. Responding (where necessary) within 24 hours is one way to demonstrate faculty presence in the module.

4. **Developing an FAQ section**
   Supplement your module with an FAQ (Frequently Asked Questions) section and regularly update this section throughout the semester as you receive individual questions of relevance from students.

Recommended practices when using online discussions

Listed below are some recommended practices for communicating with your students:

1. **Establish a set of guidelines**
   Establish a set of guidelines and these could be disseminated as a reading assignment or sent as an announcement to students

2. **Specify expectations clearly**
   Be very specific about the quality and level of posts you expect and ensure that the quality and length of your posts are those you expect of your students. Be prepared

to demonstrate and reiterate what you want in many ways for students when responding to posts. You could give clear instructions for – length of a message, criteria for acceptable responses, level of formality, resources that you expect your students to read/consult

3. **Model responses the way you want your students to use**
   If you want to post musings

4. **Create forums for specific topics**
   Create separate forums for specific topics to reduce cognitive overload and help keep online discussions focused. For example, you could create a general discussion forum (titled "Questions & Answers" or "Help!") for students to post general questions that they may have about the course to this forum or even a social forum for off-topic discussions. If students submit such general course questions via email, you can ask them to post their questions in the designated forum. Answering the questions in this public discussion forum allows all students in your module to benefit from the responses, eliminates the duplication of email responses, and makes it possible for students to help one another. Make discussion forums available as needed rather than making them all available at the beginning of the course.

5. **Create specific tasks for students to work through collaboratively**
   Motivate and guide students in their participation by setting tasks (e.g., debates, simulations, games, role-plays, case studies, transcript-based assignments, brainstorming, or projects). Such tasks that are collaborative in nature enable students to work with each other, instead of depending on teacher-student interaction alone. Collaborative learning can lead to deeper learning by promoting rich and complex cognitive processes such as working through conflict/ disagreement, developing alternative proposals and self- explanation, internalising and appropriating ideas, sharing cognitive load, participating in mutual regulation, and finding one's social grounding (Dillenbourg 1999).

6. **Post a summary/feedback comment**
   Consider posting a summary or feedback comment when the discussion has been going for a few days. You could also rephrase the question if the discussion goes off the topic.

7. **Specify due dates/deadlines for required contributions**
   If participation or student contributions in an online discussion are required, include the due dates for initial posts and responses in the description.

8. **Don't remove past discussion forums**

Students may want to review past discussions as they proceed through the course. Rather than removing a discussion forum that is no longer active, simply reorder the forums so that current forums are near the top.

9. **Save discussion threads for viewing offline**
    You could save all discussion threads or specific topics in a forum to read student contributions offline. These can then be printed or saved for offline viewing.

Designing activities for an effective discussion

1. **Use groups**
    Use the class management to divide your students into small groups of 4-6, using the class groups, tutorial groups, project groups or section groups. The small size makes it easier for all students to participate. Such groups can – in a separate thread or area – conduct their own in-depth discussion of a part of a class-wide topic or a topic in its entirety, and then post their response to the discussion that is open to the whole class. Assigning students to a specific workgroup for the duration of the course and giving them the opportunity to participate in various roles during the term — coordinator, time manager, and reporter, for instance, would give the students a good learning experience.

2. **Use structured discussion topics**
    The use of structured discussion topics allows for a focused development of discussion threads led by the facilitator or appointed moderator and facilitates instructor-learner communication. This type of discussion board presents a standard format with established boundaries of a) presence of a weekly discussion question, b) prescribed participation, and c) presence of a moderator. In structured discussions, the instructor provides the topic for discussion, linked to what was happening in the course and effectively setting the agenda on what would be discussed and the parameters of how broad the discussion would be.

3. **Use questions that stimulate higher order thinking skills**
    Use clear, open-ended questions that tap into the higher-order thinking levels of application, analysis, synthesis, and evaluation to start conversation threads. In order to support a deep and meaningful dialogue, the initial discussion questions need to be interesting – perhaps even controversial – and allow for multiple perspectives that your students can provide from their own experience. When students have responded to the initial posts and are familiar of the environment, then encourage them to move into more challenging discussions by adding challenging follow-up questions, scenarios, examples, etc.

4. **Encourage student-generated discussion topics**

   You'll find that it often makes good sense to set all major discussion topic areas in advance; however, you may also want to leave room (on the board and in your class schedule) for student-generated topics, which will increase motivation and support a learner-centered climate. Depending on your classroom climate you might consider providing an alternative space for very informal discussion and general questions and conversation, a virtual coffee shop, for example.

5. **Achieve social interaction and community building**

   Create discussion threads that will allow students get to know each other personally and intellectually.

A sample discussion rubric for online class

Activity	Exemplary	Proficient	Unsatisfactory	Points
Demonstrates an understanding of the discussion prompt/questions	**4 points** Displays an excellent understanding of the course materials and the underlying concept being discussed. Uses course materials and other information to support important points.	**3 points** Displays some understanding of the course materials and the underlying concept being discussed. Limited use of course materials and other information to support points.	**1-2 points** Displays little understanding of the course materials and the underlying concept being discussed. Use of course materials and other information to support points is incoherent or missing entirely.	___/4
Demonstrates an understanding of the comment under discussion	**4 points** Displays an excellent understanding of the comment under discussion by...affirming statements and citing relevant research or, ...asking a new related question or, ...making an oppositional statement supported by personal experience or related research.	**3 points** Displays some understanding of the comment under discussion by...affirming statements and citing some research or, ...asking a new somewhat related question or, ...making an oppositional statement somewhat supported by personal experience or related research.	**1-2 points** Displays little understanding of the comment under discussion as evidenced by...no affirming statements or references to relevant research or, ...asking no related questions or, ...making no oppositional statement supported by any personal experience or related research.	___/4
Connections to professional practice	**3 points** Evidence of strong reflective thought pertaining to personal perspectives and professional development. Reflective statements go beyond what takes place in a classroom to include a theoretical rationale underlying the use of specific strategies or materials.	**2 points** Evidence of some reflective thought pertaining to personal perspectives and professional development. Reflective statements contain some of the theoretical rationale underlying the use of specific strategies or materials.	**1 point** Little evidence of reflective thought pertaining to personal perspectives and professional development. Few, if any, reflective statements go beyond what takes place in a specific classroom. Little if any theoretical rationale underlying the use of specific strategies or materials included.	___/3
Quality of writing and proofreading	**1 point** Written responses are free of grammatical, spelling or punctuation errors. The style of writing facilitates communication.	**0.5 point** Written responses are largely free of grammatical, spelling or punctuation errors. The style of writing generally facilitates communication.	**0 points** Written responses contain more than 6 grammatical, spelling or punctuation errors. The style of writing does not facilitate communication.	__/1
			Total Points	__/12

Source: Vandervelde, J. (2003). *Discussion Rubric for Online Class*.
Retrieved from http://www.uwstout.edu/static/profdev/rubrics/discussionrubric.html

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IVLE Technical Guides

- **IVLE Staff User Guide** - covers the tools to get you started with creating and managing your courses. (https://wiki.nus.edu.sg/display/IVLEStaffKB/Home)
- **IVLE Overview: Student User Guide** – useful for students in your module who are new to IVLE. (https://wiki.nus.edu.sg/display/IVLEStudenKB/Home)
- **IVLE Recipes** – showcases how other colleagues have been using IVLE and its tools to enhance their students' learning experience. (http://blog.nus.edu.sg/cdtkdr/ivle-recipes/)
- **IVLE Tutorials and Guides** – These online tutorials and guides provide support on getting started with using IVLE. (http://blog.nus.edu.sg/cdtkdr/online-tutorials/ivle-tutorials/)