Abstract
There is a growing body of evidence, empirical and anecdotal, to suggest that students enrolled in extended (off-campus) degree programs require supports that ensure not only access but success. Access to supplementary services, such as writing centers and campus libraries, necessitates early action by support staff to guarantee that students enjoy the full range of services open to their on-campus counterparts. In traditional settings, this means building bridges to these services for non-traditional students and sensitizing staff in these service areas to the details of serving off-campus learners. Access to courses is more than offering coned versions of lectures to students off-campus; it means that courses must be designed to enable interaction both between instructor and student and between students. The interaction necessary to fully engage adult learners is achieved in courses especially designed for delivery at a distance. Access is only one component among the ties that bind a student to an institution, but it is an important one. It has been shown that the feelings of connectedness students obtain from this are important in ensuring perseverance to completion of degree programs. Ensuring success of students in non-traditional education settings requires more that access to technical and supplemental services. It requires that support staff be aware of issues of adult, distance, and independent learning, and the prioritization strategies these learners employ. It also means that staff in adjunct service areas must be prepared for interaction with students who are not traditional in age or attitude toward learning. A point-of-contact person on campus must build avenues of communication between the students and services, and between service staff and students. In the case of one institution the bridge-building, both for students and other staff was done by the degree program advisor. The presentation to the conference will highlight both the preparations for access and the bridge-building strategies for success employed by one advisor to enable students’ connections and develop connectedness.

I. Background
Most educators will agree that the impact of new technologies in the field of distance education has been significant (Paul, 1990; Duning, Van Kekerix, and Zaborowski, 1993). That these new technologies allow us to engage students in new ways is an important consideration in the choice of media for a distance offering (Duning, Van Kekerix, and Zaborowski, 1993). The options are growing, and the sophistication is improving; students learning today via these new tools have more opportunities to interact with content, instructors, and peers than did students using media popular just a few years ago (Hara and Kling, 1999). We now have a veritable smorgasbord of distance education media from which to choose, so finding and using the best tool for the job is an increasingly easy task.
However, the media choice(s) are just one aspect of distance education (Lundin, 1998). There are few distance educators who would dispute the assertion that many factors (Calvert, 1989, Hara & Kling, 1999) influence the success of a distance education program. Fewer still might argue the point that the very diversity of factors presents a daunting challenge to program developers. As educators, we might not always agree on what these factors are (Gagne, Griggs, & Wager, 1992) and we may never agree on their relative importance. There are some factors, however, that have are critical to the success of students engaged in distance education programs (Calvert, 1989).

When the Department of Engineering Professional Development began to design and construct a new type of graduate program for adult engineers, three considerations dominated our planning. The first was that of course content and design: What content was important to practicing engineers (and their employers) and what course design characteristics were relevant?

The second consideration was the process of course delivery: What mix of media were going to be the most effective in delivering our specific content and engaging our students? Were we going to let technology determine our interaction or was this to be just one component in the mixture? Certain assumptions were made about both of these considerations, and these are thoroughly addressed in another presentation at this conference.

The third was centered around the experiences we anticipated for our students when interacting with our tradition-driven institution. For purposes of this discussion, I assume that the term tradition indicates that we are discussing staff and practices that have dealt almost exclusively with on-campus students. This impact of traditional practice on the educational careers of non-traditional students has held my attention and dominated my work since June of 1996; this work is what I’d like to share with you.

Our department’s experiences in delivering distance education and in working with adult learners played a key role in the decisions that were made about the content, design, and delivery of a new masters degree program.

II. Factors that affect students in distance education programs

There are several factors that were considered to be key in making the lives of off-campus students smoother – allowing them to focus on course content and not on day-to-day operations. After introducing the factors I considered, I will discuss the preparations and actions I took. First, though, what are some of these factors:

Motivation If students are not motivated internally, there is probably little I or anyone else can do to light a fire under them (Wlodkowski, 1989, Hara & Kling, 1999). Motivation is the one factor that has been shown to be critical in the perseverance of students in distance education (Wlodkowski, 1989). Of course there are ways to enhance this factor (Wlodkowski, 1989), but if it’s missing – if the student is in your program because he feels he has to be there – then there is probably very little any educator can do...
to change that attitude. We can make the courses engaging, we can remove as many barriers as possible, we can smooth the path to completion for a student, but we can’t control the student’s world and there will always be obstacles to navigate (Paul, 1990). Of course, this is very true in traditional education, but plays a much larger role in distance education, perhaps simply because of the distance, or perhaps because motivation is one key factor that can help a student persevere against all obstacles (Hara & Kling, 1999). This is a factor that we can influence, but we can’t control.

**Context of the learner** As educators, we can prepare students for the learning experiences they are to face. We can make the media no more imposing than a textbook, rather than have the learning curve of the media dominate. Once again we can remove barriers wherever possible, but we have little control over the context of the students’ lives. Is extensive travel a part of their working lives? Are short-notice projects that push all else aside common practice for their employer? Does the student have family, religious, or community obligations that will draw time and attention away from focusing on content? What weight should we give to these other obligations when we design a program? How important are they to the level of commitment displayed by the student? Does the student accept our program as another important commitment, or are we easy to put off?

As educators and program counselors, we can be open to students’ concerns about their responsibilities, we can help students learn to manage their time effectively, we can help students prioritize, and we can intervene on behalf of students who are struggling with non-program problems. We cannot, however, control these outside factors, and we need to understand that in the lives of our students, these outside influences will play a major role (Tennant & Pogson, 1995). After all, these influences were a part of the students’ lives before we came along. We must acknowledge that we are dealing with adults who have adult lives and who are not necessarily as enamored of our program as are we. We must understand that our students’ priorities will shift, and we should accept that our students must retain the responsibility for the management of their own lives.

**Experience** Our students come to us with similar educational backgrounds; that’s part of the screening process we employ to ensure that they all have the foundation to absorb and utilize the information being shared. However, when it comes to their experiences – with employment, with life, with learning (continuing, distance, and traditional) – we can only hope to gain some understanding of what those experiences were and what effect they may have on students’ readiness and enthusiasm for learning (Brookfield, 1993). Once again, we can learn about these, and respect their importance, but we have no control over them.

**Local support** No matter how motivated the student, life is always easier if that student has support from key players in his environment. This is certainly true in areas other than education, but the lack of support from significant others in the students’ lives can sabotage the best efforts. Is the spouse supportive? Does that spouse understand the student’s commitment to the program, or the level of obligation to it? Is the spouse willing to re-negotiate home and family obligations so that the student has time to engage in courses?
Does the student receive support from management at work? Is the manager willing to discuss time constraints with the student or will the student’s time management efforts be sabotaged by the assignment of extra work on short notice? Does the student’s employer make a financial commitment to the student’s support or will the student have to obtain some type of outside aid? For some employers this means the development of new or the amendment of existing policies that allow students to engage in outside educational activities. In many cases, it means creating a learner-friendly environment as well as some level of financial support. An obvious benefit of distance education for the student is not having to leave home or work to learn, but will the employer help? Does the employer recognize the benefits of having a student-employee stay on the job and apply new learning immediately? Does the employer consider those benefits important enough to give support for time, tuition, books, and fees?

By making presentations to employers and managers, and by helping prepare other key people in the students’ lives, we have some measure of influence with this factor. We can help an employer recognize the benefits and understand the importance of learner-friendly policies; we can show the employer and manager examples of other programs that support learners.

**Adult learners** Studies of adult students have shown that this population of learners approaches the educational experience with different needs and expectations than their more traditionally-aged counterparts (Tennant & Pogson, 1995).

Adults are more interested in incorporating new learning into what they already know (Tennant & Pogson, 1995) and are less interested in learning for learning’s sake. They are also more likely to challenge the instructor and fellow students with real life experiences that contradict hypothetical case studies developed solely for education and far from the context of their own experiences. Adult students bring a rich variety of interests and experiences to the classroom; instruction that takes advantage of this variety becomes deeper and richer for all involved (Caffarella, 1994). Taking advantage of the experience of students is something over which we have a lot of control; this was given heavy consideration when designing and developing courses and will be discussed in another session during this conference.

**Distance** The miles that separate us from our students are beyond our control, but there are two factors buried within this issue that we can influence greatly. The first is the emotional distance that separates students from peers, instructors, and support staff. The very means that we employ for students to interact with course materials, with each other, with faculty, and with on-campus supports can have great impact on how far away campus and other learners can seem to students at a distance (Duning, an Kekerix, & Zaborowski, 1993). By employing highly interactive media, allowing for students to form on-line study groups, by orienting faculty to the on-line environment, and by providing readily-available contact with on-campus resources, we can ensure that our students have as much interpersonal contact and program support that they need. Not all students take advantage of all of these, but the support is there if they choose to employ it.
This high degree of interaction and support also helps with the second factor. It helps remove feelings of isolation that can reduce students’ levels of enthusiasm and impede progress through a program offered at a distance (Hara & Kling, 1999). We have a great deal of control here; we can make or break a student’s experience with us, simply by the level of energy and attention we devote to interaction and support. As a program counselor/advisor, this is probably the most important action I can take; to be fully accessible, to be fully engaged with the students, staff, and faculty, and to devote my energy and enthusiasm toward the students’ concerns.

Technology The options here seem to be growing daily; as advances are made there is great temptation to go with the prevailing trend toward higher levels of technology (Duning, Van Kekerix, & Zaborowski, 1993; Paulsen, 1998); the newest technologies receive a lot of attention and their use is extrapolated to every possible application. What should be happening, however, is to resist the hype and use the options in technology to shop for the best match between the needs of the content and the needs of the student (Duning, Van Kekerix, & Zaborowski, 1993). High tech does not always equate with best tech. The decision to use one or more media should be driven by those needs, not by the attention paid to the tool (Walshok, 1989). Another consideration in this choice should be the level of comfort and competency with the technologies in question.

It probably is unsafe to assume that faculty and students are on equal footing when it comes to some of the new high-tech options. Even though we are dealing with a sophisticated student population of practicing engineers, it’s probably dangerous to trust that they are familiar and comfortable with our technology choices. We have found that students and faculty each need some level of instruction before the technology becomes invisible and concentration on content can begin. Instructing the students became a focus during course development, and instructing faculty in the technologies employed was incorporated into their orientation to distance education.

Policies vs. practice in a traditional system This factor is the most hidden, but probably has the greatest potential for derailing even the best-intended distance education program (Spitzberg, 1994). Even though university policies might be re-written to include new foci on distance education and non-traditional student populations, we have found that the actual practices employed on campus can, in some cases, set traps for unwary support staff (Portman, 1993). In some instances, practice is driven by convenience to staff, not policy dictates, and in others it is driven by the way information flows from entity to entity on campus. In the case of students who are not physically present on campus, we found that many practices assumed that physical presence, and that our students were, in some areas, going to be penalized for not being present.

A prime example is in the Office of Student Financial Services (SFS). While SFS counselors have gone our of their way to understand who our students are, each student applicant is still required to have an interview before the financial award is given. Discovering this roadblock and accomplishing the interview by alternative techniques came about after delays in financial aid awards. Another prime example is that international students are required to have an interview with the Office of International
Studies and Scholars (ISSS) within the first three weeks of each semester. Obviously, students off campus are not going to be able to fulfill this obligation. An additional hurdle is that international students must show proof of health insurance coverage before being allowed to study on our campus. While this might make sense for students actually away from home and on our campus, our particular students were at home, at work, and not in need of separate insurance to cover them when in another country. In the worst cases, this meant that administrative holds were placed on students’ registration for courses. In others, it meant that awards were unnecessarily delayed. We had to find another way to help FSF and ISSS understand our students and their special circumstances.

We also looked long and hard at other entities on our campus, to discover what was expected from our students. The potential for a student to fall through the cracks is enormous! In everything from application to registration to student financial services to billing, our students were sufficiently different from the on-campus population to create confusion in a system that is governed by traditional practice. The main thrust of my work has been to find those cracks before the students do and to increase the awareness of staff on campus to the similarities and differences between our students and those the are accustomed to dealing with. My personal and professional goal has been to remove barriers and pitfalls so that the various operations for our students would be as seamless as for those on campus. Falling through administrative cracks were frustrations that our students didn’t need; the course content was challenging enough!

Retention and completion We can’t do anything directly about retention. This is one of those indirect benefits that are the result of good planning and support. But it is well known that if we support our students to the extent necessary to keep them engaged with and enthusiastic about the program and its courses this support ultimately lead to higher completion rates (Paul, 1990).

III. Our actions

The brief discussion above, of nine factors among the many that affect students in distance education programs, begs the question: Knowing these were going to influence our students’ experiences, what did we do about them?

Non-course program materials This important segment of our educational plan was designed to keep students informed about university policies relating to honesty, copyright, and the confidentiality of students’ records. Another section of these materials addresses program resources and policies specific to our degree program. The third element covers the issues sometimes raised by distance learners, their employers, and their families.

We collected formal policy statements about the confidentiality and availability of student records, ownership of course products, and the ethical considerations essential to student/course interaction. These were already in place for on-campus student populations, but needed to be made available to our off-campus students. These
materials are all available on-line, but we wanted our students to have the print version for their records.

**Resources** As a department, we needed to ensure that we relayed to students the location and availability of resources – technological support, libraries, writing centers, on-line academic information files for each student, book stores, and other resources that students use frequently. Access to some of these meant setting up student accounts with passwords, so that students could obtain information required for coursework or update information in their personal files. How to access this information is available in many places for on-campus students, but we had to go out and find it so that we could provide it to our students at a distance. Access to other resources, like the Writing Center, meant alerting the Center to the presence of a new population of students, and that they were about to interact with the Center’s on-line resources. This notification ensured that the on-line resources and the support for them could be shared with on-campus students and that response time for on-line students would be the same as that for on-campus students who have face-to-face appointments with writing counselors.

**Contacts** Our department also needed to think out how we planned to deal with the various issues that students bring and create in educational programs. Information about faculty and staff - who are the first points of contact for certain types of questions and how to reach each of us, tuition and other fee-payment policies, our expectations of students’ responsibilities, and information about obtaining informal transcripts and other types of progress reports were all developed and included in our materials. All of these policies and procedures were included in our the print materials sent to each accepted student; they were also incorporated into our Web site information for on-line access.

In addition to print materials, a video-taped presentation of faculty and staff was prepared by our technology section and given to students to view and then share with significant others in their lives – spouses and employers. These tapes were prepared so that the students could see for themselves that faculty and staff actually exist, and so that they could hear the level of commitment from each of us, in our own words, to the students’ success.

**Instructional design and pilot testing** Another commitment we undertook was to pilot-test each course with a population of engineers before we offered the course to our matriculated students. While this added considerably to our developmental timeline and program costs, it ensured that we would have all of the “bugs” worked out before our students interacted with course materials. Each pilot-test student was asked to keep a log of experiences and problems, and to fill out evaluations concerning both content and process. We found the experiences of the pilot test to be a vital component in the success of the course.

While our major format for asynchronous delivery is the Internet, during the course development and pilot-test phases of each course, an instructional designer worked with faculty members to help choose any other media mix best suited for the course materials, as well as to assist in the identification realistic objectives for each course and the
development of the syllabus and course timeline. The pilot testing also guaranteed that we were not overloading students schedules, that the time commitment we requested from students was not only achievable, but realistic, and that the course content was relative to current and future practice.

**Faculty comfort** In order to ensure that our faculty had a reasonable comfort level with the technologies they were going to be using, we designed a faculty orientation wherein we used the synchronous and asynchronous interaction technologies to assist them in learning how to make different types of presentations. For some of them, this was relatively familiar ground with a new population of learners; they had used the technologies for on-campus types of work. For others, this was new territory entirely. We support and encourage our faculty to mentor each other in time and labor saving techniques, as well as in the differences in interaction in an on-line environment.

**Transparent technology** To bring our students to similar levels of expertise with the technologies we were planning to employ (Web and audiographic teleconferencing), a special course was designed. The course components included Learning Management, Information Management, Desktop Skills, and Document Management. These were the obvious parts of the agenda; the part that was invisible was that they were learning these management techniques using the technologies they would be employing to access other course content. By the end of their first course, the students had accomplished the techniques of on-line etiquette, managing data, re-prioritizing their schedules, and had undertaken the building of a supportive learning community. During the semester, we could begin to see that students were helping each other solve problems, and when they came together for their short residency at the end of the semester, they came together as a family of learners ready to work together to accomplish new learning.

**IV. Summary and conclusions**

My own biggest challenge was to identify, in advance, as many of the potential barriers and pitfalls that our students might encounter. Whether it concerned the application process, course registration, financial aid application, or visa status, my passion was to build bridges between our students and the other campus entities they would encounter. And I must confess I don’t use the word passion lightly. Initially, every entity on campus that I contacted was resistant to making changes in the way work was done; those students were to be present in person to accomplish tasks! But gradually, through a process of mutual education, respect, and a growing realization of how we all needed to do our work, we were able to build a system wherein our off-campus students could be integrated into that flow of work without disrupting it. And more importantly, without disappearing into some administrative sinkhole.

All of the activities we undertook had one main objective: To ensure that our students were not only going to have access to the program, but also to guarantee that they were going to be as successful as possible (Gibson, 1996). Along the way, we discovered much about our own levels of commitment, our expectations, and our ability as a team to build
a safe environment for our students. We also learned to appreciate how others on our

campus view distance education, and to make a contribution to their growing
understanding of this new population of students and what they need to succeed.

For all of us, this was a labor of love and involved a high level of commitment in the face
of many obstacles. But we have a population of students who are succeeding in a
rigorous learning environment, who are meeting their own (and their employers’)
learning goals, and who love the program – its content and its delivery and its level of
support. While others may look at the cost of delivery or compare tuition rates, we know
that the success of our students is the real bottom line.

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KAREN AL-ASHKAR
Karen is completing a dissertation for the Ph.D. in Distance Education at the University of Wisconsin – Madison. She received a BA in Medical Technology/Clinical Chemistry from Edgewood College and a MA in Rehabilitation Counseling Psychology from the University of Wisconsin – Madison. She is the advisor for the Department of Engineering Professional Development (EPD), College of Engineering, at the University of Wisconsin – Madison. In 1995, she began working with other EPD staff and faculty to develop a master of engineering degree program for off-campus learners. She has worked with adult students since 1992, and has counseled students in distance degree programs since 1994.