
Captions

(W11D)

**Blended Learning Preferences for
Deaf, Hard-of-Hearing, and Hearing**

James Mallory

ROUGH EDITED COPY

NTID/RIT

BLENDED LEARNING PREFERENCES FOR DEAF, HARD-
OF-HEARING, AND HEARING

JAMES MALLORY

KAREN VIGNARE

GARY LONG

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>> This is on?

Good morning.

Welcome.

A couple of things before we get started.

I would like to ask if you could complete the evaluation forms before you leave.

There are handouts at the back of the room if you haven't picked one up yet.

It's my pleasure to introduce this morning, Jim Mallory.

Jim is a full professor at RIT/NTID and works in the department of applied computer technology and teaches a variety of programming courses and has been involved quite a bit in distance learning and research.

It's also my pleasure to introduce Karen Vignare who works for RIT's department of online learning.

She is currently working on her Ph.D, and she conducts a lot of research for RIT.

It's also my pleasure to introduce Dr. Gary Long, who is a researcher at NTID/RIT.

And their presentation this morning will be on access to communication for deaf, hard-of-hearing, and ESL students in blended learning courses.

>> KAREN VIGNARE: Thank you.

Welcome, everybody.

I am very pleased to be here.

Gary, Jim, and I have been working on this research and this opportunity, RIT's blended learning about two years

ago, and we really wanted to incorporate in our research the population of the deaf and hard-of-hearing, as well as the ESL students.

So we welcome you to listen to our presentation regarding what we're finding so far.

And it is very early in our research, so we would appreciate feedback and comments as we move along.

We were asked by the tech team in the back to go ahead and take questions at the end of the presentation.

And please remember to use the mic so that they can caption your statement or question at that point in time.

Okay.

At RIT have had an online learning department for well over 25 years.

Of course, that was not online.

It was more distance learning.

But in 1991, we started actual online programs using the computer network here on campus, the VAX computer network which still exists today, and people would be able to call in and use a tele-type.

Obviously since that point, online learning has progressed a lot all around the world as well as throughout RIT.

RIT currently has 8,000 enrollments at its distance learning programs and courses.

Of that we serve 4,000 unique students.

We offer somewhere close to 40 programs that you can get fully online.

About 14 of those are degrees, and the rest are

certificates.

So as that kind of mini-history should imply, we kind of know what we're doing in online learning.

While we do not think that online learning is a replacement for any kind of campus learning, it is certainly a great option for all students, but particularly part-time and working adult students.

However, one of the things that noticed was that the online portion, and Gary and Jim have both done some research in this area, the online portion was particularly favorable to deaf and hard-of-hearing students.

And so we began to wonder as we were looking at national movements that were beginning to incorporate online technologies into your traditional classrooms, whether that would not be the case here as well.

So, our definition of blended learning here at RIT is the combination of distance, or online learning, with classroom learning.

25-50% of the course is put online.

The instructor-lead activities are actually moved online.

The seat time is replaced with different kinds of things, but there is a list there, and I am going to give you some ideas about what that list would actually encompass.

One of the reasons that we really think online is very powerful, particularly as a combination with classroom, is it's very reflective.

That is, students have time to think through their answers.

They have time to go back and look at their books.

They have time to read others' information, and do a

summary and synthesis.

So online allows people to be reflective.

Writing practice.

There is a lot of writing practice online because online in our world right now is mostly text-based.

So you are using text, and you are constantly asking people to write information.

You are constantly asking them to practice.

They could be practicing with small comments.

They could be practicing with page-long types of information, or analysis.

So some of the things that we have seen in our blended learning classes are quizzes being used as pre-assessment.

So if the professor wants to know, I have a whole chapter to cover, how do I narrow that down to what the students really need to know?

And then spend that time in lecture or that time in class discussion.

So they put their quizzes online.

That way they get a good sense of what are the fuzzy points.

What are the muddiest points?

So you have this pre-assessment ability.

You also have the ability to have low-stakes quizzing.

That is, take it out of the classroom time which is very, very precious, and put in low-stakes quizzing where you could have students take the quizzes as many times as

they want in order to get the grade that they need to.

So you can offer them low-stakes quizzes.

Team projects.

I have been at several of the presentations, and this has been a wonderful conference.

One of the things that I heard mentioned was specifically something that we're talking to people about blended learning.

When you have deaf and hard-of-hearing students in your classrooms, many professors want to do group projects.

But group projects are often very difficult because of the need for an interpreter, the need for more than one interpreter in some cases when the group gets together.

If we move that work online, all students kind of have a level playing field.

They can text message each other.

There can be a transcript of the conversation.

There can be posting of the material that they're sharing so that you, as the professor, can be the arbiter of who is doing the work.

Because one of the big problems that professors have with team projects is the team will come to you and say, "Well, Johnny really didn't do any work on this project."

How do you assess that?

And if you make those materials go align, then you have a way of assessing who has been putting in the effort.

Another opportunity in asynchronis, and that's when the time and place are different.

So asynchronous for those of that you don't know what that word means means that if I send out a message today, somebody will read it an hour from now, and they may post back to it by tomorrow.

That's asynchronous.

They do not have to be in the same time and the same place.

Versus synchronous conversations.

We're having a synchronous conversation right now.

And online synchronous is embodied by web conferencing, video conferencing, chat, those are tools that you can use for seen crowds any.

But asynchronous can -- synchronous.

But asynchronous can be powerful.

A student will create a corporation, or a student will pick out a corporation, and every week they have to use their readings to say, what is the corporation doing with that information?

Prove to me as the professor that you are actually doing the readings, and that you can apply this information.

And it's a very powerful constructive learning methodology that allows to you do knowledge construction week over week offer week.

Couple of the other things that you can do are journals.

You can set up asynchronously, and some people are using blogs for this, a journal that has the students actually talking about what they're learning, what they're experiencing, what they're doing.

You can also talk about things that are very sensitive and culturally disagreeable.

In other words, we have a professor who is teaching multi-cultural kinds of studies.

Some of the things that he can do on shrine really promoting diverse discussion.

Even though we would like to think that our classrooms are very opened to diverse discussion, it's often difficult to get all students to have a comment.

Online, you can say, "You must comment, and you must get involved with the discussion."

The discussions become very robust.

We've had several people talk to us -- several professors talk to us about how this online portion is now taking and evolving into their class.

Their class is becoming much more open with each other and willing to discuss because this discussion was started online.

The other thing that's very powerful about online is the ability to prove synthesis.

In a synchronies classroom discussion, we have a little bit of a conversation but we can't put it together.

So in an online discussion we can actually have this person commented, this person commented, this person commented, and what I want to happen is that this gets synthesized into the next comment and the next level.

We actually have research out there right now that shows that there is knowledge construction that goes online, and it's easier to see the evidence of that, because it's difficult to have knowledge construction go on in a synchronis short time period.

It's difficult when you only have an hour of lecture time to get people to take that comment into their head and actually move it forward.

So online allows you that ability.

Now we move to the next slide.

Okay.

He moved before I was ready.

Some of the traditional classroom challenges in NTID and others have put research in various kinds of journals, like Stinson's work, others talk about some of the challenges that we have.

RIT really does a wonderful job trying to support deaf and hard-of-hearing students.

But there are still challenges, as I think that all of you are aware of.

And what happens is that for many there is a lag time.

The interpreters are great, but by the time that they hear, somebody else comments, somebody else comments, going back to that conversation makes them feel just a little bit out of sync.

So their ability to actually integrate and get involved in the classroom is very limited in the traditional classroom.

And we think that this is a great opportunity to explore further whether we can actually get more students integrated into the classroom.

One of the things that we hear anecdotally happen at RIT is that often the deaf students will work together, and then the hearing students will work together.

And because of that, we're not getting the integration that we really want to happen.

What happens online is that that goes away.

No one knows.

Everyone is on that equal playing field.

And what happens then is that you can really use that the classroom and that, again, is an area of research that we're going to continue to explore.

Okay.

Ahead.

>> Interpreter: We have a question.

>> KAREN VIGNARE: We were going to do that at the end.

>> Audience member: I have a question.

I am wondering if you have any comments from deaf students who are concerned about their English skills, and does that in any way make them less willing to participate online.

>> KAREN VIGNARE: Would you like to take that one?

I can give them some.

>> JAMES MALLORY: That's a good question.

>> KAREN VIGNARE: That's a great question.

We're going to hold the questions until the end.

So if we don't remember please remind us.

Thank you.

>> Audience member: I will do that.

>> KAREN VIGNARE: Thank you.

Online learning slows the synchronisÝpace so, one of the challenges of that classroom is lessened by moving to

online learning.

And it clearly makes the playing field equal.

I can tell you as a professor, I was faculty before I joined RIT, and I continue to teach as an adjunct, that I have a lot of international students in my classes.

And when I move discussions online I get a whole lot more of those people to respond than I do in the classrooms.

And I really like the fact that I can level the playing field because their comments are valuable to the rest of the class.

And getting them involved in the class is often just a little bit more difficult.

So blended learning, the whole purpose is to take the best of the classroom.

What is it that you do best in the classroom?

The discussion, the demonstration, the group activities, the getting students really engaged with what they're working on, if it's programming or anything, and then taking the other parts and moving them online.

So more and more universities today are starting to think about this opportunity of blended learning.

Blended learning is also referred to as hybrid learning.

It's also referred to as distributed learning.

It's also referred to as flexible learning.

At RIT we adopted the blended learning terminology, but I just wanted to make you aware that there are others that you might look at.

This is really a endorsement of active learning.

The endorsement is to get students engaged in that conversation.

To get them showing how they're doing their work.

To get them actively showing other students what they're doing.

One of the things that we hear from faculty is that if I can get one student to post good work, I have helped all of the other students dramatically.

So the evidence of seeing good work is also very, very important.

And we set up our pilot program at RIT and some of our research based on one particular university, the University of Central Florida is a public university, and they have had massive space problems.

So they set up the blended learning for very different reasons than RIT did.

But what they found was that communication, and that students felt that communication was as good as the traditional classroom, and in some cases better.

They also were very, very successful.

We think that learning from people like the University of Central Florida who actually has been doing blended learning since 1998 gave us a great set of guidelines on what to do and what not to do.

We are very, very happy with the success that we're seeing thus far.

Our completion rates are 95%.

We have run about 80 courses with about 70 faculty over the two years.

We're finding that students are generally interested in

blended learning.

There are some students who are taken aback by the fact that it wasn't known to them when they registered, and that's something that we're trying to do something about.

And at this point I'd like to turn it over to Professor Mallory to talk a little bit about the survey that we did.

>> JAMES MALLORY: Thanks.

I am going to sign for myself, and also use the interpreter.

Really, we were interested in basically four different groups for our survey.

Like it says here, with the hearing, the deaf, hard-of-hearing, and ESL.

And we were interested in the similarities among those, and the differences.

And it's very interesting results.

We've only had one year so far to collect data, so we're looking forward to the next year in getting more and more data to make statistically strong decisions.

But you can see the listing of the different demographics of each of the students.

About half of the students responded to our survey.

We encouraged them.

We had, what was it, two \$50 gifts.

We had like a lottery, so students were motivated to respond, and that helped with our results.

(Laughter)

About 2/3 were male, about 1/3 were female.

Only 4% were part-time, and the rest of the students were full-time.

15% were graduate students, the rest were BS or below.

Again, because of the small percentage of deaf and hard-of-hearing, we only had 18 deaf and 23 hard-of-hearing out of the 582 students.

So we need more data with those two student populations, groups.

Very interesting, 10% of the group were ESL, English was their second language.

So we're interested in comparing the deaf whose second language is English, against the other ESL students.

Okay.

But the survey had 16 Likert questions, and Gary will discuss those later.

We had two open questions, and 4 specifically relating to demographics of each of the students.

Here are some examples of the questions.

We grouped them together.

Agree and strongly agree were grouped together.

And disagree and strongly disagree were grouped together for our results and analysis.

And here are two examples of some of the questions that we may ask if they agreed or not with.

About interaction related to online course.

Next.

The other kind, if it increased or somewhat increased, they were grouped together.

And if it decreased, or somewhat decreased, they were grouped together.

And here are two examples about the interaction with the professor and their peers.

Okay.

Two open questions were, we wanted the quality feedback of the students, the qualitative nature, you know, what do they recommend?

What did they like?

What did they not like?

The final questions were four demographic questions.

You can see those here.

So what I am going to do is have Gary come up and discuss some of the results of the survey.

>> GARY LONG: Is that on?

Just before we give you the results, I just wanted to say a couple of words about a prior study that we did with about 190 deaf waits that came back to NTID for continuing education training, and in the interviews to evaluate the training that they had here at NTID, they began telling stories, and Deb is shaking her head out here because she helped with some of this work.

They began telling us stories that they had at their employment set settings at U.S. air, Motorola, the Department of Defense, and other jobs that they were working on.

And all of those professional positions that they had,

and these are all people that had prior knowledge of programming and computers and so forth, and what they said was when they went to training at their companies, they oftentimes felt isolated, or not able to participate with their peers, didn't feel comfortable stopping the instructor and asking questions.

The things that Karen has talked about.

You know, it was such a pervasive story and consistent story across that group of people that we ended up writing an article about that and documenting it.

But the reason that I bring it up is I'm not here to say that blended learning is the answer that will solve those problems, but I think that when you see the results, it does point to and creates an opportunity for interaction with classroom peers that doesn't exist necessarily in a mainstream classroom setting.

Okay.

Let's go ahead.

This is the percentage of students that either agreed or strongly agreed with these statements about ease of communication with their fellow students.

So these students, 60% of the deaf students felt that they learned more about their peers because the class was online.

And, you know, again, in the stories that I got from the participants that came back that were adult professionals, what they say is that as soon as the workshop stops, the interpreter needs a break.

So when the other hearing people are talking with each other and sharing information about their jobs, their careers, their families, what it's like to work in that environment, the deaf participants are not able to have access to any of that information.

Now, by having part of the class online, that allowed an

opportunity for the students to interact.

And as you can see here, both the deaf and the hard-of-hearing, all students were reacting positively to this, but the strongest reaction was from the deaf and hard-of-hearing.

>> GARY LONG: So again, the deaf and hard-of-hearing students, 60%, roughly, between 70 and 70% are saying that the amount and quality of their interactions with other students are increasing in the online learning situation.

And that's in comparison to traditional stand-up classroom setting.

And here are some of their direct quotes.

>> GARY LONG: For some students, this was the first time that they really had an opportunity to have direct access to the thoughts and opinions of many of the other students in the class, and I guess that I would also throw out the hypothesis that for students who are not as assertive in class, willing to stick their hand up and say things, the online opportunity may also benefit them and give them an opportunity to speak up when they didn't speak up before.

This is for the hearing students also.

Okay.

>> GARY LONG: Now, this overhead refers to the amount and quality of the interaction with the professor.

And here the hard-of-hearing students are responding more similar fashion to the ESL and the hearing students.

Whereas the deaf students are saying, "Yeah, this really gave me more access to the teacher."

Now, in some ways it probably makes sense because the hard-of-hearing students may be able to use more

speech in their normal one-on-one interaction with the instructor.

They may not be as dependent on having an interpreter there.

I don't know that specific fact, but all of this data, as Jim said and Karen said at the beginning, that all of this data is our initial findings.

We don't have large numbers of students in these groups, but based on the prior work that we've done, I would expect that trend to hold up over time.

And these are the quotes from the students then.

>> GARY LONG: The first student commenting on a situation where there's not an interpreter available, which may be the case in a lot of classes where you don't have the resources to support all of the classes.

So having a portion of the class online allows the students to interact with each other, and it can also allow the students to interact with their teacher.

Okay.

>> GARY LONG: This overhead speaks to the overall satisfaction of all of the students to the blended learning experience.

And as you can see, it's all positive.

It's most positive for the deaf and hard-of-hearing, and I would have to assume based on their comments about communication, a lot of that positive regard for online learning is coming from the ease of communication.

That it's facilitating communication with their peers, and with their instructors in a way that doesn't happen in just a traditional stand-up and lecture classroom.

There's only so much -- our interpreters can do only so

much to level the playing field.

Having a interpreter in the classroom does not necessarily level the playing field.

And here are the quotes then.

>> GARY LONG: Jim and I conducted a series of prior studies here at RIT, and John Richardson and the open University in London and I conducted three years of research there with the deaf and hard of hearing respondents.

In almost all cases one of the things that people respond to about online learning is the flexibility of it.

In other words, a lot of these people have other responsibilities.

They have jobs, they have families, they have other things that they need to be doing.

Having part of the class, or all of the class, online gives them an opportunity to fit it in their schedule in a way that's most appropriate.

So it's the flexibility of the timing is really a key factor here.

Okay.

Conclusion.

So the bottom line is that the students were very positive about the blended online learning experience, but the deaf and hard-of-hearing students were the most positive.

And most likely that was coming from the increased ease of communication that they had with their hearing peers and the hearing instructor.

So we're all opened to questions here.

Yes?

>> Audience member: Do I need go to the microphone?

>> GARY LONG: Yes, you have to go to the microphone because of the live captioning.

Thank you.

>> Audience member: Hi, everybody.

Thank you very much.

I enjoyed the presentation.

I just had a couple of questions, and maybe this is characteristic of Florida.

We've been using blended learning for a lot of the same reasons at St. Pete college, and now we're even more and more towards it.

Do you have -- what was your sort of formula?

You know, some people say that the reduced seat time is at 70/30, is it 50/50?

Did you have some kind of formula that put into place for the reduced seat time?

That's one question.

I have one more.

>> KAREN VIGNARE: Okay.

The answer to the first question that you have is that, yes, we were asking faculty to reduce seat time between 25 and 50%.

The reality is that some reduced as little as 10%, and some as much as 75%.

But most of the courses were in that 25-50% range.

>> Audience member: Yeah, because I think that affects the outcome of some of the attitudes, whether it's increased work or linear.

>> KAREN VIGNARE: Yes.

>> Audience member: The second question that I have, another question regarding -- it would be interesting to correlate gender, hearing loss --

>> KAREN VIGNARE: I did.

We're still doing additional analysis on this.

I did look at correlations for gender.

We're not seeing anything huge in that.

A little more positive female is what you usually see, but there wasn't a huge difference there.

And we were actually surprised with the graduate and undergraduate.

We expected the graduate to be more positive, and that has not shown up either.

I mean, they're both about the same.

>> Audience member: Okay.

And then hearing loss, like the deaf versus the hard-of-hearing versus the ESL hearing, what did you find?

>> GARY LONG: That's what the result I was putting up here.

Now, I haven't done -- because it was the preliminary, I didn't do the statistical analysis.

But I can tell from the trends that it will be significant.

The deaf and hard-of-hearing on those items will be much more positive.

Audience member: Good.

I will look forward to the published literature.

>> GARY LONG: You are from St. Petersburg college?

We're working with them.

So I will talk with you after this.

I was going to say that this whole questionnaire was done online.

So if you are interested in that aspect of it, it is a fantastic way to collect data, and survey students and to get feedback in a fairly cost-effective fashion.

Karen can tell you about that afterwards.

>> KAREN VIGNARE: I just want to add one thing about the -- and I know that we're mostly focused on the results for the deaf and hard-of-hearing, but I want to add one thing about the hearing students.

Because some of those numbers don't look as positive.

I just want to make it clear when we show you the full result, that most of those students were in the neutral category.

But their positives were twice their negatives.

There were more than twice their negatives.

So it wasn't like the hearing students were negative about this at all.

They just weren't as positive as the deaf.

This lady had the question earlier.

Can we get her to repeat it?

>> Interpreter: We'll need the microphone.

>> KAREN VIGNARE: Okay.

>> Audience member: I was wondering if there was any comments from the hearing students to your written survey online.

And if there were any impediments to the online learning.

>> GARY LONG: I'm not totally sure I understood the question.

Let me just say that -- let me just say this.

Because I was not clear about this.

All of the comments that I posted up here were from deaf and hard-of-hearing students because that's the focus of this conference we're at here.

We did get comments from the hearing student also, but because we had 500-and-some students in that group, we've not gone through and systematically Analyzed it in the same way that we did for the deaf and hard-of-hearing.

We're going To do that.

>> KAREN VIGNARE: I've done a preliminary coding, and one question was really aimed at getting negative feedback that is, how would you improve it?

Negative feedback.

And the other one was aimed at getting positive feedback.

And even the negative question I ended up with in the preliminary coding, nothing through SPSS or N6, but in actually me going through all of those comments, what I

am see something that even in the negative side I got mostly positive comments.

Like this is still great, but could the professor do this?

Or could the professor do this?

Or could you do this?

The biggest negative that we got from hearing students, and I think fairly from all students was that they were not always knowledgeable that this course was going to be a blended learning course.

>> Audience member: So did you hear anything from the deaf students, they were embarrassed or uncomfortable?

Did you get any comments from the deaf students saying that they were uncomfortable about their writing skills?

>> GARY LONG: No, I didn't get anything to that effect.

But I do understand your comment.

I think that it's a valid concern that if the writing skills of the students aren't at a level that they feel comfortable sharing with the teacher or other students, then that can be problematic.

But we need to think also that they have a time to construct that and, you know, and edit that before it's sent out.

And more and more of our kids now are growing up with IMing, instant messaging each other.

They have all of that I am not saying that it's great grammar, but it gets the concept across.

And I also know that one of our faculty here, and I think that he presented here uses that IMing in the classroom, and the teacher will throw out a question, and the

students will respond to that question.

And, no, it's not perfect grammar, but it gets the concept across.

>> JAMES MALLORY: Also, the online cultural differences are narrower because of the IM language, and watching my daughter IM doesn't look like English.

(Laughter)

But then the cultural differences are very, you know, near together.

>> GARY LONG: Thank you.

That's a good question.

I think that it's right to the point.

I know that there is some concern among English teachers that the evolution of IMing and that being the method of communicating will in some way degrade or hurt language development.

>> KAREN VIGNARE: Are there any other questions?

>> Audience member: The question is in those cases when the hearing students, deaf and hard-of-hearing students study altogether in the same classroom, what are using for helping the deaf and hard-of-hearing students to understand the interpreter, what else?

>> GARY LONG: At RIT there is also the availability or the possibility of C-Print if it's requested by the student.

They have live captioning, so that's the other option.

I guess what that does not allow for necessarily is the direct one-on-one communication that would happen online necessarily.

It's very different.

>> Audience member: Those comments from students that you were showing on the screen, of course, they're very subjective comments from the students.

And you as a professor, how objective or subjective are those comments?

>> GARY LONG: Well, I'm trained as an experimental psychologist, and when I first started doing research I was very focused on numbers, and after 30 years of doing research I've become more sensitive to listening to what people have to say in open-ended comments, and things where there is tremendous validity about what people have to say about their own experiences.

But it is preliminary.

Small numbers.

We want to continue to collect data and make sure that the trends that we have hold up over time.

>> Audience member: Thank you.

>> KAREN VIGNARE: Are there any other questions?

>> GARY LONG: I want to thank the interpreters, Debra Makowsky, and Susan.

Thank you.

Thank you very much.

We appreciate it thank you.

(Applause)

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