

Next Step Program "Best Practices and Success Stories"

<i>Project</i>	<i>College</i>	<i>Description</i>
Building a Virtual Community	Dutchess CC Best Practices, Tuesday, June 10, 2003 @ 9:00 am,	Ellena Reda, Program Coordinator, Math Instructor, and Math Curriculum Leader, from Dutchess Community College, will demonstrate ways in which Blackboard can be utilized to foster community spirit and good communications among faculty teaching within the Next Step Program. The Program at Dutchess is staffed primarily by adjunct instructors. Their contribution to the success of the Program is critical. Therefore it was important to find a means for giving everyone an opportunity to be involved in activities such as the Program evaluation, sharing projects, access to meeting minutes, etc., without requiring that they come to campus any more than was necessary or that their schedules would allow. Blackboard provided a means for accomplishing these goals.
Ten Strategies for Creating an Engaging, Logical, Sequential and Student Friendly Blackboard and for Teaching More Effectively	New Hampshire Technical Col Best Practices, Tuesday 6/10/03 @ 8:45 am, Auditorium	As Director of Distance Learning and Blackboard System Administrator for New Hampshire Technical Colleges, Paul Ambrose has considerable experience to share with the Next Step Program as we launch our Blackboard application. Paul will discuss what works, what doesn't work, frustrations to avoid, good course structure, teaching tips, ways to be a smarter teacher, resolving technology problems in advance, software tools, online diagrams, and online surveys and assessment.

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James Bond Meets the Seven Layer OSI Model	Springfield Technical CC Best Practices, Tuesday 6/10/03 @ 12:30 PM, Auditorium	<p>The Open Systems Interconnect (OSI) Model is an international standard reference model used to develop products and understand how messages should be transmitted between communication systems, applications, and equipment. The reference model defines seven layers of functions that take place at each end of a communication session.</p> <p>This presentation will demonstrate how we, a team of four Verizon associates representing various departments within the company, worked to apply the course competencies (quality, customer focus, team building, project leadership, problem solving, technology & service deliver) to create a multimedia presentation describing the OSI model.</p>
Linking Next Step to Return on Investment	Vermont Technical CC Best Practices, Tuesday 6/10/03 @ 1:00 PM, Auditorium	A student-created inventory system that improves customer service, enhances productivity, and helps control material costs will be presented.
Innovative Classroom Approaches Integrate Technical Content and the Umbrella Competencies	Dutchess CC Best Practices, Monday 6/9/03 @ 2:45 PM, Auditorium	Dr. Akins and her students will demonstrate how discovery learning is used to create a student centered, active learning environment that incorporates both mastery of technical content and growth in skills related to the umbrella competencies. Included will be discussion of the innovative approaches that Dr. Akins has developed to improve team building skills.

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Physics: Learning by Doing, Teaching by Inquiry	North Shore CC Best Practices, Monday 6/9/03 @ 2:15 PM, Auditorium	<p>A student will present examples of student-generated demonstrations. The demonstrations illustrate the teamwork, imagination, resourcefulness, and intelligence of the Verizon associate in the Next Step Program.</p> <p>Demonstrations are presented by the team at the beginning of a class, before the instructor has lectured on the phenomenon and physical principles involved. The student team is required to assemble apparatus, present the demonstration, attempt an explanation, and field questions. Learning occurs for the team in its work, in preparation and presentation to the rest of the class, and in the ensuing discussion.</p> <p>The students, in creating the demonstrations, exhibit considerable resourcefulness. Internet sites are an integral part of this methodology, both for informing students and for presentation of project results.</p>

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Worklife paper	New Hampshire Tech, Nashua	<p>"One of the many technical tools that we have learned to use are the computer programs available to assist in problem solving."</p> <p>Many of the class would gather on Sunday mornings and help each other with problems giving us trouble. After many circuit analysis difficulties, we decided we needed a teaching aid to help solve these problems. We put our collective heads together and decided just what this aid should be able to do.</p> <p>With many ideas on paper, I put together a spreadsheet that would solve most problems for both AC and DC circuits. Other problems were later encountered and these were also added to the spreadsheet. Over time, it has become a bit disorganized. Perhaps a future class might make it a class project to better organize, and add to it.</p> <p>I feel this spreadsheet is a very good example of the umbrella competence and the confidence to try something that was once out of our depth. I credit the Next Step Program for this can do attitude.</p>
Microsoft software capstone project	Springfield Technical CC	<p>A computer applications faculty member discussed incorporating Microsoft software (Word, Access, Excel, Powerpoint) into a capstone project at the Faculty Institute 2000; structuring a few fun and personal projects for the</p>

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Hospital Telephone System Design	New York Inst of Tech	<p>Project to design a telephone system for a hospital, based on a (real) case study that included statistical information and the following description:</p> <p>The Midsize Suburban Hospital, located in Westchester County, New York, is performing an operations review and has hired NYIT Telecom Specialists Inc., a telecommunications consulting group, to perform an audit of their telecommunications system, and the services provided by the local and long distance telephone companies. You are the senior analyst with Telecom Specialists and have been assigned to lead the project.</p> <p>A statistical summary of the hospital appears in table A. In discussing the audit with senior administrators at the hospital, it became clear that your client's objective is to reduce expenses while maintaining the current level of service.</p> <p>During your initial visit to the hospital, you learned that the PBX was installed 3 years ago and is a Meridian System manufactured by Northern Telecom. You were given complete access to the system records and the most recent monthly telephone bills from the local Telephone Company and the long distance Company. A summary of this information appears under tab A.</p> <p>You discussed the current equipment and service arrangements with the hospital telecommunications manager, who has served as the chief telephone operator for the hospital for many years. When the digital PBX was selected and installed, a consultant was hired by the hospital to determine the initial equipment and service configuration for a transition period; the system has not been reviewed to determine the final optional configurations.</p> <p>The faculty member who assigned this project is a former Bell Atlantic employee, who was hired by the hospital to perform this consulting project. The faculty used his experience to develop the case study, which he assigned to class teams. The faculty member and student from the class presented the</p>

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Measuring the Value of the Next Step Program to the Corporation	New Hampshire Com Tech, Nashua	<p>project results at the Faculty Institute 2000.</p> <p>As part of the program evaluation process, students are asked how the program has made a difference in the way they perform their jobs, what they see as the greatest advantages of the program, and how the program could be improved. A group of students, unsure of how to articulate their comments, asked that their English instructor help them with this as a class assignment. One of these students spoke at the Faculty Institute 2000 about the project and how the program has impacted the workplace.</p>
Teamwork	Unknown	<p>"I go to school with a diverse group of people from several disciplines in the company. We are all learning about the concept of teamwork and how seemingly insurmountable tasks are tackled with relative ease by working together. We are all more aware of how the spirit of cooperation, be it worker to worker, manager to worker, manager to manager can make all of our jobs easier on a day to day basis."</p>
Improved Communications	Unknown	<p>"With the Fax program that is on my Laptop, I was able to call a Vendor about a particular piece of equipment that I was fixing and had them fax the needed diagrams so that I could finish the job without having to return another day. And of course I wouldn't be able to send you this letter</p>
Laptop for Equipment Support	Unknown	<p>"Lotus Notes has been valuable in coordinating with other departments in removing possible roadblocks and to keep my manager informed of progress. The Laptop is not only used to configure and trouble shoot SONET and other types of equipment, but I use it to create a database for Subscriber Loop Carrier (SLC). As an example, I developed a database that covers the history of each SLC so that troublesome areas can be addressed on a "proactive" basis, as opposed to out-of-service. I also had compiled databases for "battery routines" and annual SLC routines."</p>

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DLC Testing	Unknown	<p>“The Next Step program helped me identify serious trouble while working on a project for DLC testing. I was able to identify a compatibility problem between the PG-XTC and the DMS100 switch. I would not have been able to understand the trouble or hold my ground against the doubters without</p>
Success Stories	Unknown	<p>“I’ll cite three instances in the last two weeks in which Next Step improved my performance as a C.O.T. - T.T.A.:</p> <p>I found a new SLC bay had been installed incorrectly onto the cosmic frame. The equipment counts were split, and they were not labeled. The first had been assigned, and I had to Buzz trace to find it. ---I used MS Excel to record the split counts, and then to make and print new, understandable labels for the frame.</p> <p>A customer complained of a crossed line with his own FAX. It turned out he had RINGMATE, and was expecting the FAX to discriminate between rings. I used my general knowledge from NSP to help him understand that the problem was in his FAX.</p> <p>A SLC1 terminal would not ring a customer's line properly. I used Electronics Circuits knowledge to find a very high resistance short circuit which didn't interfere with service, but which prevented the battery in the SLC-1 from gaining a full charge.”</p>

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Worklife paper	New Hampshire Tech, Nashua	<p>"At the 1999 program review held at New Hampshire Community Technical College in Nashua, you asked us for input about how the Next Step program is helping us to do a better job. I wanted to respond at that time but I could not think of anything to say. This was not because your question caught me off guard either because Sandy has been after us for quite some time to come up with something similar. No, I think the reason that I had trouble with the question is that I simply do not stop to think about why I am doing my job a certain way at any given time."</p> <p>The class talked this over after the meeting and most of us agreed that we rarely pay any attention to the fact that we are doing something differently because of the skills we developed in the Next Step program. The subject came up again the following week and, after discussing it with our English teacher, we decided to make it a class writing project to document some examples of how we are using these skills. Making this a class project helped because, once we could treat this as just another job, many of us were indeed able to recall times that Next Step training had made a difference in how we did our job.</p> <p>In my own case, I would have to say that the biggest impact the Next Step program has had on me is that I look at things differently now. For example, after the final round of early retirements in 1998, the night shift at the Network Operations Center where I work was left with a serious shortage of qualified people. On the 5E side of the house, only three qualified CO technicians remained to cover the four jobs that required coverage every night, seven nights a week. And to make matters worse, the vacancies created by the early retirements were filled with people who were upgrading from clerical jobs and had no technical training or experience.</p> <p>Because of my seniority and the fact that I was in the Next Step program, my local Management asked me to help with the training of these new people. This request was not unusual because there is a natural turnover of people on the nightshift and breaking-in new people is a fairly routine part of my job. However, this time, I found that I was looking at the training problem</p>

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differently than I had in the past.

Experience has taught me that people entering the craft without a technical background are usually frustrated with the company's formal training programs. More often than not, these people return from expensive training sessions with the attitude that it was a waste of time because the material was over their head. So instead of just showing the new people how to do the job while they waited for their formal company training, I also spent a little time preparing them for what they would encounter in school.

I worked one-on-one with people as they were scheduled for schooling to be sure that they understood the basic mechanics and terminology involved in doing switch surveillance before they left for school. Then, when they returned from school, we reinforced their training by having them be the ones to work with the others who were still waiting to go to school. Using this system, we were able to get all the new people qualified to do switch surveillance by the end of the year.

By approaching this problem a little differently, we have brought the expertise level of the night shift up to a point that actually exceeds the pre-retirement level. Today, some of the people I mentioned have already developed an understanding of the job and the skills necessary to do higher-level technical jobs such as software upgrades and new equipment turn-ups with field technicians. This level of development is years ahead of what we would have historically expected from brand-new, unskilled people.

Of course, this was a team effort and it could not have happened without the cooperation of local management and my fellow workers. For my own small part in this accomplishment, I have to credit the problem solving skills that I developed in the Next Step Program with helping me to find a better solution to a common problem.

During this program, my classmates and I often joked around about what possible use we could have for some of the lessons we were struggling to

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learn. After all, does a CO Technician or Cable Splicer really need to know how to calculate the direction a beam of light will take when it enters a glass of water? And, is Nicomachean Ethics good for anything except giving us a headache when we try to write about it? Well, thanks to your request for input and this letter-writing project, we are beginning to understand that it wasn't just Math and English we were learning while we labored over those lessons; we were also learning how to think. And that is the common thread that I find running through these letters; we are finding new solutions to problems because we are thinking differently.

As the first class to come through the pipe in New Hampshire, we have had to suffer through four years of uncertainty that included everything from unsupportive Management to Union boycotts. We were referred to as the "guinea pigs" of the program; a bunch of old dogs trying to learn new tricks. However, we took this in stride because we viewed ourselves as the ones who were clearing the road for those who would follow. We hung in there and we made it work because we believe in the Next Step program, and we take a certain amount of satisfaction from the fact that there are indeed others on that road behind us who will be building upon the foundation we have laid.

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Worklife paper	New Hampshire Tech, Nashua	"On February 19, 1999, a snapped pole on Rte. 10 in Grantham, NH caused a major failure of the only lightguide system between Hanover, NH, Grantham, NH and, Newport, NH. This outage also affected calling in the Claremont, NH area."

The downed system was an older generation 565Mb/s lightguide with one-to-one protection but the protection is in the same cable as the service. I notified the Network Operations Center and my supervisor and then began looking for ways to patch some of the carriers that ride this system. The only other route to Newport is through Claremont and that is also an older 565Mb/s system. I got permission from my supervisor and we set up a conference call between Hanover, Newport, and Claremont. John put up patches in Claremont from the protect channel of the Hanover to Claremont system and the new Claremont to Newport fiber cable. Then I put a patch in Hanover from the failed system service channel to the protect channel of the Hanover to Claremont system. Then Mike in Newport did the same. This restored service in a very short time and relieved some of the pressure that is always there on fiber restoration efforts.

This make-good left the Hanover to Claremont system unprotected for several hours but I felt that, under the circumstances, it was a reasonable risk because we had people in each office if something else had failed.

In retrospect, I believe the experience and education I am receiving through the Next Step program was invaluable in the above situation. In addition to technical know how, the ability to focus on the customer's needs was invaluable. I feel better able to expand my view of my job and its implications in the bigger picture. I also feel better able to express my ideas,

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Worklife paper	New Hampshire Tech, Nashua	<p>"On Saturday, December 4, 1999, I received a call from an acquaintance who is a Systems Manager with TASC, a worldwide company with offices in the Reading, Massachusetts area. He was in the process of cutting-over an existing Lucent Switch to a Northern Telecom switch. This process involved changing the DID trunks from the old NNX to a new 205 NNX and was supposed to be done on Saturday morning. However, when the time came to test the DID's, they were still translated to the old NNX in Bell Atlantic and according to their contact, this could not be changed until Monday afternoon."</p> <p>With nowhere else to go, my acquaintance at TASC paged me at 3 PM and explained the situation. I listened and told him I would look into the problem and call him back. I then spent the next hour on a cell phone and finally tracked down the translation manager of the Lowell NOC center. I contacted the customer and the translation manager who proceeded to research the problem. Once we were all together on this problem, we had it solved in less than 30 minutes and the customer, a CAS1 account, was back in business.</p> <p>I credit the Next Step program with giving me the tools and ability to research and contact the appropriate people to get this accomplished in a</p>
Orientation for New Students	Queensborough CC	<p>Each semester this Next Step Program student meets with new students at orientation. She spends 1-2 hrs going over study skills, nuts and bolts, how to cope with the pressure, etc. She has based part of her presentation on the Orientation class that is run in the NE colleges, even though this isn't part of the NY program. She feels it's important to give something back to the program and helping other students get started is one way she can do this. She's considering expanding this help to include another meeting with new students partway into the semester.</p>

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Dummies books	New York City Tech	<p>This project was presented at the Faculty Institute 2000: My partner and I are assigned to the Carrier in 14th Ave Central Office in Brooklyn, N.Y. Our tasks include the maintaining and provisioning of high speed data circuits between Central Offices and customer locations. These circuits can range from a simple Pots line to a multi-gigabit system. As you are aware, communication technology changes rapidly. Systems that you finally get to know are replaced by something faster, more advanced, and highly technical. Training in the technology is available, but with a large work force, Verizon is hard pressed to train everyone properly. The technical manuals that come with these systems are written in techno-babble, and are understood by very few. My partner and I recognized that while these new "gizmos" were daunting, a tech's basic duties could be condensed into easy to understand manuals that bypassed all unnecessary data. We took it upon ourselves to write these manuals and distribute them to our co-workers. Every time a new piece of equipment arrives, we are asked to look it over and try to write a new "Dummies" book.</p> <p>When we started the Next Step Program, my partner and I were completely computer illiterate. A computer was something to be avoided. But due to the Computer Applications course and the laptop provided by Verizon, we learned that a computer is a wonderful tool that can only enhance our lives. Through the two English courses, we learned how to structure a technical paper and express a thought in written terms. Through the Digital and Electronic classes, we learned how to read a circuit diagram, trouble-shoot a malfunctioning circuit, and design a circuit of our own. Every semester, we were required to work in groups to submit projects and papers. This team concept showed us the value of team work. These courses had a direct bearing on our performance at work.</p> <p>Attached is a letter written by the Area Operations Manager for the Greater Metro Region. He is instrumental in encouraging the writing and distribution of our training aids. His letter describes his attitude toward the Next Step Program and its TTA product.</p>

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Our training manuals ... include the series of "Dummies" books for the Fujitsu Lightwave Multiplexer sonet carrier, a incomplete ADSL training manual, and a few of the how-to job aids that we have written.

LETTER FROM AREA OPERATIONS MANAGER:

I would like to submit several projects to the Faculty Institute completed by two of my Telecommunications Technical Associates, Ray ... and Angela These projects are a direct result of the training that has been provided by the Verizon's Next Step Program at New York City Technical College.

The projects submitted include a series of "Dummies" books on the provisioning, mapping and maintenance of the Fujitsu Lightwave Multiplexer (FLM), which is the main SONET carrier of Verizon. The purpose of these books is to provide all the technicians involved with the FLM explicit guidance as a supplement to Verizon's training manuals. Other projects include a training course on ADSL (Asynchronous Digital Subscriber Lines), which they are presently working on, and several write-ups, designed with the explicit purpose of making their co-worker's jobs easier.

I have personally received several requests for copies of these write-ups from Directors who have heard about their helpful features. These books have been adopted as standards throughout the New York City Network Operations. They have increased productivity for provisioning and maintenance of the SONET networks.

As a personal note, I would like to tell you that I am very impressed with the Next Step program as a whole. Several of my people have enrolled in it, and even those who have not completed the program have shown a marked improvement both in attitude toward their jobs and toward their co-workers. I understand that this attitude is one reinforced by the Next Step program. In addition, the program has clearly provided a marked improvement in

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		<p>communication, problem solving, leadership skills, and teamwork. I attribute this change to the training provided by the program, and the emphasis on what has been referred to as the "Umbrella Competencies". In fact, several of the above mentioned projects were worked on by Ray and Angela on their own time, who claim that they would never have attempted them without the knowledge and skills acquired through the program. Specifically, courses like English and Computer Science provided by the program are those that would never have been undertaken by our employees. They have significantly enhanced the competency and capability of those people who have taken them.</p> <p>I hope that you will be as impressed by these projects as I am. It is a credit to the fine tutorship of the faculty of the Next Step Program as well as to the professors and administrators at CUNY.</p>
English and Circuits project	Onondaga CC	<p>This project was presented at the Faculty Institute 2001. Students created three Power Point presentations under the supervision of their English and Circuits instructors. These joint projects were designed to serve as study models through which future circuits students can comprehend essential electrical concepts and basic processes of electrical circuits.</p>

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Student's Study Guide to Electronics II	Central Maine Tech	<p>This project was presented at the Faculty Institute 2000. The scope of this project is to provide future students with a practical study resource for Electronics II. This study resource was developed by students in the Next Step Program. Incorporated within the project material is a working set of notes on subject matter presented throughout the course, a quick-reference power-point presentation that highlights each subject, and a series of laboratory experiments that demonstrate the application of the concepts presented throughout the course. This material will be presented on a CD disc for access by the student using a laptop computer as a study tool.</p> <p>The study aids provided here are intended to expand the availability of help and tutelage from the perspective of students who have "been there"... who have previously taken the course. Although the concept of a database study resource is not unique (several examples of study notes can be found in the "Knowledge Depot" database on Lotus Notes), the depth and scope of this undertaking is unique in its ability to provide a single resource of guidance. It is intended that each subject will be presented with adequate explanation to facilitate understanding, and supporting information (labs, diagrams, and working examples from Electronic Workbench) will serve to reinforce that understanding. The expected results are that students using this tool will become more self-reliant and therefore more self-confident in their ability to perform the work required in the course.</p> <p>Work on this project demonstrates several "umbrella competencies" stressed throughout the Next Step Program. Teamwork is employed as each of us takes an aspect of the project and works to meld it with the overall project. Since this must be completed in a short period of time, each member needs to manage his time effectively and efficiently. Communication among the members, an essential part of the project's cohesiveness, will be accomplished by meetings and Lotus Notes. Computer skills are to be employed and enhanced by the preparation of power-point presentations, by the construction of working examples of concepts built in Electronics Workbench, in the writing of reports, and in the making of the CD disc. We are confident in our abilities to solve problems as they arise and deliver a</p>

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completed product within the deadline we have set for ourselves.

It is our wish to present these notes as a model for notes in all courses. We see, from the perspective of students in the Next Step Program, a need for functional notes and study guides as we progress in our learning experience.

The thrust of this project is to share some of that experience with you now and to provide the benefit of our learning with those yet to come.

Lab Activities
Promote
Umbrella
Competencies

Dutchess CC

We are probably all aware that lab activities naturally incorporate many (if not all) of the umbrella competencies. However, with active planning and organization, these activities can be used to more effectively channel students in developing their own competency. At this Faculty Institute 2000 session, materials were provided detailing the shift in planning and organization to this end. Of particular interest is the lab activity assessment sheet which is used for self and peer assessment and highlights for the student the desirable characteristics of a team member. Activities are primarily from Electronics I and II, but concepts are transferable to any team oriented activity in any discipline.

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Worklife paper	Springfield Technical CC	<p>"I started with New England Telephone in September of '65, so I've been around a while. I've seen a lot of changes through the years. From New England Telephone, to NYNEX, and the merger with Bell Atlantic and then to GTE? There were enormous technological changes along the way as there were operating procedures."</p> <p>I've worked outside for my whole career and been fortunate to be able to work and grow with most of the technology. There are schools (company) that I would like to attend so that I would feel more comfortable working on the particular types of equipment.</p> <p>You wanted examples of how the Next Step Program has changed the way we do what we do best at work. For myself the way I work hasn't changed. Let me explain. I'm an individual that will find a "work-around" to remove roadblocks if possible to expedite what I'm doing. Lotus Notes has been valuable in coordinating other departments in removing possible roadblocks and to keep my manager informed of progress</p> <p>The Laptop, not only is it used to configure and trouble shoot SONET and other types of equipment, but I use it to create a database for Subscriber Loop Carrier (SLC). As an example, a database that covers the history of each SLC so that troublesome areas can be addressed on a "proactive" basis, as opposed to out-of-service. I also had compiled databases for "battery routines" and annual SLC routines. With the inception of the "Proact" department a few years ago, at which time I was in the "repair" side of the house. At this time I went over to construction and didn't have a need for the files that I had built, I sent the manager of Proact a copy via Lotus Notes.</p> <p>With the Fax program that is on my Laptop, I was able to call a Vendor about a particular piece of equipment that I was fixing and had them fax the needed diagrams so that I could finish the job without having to return another day. And of course I wouldn't be able to send you the letter without it.</p>

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I want to get to several technical schools for specific equipment that we use. Not knowing exact functions of the equipment, one has to formulate the best one can as to how a particular unit functions. The technical part of our training through the years of Next Step has helped. Knowing how something functions, whether a unit or a network, one is better equipped to fix it if they understand how it is supposed to work. The "Circuits" courses helped to understand better how a "unit" might work, and the "Telecom" courses are helping to understand how a "network" works.

Teamwork: Most of us work in specific geographical areas and work with certain individuals on a need-to type of situation. We tend to call upon those that we know can, or might be able to assist us. The way we used to do a "turn-up" and "acceptance" for an integrated SLC is a good example. In the beginning we worked with local people that we knew and what they were capable of. Then as the company made changes we had to call into a central location (Springfield), and work with someone that we didn't know and how qualified he or she was. After a period of time you would then get to know the people you wanted to work with. Then the company decided on creating meg-a-centers. We then had to call Taunton, Ma., to work with the people there. As before, in time you would get to know who to look for to assist you and their personal phone number instead of calling into an 800 number. When things finally begin to run smooth again, The Company realizes that the Taunton center can't handle the workload. Now we have to start all over looking for the people who are able to help us because now the company wants Lowell, Ma. to take over a particular function. So, you can see that some of our "teamwork" isn't so easy, especially over a large area. Locally we are more apt to develop teamwork skills a lot easier with the pool of people that are available.

This leads me to another topic that I will not exhaust myself. "Pool of people". I have been in the construction department for about 3 years. Before that I had been in the repair department. I've always worked by myself

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unless I needed some kind of assistance and have gained a lot of experience over the years. For the past 7 years in that department I had suggested that I train another technician to do the work that I was doing. I had given the company a couple of names of people that I had thought were qualified. One person got tired of waiting and took a bid to the construction department. He was hungry for the knowledge. I felt bad for him. The other person, well, it's almost too embarrassing to tell. They kept telling him that he was going to go with me so he could learn my job. If the trouble load were too high, they would put him in the load. This went on and on and on. Finally they (the company) let him go with me for a total of two days. He never came with me again. Of course I am in construction now. For the short time I've been in this department I have offered to train on certain jobs where I think the technician that was assigned could have used some training. The construction department budget has been cut due to the new DSL technology being installed in most major Central Offices, and all the growth jobs have been put off or canceled so the likelihood of being able to train anyone in this department isn't much better from what I'm experiencing.

I guess this was a chance to get this off my chest. I've always taken my job seriously, as I'm sure you do yours. The company has been good to me over the years in many ways. I have incorporated a "you scratch my back and I'll scratch your back" attitude with the company and let my managers know where I'm coming from and what I expected from them. I'm not going to be around too much longer, and I know that I'm not replaceable. I'm at a point that I want more time for myself and I can't feel guilty that the company won't be able to rely on me to put fires out because no one is trained.

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Worklife paper	New Hampshire Tech, Nashua	<p>"The greatest benefit that I have realized from the Next Step program is that I have become a great deal more intuitive in my circuit analysis. For example, I now have a much better idea of how different frequencies affect a circuit and how even a slight imperfection in a wire will have a crippling effect at certain frequencies. Having this insight is critical when testing and trouble-shooting equipment that changes constantly with the latest technological advances."</p> <p>My specialty in the SARTS department happens to be testing CSU/DSU's for customer acceptance. The CSU/DSU is the digital circuit interface between the Bell Atlantic network and the customer's network. It replaces the modem, which was the interface between analog telephone offices providing data services to customer's digital networks. I run a battery of frequency tests to and from each unit to ensure that the units are compatible with the customer's network requirements which may include a wide range of frequencies.</p> <p>When customers' networks shut down or go out of service, they call Bell Atlantic and demand that their service be restored immediately. There isn't time to read up on the latest piece of equipment to figure out how it works.</p>

Next Step Program "Best Practices and Success Stories"

<i>Project</i>	<i>College</i>	<i>Description</i>
Worklife paper	New Hampshire Tech, Nashua	<p>"On October 11, 1999 while working on my job as a Head Outside Plant Technician in Hanover, NH, I was approached by a gentleman who represented a company named The College Kit. It was apparent in my conversation with Mr. Ryan FitzSimons, CEO of The College Kit, that he was having great difficulties with his telephone service. Mr. FitzSimons went into detail to explain that he ran a telemarketing business and had a great deal of difficulty in dialing out to potential customers."</p> <p>After some discussion, it appeared that his problem was two-fold. First, he had trouble in getting dial tone and second, he could not always complete his long distance calls. Then he explained to me that, apparently, no action had been taken when he had called repair service as the trouble was still there.</p> <p>I asked if he had called his vendor to discuss the problem and he said that he had. Then, I asked him if he had called the Bell Atlantic Customer Service Center and he said he had not. I suggested he contact Bell Atlantic to see if they could come out and try to resolve his problems. I also suggested that he make note of the time and date of these problems; and to take the recording number, time and date of the incomplete long distance calls. I went on to suggest that he should notify his long distance carrier once he had this information because this information would be very helpful to both the long distance carrier and Bell Atlantic.</p> <p>As of this writing, I have not heard the outcome of this problem but Mr. FitzSimons said he had been contacted by both Bell Atlantic and Sprint and they hoped to resolve this problem very shortly.</p> <p>I would like to state at this time that I have over 29 years in the phone company and have worked at more than one job in the company. My background includes Line, Splice, and Central Office. However, I believe the biggest thing I had going for me was my three plus years in the Next Step program. Although I have a very diverse background, the Next Step program helped to tie all of my backgrounds together. Without this program it would</p>

Next Step Program "Best Practices and Success Stories"

<i>Project</i>	<i>College</i>	<i>Description</i>
		<p>have been very difficult for me to explain to Mr. FitzSimons what procedure to follow and just how all the pieces fit together to make the system work. After explaining what procedure I thought he should follow, he thanked me and stated that no one in the phone company had been this helpful and how he really appreciated my time and effort. This made me feel very good as well.</p>
Worklife paper	New Hampshire Tech, Nashua	<p>"One of the most eye opening results of attending the Next Step program for me was how much we had to rely on each other to complete this program. The fact that most of us had been out of school for thirty years or better made it nearly impossible for us to comprehend all the information that was thrown at us. We decided the only way to survive was to get together as a group on Sundays and pick apart the information that was given to us the week before. Each individual that attended these Sunday classes added his own interpretation of the previous weeks lesson, and between all of us, we were able to come up with understandable solutions to many previously mesmerizing problems."</p> <p>Many people are still in our class today because of the Sunday morning study group. They state that without everyone working together and helping the people who were falling behind, our class would not be graduating as many people as we are. This camaraderie has spilled over into the workplace and we can see a greater need to work as a team to complete projects. This program has taught us to ask questions when in doubt and to share our knowledge with others when asked.</p>
Virtual Private Network and Voice Over IP (Internet Protocol)	New Hampshire Technical Inst	<p>This presentation, at the Faculty Institute 2001, addressed the challenges of building two systems, a virtual private network and voice over IP for a virtual corporation. Topics included: development process employing small work groups, team dynamics, brainstorming, the overall development and building of the systems, and their efficacy in the real world.</p>

Next Step Program "Best Practices and Success Stories"

<i>Project</i>	<i>College</i>	<i>Description</i>
Telecommunications IV Web Projects	HVCC	<p>Spring 03 Telecommunications IV students were given a computer with a blank hard drive and no operating system. They were challenged to convert it to a web server! The results are shining examples of the finest accomplishments of which the TTA students are capable! Not only did the students convert the computer to a web server, but each of the teams developed a web site containing their class presentation projects and links to other relevant web sites.</p> <p>The range of topics presented on their web sites includes Access Gateways, Bluetooth Cable Replacement Technology, Cable Modems, Cellular Communications, Wireless Application Protocols, Dense Wavelength Division Multiplexing, The History of Telephony, Home Networking, Global System for Mobile Communications (GSM), Virtual Private Network (VPN), Internet Security, Internet Access, Intelligent Networks, Voice Over IP, Fiber to the Home, Home Networking, and Resident Internet.</p> <p>The range of skills demonstrated is equally impressive: everything from problem solving to teamwork to leadership to technology awareness. This is a remarkable achievement from associates with varying backgrounds, many of</p>
ADSL, fibre, and English reports	Central Maine Technical Col	A video film shows Next Step graduate describing ATM switch on site at the
Electronic	Central Maine Technical Col	An individual report by a student focused on active filters. He also developed an EXCEL form for work to reduce record keeping time in the field. The form is currently being used throughout Maine.

Next Step Program "Best Practices and Success Stories"

<i>Project</i>	<i>College</i>	<i>Description</i>
Digital project	Central Maine Technical Col	Students developed a report of "The Electric Eye Counter". This group project designed and builds a digital counter using TTL chips and displays.
Digital II, PC project	Central Maine Technical Col	The class created a power point presentation and movie showing detail process and construction of a computer.
OP-AMP	Central Maine Technical Col	Students develop tutorials on operational amplifiers by capturing action on the PC. Screen action is captured using a software product. Students enhanced the tutorial by audio comments. MultiSIM and other program software were utilized to create avi files. Laptops were linked with Laplink software to transfer large size files. A finished CD holds a collection of
Cross cohort telecommunication project	Central Maine Technical Col	The scope of the project, which deals with multiplexing multiple lines to a single line, requires more than one semester to complete. The current cohort must, therefore, take the output from the previous class and add to it. Several classes will need to work on this project before it is completed.

Next Step Program "Best Practices and Success Stories"

<i>Project</i>	<i>College</i>	<i>Description</i>
	North Shore CC	<p>For the Spring 2003 semester, this instructor organized her English I class around twentieth century memoir and chose <i>A Moveable Feast</i> by Ernest Hemingway, <i>An Hour Before Daylight: Memories of a Rural Boyhood</i> by Jimmy Carter, <i>The Things They Carried</i> by Tim O'Brien, and <i>All Souls: A Family Story from Southie</i> as texts. In addition to spinning individual skill and essay assignments from these texts, she divided the class into groups, and each took one of the books for a research project, writing a companion study guide to it.</p> <p>One team of students produced not only an outstanding written guide to O'Brien's <i>The Things They Carried</i> but an entertaining and enlightening PowerPoint presentation as well. O'Brien's rendering of the Vietnam War is certainly current, and this fine Verizon team was well-equipped to share their perspective.</p>
Networking: Real Business/Real Solutions	Springfield Technical Com Col	<p>This project presentation, given at the Faculty Institute 2001, was intended to add a touch of realism to an academic assignment. The project took the form of a business meeting of the (fictional) Springfield Technical Communications Consultants (STCC). In an effort to introduce a problem-solving element to the project, a mock meeting of the team members was held as they reviewed a customer presentation. The presentation addressed a client's real-world communications needs and solutions to address those</p>

Next Step Program "Best Practices and Success Stories"

<i>Project</i>	<i>College</i>	<i>Description</i>
Small Business Network Development	Unknown	<p>In this Spring 2003 Telecom III class, 17 students collectively worked on a network project combining the 1) the RouterSIM LAN network simulation program and 2) the design and implementation of a data network employing the physical equipment in the Telecommunications Laboratory at NYIT. The network was first simulated with the RouterSIM program and then built using routers, switches, and hubs, with 11 computers in the lab serving as workstations and servers, and cabled to patch panels in an equipment cabinet. The computers used both Microsoft 2000 and Windows NT operating systems. The students' laptop computers, with Windows 98 operating systems, were also connected to the network.</p> <p>The network included DHCP assignment of IP addresses for three separate IP subnets for three Domains: remote access service over the PSTN using V.90 modems: ISDN service: and Web sites developed for each Domain. The class was divided into 7 teams specializing in various aspects of this network project. We took digital still pictures and video to record the student's presentations. The objective of this project was to implement, in a small scale, many of the technologies used in Internet/Intranets of mid-size companies.</p> <p>The class started working on their projects in the laboratory during their 6th semester, and continued into their 7th semester, incorporating the IP orientation of Telecom III.</p>

Next Step Program "Best Practices and Success Stories"

<i>Project</i>	<i>College</i>	<i>Description</i>
UTAC-CAT	Onondaga CC	<p>This project was presented at the Faculty Institute 2000. The Upstate Technical Assistance Center (UTAC) was asked to put together a help aid on the DataStar 386 which is the current Hand Held Terminal Field Technicians use for testing and dispatching their jobs. It is more commonly referred to as the C.A.T. (Craft Access Terminal) and some technicians have more colorful names for this piece of equipment</p> <p>To briefly qualify the presentation that developed from a single request into multiple requests the umbrella competencies are evident in the following description. This demonstration is intended to be about 40 minutes long so that it can be shown in a garage in the morning without keeping the crew off the workload for very long. The target audience is field technicians who use the C.A.T. on an everyday basis, but who may not know the full range of applications for this tool. Visual displays are used including a Power Point presentation plus a live video image of the C.A.T. The partnership of the UTAC team along with Engineers and first level management developed this show over the last couple of months and the positive feedback from technicians and their foremen deems it a successful project. Mother Nature however, put a crimp in the scheduled presentations and the project was left on the shelf a bit while we concentrated on storm damage repairs. Hopefully the workload will allow the central area to be completely covered and then hand off the presentation to other regions where again it can be modified to conform with local issues.</p> <p>The first part of the discussion is intended to familiarize or re-familiarize field techs with the test module. At this time Brian ... and Jim ... conduct the presentation. Brian is a TTA graduate from Onondaga Community Collage and Jim is a sixth semester student from Broome Community Collage. One of two presenters will cover the first part and the other is responsible for the second part that is a couple of reminders for techs about some administrative procedures pertaining to their C.A.T. usage.</p>

Next Step Program "Best Practices and Success Stories"

<i>Project</i>	<i>College</i>	<i>Description</i>
Business Case Study: Networking	Eastern Maine Tech College	This project was presented at the Faculty Institute 2001. The fictional case study involves a mid-sized consulting firm charged with the task of developing a business proposal for a business seeking an upgraded LAN. The business already had a limited network in place but desired a Windows NT platform, Internet access, and numerous other features for 1,000 workstations spread over 10 floors.
Record- Keeping	New Hampshire CommunityTech	This project was presented at the Faculty Institute 2001. This project was to design and integrate the records system of the New England state colleges, with the following objectives: design and implement a web-based system for the general public to access the web site and e-mail server; design and implement a system for the Joint Academic Group (JAG) and the state colleges to communicate and share databases; establish access to the U.S. Department of Education databases; and provide telephone support.

Next Step Program "Best Practices and Success Stories"

<i>Project</i>	<i>College</i>	<i>Description</i>
Capital area Technician Assistance Center (CTAC, formerly UTAC)	Onondaga	<p>This project was presented at the Faculty Institute 2001. In 1996, the North Market Area, under the direction of Paulette Balich began the implementation of Technical Assistance Centers in Maine, New Hampshire and Syracuse. Advances in the deployment of new technologies continues to impact the company's ability to keep a large number of field technicians current on all versions of the many vendor software systems in use throughout the region. The need to provide specific technological support for new product and service implementation is escalating. The ability to establish subject matter experts in each area creates training constraints.</p> <p>Enabling a few technicians to maintain a resource center that supports 4,300 field technicians is an economically sound initiative that will generate productivity improvements. The CTAC concept (technicians assisting technicians) is a valuable resource for the company's motivated field technicians who are interested in keeping abreast of technology changes to ensure continued revenue by delighting Verizon customers. Positioning a few experienced field technicians in a lab setting and creating 800# access has allowed a few technicians to train in the latest software updates and pass that information on to other field technicians as they encounter problems in the field. It has also provided an opportunity to utilize the talents of Next Step Graduates. Lyn Rice, the supervisor of CTAC, and some of the Next Step graduates who staff this center discussed some of the center's many accomplishments.</p>

Next Step Program "Best Practices and Success Stories"

<i>Project</i>	<i>College</i>	<i>Description</i>
Intelligent Technical Operations Center (ITOC)	Various	<p>The Intelligent Technical Operations Center (ITOC) is part of the Network Services/Network Operations Northeast group that encompasses about 2000 union members, including about 170 TTAs. Robert Esposito, Director of Field Operations, along with several TTAs, discussed, at the Faculty Institute 2001, some of the special ways in which TTAs are making a unique contribution to the company. One group of TTAs has developed Dummies guides and hands-on training courses on a variety of technologies (they presented at the Faculty Institute 2000). As of late 2000, they had trained 25 of their peers on Sonet Ring, with plans to train over 200 associates. They have also made extensive information regarding Sonet Ring available on the web site http://cww.gmrns.nynex.com.</p> <p>Other TTAs are involved in refurbishing obsolete computers, upgrading them with software that is used for turning on equipment in the central office. For a cost of about \$100 each, the computers, which are transferred from other departments within the company, are refurbished and put to new use. Their plan is to outfit each of the 145 central offices under Bob Esposito with 2 computers.</p> <p>Other plans for this group include: creating a classroom on wheels to give hands on training to all of the group's central office people on Sonet Rings and other technologies; giving company-wide visibility to ITOC, to be used as a resource for other departments; and creating as many different projects as possible for TTAs in this Network Operations group.</p>
Education and Technology	Westchester CC	<p>This project was presented at the Faculty Institute 2001. As part of the English curriculum and to incorporate the umbrella competencies, students in English 1 broke down into groups, appointed group leaders, and produced a research paper based on the topic of Education and Technology. As part of the requirements, each group presented the paper to the entire class with a Power Point presentation. The project will be presented in an</p>

Next Step Program "Best Practices and Success Stories"

<i>Project</i>	<i>College</i>	<i>Description</i>
Extending the Classroom Walls	Middlesex CC	<p>Some things that I do in class that are helpful to students:</p> <p>I use BlackBoard to give my students outlines, syllabi, assignments, and web-sites of interest for the class. I include a page on "Calculating Your Own Grade" where I programmed an Excel Page to allow students to calculate their own grade based on the work they have done. This is a very popular page for students.</p> <p>I have students build projects and then report them in PowerPoint. They answer the age old questions; What, Why, How, When, Where. I also have them give both a Summary and Conclusion. The Summary gives all the details of the project but the Conclusion gives applications of the project to their own company work and also to the outside world. This helps the students focus on important things that go beyond the walls of the classroom.</p> <p>I have all students work in groups and each group develop a presentation that is presented to the class. The students are given the rubric presented in the January 2003 Curriculum Meeting by Ray as a guideline.</p> <p>I have students work together on lab projects and then relate them to work situations and also the outside world.</p> <p>Since the Impact of Technology is a Core Intensive Value in my course what I do is "thread" that into the course. In Unit Three (Internet) the students learn how to search the Internet the culminating project is to find three sources of information for their Impact of Technology topic. In Unit Four (Word) the culminating project is a Project Proposal and Outline of their topic. In Unit Six (PowerPoint) they present their information. This works well because A. it allows them to showcase their newly acquired skills without just mimicking the projects in the book B. It has them developing their research systematically and in pieces so they are not overwhelmed with one big project.</p> <p>Next semester I will be requiring a 'Reflections Journal' whereSSstudents</p>

Next Step Program "Best Practices and Success Stories"

<i>Project</i>	<i>College</i>	<i>Description</i>
		document their learning.
Fiber Optics in Telephony: application of Fiber Optics in Ineroffice and Long Distance Networks	New York City Tech	The application of fiber optics in interoffice and long distance networks was presented at the Faculty Institute 2001.

Next Step Program "Best Practices and Success Stories"

<i>Project</i>	<i>College</i>	<i>Description</i>
UPSTATE TECHNICIAN ASSISTANCE CENTER (UTAC)	Onondaga CC	<p>This project was presented at the Faculty Institute 2000: Upstate Technician Assistance Center provides facilities where Special Services, I&M, CXM, or CO Technicians can "get comfortable" with various equipment, ask questions and receive technical support on both new and existing technologies. There are Verizon TTA Technicians available via phone or field visit to answer any Technician or customer request. Assistance to Technicians is available using the DATASTAR 386, or laptops for testing and turning up various equipment. The UTAC staff is also available to other departments, such as Outside Plant, Engineering and Construction, Sales, Marketing, and Central Office. Verizon customers are also welcome to visit the center for demonstrations of our latest telecommunications technology.</p>

UTAC is located at the Syracuse Training Center, 6360 Thompson Road, in Room 209. Phone number is (315) 459-5604, and FAX number (315) 459-5607

Toll free number is: 890-6500 .

This facility is unique to the Upstate New York region in that it houses Multiplexers (RC28D, 1840A, S828A & MICROFOX/HUB, DDM-1000, & FLM-150 & FLM-600 (2400 Future), Special Services Customer Premise Equipment (Analog, T1, DDS, CSU/DSU), ISDN (BRI & TOTAL REACH), XEL RADIO EQUIPMENT, CHARLES IND. DLC, and HDSL (Pair Gain & Adtran) provided by selected vendors and ties into - and is testable through - the Syracuse Training Center's DLC equipment. This includes LiteSpan/StarSpan, DMS-1 URBAN, SLC Series 5, SLC-96, NEC ISC303 & FD6 W&S, & D4 Channel Bank, Raychem Miniplex, all providing a simulated Central Office to Customer Premise replication.

An extensive database is being built in Lotus Notes on server TCG0048B (UPSTATE TECHNICIAN ASSISTANCE CENTER, under apps) to include technical support documentation on all equipment supported by the UTAC. Future databases are being planned to include information on "how to gain access", "customer contacts", etc. In the future Technicians will be able to add their knowledge to these databases. At the present time CORPORATE

Next Step Program "Best Practices and Success Stories"

<i>Project</i>	<i>College</i>	<i>Description</i>
		WEB pages are running on http://utac1.trg.nynex.com/default.html/ It is the goal of this facility to provide both Technicians & Customers with assurance, quality service, and satisfaction.
Use of Statistical Parameters to Study Age Discrimination	Westchester CC	This Faculty Institute 2000 session included a video presentation of student projects from math classes. The math instructor was on hand during the presentation to answer questions. To successfully complete the class projects students made use of their computers, Power Point, statistical parameters such as the mean and deviation, and actively utilized several of the
Linux and the Telecom	Dutchess	Linux is an open source operating system for PCs available for free downloading from a variety of sources. Its strong point in particular, is the network operating system. A students' project on the "Linux and the Telecom", developed in the F02 semester covered four topics: <ol style="list-style-type: none">1. The Local Area Network with Linux2. The Linux Open Office Suite3. The Linux "How to" for Telecommunications4. The Linux C and C++ Programming