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Maricopa Center for Learning and Instruction

Technology: Places for Student Voices

ALAN LEVINE, MCLI

In his new book *Weaving the Web*, Tim Berners-Lee, creator of the World Wide Web, describes his motivation for building a “web of people:”

The Web is more a social creation than a technical one. I designed it for a social effect—to help people work together—and not as a technical toy. The ultimate goal of the Web is to support and improve our weblike existence in the world. (p.112)

In many ways, this vision is happening now. The web Berners-Lee released in 1991 now connects us for personal communications, for business transactions (raise your hands if you are shopping this year at *Toys* or *Amazon.com* etc.), for receiving up-to-the-second news and, most interestingly for us, for learning. You do not need a status of “visionary techno-prophet” anymore to recognize the enormous impact of the web. This connected de-centralized environment is the web where our students live and learn.

This issue of the *Labyrinth* seeks to bring you the words of students—the words that describe, from their vantage point, what technology means in their personal learning process at Maricopa. Consider these words as just a sampling of the thousands and thousands of student experiences occurring throughout our system. This system itself is a “web” that goes beyond the technology of the Internet to connect teacher, learner, and communities in new, and perhaps not-yet-revealed, ways.

Consider these articles as stories in the context of a “dot.com” world where every other billboard or magazine advertisement features a web address; where every third commercial on television is “e-” this or “i-” that; where most everybody has an online grandmother or a seven-year-old nephew who is versed in PhotoShop. This world challenges our preconceived notions and past experiences of how learning happens. We need however, to rise to this challenge and use the technology to do more than just present data, images, or bulleted word slides. We must provide rich “web-like” environments for thinking, creating, and promoting interpersonal communication.

Thus, the communication aspect of computers and the Internet specifically, is a natural avenue for providing a place for students to have their voice heard. It is much more than the web. Electronic mail is one channel. The electronic discussion board is another. Synchronous chat rooms, beyond the sensationalized stories in the media, are a spectacular place to have immediate, meaningful interchanges not otherwise possible.

Also, we can expect even more revolutions around the corner that may make the web explosion of today seem like ancient history. Imagine the communications functionality of future wireless devices such as phones, electronic organizers, or your humble wristwatch. However, new device and faster networks do not by themselves create meaningful connections.

The web has exploded in the last five years, but what Maricopa recognized long before the value of electronic spaces for student communication, a point noted in this issue's tribute to the *Electronic Forum (EF)* written by Karen Schwalm (GCC). A recent meeting with a representative from an Internet software company, a group of our faculty had to explain the instructional value of electronic discussion groups where students could anonymously participate. It was something our faculty understood because of their EF experience.

Many Maricopa faculty, such as Rick Effland (MCC), have been pushing the technology edge for doing more than just content presentations. Two of Effland's former anthropology students James Jacobs and David Jannosy, write how their technology experiences, which were integrated into Effland's course, profoundly affected their careers. For quite some time Effland has avidly used dialogue spaces (e.g. O'Reilly Webboard for his students to discuss and exchange ideas about the history of human and societal development—spaces where literally the student “voices,” their words, rise, and sometimes crowd out their instructor. What may be more remarkable (but hardly noticed by us) was that all of the communication about these articles among the *Labyrinth* editors, Effland, and his students took place via e-mail.

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labyrinth \ˈlab-ə-rin(ə)th n [ME laborintus, fr. L labyrinthus, fr. Gk labyrinthos] (14c) **1 a.** : a place constructed of or full of intricate passageway and blind alleys **b.** : a mysterious passageway for exploring and discovering the unknown **c.** : a unicursal figure where it is impossible to get lost **2** : an enigma to lead us deeper into the use of new technologies for learning **3** : a publication for exploring and sharing knowledge.

Assisting Student Learning with Technology

RICHARD EFFLAND, MCC

I have been involved with the use of technology in assisting student learning now for nearly seven years. In that time I have encountered student creativity that made me admire the capacities for learning when students are given freedoms not normally considered. We still use several learning modules that were designed and created by students. The pedagogical insights of former students such as Linda Trujillo have few parallels in more traditional settings where students are not the center of learning. I have been asked to introduce two of my former students. It is a pleasure to have known them not only as students but also as fellow learners.

The first student is Jim Jacobs. Jim has a worldly base of life experience that few students will ever have. He has a passion for anthropology and archaeology. He walked into my life knowing things I did not, and he freely shared his insights, not only me, but to his fellow classmates. I did not "turn" Jim onto technology, but rather probably channeled some of his abilities and talents by the use of technology in my classes. During his encounter with my approach to teaching and learning he quickly embraced the technology and flourished in this environment. Further, he adapted to the "html" world and soon was creating his own web pages and then web areas. He then shared those with students as links from my own web areas. When we began the Student Technology Assistant (STA) program at MCC, Jim was there, and he was applying for this position. His

service to the Life Science Department was a good model of how the STA program could benefit faculty

The second student writer is David Jannosy. David entered my Honors class for ASB222 "Buried Cities and Lost Tribes" a bit lost and hard to figure out. This was an Honors-only class devoted to creativity. The class was to define and build a web project. It was interesting to see David develop within the semester and become a leader who took responsibility to build the actual framework for the project. I did not know how he was doing some things, and sometimes I looked at the end product with a sense of mystery because one could not follow much of the pages logical flow. Yet in the end, the class looked up to David as their leader, and he stepped forward to pull it together. Unlike Jim, David was slow to get into the STA program because he procrastinated. However today, he is one of the longest surviving STAs in the program. I have seen him mature and grow in a special way.

Neither Jim nor David is like the student I first encountered. They have become masters of technology in their own ways. Perhaps the nicest by-product of their achievements in my classes is that they have helped others become more technologically literate. They have taught me along with other students, and I am the one who now realizes the real reward as a teacher.

Technology and Computers—More Than Just Classroom Learning

JAMES JACOBS, MCC STUDENT

The first class I took at MCC, "Buried Cities and Lost Tribes," was also my first experience with computers in a classroom setting. While I had previously used Computer Assisted Drafting for residential design, I had not utilized computers as an educational tool. Dr. Rick Effland taught our class to use the Internet and other learning programs. Dr. Effland's class changed my perspective, and computers took on an entirely new meaning. They were education delivery tools, not just workplace slaves.

MCC also provides students with email accounts. Suddenly, I enjoyed the capability of instantaneous global communication. My assignments benefitted from electronic interaction with academicians around the world. Thanks to email communication, I could network and exchange ideas with my professors, fellow students, and even people on the other side of the world.

I began taking almost every computer class offered in the Open Entry/Open Exit Computer Lab. I also took an Internet class and purchased

my first computer, a used Mac. Thereafter, computers played a role in every class, even if I only used it for word processing.

Dr. Effland and the Center for Teaching and Learning helped me create a "Prehistoric Rock Art" web site. The site is now a learning resource for other students. It allowed me to publish my photography and research. The Internet also served as a research tool. I began to place my coursework writings on-line. Students and teachers from all over the world emailed their comments, questions, and thank-yous; consequently these activities gave me a sense of being connected to a global learning community.

The financial enticements of the Honors Program ensnared me. For the Honors projects in other Anthropology and Religion classes, I created more web pages and an Andes web ring. Much to my surprise, the biography of Tupac Amaru page accumulated 50,000 hits in the first year. The fact that class papers can actually be read by so many people

provides more motivation than maintaining a great GPA. I was no longer writing assignments that would be read only by one professor. The technology at my fingertips on campus allowed me to participate in a worldwide educational web.

When the Student Technology Assistant (STA) program began, I considered the program an opportunity to give back to MCC some of what I had learned. Also, learning while working for a paycheck seemed a great idea. I was hired, and the STA program led to more opportunities. I was asked by another community college to develop an Intranet site and tutor their staff. Subsequently, I was recruited to teach computer classes.

Earlier this year, I was certified to teach CIS classes. My MCC classes and experiences, and especially my work as an STA, contributed to my qualifications. As I start my new career, I have to thank MCC. Their learning technologies facilitated my educational experience. At MCC, I acquired new skills and abilities that are not only useful, but also the foundation for continuing learning. I also discovered a new career path, one I would not have imagined only a decade ago. Technology and computers have changed my life in positive ways and have provided new directions in which to explore. For this, I thank the many MCC professors and staff with whom I have interacted in the past few years.

Laptops, Websites, and Angkor-Wat

DAVID JANNOSY, MCC

Considering my technical major, it was pure coincidence that I happened to enroll in a class in the cultural sciences, which would have so much influence on my higher education. In fact, the reason I was in this class at all was just to "fill a requirement." In any event, it was an honors class, and though I do not avoid such challenges, I was honestly taking the honors section purely for my time schedule and need for a general history requirement. The class was ASB222, "Buried Cities and Lost Tribes," led by one Dr. Efland, and I expected to show up at class with my textbook, notebook, and pen ready for some serious caffeine-required 10:00 a.m. lectures.

I was not expecting to be greeted by laptops and web sites. However, this technology appeared in front of me, and as the class began to develop, it became apparent that technology was going to be an integral part of the curriculum. This immediately excited me. Luckily, I remember thinking, I had taken the honors section, which would delve further into the technology and utilize it to study topics of anthropology. The idea of studying the advancement of technology in the past contrasted with the rapidly advancing technology of today struck me as a very interesting and analogous mix of activities.

The medium that was emphasized with the various curricula was multimedia web 'course-lets' that brought together group skills to evaluate anthropological situations. One particular exercise I remember was an excursion into ancient Angkor-Wat, a Buddhist nation in Asia. We worked in groups around notebook computers and hyper-linked our way through pages that were filled with various representations, statistics, etc., that revealed clues about the material and, in small groups, we were left with the responsibility of solving the mysteries of this intricate subject.

One thing that definitely facilitated our small groups was our use of laptops, an idea so subtle but effective

that I didn't even notice until we had completed a few exercises. There was a completely different atmosphere in the class contrasted to the traditional "computer lab." In fact, I would say that the social psychology of this setting was completely different than that of the typical "computer lab." We could share the computers much more effectively than sitting around desktops, and we could sit in circles talking, passing the computer, and easily switching roles from writer to information collector. And, considering the web medium, there was practically no learning curve for the software; in fact, everyone was quickly comfortable with the format.

As our class progressed, we began working on our final project. This was a class assignment that combined elements of research along with designing a web site. This would then tie together a central theme of anthropology. Together, the class decided upon the central theme. After several interesting class conversations about the format of the Web and the types of information best conveyed with it, our class decided upon comparative ancient religion. We were also faced with a project management situation. Despite our small class size, having more than ten people contributing to a document required careful consideration of how to best organize all of the information! We concluded that our best bet would be to take a central theme we could considerably task-out to each individual. Later, we could combine it into a highly cross-indexed type Web site of various concepts in comparative ancient religion. Again, we utilized the classroom laptops to reach these goals for both researching our topics and learning about the construction of web pages.

Overall, the experience was highly informative and thought-provoking. The atmosphere of the entire class was enhanced by the Web and the informal laptop atmosphere. Our final project integrated up-to-date technology and real-world skills from which I still draw ideas.

Ten Years of Student Voices on the Electronic Forum

ALAN LEVINE, MCLI

In late August of this year, we passed a milestone—the tenth anniversary of Maricopa's technology environment for communication, which is the Electronic Forum (EF). As noted in the tribute by Karen Schwalm, Glendale Community College is closing its EF services on a high note as it moves forward to the next stage.

Beginning in the paleozoic years of the Internet, the EF was an instrument which focused on enhancing learning and its functionality evolved, with the advent of electronic communications, into the "web" era. These days we are challenged to list many technologies as actively used after ten years!

Over the years, the Electronic Forum has been an instrumental system for the electronic expression of students' voices, so we wish to salute everyone who helped develop, integrate, and participate in EF.

Electronic Forum Farewell

KAREN SCHWALM, GCC

The Electronic Forum, which just celebrated its 10th birthday last August, will close at Glendale this Fall. During the past decade, EF has provided students at all 10 colleges (and at Pima CC, ASU Main and ASU West) with opportunities for electronic mail and group communication in support of both formal and informal learning. Over 275,000 Maricopa students have had accounts and, at GCC alone, students have sent 4.4 million email messages. That's a lot of writing!

Many, many faculty throughout the district and across disciplines have used EF discussion groups in their classes, but I want to thank those first brave souls — Eileen Shiff in Child and Family Studies, Jack Rose in Administration of Justice, and LynnAnn Wojciechowicz in English — who started early and helped us find new ways of fostering student interaction electronically. What they learned helped us all and will continue to help us as we move to new systems for supporting student communication.

Kudos also go to Lee Kirkpatrick Sola and Marla Dinchak who displayed untold amounts of patience and wisdom in promoting and guiding open discussions at GCC. EF provided a "press" and an "audience" to people who had experienced access to neither, and that provided opportunities for learning — both theirs and ours — that none of us had anticipated. The support of GCC's English department and college administrators over the years has been important to us as well.

Several campuses will continue to use EF into its next decade (it has always been Y2K compliant), and we wish them well. Other colleges have moved to new email systems. We look forward to developing, once again, cross-college discussion groups that support learning and community, sharing strategies and experiences both electronically and face-to-face. We have a solid foundation upon which to build.

Finally, of course, thanks go to Chris Zagar, who took the skeleton of an idea and programmed it into reality. He has always asked me hard questions about teaching and learning that resulted in a far broader vision for EF than I had ever dreamed.

And we've had fun. It has indeed been worth the EF-fort. ●

Learning, Programming, and Moving on at MCLI

ALAN LEVINE, MCLI

Over the past few years at MCLI, we have been fortunate to recruit three students who provide programming support for our computer development projects. They arrived with little more than an interest in computers, but all displayed a visible hunger to learn. Our first two student programmers have moved on to careers in the web development field. Previously, we found it took quite some time to find a replacement, but after talking to Jim Tipton at the Mesa Center for Teaching and Learning, we found ourselves in the predicament of having to choose from two qualified candidates, both veterans of MCC's Student Technology Assistant program.

Colen Wilson joined us last June, and quickly dove into Perl programming to create a web based database for faculty to report "bugs" on a multimedia project. He has recently survived (smiling) two days of "Linux Bootcamp" and is busy investigating new applications to run from our experimental web server. Not only does Colen have the drive and aptitude to independently learn new techniques (while listening to live baseball games over the Internet), he is also an able team member and supporter of MCLI's non-technical activities as well. He clearly enjoys both work and learning opportunities.

We've asked him to share some of his experiences as both a student and a support staff in the Maricopa system.

Learning That Provides a Direction for the Future

COLEN WILSON, MCC STUDENT

My name is Colen Wilson, and I am currently a MCC student pursuing an associate's degree in Computer Information Systems. Upon completion of this immediate goal, I plan attend a university in a related field of study. I am also a part-time Instructional Programmer at the Maricopa Center for Learning and Instruction (MCLI) at the District office. I think I have an advantageous point of view because I am able to see my education from two perspectives—that of a support staff member and that of a learner.

Life in the city is very distant from my upbringing. I am a Native American of the Navajo Tribe and originally from Fort Defiance, a dusty reservation town in Northern Arizona. I went to a small private school in St. Michael's, a few miles away. Upon graduating from high school, I moved to the city to further my education. I began my college career at Arizona State University in the College of Architecture. Since I enjoyed building things, I figured this was the path to take. I spent the next couple of years enrolled in courses, but I was still uncertain about my future.

I remember having the feeling that I wasn't getting anywhere fast enough. I needed to make a change. I received my first 'A' in a computer programming class while at ASU. I enjoyed the class so much that I decided that this was the path I was going to take. I heard good things about the classes at MCC, and it

wasn't that far from ASU, so I enrolled with a new major—Computer Information Systems.

A whole new world opened up to me, and I couldn't believe that I passed by it on my way to ASU! The classes I took became immediately applicable. After working at various customer service jobs, I came across the Student Technology Assistant Program at MCC. Having taken a Web Publishing class, I knew this was the road for me. I began my role as a Student Technology Assistant (STA). There, I worked along with the faculty of the Department of Design, Family and Consumer Sciences, serving their technological needs, which was mainly web development. This was a great experience because, not only was I able to apply my skills in a job setting, but I was also able to interact with faculty. Observing education from an instructor's perspective was very rewarding.

It was this experience that led to the current role I play at the MCLI. My position truly allows room for growth and actively encourages it. I am able to learn on the job and on MCC's campus. As a student and an employee, this is an ideal situation.

In approximately the same amount of time I spent at ASU, a portion of my future has materialized through the Maricopa Community Colleges. I can actually see the direction of my future.

<http://www.mcli.dist.maricopa.edu/labyforum>

Are We Listening to International Students?

JON LEA FIMBRES, FORMER PVCC/SMCC FACULTY MEMBER

Currently Regional Educational Advising Coordinator, Middle East & North Africa
(jonfbobh@internetegypt.com)

In a recent *International Herald Tribune* article, two young students from Sub-Saharan Africa were found stowing away on an international flight to a destination in the United States. They were quoted as saying they would do almost anything for an excellent American education. They wanted to study in the United States in order to gain the skills so they could participate in developing and improving their country.

International students are telling educators that they are willing to relocate, find funding, and contribute to their local and adopted community in order to obtain a higher education. Currently, there is a network of over 450 overseas advising centers which are listening objectively to the needs of international students. Advisers provide prospective students with information on the application and admissions process. Further, they help these students find appropriate American educational institutions which match the students' career and educational goals and provides practical advice on visas, passports, cultural, and academic life in the United States. The stated mission of these American centers is to increase mutual understanding among nations and foster cooperative international development efforts. Peace through education may take longer than other diplomatic efforts, but it seems to benefit both the student and the United States.

How are international students telling us that an education in the United States is important? In the last 25 years, international student enrollment has increased from 34,232 to nearly 481,280 students enrolled in 1998. Over 76% of these students are self-funded. A very small percentage receives U.S. Government support to study in the United States. Many of the current world leaders and future leaders have studied in the United States, and the recent *Time* magazine article on the Asian Recovery lists American alma maters of Asian leaders and their children.

Having international students pursuing their educations in America is a win-win situation for everyone. Having a strong international and student alumni network helps to build long-term relationships and trust that is critical for the United States to become an effective global citizen. Additionally, it is estimated that the economic impact of having international students studying and living in America contributes over \$8 billion a month to the American economy. In Arizona, it is estimated that the 9,150 international students who attended in 1998 contributed \$157,379,695 to the state economy. The presence of international students is estimated to create nearly 100,000 jobs in the United States.

Unfortunately, the United States has become complacent when listening to the needs of international students. Federal funding and policy support is declining. Each year budgets are cut for support of overseas advising centers. Community colleges have seen a steady increase in enrollment of international students but are hesitant to provide national leadership and monetary support for the advising network that sends the students to them. A recent conference entitled: "U.S. Leadership in International Education: The Lost Edge" was held in Washington, D.C. sponsored by the United States Information Agency. Leaders from all segments of higher education, government, and business discussed ways to increase support for maintaining the high level of objective and unbiased information on American higher education that is provided by overseas advising centers that monitor the steady flow of international students. All were reminded that each segment has a critical part to play in advocating, supporting, and advising international student education.

Other countries are recognizing the value of having international students studying in their countries and they are aggressively financing recruiting efforts. Canada, Great Britain, and Australia have looked at all areas of the international student experience in order to recruit them. They have improved their student visa procedures, actively supported their overseas advising centers, and developed strong national policies to support international education. The United States still remains the number one choice for many international students, but this status is threatened by the proactive strategies of other countries.

Supporting and listening to international students benefits everyone. Students learn skills, become acquainted with American culture, and contribute to the economies of their host and native countries. Education benefits by having a diverse student body and steady international student enrollments. Communities benefit financially by developing global citizenship. Businesses benefit by having an educated global workforce and employees with real life cross cultural skills. Not listening to international students is a lose-lose situation.

We need to continue to listen, advocate, and support our international students and the overseas advising centers which assist them. International student voices are telling us that higher education is very important to both their countries and them. In spite of amazing obstacles and general American

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Hands-on Experience, Service Learning Makes it Real at MCC's Network Academy

ALAN LEVINE, MCLI

Note: The audio version of this interview, taped on 9.25.99, is available in RealAudio format from the Labyrinth/Forum/Assidere web site.

The Network Academy is one of the programs at Mesa Community College's Business and Industry Institute (<http://bii.mc.maricopa.edu/>). Director Pinny Sheoran contacted us with information about a new Service Learning project. In this program, students spend part of their time answering questions posted by people from around the world to the Support4Free web site (<http://www.support4free.com/>), developed in partnership with local computer consultant Ken Colburn of DataDoctors. The students also get real-world experience working with network technicians at sites such as Mesa Lutheran Hospitals.

Pinny invited us to chat with a group of these students and staff members from the Network Academy so they could share their Service Learning experiences. Judy started as a student and now works for the Network Academy. She shared the events of how this took place.

Judy: I started as a "re-entry woman," someone who was changing from a lower skilled job to something better. My first class was in a classroom with two women and fifteen men. The instructor, Vasantha Srinivasan, was very encouraging to all her students, but it was especially important for us since we were the only females in the class.

It was hard to take classes while I worked full time. I tried to do this ten years ago when I first moved here. At that time, in the technology field, personnel managers who hired were looking for local experience. Although I had a two-year technical degree, I was unable to find a job that would help me pay for childcare. So, here I am ten years later trying again.

Vasantha told me about an internship at the Network Academy in which one worked for minimum and had the opportunity to learn and work in an environment of people who understood the limitations of students. I applied, interviewed, and was hired as an intern. It was a change for me because I was assigned to work in a department where the other two technical support people were young males. However, I was glad because it was an environment in which I could get hands-on experience while I was learning.

Many other students who did not have an opportunity for hands-on learning were interested in my responsibilities. We just began a new program and worked with a local businessman, Ken Colburn, called Support4Free, a non-profit, online web support organization. This service provides answers to

questions posted from people all over the world. Another Service Learning student, Divyot, and I started answering questions from people who were experiencing trouble with their computers; they asked all kinds of questions. In the beginning, we did not really know what we were doing!

We went out on the web looking for answers. Colburn was supportive and informed us that our answers were good. He also stated that we were responding to people in a professional manner. While answering their questions, we were learning about technology and gaining great job skills. It prompted us to continue this program and prompted me to request a job, which I have now, supporting service learning students at the Network Academy.

Alan: How many students are now in the program? How does it work?

Judy: It is growing; we have sixteen now. The students that come to us come from a broad range of backgrounds. They are women who are re-entry students, and some are multi-cultural students. Many are people who may be older and have worked in other fields, and now they are displaced.

The students sign up for a three-credit course called "Service Learning." It is a regular academic course, which is 16 weeks long and requires 150 hours of time. We coordinate with a number of non-profit organizations where the students volunteer their time. The sites agree to provide an environment where the student will work one-on-one with mentors in their field.

While students earn a grade, they have a faculty advisor submit weekly logs, and at the end, they complete a paper which describes how they achieved their original goals.

Next, we meet Suzanne, a new student to this program.

Alan: Suzanne, how did you get into this service learning program?

Suzanne: I received an A+ Certification but had absolutely no-hands on experience, so I didn't feel very qualified for any position. Although I had managed to get a few interviews, I didn't do well because I felt like I didn't demonstrate my confidence. Then I read about the MCC Service Learning program in the *Scottsdale Tribune*, met the people here, and immediately signed up for it. I've only been enrolled three weeks. During this time I have answered questions on the Support4Free site, which has been good experience. However, I am looking forward

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<http://www.mcli.dist.maricopa.edu/labyforum>

even more to working at Mesa Lutheran Hospital. When I begin this coming weekend, I will get actual hands-on experience with their computer systems.

Alan: There is a lot of emphasis now placed on the certification but perhaps what is lost in the wash is the lack of that applied experience. Here you get a mixture of the support line help through the web as well as network experience in a workplace...

Suzanne: Working on the Support4Free site has been helpful because I feel I know that I can get on it and maybe find the answer. It's a real good feeling when you can answer someone's question. I think it is a bit distressing when you have absolutely no idea what they are asking! To myself I think "I have a certification and I should be able to answer this!" but I can't. It shows how much I really don't know—I am just good at taking tests.

Divjyot was one of the first students in the Service Learning Program.

Divjyot: I moved here from India about a year-and-a-half ago. I had taken a few computer courses in India, but that experience was eight years ago. These courses included old programming languages like COBOL, BASIC, and little bit of C. I worked in India for about three years, but I always avoided technical jobs. I had done programming, and I knew that it meant deadlines and a long commitment—I was looking for something a little easier! So, I stayed mostly in administrative jobs. However, when I came to the United States, I decided that I wanted to do something new.

I read about the Network Academy in the MCC catalog. It sounded interesting because I had done a lot of things with computers, but never networking. I, too, had encouragement from Vasantha. She is amazing in class! I was in a class, also, with just two women and all men. When you walk into a class like that, the men all have an expression on their faces like, "What are these women doing here?" Are computers and math supposed to be a male thing? I don't agree.

I enjoyed the courses I took here, and I have passed my Networking Essentials and Workstation courses. I did not have a lot of direct experience in networking. This is the reason I was interested in the Service Learning program.

When I looked at the first few questions that came in to the *Support4Free* site, I felt like I did not know anything! How am I ever going to answer these questions? I almost gave up, but then decided to work together with Judy.

Judy said, "I don't know anything either, so let's do it together." It was great to get positive feedback from Ken Colburn. It was even better when we compared our answers to similar ones maintained on the site's database—it made us feel like our answers were correct. Finally, it is great to get feedback from the people we help.

I have more experience now, and I feel more confident I am eager to go out and see what the job market has to offer now that I have a certificate in addition to experience. The best thing about the program is that it gives you an opportunity that you could not possibly have in industry. We are absolutely fresh just out of class, and I don't think people in business would want us to experiment on their systems without this experience!

Lamani, who is deaf, described his background through his interpreter, Debbie.

Lamani: I am from Samoa. Three years ago I decided that I would major in computers, but I had not decided beyond this major. I struggled with a computer systems major; then I switched to computer science, but I wasn't very comfortable with it either. Then I talked to a computer engineer who was also deaf, and he gave me a lot of information that convinced me to change my major once again, this time to Networking.

I have been here at MCC about a year, and have some lab experience, but not a lot of hands-on in the "real" world. When I was offered an internship, I thought this would be a chance to get that experience. I needed this so much. Judy has supervised and helped me edit and get through the web site support process.

To get hired, you might not even need a certificate or a degree. Employers are really looking for hands on experience. They are going to hire someone with a lot of experience over someone that just has a piece of paper.

Marsha, a staff member, shared her thoughts on this program.

Marsha: I handle the graphic design for the Business and Industry Institute. I came today to gather more information about the Service Learning program to include in our new web site. What I am hearing is that people are not getting sufficient experience learning technology through academia. However, I see that they are getting the opportunity to confront communication skills with real people in the *Support4Free* program. This requires that they develop patience, self-confidence, as well as research skills. Most importantly, though, are the communication skills which involves dealing with people and finding the answers. Additionally, while doing all of this they must maintain a sense of who they are and not become overwhelmed because they don't have the answer. They are finding out that the field is too big one cannot know all the answers, so one must be good at researching, communicating, and inspiring confidence in the person that is waiting for an answer.

We then discussed the needs that the Service Learning program is addressing.

Judy: The students we have enrolled in the program can bring something of great impact to the technology

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workforce. Currently, people that work in the networking field represent a small part of the diversity in this country. When this wave of students enters the technical field, they will be part of a change. Gone will be the image of a techie that comes out and sneers at you because you don't know much about your computer and gives you a curt answer before returning to his little cave. I believe that this wave of students understands that not everybody knows everything. No one can, but we can change that image. We understand that people out there deserve more respect—we can educate them when we answer their questions. We can present to them that it is OK to ask questions.

Pinny: I'd like to add why we decided to move into organizing Service Learning as a way of providing hands-on experience. To do very complex technology programs, we need the complex technology itself and complex technical support. We are not competitive enough with the marketplace in developing professional staff. If we are serious about education, every venue we have should be an educational opportunity. I believe that the technical support for this department is going to come from its students.

As a faculty member, my concern is how can I get students to extend this learning. Initially, I offered paid internships, but the truth is we do not know if students are learning in an internship. I looked at Service Learning in which the restriction is a non-profit environment. Our perspective of Service Learning has been that it is a "soup kitchen" approach, a societal service. But those non-profit agencies have a technical infrastructure that allows them to serve the community. And, look what we are saying to students—pay 3 credits, give 150 hours—it better be something that benefits them! The key is to find strong sites. Here's what students learn at a site; they learn what it takes to start working in a large organization, they fill out forms, sometimes they go through security. Students also learn that if they do not have a good supervisor, they end up wasting their own time.

My challenge is in finding sites for their hands-on experience. And, I want them not just to have experience at just one site, but multiple experiences. For their 150 hours, we would like them to do part on the *Support4Free* project, where they are learning how to research, how to assess the question, how to answer the question in a language that is understandable to human beings, not techies. And more importantly, they are learning how to depend on each other, because they work in teams. If they don't know an answer, it's okay, because someone else might.

I want to speak to the learning side. I require that the students keep a weekly log. My hope is that the students' learning will be reflective. At the end, they write a report, and in these reports they begin to think a little bit more about not only what they have learned, but *how* they learned.

The students shared some of their thoughts on the program.

Alan: Can you tell us about research skills and writing skills?

Divjyot: When I started answering questions from *Support4Free*, Ken Colburn was editing our answers to ensure quality. Our first ones were completely edited, but after two weeks, they started coming back without major changes. When you see your work being edited, you think about the reasons why they were edited, and then try to adjust your next answers in a similar way. We tried to construct our answers in a way that the person who wrote them would understand. We had questions from beginners who did not know anything about computers, and we had questions from people much more experienced than we.

Alan: When you got that first feedback, did you look at it as, "This is what I need to improve my work?"

Divjyot: Yes. It was good to see the feedback. I was not confident at all in those first two weeks, and we tried to answer it in the way we thought it should be. However, we found out we could do much better.

Alan: What is an example of a difficult question?

Judy: Sometimes it is from someone that knows enough to be dangerous, but not enough to fix their computer. We get a lot of questions that say, "My computer wasn't working right, so I reformatted the hard drive, and I flashed the CMOS battery, re-installed Windows and nothing is working right." Now it is really difficult because they wiped out everything they had which might have indicated the problem. They probably do not realize how hard it is to start from scratch.

Suzanne: Yesterday, I had a person who asked, "What kind of computer should I buy?" and that was it! I wrote back with questions like "What do you need it to do?" These types of questions are not really specific enough to answer. We get some questions in which there is not enough information, or it is garbled because the writer may not have good communication skills, so you have no idea what they are asking.

Alan: What are the differences between classroom learning and what you do here?

Lamani: With Service Learning, you receive more diverse learning, from different companies. You learn how to apply your knowledge by hands-on learning. The class depends a lot on the teacher. I feel like the classroom is almost more for future teachers; however, Service Learning is more for those that will go into the field.

Pinny: Do you think that in this learning, you are learning more because you are talking to other people? Are you able to do that in the classroom?

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Lamani: In Service Learning, there is more socialization, more networking. It is limited in the classroom. It seems like in the classroom, you do not find much group discussion, mostly lecture. People stay to themselves. In Service Learning, when a question comes up, I can always approach a student peer and ask for help. We can answer and solve the problem together. I am confident that I learn much better that way.

Pinny: Students are getting an exposure to the range of problems they may have to solve out there in the *Support4Free* site. My first vision was limited to keeping students in different Service Learning situations, but now I think we say that students should get at least three different experiences, one in *Support4Free* but then two more with hands-on experiences.

We are touching only 16 out of 1800 students in this program. How can we reach more? This is not just an add-on; there is some very serious learning happening. This may sound corny, but I heard someone recently say the way you become a public institution is by making life-long linkages with individuals. So, I am hoping that as Divjyot goes on to some company, she'll start talking about internships, and, maybe, after she goes out and works a few years, she will come back and teach for us as an adjunct faculty member!

Alan: If you could talk to your teachers in general, what would you like to tell them about reaching you more effectively?

Suzanne: I have found that many of my teachers have not taught me anything. I go in and get the credit, but then I go home and learn the material myself. I look in books, and more books, and read, and read, in order to pass the certification exam. I don't feel like I get a great deal of knowledge from a person who stands in front and reads a book to me. Many people teaching assume that you know a lot more than you do, because they know it they think it is so easy, and everyone knows what you know. For instance, in my A+ certification class, we did some hands-on; however, when you are female and paired with a guy, you are not going to get much hands-on experience because...they just say "Here, let me do it. I know what I'm doing;" it makes it very difficult to learn in that situation.

Lamani: Some of the teachers are fantastic lecturers. Much of the time we would sit with the computers while the instructor stood in front of the room. We would be seated in a way where we would be watching the lecturer, and we would work hands-on with the computer at the same time as the lecture. I like that part of it.

Marsha: I've noticed that a lot of classes seem to have students who work full-time. What percentage of our students are already working? Does this make it tough on the first time new students?

Pinny: In our program, 46% of the students have Bachelors degrees, yet they are pursuing an AAS degree because it is a technical degree. Over 60% are employed in a full-time job. Yet, some of them may not be working in the technical field, so we do not want to assume that it is only the full-time student that need support. The purpose of Service Learning is to provide hands-on learning to anyone that says "I need it." I do not care if they are experts or not.

On the teaching side, I think it is critical for our faculty to recognize that it is easy teaching to those that already know the material, because then you become involved in a debate; you are not really teaching. The faculty make me happiest when they tell about the students who, when they arrived know nothing. This is later contrasted with how they helped them. Good faculty know to take the student who really know a subject, and pair them with the ones that don't. That's a part of good teaching and classroom management.

We should ask the students what the environment is like when they enter without prior knowledge. I'd like to put the challenge to the students—if you don't come in with the experience, don't you have an obligation to demand that it is created? I always tell students that is so easy to complain, but talk to me about what you are going to do in the classroom to help your teacher realize, "Hey! Can you organize this differently? Can we do it as group work?" I know, as a teacher, I learned more from all the things students said I did not do for them.

I'd like to ask how do you feel about being in class with people who are already working in the technical field?

Divjyot: They can tell us what the real world is like. In some of my classes I was the only student who was not a full-time employee. Sometimes we would address a topic, and they could say, "We solved this kind of problem, and this is how we did it..." Some of them would even bring in problems which were not covered in the book.

Suzanne: I began the program at a real disadvantage I was expecting a divorce and knew I could not support myself. In my first class, I could get by just by reading the book. But in the next class, I walked into a lab and did not even know how to turn a computer on! I did not own one. This was totally beyond my realm. If someone else had not paid for my classes, I might have given up. However, I told myself I could learn it. My instructor helped by pairing me with an experienced Novell administrator. I got by because I was stubborn!

Because I began in a position where everyone knew so much more than I, I felt incompetent from the beginning; and I've never really caught up. After the A-Tech, I started going to another community college (before coming to MCC), and I had some teacher:

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that were really bad! I don't mind if a teacher makes a mistake, or says to me, "I don't know the answer. Let's find out..." But this one teacher was so bad that he didn't realize he did not know the answers. Possibly, he just made up the answers. I dropped that class because I was so afraid he would teach me something that was wrong.

Pinny: In our institutions, we have encouraged images that a good teacher is one that knows

everything, a hotshot. But the truth is that they are not doing a service to our students. This frightens me. This student just said, "I don't mind that you don't know, just don't lie to me!" I've found that good faculty are not the ones who know a lot; they are the ones that know about good teaching and learning.

Bag of URLs: Technology for Student Voices

MCLI collects web sites to share with you in our "Bag of URLs":

<http://www.mcli.dist.maricopa.edu/eye/bag/>

This site offers you features to search among more than 2800 items already submitted, a place for you to "drop" more URLs in the "bag," and an email list to sign up so you can receive notices when the most recent bag has been updated.

Below are some web sites "in the bag" that are related to this issue's theme.

E-Mail

There are now many free, web-based services for students to set up their own email accounts.

Free Email

<http://www.thefreesite.com/email1.htm>

Free Email (Yahoo)

http://dir.yahoo.com/Business_and_Economy/Companies/Internet_Services/Email_Providers/Free_Email/

Mailing Lists

Electronic mailing lists ("listservs") are effective for intercommunication among groups by e-mail.

eGroups

<http://www.egroups.com/>

ONElist Mailing List Communities

<http://www.onelist.com/>

Web Discussion Boards

Taking mailing lists one step farther, a discussion board publicly displays a group's communications in a "threaded" format making it easier to follow the back and forth exchange. Available tools range from free web server CGI scripts to complete software packages such as O'Reilly WebBoard.

WebBBS

<http://awsd.com/scripts/webbbs/>

WWWBoard

<http://worldwidemart.com/scripts/wwwboard.shtml>

O'Reilly WebBoard

<http://webboard.oreilly.com/>

Chat Rooms

Chat rooms provide environments for live or almost real time communication.

TalkCity

<http://www.talkcity.com/>

BeSeen.com

<http://www.beseen.com/>

"Packaged" Environments

What if you want several tools? Try Yahoo's free service for creating "clubs" that include all of the functionalities mentioned here and more. Or, many instructors are now using course management packages such as Blackboard's CourseInfo (available at nine of the Maricopa Colleges) or WebCT that provide discussion boards, chats, and more.

Yahoo! Clubs

<http://clubs.yahoo.com/>

Blackboard

<http://www.blackboard.com/>

Maricopa Blackboard Group

<http://www.mcli.dist.maricopa.edu/ocotillo/bb/>

WebCT

<http://www.webct.com/>

<http://www.mcli.dist.maricopa.edu/labyforum>



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Our correspondent from Egypt, Jon Lea Fimbres, sheds light on the perspective of international students who are increasingly showing up for a United States education. Also, Colen Wilson, a Mesa Community College student who works for us at the MCLL, describes his path from a small town in the Four Corners region to a promising career in computer applications.

Finally, we interviewed students in a unique Service Learning program at the MCC Networking Academy—their words clearly say how making learning (by hands-on experience) “real” is very important.

Hopefully, this issue emphasizes the idea that providing an electronic discussion board, an e-mail address, and a chat room means little without a rich and meaningful context for learning. We cannot just build the new electronic forums. We have to be there to guide, to listen, and to respond to student voices, as well as to provide some meaningful connections between people and “all that stuff out there”—the central idea of the “weblike existence” envisioned by Tim Berners-Lee.



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complacency, international students are enrolling in our educational programs. They are telling us that they are willing to relocate, invest in their futures, and return to their countries to improve economies and living conditions. International students are communicating through their actions and their resources. Is the United States ready to listen and respond to their voices in a mutually beneficial manner?

Information and statistics from:

Advising & Student Service Branch, U.S. Information Agency. “Fact Sheet: Economic Impact of International Students,” 1997-98.

“U.S. Leadership in International Education: The Lost Edge,” Conference Report & Action Agenda. U.S. Information Agency and Educational Testing Service, 30 Oct. 1998.



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