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Technology and Deaf Education
Exploring Instructional and Access Technologies

ENHANCING INTERACTION BETWEEN DEAF, HARD-OF-HEARING, AND HEARING STUDENTS
THROUGH BLENDED LEARNING

Presenter: Michael Starenko
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>> MICHAEL STARENKO: Hello, can you hear me? Is that good? My name is Michael Starenko. How does that sound? I'm embarrassed to ask. Good morning. My name's Michael Starenko. I'm an instructional designer in the Online Learning Department here at RIT. My topic today is "blended learning."

And blended learning is a fairly new initiative which started five or six years ago. It's now become an international movement, particularly in higher education. As this quotation attempts to explain, blended learning is both simple and complex.

It's simple because it attempts to combine the best features of online interaction with the best features of face-to-face interaction. It does not privilege one or the other. Despite its simplicity, it's actually very complex, because there are so many different ways of organizing learning environments that could take advantage of both face-to-face and online interaction.

The main online tool in blended learning is the threaded asynchronous discussion board. It's been around since the early '70s with electronic bulletin boards. It's now a common feature of every commercial and open-source course management system.

These range from desire to learn, and idea tools. Those are the two systems use add RIT, but also blackboard, web CT, and the open-source system called MOODLE. All of these systems bundle a number of applications, like e-mail, chat, great book, but most importantly, for blended, they bundle the asynchronous, or threaded, discussion board. We started a blended pilot five years ago, and we struggled with how to represent online -- the online component of a blended course. We have hundreds maybe thousands of representations of classroom interaction in popular television, film, theater, literature, ethnography, anthropology, but we really don't know, really don't have a good representation, of the online environment. So this was one of our earlier attempts. So you start with a course that meets twice a week, and you begin by --

You begin by eliminating one of the sessions. If you were teaching --

[comment off microphone]

>> MICHAEL STARENKO: Can you hear me now? Everything's working. How's this? Better? I think the battery's low on this. Okay.

So we have a possibility of a pre-class online discussion.

[microphone not working]

>> Third time's the charm.

>> MICHAEL STARENKO: I'll try this. All right. My main claim is this quote from an article by Gary Long and Jim Mallory, who are both faculty at NTID, and they argue that in a typical mainstream class, deaf and hard-of-hearing students currently use the assistance of a third party, either a sign language interpreter or a voice-to-print captionist, to facilitate communication with hearing instructors and peers. With the advent of distance learning technology, such as the asynchronous discussion board, there is now the opportunity for deaf and hard-of-hearing students to interact directly with their hearing peers and instructors, without the message going through a third party.

What is an asynchronous discussion board? To give you some ideas, it's anywhere, any time. It's primarily text-based, although multimedia files can be attached. It leaves a permanent textual record of all interaction and it's bundled with all course management systems.

As I mentioned RIT uses desire to learn and with the current licensing structure it costs about \$20 per course, or about a dollar per student, to have a full online course management system with the asynchronous discussion. And classroom communication, compare online to face-to-face, it's historically related to religious ceremony, political discourse, and theater. It's same-time, same-place, yet seemingly unmediated, that is, does not seem to be mediated by representations, signs, and symbols. And it's primarily verbal and oral, although there are many physical features to the face-to-face environment.

And, of course, in the absence of any external recorder, there's no transcript or record of face-to-face interaction in the typical classroom. The climate seems right to bring online and face-to-face interaction together. Learning-centered modes of teaching and learning are now coming to center stage. Most colleges and universities, and schools K through 12, have implemented course-management systems.

Today, students are knowledgeable and comfortable with online technologies, and all of us are time-starved, that is, we crave ways of making our lives more flexible and convenient. And online interaction offers such flexibility.

To the extent that it's possible, I'd like to break this group up into smaller groups for a small learning activity. And it's involved briefly to discuss how you use, whether you use, discussion in your teaching, assuming that you are teachers or educators, and identify any apprehensions that you may have about using asynchronous online discussion in your courses. And at the same time, think about what might be the possible benefits of using online discussion.

And then we'll report back in about 8 to 10 minutes. So if you want to organize yourself by row or whatever feels most comfortable for you.

>> I went to Florida school for the deaf and the blind and it's pretty large so we've started using some of these. Very limited off-campus, we have two Blackboard courses, one in the blind department, one in the deaf department, that have started. And we're looking at doing some things internally so that staff become comfortable, and parents and kids both learn some good behavior, how to make good decisions on the internet, things like that, before we go live, since we're K-12, out into the public internet.

And then I was also with someone from Texas School for the Deaf in Maine and we talked about the limited ability so far to get into that online course outside of staff comfort was a big issue.

>> MICHAEL STARENKO: Thank you. This group in the middle over here.

>> What we discussed was that some of the students may benefit from this technology. We also discussed the negative aspects, the pros and cons, can't avoid the cons so we discussed both pros and cons, and students can share their ideas, we can document that. None of the students can see what another student's idea is add their own and expand and elaborate on that one idea and the whole idea is elaborated and they share knowledge and it's a wealth of knowledge.

Also have students explain, there's an explanation that's added. The teacher can be what's being discussed with the students, what they're familiar with, what they do and don't know, what's happening between-student interactions. Students' inquiring minds, they're inquisitive, the different perspectives. They see the thought process and how they learn and what they understand and how they express themselves. Students can see a model of the language that's being used, and improve their own grammar.

Sometimes students feel really deflated that their English expression isn't very well and they'll think I'm student if I'm not writing well. It's a potential negative but it could be positive if the teacher some sports the student and says yes, you're doing well and all right this needs to be worked on, what I think the students can benefit from it. That's what we discussed. That's about it.

>> MICHAEL STARENKO: Great, great. The issue of deaf and hard-of-hearing students being embarrassed by their language abilities is certainly one of the criticisms that I've heard about blended learning. And there seems to be some debate over that. Some faculty believe that students should spend more time, not less time, in face-to-face interactions. So there's this sense that online is -- that students are not ready, not prepared for online interaction.

And I think our first person who shared their responses hinted that faculty may feel reluctant to go into this, use this technology, with the sense they don't feel they have enough support or don't have enough confidence in their technical abilities.

And RIT is fortunate in having, here at NTID and at the campus at-large, having a very extensive support structure to enable faculty to take the time and experiment and feel that there's a safety net for them.

They can experiment without really failing at it.

So would anyone else like to share anything from their discussions?

[comments off microphone]

>> But when they get on a discussion board they --

>> MICHAEL STARENKO: Exactly.

>> You need the microphone because the captionist couldn't hear you so if you could repeat it into the microphone, what you said.

>> MICHAEL STARENKO: Sorry.

>> I just said that there are a lot of kids that in classrooms won't speak because the more verbal students in the class will get their opinions out quickly, and it takes them maybe a little longer time to process, and to raise their hand and to get the guts to come out with their answers.

And a discussion board can really encourage them to shine, as students, as well, with their own opinions.

>> MICHAEL STARENKO: Thank you. Thank you very much. Yes, RIT, approximately 10% of our students at RIT go to NTID.

And an additional 12 to 15% are international students. And in our surveys of students taking blended courses, we've found much higher rates of satisfaction among deaf, hard-of-hearing, and English as second language students, for many of the reasons that you raised. Thank you.

All right, just some general benefits of discussion. Here's some of the objections to online discussion. We've covered some of those points already. And some of the benefits of online discussion. Basically, the benefits and

the negatives of online relate to the negatives and benefits of written communication, compared to verbal communication.

When RIT launched blended learning 5 years ago, we looked at two different models. One model is where you take the content of your course, and move it online.

So if you're teaching a film class, you don't screen the films in your class. You would put them online and have them streamed in that model.

The second model says, do the discussion online, and then do other kinds of activities in the class. So if you're teaching a lab-based course, naturally, do it in the classroom.

If you have high-stakes exams, no need to worry about proctored exams for online components. Use your face-to-face classroom for your exams. So those are ideas of exploring the best uses of each environment. So we believe discussion is very well suited for the online environment, and other types of instructional activities are better suited for the face-to-face delivery. But this is just a brief overview of some of our accomplishments regarding blended learning. We've had over 300 blended-course offerings, which gives us a lot of experience in blended. Most of what I know about blended comes from what I've learned in working with RIT faculty.

For both our blended pilot and our ongoing blended program, we do extensive documentation. We survey the students at the end of the course, we invite faculty to a quarterly luncheon, where they share their experience with other blended faculty. We do structured interviews with the faculty. And our findings are that faculty are motivated to teach a blended course to solve an instructional problem.

And the single problem that comes up over and over again is: Participation, student participation, which is a very broad category. But generally, participation involves communication, so they're looking to blended as a way of enhancing communication, communication access.

And the major findings from the students, these are primarily from end-of-course student surveys, and 70% of students said that they like blended learning, and believe that more courses, more blended courses, should be offered. And the deaf and hard-of-hearing students, as a subgroup, were the most pleased with blended learning.

And significantly, students perceive that they have a greater amount of interaction, and a greater quality of interaction with other students. And that might seem counter-intuitive, but how might you explain that finding? How might it be that students might feel that they learn more about other students in the course because part of the course was online?

Well, some of it has to do with the fact that online communication encourages widespread and even participation from students. So if I ask you a question, I asked you, this class, a question, one or two, or a few, might raise your hand. But if this were an online -- part of a blended course, each and every one of you would respond to that question, and each and every one of you would see that person's response. So everyone has an opportunity to voice their perspective. And that's something that is perhaps unique to the online environment, and one that we believe has many social and educational value. I'm just going to go through this really quickly. This just -- our definition of "blended" is a face-to-face course in which approximately -- this is up to the instructor, it's not mandated -- 25 to 50% of classroom time is replaced by instructor-guided online learning activities.

So over here, these are the face-to-face activities that we think should be kept, that can be exploited very well in the face-to-face environment, but traditional discourse, class discussion and class group work, we think that could be moved over to the distance, or the online, side.

And things like media, in a distance course, where you never meet face-to-face, you might want to have a movie of some lab experiment. But in the

face-to-face environment, you can show that experiment. You don't have to provide a movie for it. So it greatly simplifies the whole production. When you think of blended, don't think about massive media production, which is very typical of a distance, or fully online, course. Then you bring all this together in the course-management system. So I think we have -- we have an opportunity to explore a couple of courses. And hopefully give you some ideas about how you might go about organizing a blended course. The first step is to think about what instructional challenges you face, and how blended might be a solution to them.

For Jim Ravel, a professor of history and teaches an evening history of modern America course. It has students from working students, traditional, on-campus students, adults, traditional-age students, and he found that students just got bored in the course. It met once a week. So how do you engage students in a topic that many students say was the most boring topic they had in high school? How do you do that? Well, the first thing he did was look at different instructional material. So he supplemented his textbook with a book called "Taking Sides." There are about 300 different topics from the whole realm of biology through political science, and they take controversial issues and they find an article that's pro, and an article that's con. So he developed online discussions out of these paired pro and con readings.

And he posted those questions three days before the class met. So everybody was writing and thinking about these issues before they came to class. And he could see what topics the students were interested in, and what topics students were struggling with. And he could take that feedback from the online area, and he could tailor his classroom time. He had more effective use of his classroom time, because he already had this online discussion prior to class.

And another innovation, I'll just pass that on to you, if you're teaching a class with more than, say, 20 students, instead of having one discussion board for all 20 students, you could organize smaller discussion groups using the same discussion question. We found that discussion sections of 8 to 12 students is just about the right amount. So there's a critical mass of students to keep the discussion going, but it's not so big that you feel you're like a lonely voice. You get an opportunity to hear, and other students will respond to what you're saying. So this is an example of how he's organized these groups. So you see for each of these group 1, group 2, group 3, they each get the same question. So the Rockefeller question was essentially, a question, was Rockefeller, did he help the United States? Or was he detrimental to welfare in the United States?

And here's some comments from some of Jim's students. They run the gamut from, "I don't like to come to class as often."

And so the online -- as you might imagine, if you gave it some thought, that international students would have a really unique perspective on U.S. history. So to be able to hear more of what the international students are saying was definitely a benefit in this course.

And here's some things you might want to take away from this example. And I've already mentioned one is to organize whole-class discussion into smaller subgroups. And Number 3, is it's important for you, as an instructor, to decide how you're going to respond to the students. Because in the online component, you need to give students an idea that you're present. That you're reading and acknowledging what they're writing. And for most classes, you will not be able to respond to each and every post. And what many instructors have discovered is that you can give students a sense that you're present in the online component by summarizing the discussions, by taking the time to go through the discussions, to pull quotes from students, to identify

students by name, and then to provide some insight into how you think the discussion went, and how the discussion could have been more informative or more probing.

And these could be posted as a news item in many course management systems. You don't have to do it more than once a week, but it provides a wonderful closure to online discussion. It's very unsatisfying for students to have posted and interacted with each other and then to get no response from the instructor.

Here's another course, this was a course on contemporary poetry, and RIT works on a quarter system. We have 11 weeks in our quarter. So in this course, the two instructors brought in a new poet every week. And many of you have probably had classes where you had guest instructors, or guest speakers. What do you do with them? How do you get students prepared for the speaker, and what do you do after they've presented? So John and Linda, in this particular course, used the online component to have a discussion about the speaker before they presented.

And then to provide some sort of critique after they came. This shows a sampling of some of the poets and other artists they brought to this particular course. This is an example of the syllabus, and you can see that online discussion is about 25%. So it's really important to think of online discussion as different -- differently from participation. In our normal class, we just as a rule of thumb give 10% to participation. But most of us don't actually assess participation. Maybe it's a proxy for attendance. So what we recommend is, don't give online participation 10% of the grade. Give it something significant. 20, 25. I've seen faculty give 60% of their course grade to the online discussion. That's because they may have three online discussion topics each week. Depends on the kind of course. You hear lots and lots of discussion. So a few tips: Ask challenging questions. The worst kind of question to ask in an online discussion is one that has a yes or no answer, obviously. You won't get very far with that. Ideally, ask a question that enables students to make a decision of choice, and then to defend their choice, to provide a rationale for their point of view. Another is to summarize. I mentioned before is to take the time, summarize the discussion, and also at the same time to look ahead to the next week to give students some guidance on how they should approach next week's assignment. So this is some of my just -- I think the time is right to seriously consider blended learning, and these are some of the reasons for considering blended learning. It provides a better balance between faculty centered and student centered approaches to education. It provides students with a wider range of ways to communicate and participate.

It encourages students to improve their reading and writing skills, as well as their speaking and listening skills. And certainly in today's society, it's important to know how to use online communication. In today's organization, it's imperative to learn how to work in virtual teams. An online component can provide students with some of these important skills. Any questions? [off microphone]

>> We took advantage, we didn't have a biology teacher, so we took advantage of the online classes provided by the state. It was a biology class. And I was actually the facilitator for the class.

But one of the things that my students really enjoyed about it was, they knew what their grade was. They could look right then and right there, just as soon as it was posted, and they knew where they stood in class, and whether they were passing or failing.

And it was amazing how much that motivated them in their class work.

>> MICHAEL STARENKO: Yeah, thank you. Faculty say that the grade book, the electronic grade book, is very popular with students. Students like and need fairly immediate feedback. And another feature of these electronic grade

books is the "comments" field, so you can easily write a one- or two-sentence comment, and that has a great impact on students.

Most course management systems have electronic drop boxes so instead of dealing with all these copies of papers and late submissions, you could create a drop box with a folder for each assignment. Students post their work there electronically, they get a timestamp that tells them that they've successfully submitted their work at this particular time, and you can go in and you could be sitting on an airplane or a bus, and you could access those files, if you have the time and inclination, you can use track changes in Word and insert comments on a student's writing and return it right back to the drop box.

So we see that as another way of -- that course management systems can enhance your efficiency, and at the same time, provide new modes of interaction with students. Because when you provide a comment on a paper, that's very educational. In fact, some of your -- you'll find that much of your teaching in the online environment is in providing feedback to students. It's not lecturing, it's providing feedback on student work. So thank you for that comment. Anyone else?

>> Are you going to pass out copies of your handouts or your slides? Or can you put them on the internet so that we could have these slides?

>> MICHAEL STARENKO: Yes. Most of this material is on our website. It's at online.RIT.edu/blended. And if you go to the student site, RIT.online.EDU/students, you'll find a 5-minute video clip that interviews a hearing student and a deaf student about their experience with taking an online course, and how they've benefited and how they learned about each other.

Thank you.

[Applause]

>> But not the PowerPoint?

>> MICHAEL STARENKO: No.

[question off microphone]

>> Do RIT students have to learn a second language not related to blended learning?

[off-microphone comment]

>> MICHAEL STARENKO: So the question is, at RIT, can students learn other languages online? We do have a foreign language center, and they use -- they have extensive computer-based applications, but they're not accessed remotely. They're not accessed from a website. You have to actually go to the center.

It's time for lunch. Thank you very much.

[Applause]

[End of Presentation]

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