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RIT-NTID
IMPROVING DEAF STUDENTS' ACCESS TO TECHNICAL EDUCATION AND INTERCULTURAL
COMMUNICATION THROUGH ONLINE LEARNING
PRESENTERS: ILA PARASNIS, ANTONIO TOSCANO and SIMON TING
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10 A.M.

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        >> Okay. May I please have your attention? Okay. Good morning,
everybody. My name is John Reed and I'm here to introduce Dr. Parasnis.
First I wanted to introduce the two interpreters that we have here. We have
one Sara Jacobs and Jen Prosio and Donna O'Brien, the third interpreter for
us today. They will be voicing and signing for us. Okay. There are
evaluation forms being handed out and I appreciate if you would fill that out
and hand it either to me or you could fill out the evaluation on line. And
that information is on the PowerPoint hand-out there, as well. Now I would
like to introduce Dr. Ila Parasnis, she is a professor for NTID and she has
done a lot of research for this institution and others, as well. Please
welcome Dr. Parasnis.

[loss of audio]
>> Ila Parasnis: I want to quickly show you our presentation overview.
What we are going to do is Tony would first present about the course and how
we developed it, how we presented it and then Simon Ting would come and talk
about the course website demo. You will get to see how we actually were
using it in the classroom. And then I will come and talk about the
successes, challenges and future plans that we have about this pilot project.
So now -- you all had the abstract of the presentation in your hand-outs. So
that's what we are going to do today. So I will now invite Tony to come to
the podium.
>> Antonio Toscano: Here, Ila. Good morning. Good evening. Imagine if
you started your classes with this kind of a greeting, for sure your students
will think you are cuckoo. Instead, it was a natural in our web design one
course which was taught this spring quarter. How could this be possible? At
the basis of our project was our team's belief on the power and potential of
the internet. The person who is credited with inventing the internet growth
hope in life comes from the interactions among all people in the world. The
web design course delivered the spring quarter was following the footsteps of
the vision. The project team also believes the web has become a primary
space for social interactions, social activities including the social
activity of teaching and learning. I'm not talking here about what is not
known as distance learning, but rather a new approach, a new approach which
is more akin to learning at a distance. Learning the way one is used to
learning in the company of peers with a live teacher who can react to the
individual needs and tailor responses and explanations to each individual.
Learning in an environment applies opportunities to show the work and receive
immediate feedback from the teacher and peers. We also believe that the web
is well suited to allow equal access to those of different economic and
political situations. Those who have physical and cognitive disabilities.
And those of different cultures and languages. With this belief in mind, we
approach the task on hand. The task was to teach a course simultaneously to
that student as NTID and at AYJ institute in Mumbai. Synchronously meaning
we would hold one class for all students. Simultaneously means 8:00 a.m. in
Rochester and 5:30 p.m. in Mumbai. That's why good morning and good evening
was our greeting. We proposed to use the best strategy our team has almost a
central collective teaching experience and all available web technologies,
some of which were familiar to us, some of which needed to be tested or
suited to our needs. The course, web design one, introduced students to the
fundamental skills needed to create design to work on the web. Students are
produced to the internet learning basic HTML programming for graphics, legal
issues on the internet and students are expected to design web pages that
demonstrate their understanding and use the basic design principles. That's
the curriculum we worked with. At the course development, we developed a
matrix and broke down the course content into meaningful content units. We
base our course instructional methods on a project basis approach and the use
of collaborative work activities. Broke down the content units into
measurable pedagogical meaningful elements, such as project development
objectives, design objectives, technical objectives and research objectives.
We then developed instructional material such as PowerPoint presentations,
lectures, assignment, textbook, exam, et cetera. Simon will show you some
examples in his presentation. This was the easy part, straight forward, been
there, done that many times. The part that was new to us was the content
delivery and assessment of these objectives. After some research we decided
to use idea tools which is a web based course management and delivery system,
the team felt idea tools would provide a flexibility of using a web-based
course management tool as well as a course delivery platform for us. The big
plus was enlisting Simon Ting and Kathy Clark on our side as core researchers

and collaborators. Another happy opportunity presented itself in the offer from professor Jeff porter for us to use the sprint relay experimental distance learning access demonstration lab. I know that's a long title. We'll call it the sprint relay lab from here on. And all its support personnel there. And all the bells and whistles as our classroom for which to deliver this course. We had eight PC desk top computers, two video cameras with recording capabilities, a smart board to use as an editing tool and a means for all to give feedback on an image or layout that was at the time discussed. Software that enables to connect all the equipment into a network giving the ability to send images from any computer monitor to almost instantaneously to any other computer in Mumbai for the student to see and comment. We had LDC projectors, et cetera. So it was a fully loaded classroom with all technology available at a time. On a typical class day I would arrive at the sprint relay lab at about 7:30 eastern standard time. Soon after the gremlins of the day would follow me into the classroom and they would help out with the magic. They would establish connection with Mumbai using very simple software called Skype. More information can be obtained at www.skype.com. Specifically my assistant there, her name is Arul, with Skype as our communication life line we would fire up idea tools and its video capabilities. We had two video images coming in and two video images going out. Around 8:00 a.m. is our start time, my student and NTID students would trickle in, having the coffee or drinks under their shirts, yawning, trying to wake up, at the same time I could observe through our video connection the students in Mumbai getting ready after a day's work to partake in the learning. The classes would start with some kind of a review of the work that has been done outside of the classroom, flowcharts, sketches, layouts, images would be shown. Feedback would be solicited about this work from both groups of students, almost as if both groups were in a single classroom. We would then roll in to a lecture where I might use PowerPoint. These lectures were pushed via the medium of video to Bombay in a double screen format. On one screen, I would be seeing signing in ASL and lecturing. In the other screen the student would see my PowerPoint slides. Just as the students at NTID would see them. In Mumbai an interpreter would translate my lecture into ISL, Indian sign language. These lectures would be recorded and almost immediately uploaded and linked to NTID tools course management system. And this would be for the benefit of both students in India, they could review the lectures and the students here if they had missed class or if they fell asleep during my lecture, they would be able to see these lectures again. Another activity of our classroom was that the student in this sprint relay lab and the students in Mumbai would be able to show each other the work they were doing on their monitors while they were working on and solicit feedback from the students locally or in Mumbai, interact with each other live and synchronous. At the end of each class additional time would be provided for the students and the assistant in Mumbai for questions and or clarifications. Our students here at NTID would probably leave and go to their following class but I allowed for some extra time for the people in Mumbai. I'm sure Simon will show you some of the functionalities that I mentioned here. But let me elaborate a little bit on the social networking possibility we had of our disposition. With the idea tools students can communicate with each other using what we call a web board which is much like a blog. Use one-to-one chat, use e-mail and use video chat. I strongly believe these capabilities were essential in the creation of this virtual classroom. The kind of experience we are trying to achieve. This virtual classroom if you can imagine simulated all aspects of a live classroom by providing students in both locations with visual auditory captions and other venues to participate in meaningful group and one-to-one discussions. In addition, in this visual classroom all these communications

were archived for later use. There's much more to say and more details to
share but what is really exciting to me is what hasn't really quite surfaced
in our minds yet. We are too fresh out of this experience. I hope the new
insights can be deduced from it and time will sift out wheat from the chaff.
We will know if we really have walked in the footsteps of Lee. Thank you.
Now or later, it's up to you.

   >> Ila Parasnis: Thank you, Tony, for your introduction for exciting
course. I'm now going to invite Simon Ting to show you how we actually use
the idea tools to present this course. Simon.

   >> Simon Ting: I will show you the web design website that Tony used to
teach this course for this project. He had to work with two groups of
students. One was in Rochester and the other was in Mumbai, India. We're
waiting until Kathy can log on to the website. This is the website for the
course. You can see Rochester and Mumbai listed in the banner with a time of
the day, the date and also the weather conditions in those cities. This is
one of the reasons that we used idea tools for this project. Idea tool
sincere very visual. We built in visual content such as multimedia which can
incorporate sign language. All suitable for deaf students. I started
creating idea tools in 1999 and I was joined later by Kathy Clark. Over the
years we added new functionality and new tools. And these all went into the
building of this website. You can see there are two menus, there's a main
menu on top. When you click on something on the main menu you get a submenu
and you can see the course materials are divided into several units. If you
click on a unit you will see the information about that unit on the sidebar
on the left. We have various things in here. We have video lecture,
homework and PowerPoint. There's a massive amount of content and this allows
us to organize the content in a non-linear and yet logical way. With the way
we do this is by using our course builder. I would like to show you the
course builder now. It does take some time to load up. It's a graphical
tool where you can create folders and subfolders, you can drag the folders
around. You can add new course folders. You can drag folders around. Even
put one folder into another folder and make it a subfolder. When you
rearrange things then the new arrangement is automatically saved into your
course. The course calendar is another way of organizing information and
content. This is an HTML-based page. This is an editable document and you
can drag things around. It's another way of organizing the course content.
Any changes made in here will automatically be reflected in the submenu there
at the top. It's automatically listed here, as well. As I mentioned one of
the benefits of idea tool sincere it's multimedia capabilities so I would
like to show you some of the multimedia content that was especially applied
to this course. At the start of each week students would view a video
lecture in order to be familiarized with what they were going to be learning
that week.

   >> Hello and welcome back. This is week two and we'll be working on unit
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   >> Simon Ting: We shot this video of Tony and using a process known as
chroma key we replaced it. We did not have the build a studio set so we had
a lower cost and time requirement to create this site. There are captions
appearing here that are utilizing our captioning tool in idea tools. The
final edited video was saved as a quick time movie and then it was compressed
for realtime streaming. Realtime streaming allows users to interact more
directly with the movie. So I want to show you, you can drag things around.
Don't have to wait for a whole file to download. Some of these files are
very large. So that was one example after video lecture on this site. As
you may know that's a comic that is popular in Japan, read by both adults and
children. In Japan it serves many purposes including educational purposes.
For this project instead of using PowerPoint slides we used the story boards

to present some of the content to be learned. A deaf student with poor
reading skills may be at a disadvantage reading textbooks for technical
information. So we tried to instill the information and present it either as
a comic strip or slide show. You can advance slide by slide, if you like.
You can go back to the thumbnails, click on a particular slide you want to
show. And now I would like to show video conferencing. The video
conferencing tools allowed Tony to give a PowerPoint lecture or show a Manga
comic or course hand-out or assignment. So the students in either location
can see and hear what is going on. We don't have the time right now to give
you a full video conferencing demonstration but we can look at one of the
archived videos. After every class the videos are automatically recorded and
saved and they will be uploaded after class is over.
    >> Good morning. Come closer. I want to feel you breathing.
    >> Simon Ting: Now we would like to show you what will happen on the last
day of classes. We have a kind of closing ceremony. I just want to start
the video.
    [loss of audio]
    >> Hello, everyone. This is very exciting I know we're having some
challenges with the technology -- hello, everyone, this is very exciting. I
know we're having some challenges with the technology but I can see the
future is going to smooth these challenges out. I'm thrilled to be here.
This is the closing ceremony for the web design course that the NTID students
and the students in Mumbai have participated in. You have had a wonderful
experience and this is a wonderful collaboration for both institutions, for
NTID and for AYJNIHH. This is a very long time. The students have worked
together on projects and learned new things about web design and that's very
exciting. I understand this is a new experience, this is a pilot project.
This has been an experiment that we will continue to improve as time goes on
and make possible.
    >> Antonio Toscano: So you experienced the magic that was happening every
day, every class in the classroom there. We would have four monitors, four
different views of different situation. Usually two videos from Mumbai and
two videos from NTID classroom. I have a few examples that I want to share
with you of student work and then Ila will have concluding statements on this
presentation. These are screen shots I collected quickly. This is a record
of a conversation in Skype speaking about culture. Hello, sir. I was
referred to a sir, the first time in my life. You can read the kind of
things that would happen, sir, I have a question inserting a logo in a
header. I would try to explain what to do or try and find out what the
problem might be. And try to solve the problem. You saw the idea tools page
and here is an example of student work that I reviewed and added a couple of
comments and sent back to the student. And graded right down here. Nine out
of ten points. This is a report on the internet. The history of the
internet. The students a little research on how it all got started. These
are some exercise the student worked on about picture resolutions and the
pictured dimensions. They have the files. They could download the files.
Open them up in photo shop and work out whatever is that I was asking them to
do to prepare the images for the web. They would then return the images to
me or return the information and I would grade that. This is a again some
more homework, students went to stock photography available on the web and
they would in this case find an image that I asked them to find for use on
the internet. They had a midterm exam, as well as a final exam. These are
some of the questions and that student earned 94-something percent. These
are some screen shots of web page the student design and developed. At
various levels -- various stages, I should say, those are not finished, they
are just showing progress in what they are doing. The student decided on a
name for the website and it is U.S. to India for deaf. That was the domain

name. Student designed a logo, the Indian flag, American flag, it became our symbols in our web design. These are the topics in the website that they designed. This page is American Sign Language and it contains imagines, contains text and also does contain animations. One of the students here at NTID designed this page. This is the restaurants in Rochester. We're trying to cover interesting cultural differences in this website. And Buffalo wild wings is what is shown here. Typical U.S. food. This is a page actually it's one -- of the drafts of a page about people in Mumbai. So this is a product from the students in Mumbai. Eventually the students added photographs to this one. And here is a page about famous places in Mumbai. Again some more famous places which include text and images. And that's it. Now you're going to ask where was the website, right? The website is not finished. I think what happened is that we plan too much to be able to accomplish in ten weeks. But my gut feeling, my deep feeling is that what was interesting about the course, what was the goal about this course was not a product but was rather a process. And I think for that the course has fully succeeded. We were able to have a process going on between these two groups and be able to make decisions about pages amongst the groups and come up with individual products at this point if we had two more weeks, probably could have put the site together and put it up on the web. I think one of the things that I felt that occurred to me not to put the site on the web is the quality of the language, the English is not quite acceptable to me. It would require another component to the site where they may be perhaps an English teacher helping out the students write the content. These are the kind of things that we haven't really talked about yet but that I think will be important in the next step and so I'm going to leave you with this next step question. I'm going to ask Ila to come and comment on her impressions, the success and the failures because there were some even though we haven't mentioned them yet. Thank you all.

    >> Ila Parasnis: Well, I think both Tony and Simon have already mentioned some of the issues about the web design course that we addressed and resolved but I'm going to go quickly through the successes, challenges and the future plans. We have about this project. All right. This was really an international collaboration. We really think of this as a success of the course. We had two institutes collaborating with each other. We mentioned NTID and then the institute in Mumbai is called Ali Yavar Jung National Institute for the Hearing Handicapped. For ten weeks our NTID students and AYJNIHH students learned together at the same time. We mentioned the NTID students met here in the sprint relay lab and AYJNIHH students met in their computer lab. This course was to corporate the development of communication skills within technical education. We created really an international learning community by using cutting-age technology. This course is developed primarily by Tony Toscano who is a technical fact member from NTID department of imaging studies in collaboration with Rosemary Toscano an English language writing faculty member and myself a research faculty member from the department of research and teacher education. We gave real carefully attention to make the course materials visually informative, linguistically accessible and very interactive in nature, as you saw. We brought different strengths to the project based on different expertise and our interactions throughout the year enriched and refined the project as well as our own perspectives and thoughts about how to teach deaf students. I cannot say enough about the great technical support that we had to make this pilot project a success. Simon Ting and Kathy Clark who developed the attractive website that you saw earlier were invaluable in their support of the project. Both of them worked diligently throughout the project to make idea tools work successfully. We also had Prashant Gahlowt, a student assistant, provide us with technical support for every class held in the sprint relay lab. At AYJ

and NTID we had the support of a computer programmer for setting of the lab there and troubleshooting with Simon whenever technical issues came up. The teamwork that we experienced is really essential to make this type of project successful. We were a great team. We were one team although separated by thousand of miles. We supported each other, readily available, motivated, engaged and despite all the last-minute issues that kept coming up we had fun. After each class, the NTID and AYJ team members continued to discuss for at least half an hour and most of the time for a full hour, the instructional and technical issues that came up during the class. AYJNIHH staff met with students throughout the week while at NTID the classes were held on Tuesday and Thursdays. Arul, the instructional support person there, and Tony e-mailed each other often. Vijaykamor who was our Indian sign language interpreter went beyond his duties as an ISL interpret per and often helped us with technical issues. The collaborative spirit of the team was something that all participants in this project recognize and appreciated. Students in both countries worked willingly with each other and remained interested to try this innovative approach. By the way, I'm basing my comments on the interviews I conducted midway of the course and at the end of the course and with each of the members of the course. The perceptions are based on those interviews. The challenges. We did have many technical difficulties but it's not surprising the first time idea tools was tested internationally. Frequently we would have major difficulties with video because of the slow internet speed. That's one issue that we had to address how to have that immediate access. So maybe perhaps many times videos could not be downloaded fast enough for students in India to see Tony signing. Most of the time the audio would be clear and he would interpret what he heard and the students would see the archived videos later when they met but sometimes we did lose connection with the instructor. Everyone took this pretty good in stride and we're not frustrated. I think the motivation remained high in India and over here because we all felt that we were using a really innovative approach to have this live virtual classroom and real classroom for this course. We did have some barriers to effective communication. As I mentioned, the deaf students in India had severe English language limitations and therefore had to express themselves through the interpreters and also needed help in written communication. We expected this and we had designed a course so that homework could be done as a group and submitted with the help of the instructor in India. However, this barrier of limited one-on-one direct communication between students. It happened but it was interpreters on both sides and we simply ran out of time sometimes. We left half an hour at the end of each class to have students interact but now looking back we believe we need much more time to have students interact with each other. Cultural differences in communication were anticipated. We are from India and Zara who helped students in India is actually an NTID alumni. We could facilitate communication but this is one area one has to be sensitive to and plan for. Student performance assessment was a little difficult because of the differences in the educational system. We anticipated that and we tried to be clear of the instructor's expectations regarding class participation, teamwork, homework assignments, et cetera, but I think we need to hold a pre-workshop for students and the instructional staff for India in the U.S. and make us fully aware of the educational differences. There are some major access limitations -- there are some major access limitations that for Indian deaf students. They did not have computers at home and no internet connection from home. Only one or two students had digital cameras. Thus they are limited in the time spent in AYJ and NTID to do the class assignments and homework. Again, internet cafes are extremely common in India and we are going to encourage them to use them after the class time is over. Our future plans are to repeat the same course

at NTID and at AYJNIHH again to determine the effectiveness of the model we
have designed and refine it as necessary. We will continue to use idea
tools, Adobe connect and Skype and determine the best way we can communicate.
We will use realtime captioning throughout the course. When we used it for
the closing ceremony everyone here in India really appreciated it. We are
looking into that. We will have a technical support person in each classroom
dedicated to the course. That is going to be critical and so it will not
take time away from the instructor to try to attend to these details. We'll
have a sign language interpreter in each classroom, ASL here and ISL there to
facilitate communication in the instructional pace. We will also establish
an active chat group for students that promote social interactions out of
class. I think that's going to be -- we started doing that in the third week
of the class. I think we need to do it right from the start, right from
first class and create an out of class time for them to get to know each
other. I think that will also increase the intercultural awareness. In
conclusion, the model we have developed promotes technical education and
development of English language skills, intercommunication skills and cross
communication skill s.
    The pilot web design course that we taught using this model suggests that
a blended learning approach that uses the internet has much potential for
making technical education accessible internationally. In addition to
thanking the interpreters for this lecture, I would also like to acknowledge
the number of people who helped us make this project a success. We could not
have done this without their wonderful help. You can contact us, any of us,
I have just included my contact information here for you. Thank you and I
hope we have a little time to take questions. Thank you very much.
    [APPLAUSE]
    >> Academic schedule is the same as our academic schedule?
    >> Antonio Toscano: Yes, we started the course at the same time and ended
it at the same time. So we matched because the student in Mumbai, already
graduates. They were working during the day. Then at 5:30 they would go to
the institute and take part to experience. So we were able to match.
Correct?
    >> Ila Parasnis: Right. This was something that I went and negotiated
with the AYJNIHH to make it this way. They created the opportunity for the
ISL instructor as well as the instructional support person to come and teach
students. This was a pilot. Any other questions?
    >> My question is a very basic question.   [inaudible
comment]
    >> Ila Parasnis: I presented on this issue on Monday and what I said is
still true -- is that there are four colleges that accept deaf students in
India. But none of them really provide any support services like you see
here so there isn't really post secondary opportunity for deaf people unless
they go to hearing colleges. They are just have the same entrance
requirements and they take the same classes. So this is one way we are
hoping that technical education can become accessible to deaf young adults.
    >> [inaudible comment]
    >> Ila Parasnis: No. What we did was we asked the director of the
institute, Ranjsyee -- to select students who had some exposure to using
computer. We did not have any basic requirement except they know the
computers -- how to get on the computer and they had finished their tenth
grade high school education. The students volunteered to come and go through
the training.
    >> [inaudible comment]
    >> Ila Parasnis: Yes. Right now for the pilot project we -- people at
NTID took the course for credit. They did three credit hours worth of work
and they got a grade because this is an accredited course at NTID to teach

web design. The students in India only received a certificate of merit.
Just says that they attended ten weeks because at this time the AYJNIHH was
happy just to have the pilot course be done and expose the deaf students to
the possibility of learning this way in the future. If we -- when we refine
our model and when we get everything worked out a couple of times, our goal
is to start providing some kind of number of courses that people could
potentially take and get certificates as continuing education certificates.
But that's in the future. At this time, no.
    >> Antonio Toscano: You are probably getting to issues of credits and
payments for a degree, but this is --
    >> Ila Parasnis: That was not an issue. This was not an issue here. Any
other questions? Thank you all for coming.
    [APPLAUSE]