CALL TO CSB
3-12-02

JD: Good morning Techie are you there?

T: Good evening, Jim. The rest of the members of the group are here.

JD: Excellent. How is the volume coming through from this end, please?

T: Good enough but if you could make it a little louder that would be a lot better.

JD: O.K. I am speaking a little louder now, how is that Techie?

T: O.K.

JD: Good. That is fine. Well, I have the three folks with me that I promised would be here today and I am going to introduce them to you. You should have their photos and their titles.

T: Yes, I have them.

JD: Well, this is Laurie Brewer sitting right here. This is Vince Daniele. And, over here is Karen Christie.

T: O.K. Jim. Here with me, this is Veronica Templo, Jonathan Tusalem, Nimfa Viernes and then we have Cynthia Alcantara and Joy Cristal.

JD: O.K. Excellent. What I thought that we would do is basically run the teleconference the same as we did last time and we will tell you who it is that is speaking from this end and then if you could do the same from your end. And, then this time, Techie, what I will do, is I will repeat some of the questions because we have an audiotape that we are running of the teleconference and last time, we missed a little bit. So, I may do some clarification as we go through our discussion and by the way Techie, within the week, we will be sending to you the transcript of our last discussion so you all can have a look at it and that I think will be helpful when you look at that compared to the materials that we sent to you.

T: Yes. O.K.

JD: So, why don't we get started, Techie and I will start by asking Laurie, Vince and Karen to talk with you a little bit about how it is that we assess our students' basic skills when they come to NTID, particularly in our basic areas of mathematics and English reading and writing skills. So, why don't I turn that over to them and have them chat with you a little bit about that.

T: O.K.

JD: This is Vince Daniele, Techie.

VD: You may know that we have students here who study for two-year degrees and for baccalaureate level degrees. From what I have read about your program, I know that you have some students in certificate programs and then other students who continue on for the bachelors level programs. We find that it is most helpful for the students who are in our two-year degrees, to give them a test we have developed here. And, the test really is an assessment of what might be termed basic skills that are at the pre-algebra level which includes fractions, decimals, percents, some concepts of being able to sketch a given mathematical situation. Then we also do the same test, it is a 48-question test that we will share with you when Jim gives you a package of our materials. The same 48-question test includes several, about 19 questions that are related to skills with algebra. They are broken down into approximately, I believe 12 or 14 questions that would represent what we teach in our first or introductory algebra course and there is some overlap between those 14 basic algebra questions and then algebra questions that might be characterized as intermediate level algebra. And, we find that many of the students in our two-year degree programs do need placement at either pre-algebra or algebra or intermediate level algebra level courses. The students who are going to study in our baccalaureate programs, we look at many of the same placement instruments that are used with hearing students across the United States. They take college entrance tests and perhaps our structure should be explained. The mathematics department at the National Technical Institute for the Deaf teaches the mathematics courses that will be required to serve students in two-year degree programs; in the associate level program. Students who are studying at the baccalaureate level take their mathematics mainstreamed into other colleges of the Rochester Institute of Technology. So, the mathematics department in the College of Science uses their own placement test to place students as they would all students who come to RIT. And, that is a very traditional college placement test which is really an assessment of algebra and pre-calculus kinds of skills.

JD: But, Techie, the tests that Vince is speaking of was developed here and used by us because when we had some of the standardized tests and they were applied to our students, our students, where some of them were almost scoring at chance level or below. So, it was necessary for us to develop our own instrument and through the years although it is not a very sophisticated instrument, what has happened is, it has been very useful for us in helping us to place our students in the courses that we offer them and then the mathematics courses that are related to the technical curriculum that we offer, Techie.

VD: Yes, for example and I, if I can add this, when we look at our basic algebra, we call it a foundations of algebra course, there are 14 questions on the test related to the foundations of algebra. And, when a student has nine of them correct, we determine that, that is probably enough to skip the foundations of algebra course and move into our intermediate level algebra which is a course that we call applications of algebra. It is interesting that I can tell you this, that on a test of 48 items, our average entering student will probably score about 20 to 25 correct. So, that would give you some idea of how the students do on this placement test. And, in fact, if a student has 24 correct, we tend to look at, if a student has over 50% on the test, we tend to look at that as being strong enough to be placed at the intermediate level. We try to respect what it is our students have studied in the past and the purpose of our testing is to facilitate as an appropriate placement. We are not trying to hold the students back.

JD: And, Techie, that is the mathematics. And, we will come back to that in a second. But, before we go any further, I would like to ask Karen to give you a brief overview of how it is that we assess the students' reading and writing competencies in English.

KC: In our English Department, here at NTID, it really includes three strands; the first one is related to reading and writing skills.

T: Please speak a little bit louder.

KC: Our Reading and Writing Department has three strands; the first strand would be focusing on reading skills. The second strand focuses on writing skills and the third focuses on literature. So, there are three strands. So, really we have three areas that we really look at when we assess. And, we had just recently started using what is called the ACT, which is a test, a standardized test for analyzing those skills. Now, you have to understand that the level that we decide, for example, in our history of NTID here, when we give the test to students who have already been placed, we do, do that. And, then what we do is to place them and then we see if they match what expectations we have for future students. So, that is really how we assess those three components. Some reading is involved with that, of course. And, also with the writing skills, again, we have developed our own type of testing for placement and over our history, we have used the Michigan and California standardized tests. Those two have been fairly successful. But, we found that they don't provide enough information about our students' writing skills. So, when the students come here, we give them an NTID entrance exam. Basically, we ask them to write an essay about maybe some past experience they have had or what they expect about NTID and then the faculty within the English Department will assess those essays for grammar, for sentence structure, vocabulary, how advanced the writing is and so forth. And, that will help with placement for those students. Now, the reading exam, I think before we used the California standardized testing, we added more vocabulary? Correct? So, our English assessment is a little bit, I would say perhaps makeshift. We kind of throw things into the mix. We take, we borrow from standardized tests that are used for hearing students and we also use standardized tests but we try to tailor those to match our students to help make the best placement in the appropriate level of English where they should be. Now as far as the literature stands, the reading and writing curriculum basically has four levels, four very basic levels. So, we break those down according to how the levels that we need to take place with students. And, then when they pass out of those four levels in reading and writing, they can move into literature strand. For the AOS students that are here, we feel that level three is the appropriate goal. But, for the AAS students who goal is to perhaps transfer into the bachelors level, then we look at level four. So, we really have two types of students that go through the English curriculum here at NTID.

JD: Techie, I am going to ask Laurie to talk to you know a little bit about how we have crafted our curriculum in mathematics and our curriculum in English and how that relates to the way that we have constructed our overall curriculum within the college because what we have attempted to do is to reach the students at a certain level of skill and then to create in effect, a kind of ladder for them in those basic skill areas. So, I am going to ask Laurie to talk about how those basic skills and the curriculum that we have constructed tie into the overall curriculum of the college. So, now you have heard Vince talk about how we assess them in math. You have heard Karen talk about how we assess them in English. Now, I am going to ask Laurie to kind of give you an

overview of the courses that we put in place in that curriculum and how it fits within the university structure.

LB: O.K., as you have heard from both Vince and Karen, that basically we have two responsibilities within the college of NTID. One is to prepare the students for two-year degrees, for graduating with the two-year degrees and having the appropriate English and mathematic skills for those two-year degrees. Our other responsibility is to prepare the students for continuing on for baccalaureate degrees in the other colleges of RIT. So, when we construct the curriculum, we have to work with those two groups of faculty; the technical faculty who are preparing our students to exit with the two-year degree. We need to work with them to understand what the literacy and the mathematic skills they will need on the job; the actual applied skills on the job. So, we work carefully with them to understand those needs. And, then we work carefully with the faculty in the other colleges of RIT who teach mathematics and science and English to understand and make sure we are clear on what their entrance level skills are in those colleges. Then we design the curriculum to be developmental so that we know what the range of skills are that the students come to us with. And, we have a curriculum that theoretically, a student could come and start at the first level of the NTID curriculum and progress through four different levels to then continue on to the baccalaureate degree. And, that is our goal. Our goal is to make sure as Karen said, at that third level they have enough skills to graduate with the two-year degree and apply their English skills and their mathematic skills in their workplace. And, for students who continue on to the fourth level in the curriculum, that is preparing them to what we call cross-register or mainstream into the other colleges of RIT. And, that we work very closely to make sure that the extra skills of that fourth level are the entrance skills in the first courses in the other colleges.

T: May I ask a question now?

JD: Yes, please.

T: What are the minimum and maximum competencies for each of those levels that you have mentioned?

JD: O.K., Techie, let me repeat the question. The question is, what are the competencies that are required at each of the levels – one, two, three and four.

VD: I can talk about the mathematics levels. At the first level is what we would call, I believe it would be appropriate to label it as a pre-algebra level. We have two courses at that level; one is an introduction to mathematics course with a focus on the way language is used in mathematics. It is a study of fractions, decimals and percents but many of our students are 18-20 years old and are still struggling with those concepts, so we make a real effort to make sure that we are not doing a rehash of drill and practice type of activities. There is an emphasis on using language and the English conventions that a student would find in mathematics. We have found it necessary to write many of the materials for that course ourselves because many of the textbooks that we have found are simply drill and practice. So, for example, we might say that a student lives 20 miles from school and commutes every day and when the student is ¾ of the way home, how much of a distance is left? And, instead of trying some mechanistic approach to how that

would be solved, we make sure that the students are able to sketch a number line that represents a distance of twenty miles. We talk about breaking it into four parts. The student is ¾ of the way there. The question is, how much is left? Because we also emphasize the question might have been how much has been covered? When people visit here, I would be glad to share some of the materials and talk about some of the things that we do at that level. There is a second course at that first level that we find some students need and some do not but it is actually labeled a preparation for algebra course. The second level up is primarily our introductory algebra level. As I believe I mentioned before, it is called a foundations of algebra. The third level tends to be some of the courses that are specific to particular technical programs. It is our intermediate algebra. It is a trig course. In fact, it is two different trig courses. We teach a trigonometry course that is used by students when they read blueprints and machining. Many of the machining tools cut circular kinds of pattern. And, so a great deal of trig is involved when you are talking about the radius of a cut. And, so we have created more than one course at our third level to serve specific majors. And, then our fourth level is intended to bridge into baccalaureate programs and we have a course that is called the advanced math which is a very traditional pre-calculus course. When I say traditional, I mean the topics are traditional. A study of functions. A study of rather advanced algebra and we also have another pre-calculus course that is called explorations in college algebra that does not include trigonometry. It is intended for students who will be taking business degrees and a couple of other baccalaureate programs that don't require the use of trig. And, we also have a preparation for statistics course at that level and for some students, we find it helpful to offer a concepts of calculus which really is a very basic introduction to calculus at that level, before bridging into a full-blown, rigorous calculus course in a baccalaureate program. And, that really is a summary of the four levels that we have.

JD: Techie, I am going to ask Vince a question. If you had to divide those courses, level one, level two, level three, level four, for someone… for a hearing person who was working their way through an academic track at a junior high, high school, pre-college, college, how would you characterize level one, level two, level three and level four?

VD: I believe it would be appropriate to say that level one is a junior high school level. And, then level two would probably be at a first year or second year high school level. Level three would be a second or third year high school level. And, level four would be a senior, fourth-year high school kind of level. But, it is also what one finds often here in the states with a community college level of mathematics. It is not unusual for community colleges serving any population here in the United States, to be teaching courses that are very similar to those same kind of levels.

JD: So, Techie, so what you could see is that we have a wide range of courses in mathematics where students are placed on the basis of the assessment that we do and that gives them the opportunity to develop a competence that they need to be successful. Now, what I am going to do is I am going to ask Karen to….. I am sorry.

VD: Could I continue with just two other things? I would like to just suggest that Laurie and I had talked about this at some length. There are developmental questions involved. As Laurie has said, there is a path where if you look at our curriculum map you could see that a student could start at the first level and work his or her way right up through the fourth level and into a

baccalaureate program. What we have found is that some students can do that. But, we have also found that quite often if a student arrives here at 18-20 years old, and is still functioning at level one, it sometimes is difficult to move through all four levels. And, students will exit after a level, the second level or third level of a course. And, I will tell you that for the two-year degrees here at the college, some of the programs require courses taken at the third or fourth level. But, the minimum college requirement is that students take at least one course at the second level. And, incidentally, we should probably tell you that we label the levels, A, B, C and D that if anything that you see here, level A being the first, we will make more of a reference to use of letters than numbers. But, the minimum exit requirement is three credits of mathematics at level B. And, one other thing that I would like to say before moving to Karen again, when we talked about placement, I talked about the placement test that we have used. Laurie has provided terrific leadership in regard to responding to student needs and student concerns. And, our students here have expressed to us a concern that they don't want to see everything based on the results of one test. So, in as much as we accept about 200 to 250, probably closer to 250 students a year, we find that it is possible to give every student an interview after the test to talk about how they felt about the test. We look at their high school or previous college experience to see what courses they have taken and we also look at the results of any standardized test such as the college entrance exams that are typically given across the United States. And, we put those four factors together; our in-house test, any national test results that we may have, the students' background in regard to transcripts from high school or another college and the interview. And, occasionally, we will have a student say to us that he or she wants to be placed higher than the test results would indicate. I think the interview serves a dual purpose of asking the students about their interest and how they felt about their results, but it also gives us a chance to talk to them candidly about what typically students will, what kind of results are typical for students who want to start at the B level or the C level or the D level. So, it is a delicate process that is not simply an on/off switch, if you will. It is not simply a pass or fail, here is the cut-off score kind of thing. Sometimes we look at student maturity. If it is an older student returning to school, any number of factors can go into a decision where we will say let's say let's take a chance in this instance and maybe we will say to the student, look, in the first week or two of the class, you may say to us, you need to drop back one level. So, I think that adds something that I feel is important.

JD: Techie, what I am going to do is ask Karen now to respond to the same question which is what are the characteristics of level A, level B and level C or one, two, three and four and how do we make decisions.

KC: Before, Laurie talked about developmental layers. And, I think you have a good picture of what our English curriculum looks like as well. Let's start, for example, with the writing curriculum. We assess, with the NTID writing test and then we place the student in one of the first three levels. Actually, the academic writing essay, if they do well in grammar, it means that they have probably like an 8th grade level. They would be placed in level three in our scale. And, below that they are working with very basic skills. Deaf students tend to arrive here with a variety of skill levels. The second level they would be building on sentences and vocabulary and by the third level, they are approaching essay skills and by the fourth level, that is a bridge to RIT courses. So, that means that the fourth level is very important to have academic writing skills, that they have appropriate grammar, essay writing skills and the curriculum is broken up

into the reading strands, the writing strand and the lit strand. They are really not totally separate. They are integrated. So, of course, in a reading course, they are going to do some writing. And, in a writing course, they are going to be reading. And, so in a level two, if they are going to do level two writing, they are going to take level two reading first because we believe that it is important that they be able to read at that level first. And, that will establish the guide or the model that they will be able to write based on. So, for reading skills, level three is about an 8th grade reading level. Level two is about 7th and the first level is, as students arrive, there is really no minimum competency. So, I can't really give a grade level for the first level. That one probably has the most variety with it – that first level. We do tests first and then make the placement decision. But, we do talk with teachers and students and sometimes we have clearly made a wrong placement and so, we need to move the student either up a level or down a level, depending on their skills. But, that decision happens between the teacher, the student and the chairperson. They sit down and have a discussion and make a decision if the level placement is proper or not.

JD: Let me give you a sense, Techie, of (end of tape side 1). Karen said about 8th grade reading level for a level three. About a 7th grade for a level two and for a level on, below 7th grade- 6th grade and below. To give you an idea of how that fits in the national distribution of deaf people in the United States, the average reading level for someone who exists high school, who is deaf in the United States is about the 4th grade reading level. And, at NTID, we expect for entry, an overall 8th grade achievement level. Now, that overall 8th grade is across a variety of different competencies. So, what you hear Karen saying is 8th grade is about our level 3. Now, what I would like to do is I would like to turn…..

VD: Can I add one thing? You might be interested to know on the mathematics side, about how many students are entering class every summer, placed at each level. We have about 20% of our entering class at that level A, which would be in a pre-algebra level. And, we have the majority of the students, perhaps 50% placed at level B and then another rather large section of maybe, perhaps it is 40% to 50% at level B and then another 20% at level C. And, then the remainder are at level D. But, I want to emphasize that group of 250 students is largely a group of students who will be studying at the associate degree level. Many of the baccalaureate level students are directly admitted into other colleges of RIT. And, so I want to be sure to communicate that yes, we have a large number of students functioning at our levels A, B, C and D, but we also have a large number of students who enter directly into the very traditional college level courses. Because of our structure here, I don't necessarily have too much to do with them because we teach the mathematics here for the students in the two-year degree programs. But, I guess it is important to see that our range goes from everything to pre-algebra right up to students coming in ready for calculus. And, there is a little bit of distinction between those who are going to pursue two-year degrees and those who will be pursuing a baccalaureate level program.

JD: Techie, I am going to ask Karen to give you the same percentages as relates to our level placements for English.

KC: Well, I would say that most of the students are in the middle two level – between level two and three, I would say is where most of them tend to be placed when they come in. For the top level and the lowest level, I would say each of those comprise 10% and the bulk of the rest are in

the second and third level. So, really, it depends on the student's background. Some of them can move through the levels very quickly and some students might start really, when they get here their English is almost, they really have to… it is really hard for us to sometimes to predict what the student's success is going to be based on the level of English when the student first arrives. We look at their English, reading and writing skills and but there is a lot of learning that happens here through those levels. So, how they progress is really individual.

JD: Techie, before we go to questions and answers, I am going to ask Laurie to talk just a little bit about again, the tie of our different levels to our curriculum within NTID because, you have heard now that we accept students at a variety of different levels. So, I would like to ask Laurie to talk a little bit now about how those tie to the technical curriculum that we offer.

LB: And, before I focus again on the technical curriculum, I just want to review again that we have a group of students who place directly into the baccalaureate program. Those students take the regular standardized college entrance exam. And, they meet exactly the same standards ars the hearing students are meeting for entrance into those colleges. So, that is how that initial distinction gets made. Remember that 40% of our total population are in baccalaureate programs and 60% are in our two-year programs. So, now I am going to talk about the two-year programs. So, in the two-year programs for the mathematics and science requirements, Vince had mentioned that there is a basic math and science literacy requirement here at NTID for all students. And, that is they must take one mathematics course and one science course at out B level or our second level or higher. Then, there are additional science and mathematics requirements for different technical majors and those will vary quite significantly depending on the technical major. So, for example, for our art degrees, the one mathematical course is a B level that will meet the needs for mathematics in those degrees. But, students who are pursuing more engineering-related degrees, like robotics or who are doing applied computer technology, those students will take more mathematics. And, those requirements are defined by the technical faculty and then they work with them to actually design the courses to make sure that those fundamental math courses and then the applied mathematics courses are meeting the needs of the specific technical major.

JD: Excellent point. O.K., so that is an overview for you of the basic competencies that we focus on in mathematics, English and an idea of how they tie into our curriculum within the institution. They don't exist in isolation, Techie. They are an integral part of the overall developmental scheme that we have put into place for our students as they enter and then work their way through our curriculum. Now, we have got about 15 or 20 minutes left and I would like to leave those for an opportunity for some questions and answers. So, if you would just simply go ahead and fire away and we will do the best we can in responding.

T: I have one question. When students get stuck or do not move up to the higher level, _____are they not allowed to move up to the _____or do they have to finish off first this basic process before they can move up to the second part.

JD: O.K., so the question Techie is, when students get stuck and they start having difficulties at the different levels how do we deal with them? Do they have to finish the level and competence before they move forward? I'll ask Laurie to respond to that.

LB: To start at the A level, if they have both A level, the first level, the mathematics and reading courses, we tend to have them in intensive English and math courses with taking only maybe one technical course maximum. Once the student is at the B or C level in their English and mathematics, they will be taking technical courses with their basic English and math requirement. So, that is the general scheme. It is only at that first level where they won't be taking many technical courses where we have some students who don't know which technical majors they want. The curriculum is designed based on our history and experience that any student that we accept we feel that we are going to be able to assist them in certification at either the diploma level or the associate degree level; the two-year level. So, we are expecting that even he students that come in at A level will be able to exit here with a degree. We try to make sure, we are constantly monitoring our entrance requirements and placement procedures to make sure that we are not accepting students who cannot successfully complete a degree. So, does that help you?

JD: Let me ask Laurie one additional question. Laurie, if a student is taking a level 2 course and is having a difficult time passing it, takes it and doesn't get the grade that is required, do they move on to a level 3 course or do they stay at a level 2?

LB: They must pass the level 2 to move on to level 3. Except as Karen said, if the teacher recommended, if the teacher saw something that indicated that it would be appropriate to move to level 3, only in that situation would the student move forward. But, in general, they would not move forward. But, if they stopped at level 2, they could get a diploma from here. And, if they are at level 3 or level 4 they can complete the two-year AOS degree. So, it is only at level A that we get very concerned if they get stuck in level A. That is a big concern for us.

JD: I think Karen wants to add something.

KC: Yes, maybe just to clarify to move up to a next level, they do have to be able to pass the course before they do that or show evidence of the skills that we expect. Either of those two. So, that way they can move up. Now, if we find that a student is getting stuck at a particular level, we ask them to take the course again. And, then if they don't do well, we continue to ask them to take the course to see if perhaps more time is all that they need to allow them to pass and develop the skills necessary. It is the same with the math program?

VD: Yes, I would say generally it is. I will say one thing about the mathematics. Institute policy here is that if you pass a course you are entitled to go to the next course. But, we will often tell students who receive a grade of D as in A, B, C, D, yes, they have passed the course, but perhaps they would be well advised to take it again to improve their grade just so they will be ready for the next level. Now, if the course is a terminal course, for example, in mathematics, Laurie mentioned that perhaps an art student wouldn't need very much mathematics. They would take one required course. The student passes with a D, he or she is done and has completed his or her math requirement. But, if a student is in one of the more highly technical programs in regards to

the use of mathematics, we might say to the student look, you have two more math courses left, we find it would be wise if you took the course again just to raise that D to a C or a B and it you might do better in subsequent courses. But, this of course, gets right back to what I said earlier about developmental issues. If a student arrives at level A and is struggling, has had a history of struggling with mathematics, yes, we can move him or her through the levels but, the higher you go, the tougher it may be.

JD: Techie, this ties into some of the discussion we had in our first meeting. Let me see if I can summarize that. A student comes in and says I want to be an engineer. I want the associate degree in engineering. We say O.K., fine. We provide them with the assessment in mathematics and reading and writing and let's say we find that as a result of that assessment they are at a level one in mathematics. Now Vince has just told you that, no Laurie just told you that in order to get the degree in engineering from here you have to move all the way through to a level four in our mathematics. So, now we have a student who says I want this and then we say to them yes, and here is where your skills are. We don't say to them, Techie, you are never going to get there. We say if you work hard and if you study, you may be able to get there and we will encourage you to do that. Then the student starts taking the courses. And, this ties into the question that you asked. So, a student starts to take the courses now. They do well in level one. They move on to level two in mathematics. But, now they get kind of stuck in level two and they just make it into level three. Well, while all of this is going on, the students are working with Vince and with their counselor who is saying you may still want engineering, but engineering may not be a place where you can go with those kinds of skills. Let's start to think about a curriculum, as Laurie said, like the arts which only require a level two and you are at a level three. Therefore, you could succeed in the arts. So, that is where the counseling, the entry skills, the student desires all come into play as we begin to talk with the students developmentally about where they can go, where they should go and the like. So, that kind of ties back, Techie, to our first conversations that we had last week about the career development issues.

VD: And, can I add, some students will start at that lower level and will be able to get through each of the levels and succeed in that engineering program.

LB: I think that we are now around I think it is about 35% to 40% of our students who are in baccalaureate programs now, started with some developmental work here at NTID. So, we do have success in assisting students progressing all the way through the curriculum. But, we also know that we need to maintain those two-year degrees, because some students will not succeed, but are very smart, very bright, very talented and with a good two-year degree can have a good career.

JD: But, Techie, that is why we constructed multiple levels within our math and within our English and multiple levels within our curriculum for the students so that there are opportunities for them to succeed within our curriculum. But, every single curriculum is tied to the workplace and to a productive job when they leave and that is what we will be talking about on the 15th, this Friday.

T: I have another question. Regarding reading and writing, in the English language, what is the level that is required for the, I think that most of the courses that you have are all really technical

courses. What would be the highest level that is required in terms of the reading and writing for them to be able to move up to those technical courses?

JD: The question that I understand Techie, is for the students in our English, what are the minimum requirements that they have in reading and writing in regards to our technical curriculum either at the diploma, the AOS or the AAS?

T: Yes. That is right.

JD: O.K., I think Laurie has a comment.

LB: I am going to try to answer that and ask Karen to help me out too. Within the technical courses students will have a variety of skills. However, we try to make sure that they are at the second level of English before they begin serious technical studies. This means that they are reading at a minimum of what we call 7^{th} grade level. But, the challenge for the technical faculty is they will have students reading at 7^{th}, 8^{th}, 9^{th} grade. They have a variety of reading skills. And, one of the big variables in reading is how independent students are able to read. Students who are at the 7^{th} grade reading level tend to need more assistance and preparation for learning from the text. Once students are at the 9^{th} grade level then they become much more independent readers. And, the students here who cross-register, if our students are reading at the 10^{th} grade level, those students are cross-registered. We have very few students here who are reading 10^{th} grade level that are here within our programs here. But, we take in many students who are reading at that 4^{th} level that Karen talked about which is around the 9^{th} grade and many of those students with assistance from us do successfully enter baccalaureate programs. So, hopefully, that helps a little bit.

JD: Techie, does that help provide some understanding?

T: Yes, Jim. One more question. With regards to the deaf population in the last ten years, at what level do those students who graduate from the two year certificate course, at what level do they finish in terms of the reading level? Do they go on to the second level or move up to the fourth level _____?

JD: O.K., so the question is over the past ten years, for our students who come in, at what level do most of them exit with their certificates or diplomas or associate degrees from NTID?

T: Yes. Reading level.

JD: O.K., the reading levels now you are talking about. Maybe what I would like to do is, let me rephrase that question a little bit. I'll make it more complex for Laurie and Karen to answer. The question that I am going to ask is for students who come in at level one, where can they expect to exit? For students who come in at level two, where do they expect to exit? For level three, where? And four level four? Because, Techie, I think your question is kind of an average question. I think it needs to be more specific. For example, if a student comes in at level one, what is the level that they can expect to exit the institution at? And, then level two, what could we expect there? Then level three and then level four.

LB: Our experience over the last 30 years is that for students entering, they will make two levels of progress in our curriculum. So, if they start at level A, they will end up at level three. If they start at level two, they will end up at the fourth level. If they start out at level three, they will end up at, they have a good chance that they will end up at fourth or in the other colleges of RIT. So, that gives you a sense of the progression. Now, we have two types of two-year degrees. One is called the associates of occupational studies. Students only need to get to the third level in the English curriculum to complete the associates of occupational studies. We have a second two-year degree that is called the associates in applied science. That degree requires students to be able to study in the other college of RIT which means that they have to finish the C level and they have to finish the first level of English courses of a baccalaureate program. And, we have students who come in at the third level and the fourth level who will finish the AAS, the associates of applied science and have progressed through the first year of English requirements for the baccalaureate degree. Other students will come in at the second and third levels. They will finish AOS degrees, completing at the third level. So, it is kind of a complex system.

JD: I am going to ask Vince the same question or to respond to the same question about math.

VD: I would say that for mathematics it is important to remember that the students are not required to go through all four levels in order to get a two-year degree. The minimum institute requirement here is that they take one or more courses at level B or higher. I don't do much with the English curriculum but I think I am correct in stating that the AAS, the associate of applied science is very similar to what one might find in many community colleges across the United States and typically what would be called first year English, freshman English in some colleges is required for that AAS degree which is why the students who are getting an AAS need to take at least the first year English course in one of the other colleges here. But, for mathematics, we have no such requirement and students can get two-year degrees, both AOS and AAS by taking all of their mathematics within the college of NTID. And, I wanted to say one other thing about the developmental aspect of our curriculum, particularly in regards to mathematics. I think it is fair to state that when the students arrive sometimes at level A or B, quite often it is not their fault. It is the function of the program that they were in from when they were young students; four, five or six years old all the way up through when they were eighteen. They may have been in a program where they were taught by someone who was certified in deaf education but may not have had a mathematics background or they may have been in a mainstreamed program with hearing students where the communication was difficult. So, we do find that with mathematics, some of our students who come in at level A or B when given appropriate instruction with the ability to communicate with their instructors, take right off which is why which gets right back to something that Laurie has always emphasized. The path is there. You could come in. A student could come in here at level A and conceivably go right through a baccalaureate program. It doesn't happen often. But, a student will exit with a minimum level B requirement or they will take some C level mathematics and get some trigonometry or some advanced algebra or that kind of thing but it is quite often, this is not a situation where the student has some sort of a limited potential. It is often a function of their background. We really try to advocate for our students going as far as possible.

JD: So, the curriculum is constructed again, Techie, in such a way that we are trying to optimize the probability of success, create the paths so students can be successful, assume that students will be successful and then provide them with the support to be successful. And, then they, as Vince said, then encourage them to go as far as they possibly can with the realization always sprinkle with the reality of keep in mind young person, this may not be the curriculum for you. You may not be able to achieve the level. But, if you are not, we have something else that you could study. Techie, I think we have time for one more question. We are almost at 8:00 and I want to get these people to their classes. So, why don't you give us one more question.

T: Aside from the subjects that these students go through, do they have tutorial classes that support them related to these skills?

JD: O.K., the question, Techie, as I understand it is do we have tutorial or other support services outside of the regular classes that are taught by our faculty. I'll ask Laurie to talk about that.

LB: All of the faculty are responsible for providing individual tutorial support for the students in their classes. So, the faculty provide that. We also have a beautiful learning center right in the center of the college which is staffed with both professional tutors and with peer tutors, our advanced students can become tutors. And, students use that during the day and in the evening. So, yes, there is tutorial support from individual faculty and from a learning center available for students.

JD: Techie, when you arrive, one of the things that we will have as a part of your introduction and tour will be a visit to the NTID Learning Center, our Self-Instructional Laboratory. So, you will have an opportunity to see not only the classes where we do the formal "traditional" instruction but you will also see how we have incorporated a tutorial and support model to provide students with additional support tutoring outside of the class. Well, we are at the end. What I would like to do is just a quick summary. I would like to say that we will send you a few things, Techie. I am going to ask Vince if it would be possible for him to get us a copy of the math test that is used so that you can have an opportunity to see the mathematics test that we use and we will post that to you. I am also going to ask Karen if it is possible to have the NTID writing test sent along to you and also examples of California, Michigan and ACT. So, you can see what those tests look like. What I will also do between now and the time that you arrive, is I will point you to our mathematics and our English curriculum on the World Wide Web so that you can get an opportunity to take a look at those courses as well. So, between now and the end of this week, we will pull these materials together and we will post them over to you.

T: One more thing, Jim. _____.

JD: What we will also do is send you a description of the different levels of the curriculum in mathematics and in English so you can see how those courses relate to the different levels that we are talking about and how they relate to mathematics and the English tests scores as well. Techie, thank you very much. I think we have had a wonderful conversation. I would like to thank you all at that end for participating. I would like to thank our colleagues here and I haven't introduced our two interpreters – Karen Finch and Kathy DeRock have been interpreting for us.

I want to express my appreciation to them before we leave. You all have a good night sleep. We are just about to start our day!

T: Yes, O.K.

JD: O.K., we will see you on Friday. Bye.