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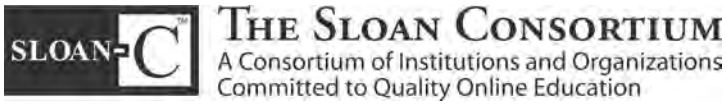

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BLENDED LEARNING AND LOCALNESS: THE MEANS AND THE END

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ABSTRACT

Blended learning can be seen as the means to achieving a greater sense of "localness" on the part of colleges and universities. Blended learning has been evolving for several years and while definitions vary from one institution to another, it is defined in this paper essentially as a combination of face-to-face and online learning. Localness is a term used at the Alfred P. Sloan Foundation as part of a new funding initiative to support academic programs designed to strengthen a college or university connection to its core constituencies. The purpose of this paper is to explore the relationship of blended learning and "localness".

KEYWORDS

Distance Learning, Online Learning, Blended Learning, Hybrid Learning, Localness, Access, Marketing, Branding

I. INTRODUCTION

At the Sloan Consortium Summer Workshop held in Baltimore in 2006, a panel discussion was organized entitled, *Localness and Blended Approaches to ALN*. Seven presentations were made: two were designed to introduce the topic and five described case studies of blended learning applied to localness initiatives. The Alfred P. Sloan Foundation has been funding activities in ALN (asynchronous learning networks) since the early 1990s as part of its *Anytime, Anyplace Learning* initiative. While the term ALN is often used interchangeably with online learning, in its purest form, it referred specifically to asynchronous, instructor-led, highly-interactive, cohort-based online learning environments. The Alfred P. Sloan Foundation's interest was to use ALN as a way to expand access to higher education opportunities for students who were geographically distant or time-constrained. Blended learning is a more recent phenomenon and refers to the blending or mixing of face-to-face and online learning in an academic program or course [1]. The Alfred P. Sloan Foundation sponsored two workshops (2004 and 2005) hosted by the University of Illinois, Chicago, that focused on definition, research, and institutional practices of blended learning. In 2006, a third workshop was funded which added the concept of "localness' to the blended learning theme. Localness referred to a new initiative of The Alfred P. Sloan Foundation in support of academic programs designed to strengthen and enhance an institution's connections to its core constituencies. A fundamental aspect of the panel discussion on *Localness and Blended Approaches to ALN*, was to continue the work started in Chicago and to explore further blended learning as a means for

higher education institutions to expand their connections to their local or core communities.

The purpose of this paper is to explore the relationship of blended learning and "localness". Models of programs are presented to demonstrate this relationship.

II. DEFINITIONS

A. Blended Learning

Blended learning, also known as hybrid and mixed-mode learning, is not one thing. It comes in many shapes, flavors, and colors. In one course, blended learning may be the enhancement of the traditional lecture with electronic instructor notes, additional readings, and images of charts, graphs, or other handouts. In another course, online learning may be combined with face-to-face instruction so that it meets two hours per week in a classroom with the third hour consisting of an online threaded discussion [1]. As noted by Gary Miller, Associate Vice President for Outreach and former Executive Director of The World Campus, the Pennsylvania State University recently went through a lengthy process that resulted in the definition of five variations of "blended learning" environments [2].

In the broadest sense, blended learning can be defined or conceptualized as any combination of a wide variety of technology/media integrated into conventional, face-to-face classroom activities. However, the blended learning variation examined in this paper focuses on an online component with some replacement of seat time in the conventional classroom. This definition was discussed extensively at the 2004 and 2005 Sloan-C Workshops on Blended Learning held in Chicago. The two core elements (online and face-to-face instruction) of this definition were deemed critical to the definition. This definition eliminates certain forms of stand-alone media such as videotape, CD-ROM, or DVD that might be used solely in a face-to-face course. It does not eliminate these media if used in a course that has both an online and a face-to-face component.

At the 2005 Sloan-C Workshop on Blended Learning, the following was adopted by the participants and will serve as the definition of blended learning for this paper:

1. Courses that integrate online with traditional face-to-face class activities in a planned, pedagogically valuable manner;
2. A portion (institutionally defined) of face-to-face time is replaced by online activity [3].

It is understood that this definition incorporates a number of online learning techniques (e.g., webcasting, discussion boards, text messaging) delivered synchronously or asynchronously. However, in keeping with the original Alfred P. Sloan Foundation initiatives in ALN stated earlier, the Sloan Consortium recommends that these techniques continue to be instructor-led and highly interactive and not simply electronic delivery of course content.

B. Localness

The application of localness to ALN and blended learning was first articulated in an unpublished paper distributed by the Alfred P. Sloan Foundation [4] focusing on connections of higher education institutions to their local communities and/or radii of influence. Most traditional, non-profit institutions with large commuter, non-residential and part-time student populations are well-known and trusted within their localities. When online learning burst into the academic consciousness in the mid-90's there was a rush by many of these institutions to downplay their locality, and to emphasize their role in meeting the needs

of all kinds of geography-independent and global student populations. However, many of these same institutions eventually came to realize that many of their local and in some cases even their residential student populations were as interested in enrolling in online learning courses as were students living afar. The institutions are known in their local regions; that's not the issue. What is not always known is that they are offering a "quality" online or blended product. To provide a multiplicity of options for all students, educational institutions should consider strengthening their positions within their local regions by expanding their ALN and blended programs and by then making it well-known that such programs exist. A strong ALN or blended effort might also be used to permit institutions to extend and expand their effective core constituent bases. This concept is called localness.

III. MODEL PROGRAMS

The typical example of localness would be a community college or public university that expands or adds fully online or blended learning programs to allow greater access to higher education for its local core student populations. For example, the University of Massachusetts offers staff development and other outreach programs to local public schools. In order to reduce some of the travel time for education professionals who combine education, careers, and family responsibilities into incredibly busy days, portions of these outreach programs are also available in an online mode. Similar blended approaches could also be taken with any of the local professional areas such as health science, nursing, business, social work, or engineering.

Another example is the City University of New York's recently implemented Online BA program in Communication and Culture which is specifically designed for it own students who withdrew in good academic standing from any of the traditional programs in its colleges. CUNY like many large public university systems casts a wide net of access to higher education but also has a high drop-out rate especially among first-year students. However, the vast majority of these students drop-out because of financial, family, or career responsibilities and not because they are unable to do academic work. The convenience of an online degree program might help these students balance their personal lives with their higher education aspirations.

Since first being introduced in early 2006, the concept of localness has been expanding to include connections with constituencies that are not necessarily geographically local. Higher education institutions that have developed constituencies that exist beyond a locality or subsequently grow beyond a locality can also be models of localness. For example, Pace University has developed a number of certificate programs to develop and maintain skills for workers in the telecommunications industry. What originally started as the University's connection with a local business and a local trade union while still in existence has expanded into a national constituency of telecommunications businesses and a parent trade unions. ALN and blended learning are being used to reduce the need for employees and workers to travel extensively from different parts of the country to take advantage of Pace University's program.

Babson College, located in Needham, Massachusetts, has been experimenting with a multi-tier localness strategy for graduate business education. By "localness" Babson means the reach of the college within a finite geographic area not necessarily in Needham or the Boston area. Babson is committed to a blended MBA, which has served students living in relatively close proximity to the college. However, Babson is also seeking to extend its reach in geographically distant locations through what it terms a geo-local strategy. At the time of this writing, the college was planning to offer a blended MBA program specifically in Portland, Oregon where it has already established ties to several local businesses.

These models exemplify ways in which ALN and blended learning can be used to establish and strengthen the connection of higher education institutions to their core constituencies. In these examples, the goal or objective was to strengthen the connection (localness) and blended learning was the vehicle or means to facilitate the connection.

Before concluding this section, it is also important to mention that one aspect of these localness initiatives is to confirm in the minds of constituents the importance of the educational services provided by these traditional colleges and universities. Marketing, branding, and advertisement of these services are critical to strengthening the connections with their core constituents, whether they are traditional students, businesses, public agencies, or whole industries. The vehicle of blended learning likewise is one important way for colleges and universities to demonstrate that they are sensitive to and willing to address the personal, financial, and other needs of these constituents.

IV. CONCLUDING COMMENTS

The connection of localness to blended learning presented in this paper evolved from discussions and presentations at the 2006 Sloan-C Summer Workshop held in Baltimore; the 2004 and 2005 Sloan-C Workshops on Blended Learning, and the 2006 Sloan-C Workshop on Blended Learning, Localness, and Outreach held in Chicago. The workshop participants constituted a group of administrators and faculty experienced in looking at issues of online learning. Their insights were expressed formally during workshop sessions as well as informally at social gatherings. This paper attempts to organize some of these insights and to provide clarity to the definitions and concepts of localness and blended learning as well as emphasize the importance of their relationship to each other. It was the opinion of these participants that blended learning is expanding rapidly throughout higher education and is evolving into one of the most important formats for delivering instruction [5]. When used as a means to achieve stronger ties with students and other constituents within an institution's realm, it has the potential of significantly extending and enriching educational opportunities.

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VII. ABOUT THE AUTHORS

Frank Mayadas is a Program Officer for The Alfred P. Sloan Foundation. Prior to the Sloan Foundation, Dr. Mayadas spent 27 years at the IBM Corporation where he was Vice President, Research Division, Technical Plans and Controls from 1991 to 1992; Vice President, Technology and Solutions Development, Application Solutions Line of Business, from 1989 to 1991; General Manager, University and College Systems, IBM Personal Systems Line of Business, from 1988 to 1989; Secretary of IBM's Corporate Management Board and the IBM Management Committee, from 1987 to 1988; and the IBM Management Committee, from 1987 to 1988; IBM Research Division Vice President and Director, Almaden Research Center, San Jose, California from 1983 to 1987; and an IBM Research Division Director, Technical Planning and Controls, from 1981 to 1983. At the Sloan Foundation, Dr. Mayadas is involved in a number of areas: online education, globalization of industries, industry studies, and career choice in technical fields. He started the Sloan online learning program in 1993. This program (known as Anytime/Anyplace Learning) has had a profound impact in moving the academic field forward. Academic partners in the effort comprise the Sloan Consortium or Sloan-C (see www.sloan-c.org). A large number of disciplines are covered by the consortium, ranging across humanities, engineering, business, and social-, life- and physical- sciences. Over 900 full programs (Certificate and Degree) are offered by consortium members.

Anthony G. Picciano is a professor in the Educational Leadership program at Hunter College. He is also a professor in the Ph.D. Program in Urban Education and the program in Interactive Pedagogy and Technology at the City University of New York Graduate Center. His teaching specializations include educational technology, contemporary issues in education, educational policy, organization theory, and research methods. He is the author of seven books including *Educational Leadership and Planning for Technology, 4th Ed*. (Pearson, 2005), *Data-Driven Decision Making for Effective School Leadership* (Pearson, 2006), *Educational Research Primer* (Continuum, 2004), and *Distance Learning: Making Connections across Virtual Space and Time* (Merrill/Prentice Hall, 2001). He has received a number of grants and awards from the National Science Foundation, the Alfred P. Sloan Foundation, the US Department of Education, and IBM. He currently serves on the Board of Directors of the Sloan Consortium of Colleges and Universities. His articles and reviews have appeared in journals such as *The Teachers College Record, The Urban Review, Journal of Asynchronous Learning Networks, Journal of Thought, Journal of Educational Multimedia and Hypermedia, Computers in the Schools, Equity and Choice,* and *EDUCOM Review.*

ONLINE INSTRUCTION AS *LOCAL* EDUCATION: CUNY'S ONLINE BACCALAUREATE

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The City University of New York

ABSTRACT

The City University of New York is taking a new, local approach to online instruction: offering an online baccalaureate for degree completers, designed for NYC students who have "stopped out" in good academic standing and need the "any time" flexibility of asynchronous learning to finish the degree. What is especially distinctive about this online program is its goal of access for local students, its core constituency and mission. Though CUNY is addressing a local problem, online access to higher education for local students may address nation-wide problems with rates of degree completion and progress towards completion. As more institutions provide online instruction, localness may well be the key to access and timely completion for local students, with time and not distance being the key obstacle it overcomes.

KEYWORDS

Online Learning, Degree Completion, Time to Degree, Localness

I. INTRODUCTION

A. The Distance Traveled Since the Days of Distance Ed

Throughout most of this young century, a series of Sloan surveys has been documenting the dramatic growth in online learning: *Sizing the Opportunity: The Quality and Extent of Online Education in the United States, 2002 and 2003* [1], *Entering the Mainstream: The Quality and Extent of Online Education in the United States, 2003 and 2004* [2], *Growing by Degrees: Online Education in the United States, 2005* [3], and *Making the Grade: Online Education in the United States, 2006* [4]. As the penultimate survey to date reports, "The number of students who study online has been increasing at a rate far in excess of the rate of growth in the overall higher education student population" [3]. The most recent notes that this remarkable growth is actually accelerating: "The more than 800,000 additional online students is more than twice the number added in any previous year" [4]. But there is always the question of when quantitative change shades into qualitative change, when a difference of degree becomes a difference of kind. And while the penetration continues and the number of students and courses grows, seemingly inexorably, there is a sense in which a corner has already been turned. As the second survey in the series, *Entering the Mainstream*, reported over two years ago, "Virtually all public institutions offer online courses…" [2]. What this means is a simple but compelling fact: If you're a student, and you want online instruction, you can get it locally. Distance ed has gone local.

B. What Institutions Have to Ask Themselves

For the students, and in their parlance, "It's all good." They have the convenience of online instruction combined with the comfort of the familiar: the traditional institution with the respect its instruction and especially its degrees have earned. Students can pursue online instruction from a variety of motives: curiosity or convenience, need or interest. They can mix and match modes, experiment, explore.

Institutions, however, have to ask what this "turned corner" means for them because, after all, it presumably needs to mean something more than ad hoc exploration. If they are among the majority of those institutions that have made online instruction an option—the 2005 recent Sloan survey showed that nearly two-thirds of them have made at least some of the same courses that meet face-to-face available online as well [3]—then key questions have to be asked and critical decisions made.

- What will be the institutional driver for online instruction for local students? Why invest resources? How should the online option(s) be marketed?
- What are the risks? What, for instance, would prevent online instruction from simply drawing current students out of classrooms and off campuses, playing to convenience rather than need?
- What will keep institutions from poaching on their own constituencies, "raiding" what one mode already reaches by another?
- What are the risks of *not* engaging fully in offering online options for students? How will this affect the institution's relationship with partner institutions (especially in a multi-campus system) and above all its standing with competitors?

C. Why Such Questions Are Well Worth Asking

Institutions are not disposed to change. When they do, it usually happens with all the speed of a glacier moving uphill. For it to happen faster, there has to be a compelling reason to change, a problem to solve. Higher education actually has quite a few problems that could be significantly impacted by the growth of online instruction:

- Completion rates for baccalaureate degree programs at public institutions are at an all-time low (under 40%) [5].
- Six out of every ten college students do not complete a bachelor's degree within six years of enrollment [6].
- The average time it takes students who do not stop out to complete a "4-year" degree is now a full 5 years [7].
- Those who do stop out are a worrisome unknown for institutions: as one report's title put it, "Stopouts or Stayouts?" [8].

Long before the recent release of the report of the Secretary of Education's Commission on the Future of Higher Education [9], with its emphasis on access and accountability, institutions of higher education have been working to address these problems—and, it seems, without much success.

But there is a new tool in the toolbox now, and we may have not yet begun to reckon just how powerful it might be. In addition to all the documented work with online learning, Blended Learning (partly on-campus, partly online learning) has generated particularly pervasive interest in the part of faculty as well as students, one tied to uses so grass-roots and under-the-radar we really don't know just how pervasive that interest is. We already do know that, according to data now over a year old, nearly 90% of American teenagers between the ages of 12–17 are on the Internet [10]. Meanwhile, Blended Learning (in CUNY, more than doubling the use of online instruction and the number of courses no longer meeting full-time in the classroom) has many instructors who are not yet willing to commit to fully online instruction preparing themselves to do just that. The faculty are increasingly ready, and the students are waiting.

And that's a good thing, because, again, online instruction has problems to solve. As a college degree becomes increasingly important economically as well as intellectually—and as the tuition it takes to get it keeps rising—the issues of time to degree and degree completion come with ever higher opportunity

costs. As students straining under these stop out altogether, higher education must find a means of re-establishing their access. What would a program that used online instruction to do that look like?

II. THE CUNY ONLINE BACCALAUREATE PROGRAM

A. The Context

The City University of New York is a union shop, and a union-imposed moratorium on "distance education" was in place until March of 2000. The moment it was lifted, CUNY began working intensively with online instruction, supported by funding from the Sloan Foundation. Hundreds of faculty were trained to offer online courses to thousands of students. Neither a campus nor even a discipline was untouched; online courses were offered at every kind and level of instruction. As the faculty development project reached deeper into the mainstream, hybrid or blended courses (half online, half on-campus) became an increasingly prevalent alternative to fully online instruction.

Still, the reasons to bring instruction online were largely up to the instructor. The University as a whole had all the students it could handle, literally on its doorstep. But soon changes—including both significant enrollment growth and substantial faculty hiring—prompted another look at what might be done with online instruction. The critical change was arguably a change at the top: the new Executive Vice Chancellor for Academic Affairs had been one of the prime movers behind UMass Online. And one of the things she noticed there was that most of those students shared her area code. Even and especially in multi-campus institution where all the colleges and their students were but a subway stop away from one another, now seemed to be the time to investigate the viability of an online degree.

B. The Motives

CUNY turned to its own institutional research, which showed that, over the last six years, 64,000 students left in good academic standing (with a GPA of 2.0 and a minimum of 30 earned credits)—and without enrolling anywhere else. (It must be remembered that this number is a reckoning, over more than half a decade, of "stop-outs" from an institution with close to a quarter of a million students pursuing degrees at any given point in time.) Focus groups revealed academic difficulty was not the issue for these students who stopped out, nor were problems with CUNY specifically. What then? To do a global paraphrase of the students queried, "Life happened" —the need to work full-time, to provide child care, and so on. And so, for so many, the door to a college degree was shut.

But online education can re-open that door, and it can do more than that. Asynchronous online instruction can eliminate the scheduling difficulties that have defeated so many students, but it can also, by virtue of its form of access, transform and heighten the nature of learning. Teaching traditional subjects, it can also teach what study in such fields becomes when study means not just access to information but what to do with the astonishing information resources now at our disposal. Online education can help students cope with a world where change keeps accelerating, and where the means of connection keep multiplying, and yet old as well as new kinds of division keep obtruding. It can show them what it means to learn—in life as well as in college—when that is less and less a matter of mastering a predefined content, more and more a matter of making connections and drawing conclusions from among the welter of facts and opinions thrown at us daily. It was that chance to address a profound need for access with an enhanced form of learning tailored to the modern world and workplace that made the development of an online degree such an exciting, inviting prospect.

C. The Methods

Realizing that online education could eliminate the scheduling difficulties that have defeated so many students, CUNY decided on an online baccalaureate program for degree completers. It would speak directly to the matter of access, the heart of CUNY's mission, and it would allow the leveraging of all the work that it had done on online education—though now with the clear recognition that online instruction was also a critical need for a local population for whom time, not distance, is the issue.

But what kind of degree? All that work with online education presented an interesting possibility: the cherry-picking of successful online courses across the campuses, pulled together into a best-of-breed curriculum. But that would mean missing another opportunity: here was a chance to build a new degree without the legacies and territorial imperatives that would face such an endeavor at a traditional campus. The degree had to be in something, had to have a concentration, and making that a generic liberal arts concentration seemed oxymoronic. Here was a chance to develop a major uniquely suited to the world-as-it-is, flattening or shrinking through communication networks but also pulled apart by diversity and division, reshaping itself with ever-escalating change.

Ultimately, these were not mutually exclusive choices. What a degree-completer's program most needed was a traditional take on general education, one that would maximize the transferability of credits the student came with. But that could be capped with an innovative, interdisciplinary major, an interweaving of social sciences leavened with communication and communication theory. That, ultimately, was the decision: a program with a strong liberal arts base but a genuinely unique interdisciplinary concentration characterized by courses like Global Culture and Diversity, Analyzing Organizational Structure and Change, and Studies in Mass Communication. Not a degree for everyone (there is no such animal), it is nevertheless a multivalent means of cultivating the thinking, communication, and research skills needed across a spectrum of job sectors and graduate programs today.

It was also important to think beyond the curriculum, to learn from the mistakes of programs created on the principle of "if you build it, they will come." They might not come without effective marketing (plans for which focused on direct mail and local newspaper advertising as well as web-based prospecting). And it could even be a problem that they did come if the necessary support structures were not in place. So an extraordinary effort was made to ensure intensive student support including effective and consistent contact for applications, careful follow-through and prompt transfer credit evaluation, as well as ongoing advisement once students were admitted and enrolled.

D. The Results So Far

The program was approved by the CUNY community in January 2006, its Board of Trustees in February, and the New York State Education Department in March. Marketing began in April, the first applications were accepted in May, and registration for courses started in July. By August 30, the first day of the fall term, the program had 250 students (admitted from nearly twice as many applications). Averaging 3 courses each, the students' course enrollments took the program slightly past planned capacity (30 sections or 600 "seats"—the plan had always been to start well by starting small), but instructors waiting in the wings were able to accommodate student demand.

The faculty had spent the summer in an interactive site, sharing ideas and course sites with one another, raising questions of procedure and policy, experimenting with new tools (notably means of developing course-specific wikis and blogs). Like the students' 10-day online orientation prior to the term's start, the preparation paid off. The biggest surprise to date is how quiet things have been with the online help desk.

And keeping the class sizes capped at 22 throughout the curriculum has meant the carefully planned online tutorial services seem underutilized—like the quiet help desk, another heartening non-problem.

The students themselves seem to be just those targeted. Most are former CUNY students. Nearly 200 of the 250 come from New York City. Of the remainder, those from elsewhere in the state are only slightly outnumbered by those from out-of-state, though that last subgroup does include a few international students. In terms of demographics, they seem to fit the general (and highly diverse) CUNY student profile by race, ethnicity, and gender, differing significantly only in tracking older. (The average age is 34, but that average shouldn't obscure an astonishing range that includes retirees as well as single parents in their early twenties.) As for why they come, each has a story—told in a personal statement that is part of the application, an explanation of why the online degree is the right choice and perhaps the only one—but a part that might stand for the whole is one student who noted that some years ago she felt she had to choose between a good job and a good education (and even later felt, in stopping out, that she had made the wrong choice); as she put it, the online degree meant she could have what she needed. Paying the bills and pursuing that ever more necessary degree no longer need to be mutually exclusive.

III. CONCLUSION: A GENERATIONAL SHIFT?

Small steps and small programs need to be careful of assuming too much significance. The road to yesterday's tomorrows is littered with the wreckage once touted as the coming thing. But online instruction has come a great distance, and it is time to ask whether the distance traveled doesn't entail some turned corners. Comparability with traditional instruction is no longer the challenge or burning issue it was; it's the baseline expectation. Once satellite and ancillary in some institutions, grass-roots and under-the-radar in others, online instruction is increasingly integral to the missions and goals of more and more institutions now, so much so that it has been argued that "the growth of online learning, its rhizomelike reach into all aspects of institutions of higher education, poses the intriguing possibility that we are converging on a single, integrative model, albeit from different directions" [11]. Maybe it is no longer a question of whether online learning has come of age. Maybe the question now is whether we have turned another corner, moved to a second- (or is it third) generation model, one where what was online instruction, once thought of as "distance ed," has gone local.

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V. ABOUT THE AUTHOR

A professor for over two decades, **George Otte** is on the doctoral faculties of the CUNY Graduate Center programs in English, Urban Education, and Technology & Pedagogy. Since March 2001, when he was named Director of Instructional Technology for CUNY, he has been supervising CUNY Online, the City University's faculty/course development program for online instruction, supported by the Sloan Foundation. He is currently also Academic Director of the CUNY Online Baccalaureate Program.

PACE UNIVERSITY, BLENDED LEARNING AND LOCALNESS: A MODEL THAT WORKS

David Sachs
Pace University

ABSTRACT
Several forms of blended learning at Pace University offer flexible options for learners, and its growth reflects its appeal to traditional and corporate learners.

KEYWORDS
Blended Learning, Mission, Computing, Communications, Flexibility

I. BACKGROUND

Since 1996, Pace University, primarily through the Seidenberg School of Computer Science and Information Systems, has been actively involved in online education in the style known as asynchronous learning networks (ALN). Perhaps best known is the NACTEL program; an online array of undergraduate and graduate degrees provided 100% online to individuals in the telecommunications industry. This program, in place since 1999, has offered high quality online education to several thousand individuals throughout the United States, who work in five different time zones under some challenging conditions. For more information about the NACTEL program, see http://csis.pace.edu/nactel.

More recently, the School and the University have been focusing on blended or hybrid learning. For purposes of this discussion, let's take a moment to define what we mean by blended learning. Pace University has defined blended learning in several ways. The first way, and the one that the University has labeled "Web assisted" is when a significant percentage (one third or more) of face-to-face time in a given course is "replaced by" online time that enables individuals to come to the University less often than would have been previously required. A good example of a blended course or "Web assisted" course is CIS101 in which some 1,000 students per semester now meet for two "face-to-face" hours each week, and "one hour" of the course is taught online.

A second way that the term blended has come to be used is when a given set of courses (a certificate or degree) consists of some courses that are taught 100% in a classroom and others that are taught 100% online in ALN format. The MS in Software Design and Engineering is a good example of a blended degree. Some of the courses in the degree are held "face-to-face," since they require significant face-to-face group and team work. Other courses within the degree are taught 100% online in ALN format. Overall, the degree is perceived by both students and faculty members to be a blended degree.

Another example of a blended degree is the Doctor of Professional Studies in Computing degree. In this instance, each and every course within the degree is blended, and the degree as a whole is perceived to be blended. Individuals must be on campus 6 times each semester, for a Friday evening and Saturday full day set of classes. All of their other instruction and student work is done, in traditional ALN format, 100% online. Individuals pursuing the Doctor of Professional Studies in Computing degree come to the

University from as far away as California and as nearby as White Plains. In all instances, the fact that the degree is blended is what has made it work.

All three formats of blended teaching and learning are currently supported by the Seidenberg School and the University and all of them have added significantly to the mission of the School and the University. Let's look at three examples.

A. Example #1: CIS101

Several years ago, it became clear that the CIS101 course—an introductory course taught by Seidenberg faculty members to over 1,000 undergraduates each semester—had some challenges. One challenge had to do with the size of the lectures—72 students—and the other had to do with the overall design of the course. It became clear that blended learning would provide the perfect solution. Blended learning would provide better teaching environments. Students would come together for one two-hour course meeting each week—with no more than 28 students in the class. The other hour of instruction would be provided online. All of the students are local—and many of them need or want more flexibility in their schedules. Such flexibility provides students with other course opportunities, and perhaps with some work options as well.

CIS101 has been described as follows: "This course introduces students to the essential knowledge required to achieve a well-rounded understanding of the explosive impact of the Internet and technology in all aspects of modern society. Computers are now the primary means of information retrieval, analysis and communication among individuals and organizations throughout the world. CIS101 provides students with the understanding of computer terminology, hardware, and software necessary to explore the resources of the Internet and exploit technology to its fullest on both a personal and professional level." Prior to redesigning this course, and using a blended approach to teaching it, significant questions were being raised about whether any or all of these goals were being met.

The redesign team consciously chose to reconstruct CIS101 in such a way that for part of it (two course hours each week) students would continue to meet face-to-face, in groups of 28, with their professor. The other face-to-face hour each week would be replaced by online course instruction. This would serve several purposes. Students would learn about online instruction, they could access their course materials for this one hour of instruction "anytime, anywhere" and they could have more flexibility in their lives. The course redesign team focused heavily on determining which course materials worked best and where. Students in CIS101 are surveyed several times each semester. It is abundantly clear that the new course design for CIS101 works well. Students have much greater access to their professors, they have more flexibility in their schedules, and they are becoming gently and caringly introduced to online education.

B. Example #2: The Doctorate in Professional Computing Degree

Without a blended/local approach to education, Pace University's Doctorate in Professional Computing degree would most likely not be possible. Since 1999, this degree has attracted individuals who for the most part live nearby—within about 50 miles from the University campus—(as well as some who live farther away) who wish to participate in an educational offering that is demanding, time consuming and flexible. Students must be on campus 5 or 6 weekends (Friday night and all day Saturday) each semester. All of their other work is conducted online. This degree, intended for full-time working IT and education professionals, offers the "best of both worlds" to these adults. They have the opportunity to interact face-to-face with their classmates, and they also have the chance to maintain their full-time jobs and family and community obligations.

Blended learning has been the key to the success of the Doctorate in Professional Computing degree. When students are surveyed about the mix of on-campus face-to-face time and the off-campus online time, they always tell us that the mix is a perfect one. They value the on-campus time that can be used for group work, hands-on labs, and face-to-face meetings with their advisors and professors. And, for many of them, the conversation continues during those in-between times. They work in teams, and they provide each other with research and reports and conversations, all online, when they are not on campus. Students use a wide array of technology, in truly blended format, during the three or four years that they participate in this degree. They communicate regularly and effectively with each other, and quickly and easily go back and forth between the on-ground face-to-face meetings and the online email, attached files and Instant Messenger meetings that occur in between.

C. Example #3: The Bank of New York Project

The Bank of New York Project began in January 2006. Approximately 40 individuals from the Bank of New York are actively involved in pursuing two graduate certificates—one in Software Design and Development and one in Secure Software Development. All of the instruction is provided on-site by Pace University professors at a nearby Bank of New York location. It is clear that face-to-face instruction is important to the Bank and to the students. Students value the time that they spend with their professors and eagerly look forward to working closely with them in a classroom setting.

It is also clear that blended learning has made a huge difference with this particular project, primarily with respect to calendar flexibility. Banks regularly close for certain holidays (Martin Luther King Day, Presidents Day, etc.) and, in this case, that would have meant that the classes either would not have met those given weeks, or would have had to find other time to meet. Instead, it was "blended learning to the rescue". Both cohorts of students were provided with Blackboard course shells for their classes, and professors were able to successfully integrate their online teaching with their on-ground instruction. When professors knew in advance that their classes were not going to meet, they were able to put all of the necessary course materials into the Blackboard shell, and the courses met anyway. And, when an unexpected snowstorm occurred and wiped out another scheduled class meeting, the class was again able to continue quite effectively.

Blended learning also provided a helpful answer to a calendar challenge. The Bank and the University wished to offer students a late Spring term—but it was also clear that the calendar would permit only offering a nine-week term ending by July 1st, rather than the usual 12-week one. Once again, blended learning provided the answer. Classes met face-to-face for nine class meetings, but students also had a significant amount of additional work (the equivalent of three weeks' worth) provided to them in an online fashion.

And finally, when it became clear that there was a need for students to have a Java class in their lives and that it would have to be scheduled during the summer, it was blended learning that made that possible. Students were enrolled in a nine-week face-to-face class as well as a nine-week online class. They were permitted to attend either or both of the classes, and some students moved back and forth easily from one to the other. The professor who was teaching the students (and who was teaching both sections) knew them all, and "met them all" each week, one place or the other. Blended learning worked well in this case; the course took place during July and August while students came and went and they never had to miss a class.

II. IMPLICATIONS FOR THE FUTURE

Blended learning is providing Pace University and the Seidenberg School of Computer Science and

Information Systems with a wonderful variety of teaching options to offer to both the regular traditional undergraduate and graduate students as well as to corporate clients. Traditional students are "voting with their feet" to have blended learning experiences in their lives. Sometimes they are taking courses that are listed in our University online catalog as "Web assisted" (the term that the University chose to use for hybrid or blended courses). For the most recent year (2005–2006), approximately 15% of the University's 14,000 students took at least one course that was a "Web assisted" or blended course. These courses are blended, in the sense that the course has a fixed number of actual face-to-face classroom meetings, as well as a number of online sessions.

As well, students are choosing to create what would have to be called a blended set of courses for themselves. Undergraduates sign up for three or four face-to-face classes, and then register for one additional 100% online course. Graduate students often take one course face-to-face and one course online each semester. In both cases, quicker time to completion is made possible by this blended solution, as well as more personal and professional flexibility. For the 2005–2006 academic year, an additional 15% of the University's students took at least one 100% online (ALN) course. Students are clearly telling us that blended education works for them, quite effectively.

Blended learning also is providing the Seidenberg School and the University with new options for corporate clients as well. All current conversations with corporate clients include references to the fact that education can be provided three ways: 100% on-ground; 100% online; and blended. For both the University and for corporate clients, blended learning is increasingly becoming an attractive and important option. The corporations like working with a local University, one that is within easy commuting distance for their employees. In addition, corporations like to include employees who are at somewhat remote locations (30 to 40 miles away) as well. Blended learning makes this possible and appealing. Individuals who work at somewhat remote locations may wind up in blended classes, ones that offer a mixture of face-to-face and online instruction. They can still participate with the local University and the local initiative, but they can remain in their somewhat remote location.

It is clear that blended learning is here to stay. Blended learning, whether it occurs within a course or a certificate or a degree, offers both the University and students increased flexibility. All of this bodes well for the future.

III. ABOUT THE AUTHOR

David Sachs is Associate Dean and Professor of Technology Systems in Pace University's School of Computer Science and Information Systems. As Associate Dean, he has been actively involved in the development and implementation of computer science and telecommunications courses for the corporate community since 1984. As supervisor of the Pace Computer Learning Center, Dr. Sachs is responsible for the many hundreds of days of personal computer, computer science, and telecommunications education that are provided each year to corporations throughout the United States and around the world such as AT&T, IBM, MCI, PepsiCo, The Reader's Digest, and others. Dr. Sachs has worked closely with teachers, administrators and others to think about the most effective ways to introduce technology into public and private schools.

Most recently, he has been actively involved in the development of courses to be taught asynchronously over the Internet and the World Wide Web. Dr. Sachs is Co-Director of the NACTEL Program (http://csis.pace.edu/nactel), a program that provides an AS in Telecommunications Degree and a BS in Telecommunications Degree to many hundreds of individuals from Verizon, Qwest, SBC and Citizens,

many of whom are members of CWA and IBEW. In addition, Dr. Sachs has been the Principle Investigator for a FIPSE Learning Anytime Anywhere Partnership Grant (1999–2002) as well as for a grant from the Alfred P. Sloan Foundation (2002).

EXTENDING ONLINE AND BLENDED LEARNING TO CORPORATIONS IN THE NEW YORK METROPOLITAN REGION

Robert Ubell
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Stevens Institute of Technology

I. INTRODUCTION

WebCampus.Stevens, the online graduate education and corporate training unit of Stevens Institute of Technology, delivers one of the largest and most effective ALN and blended programs of any college or university in the New York metropolitan region. Under a newly awarded Sloan Foundation grant [1], the school is extending its engineering and management programs to area corporations, supporting local telecommunications, pharmaceutical/life sciences, media, finance and other key industries. Stevens provides local employees of Fortune 500 and other companies access to high-quality online advanced technical and managerial skills, preparing them for success in global competition.

Established in 1870, Stevens offers baccalaureate, masters and doctoral degrees in engineering, science, computer science, management and technology management, as well as a baccalaureate in the humanities and liberal arts, and in business and technology. The university enrolls about 1,800 undergraduates and 2,600 graduate students. It is one of the oldest and most respected engineering and management schools in the nation with a long tradition of meeting the technical and managerial needs of local industry.

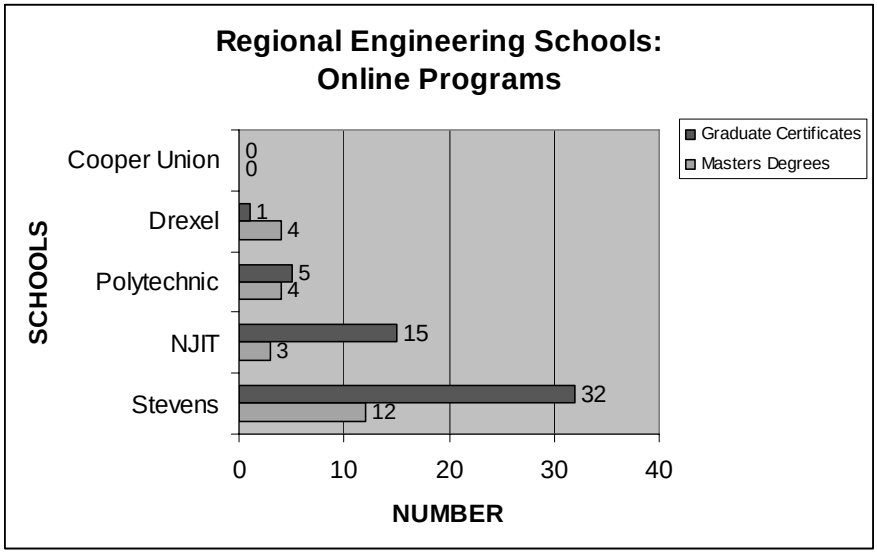


Table 1. Data Compiled from the Schools' Websites. Comprehensive Universities in the Region, Such as Columbia, CUNY, Rutgers, and Pace are Not Included.

When compared with the four other regional engineering schools—New Jersey Institute of Technology, Polytechnic University, Drexel University, and Cooper Union—Stevens' online learning effort is by far the most robust (see chart above). The school offers more online masters degrees and graduate certificates than all four combined. It is also the only regional engineering school with an online MBA [2].

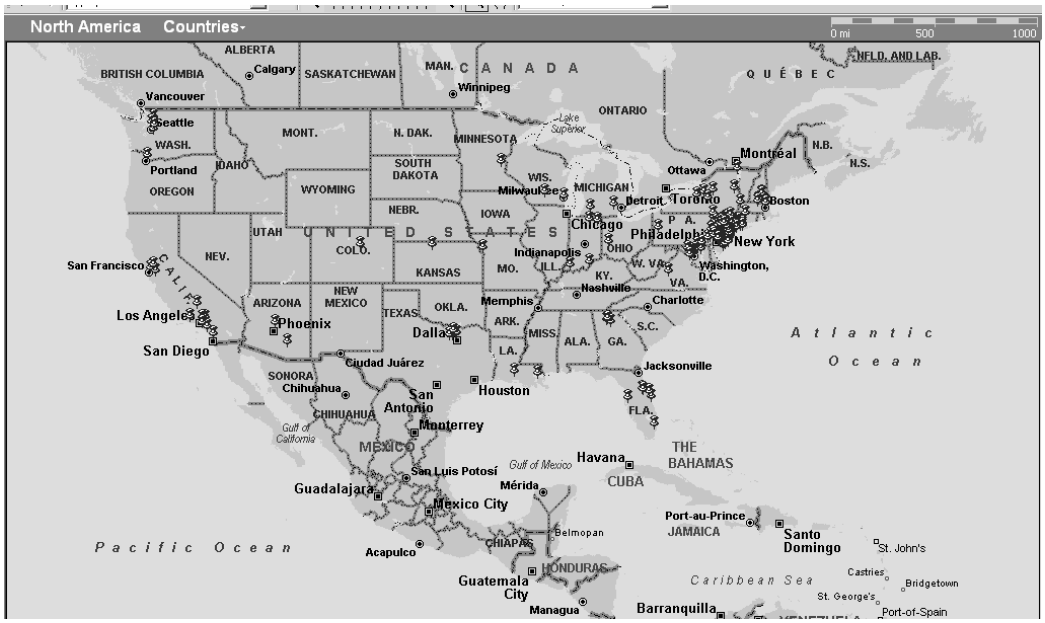
II. LOCAL ENROLLMENT

The table for fiscal year 2004–05 that follows compares the number of graduate enrollments by geographic regions throughout the US. The data confirm the strength of WebCampus' local penetration. Approximately 84% of graduate enrollments are from New Jersey, New York, Pennsylvania, and Connecticut.

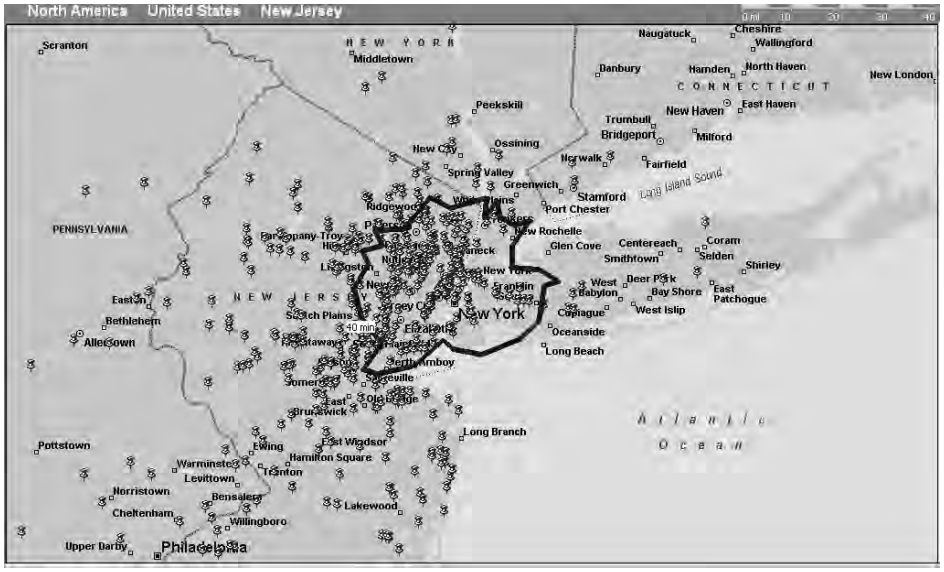
As the table below shows, while Stevens has an excellent record of attracting students at a distance (with enrollments over the five-year period from 44 US states and 42 countries abroad), the number of students drawn from the local region only is significant. The next two maps confirm this local impact.

Local States	Number	Percent
New Jersey	1,486	
New York	198	
Pennsylvania	62	
Connecticut	7	
Total Local	**1,753**	**84%**
Total Distant	**335**	**16%**
Total Combined	**2,088**	**100%**

Table 2. Local vs. Distant WebCampus Enrollments (Calendar Year 2006).
Excludes Undergraduates Enrolled in Graduate Online Courses.



Map 1: Distribution of Local vs. National Enrollment
Pushpin Images Represent Locations of Webcampus Students.



Map 2: Local Enrollment D
Pushpin Images Represent Locations of Webcampus Students. Blue Line Indicates Outer Circumference of Convenient Commuting Distance From Stevens' Hoboken, NJ Campus.

Winner of the 2003 Sloan-C award for Institution-wide Teaching and Learning Programs, WebCampus has also been awarded the 2005 US Distance Learning Association's "21st Century Best Practices" prize as the best online graduate school. The school began offering online graduate courses in 2000 with full accreditation granted by the Middle States Commission on Higher Education two years afterwards.

Today, WebCampus offers a dozen masters degrees (including an MBA in Technology Management) and more than 30 graduate certificate programs in science, technology and technical management. Teaming and collaborative learning are among the key pedagogical requirements of WebCampus online instruction [3]. These elements parallel the needs of global corporations for technical and managerial personnel to perform effectively in highly competitive environments [4].

III. ASYNCHRONOUS DELIVERY

WebCampus employs WebCT as its online course management system, consistently upgrading it for easier navigation. Online students have convenient access to every university service available on campus—online application, registration, advising, access to faculty, bookstore, library access, e-mail, and technical support.

Graduate programs fall under the university's three schools—Sciences and Arts (ISSA), Technology Management (STM), and Engineering (SOE). Combined, the three schools offer 708 graduate courses, 308 of which (or 43.5%) have been migrated to online and blended delivery (see chart below). The school plans eventually to deliver all its graduate courses on campus and online, a target that no other local or even national school has yet accomplished.

School	Courses Developed		Courses To Be Developed		Total Courses	
	Number	Percentage	Number	Percentage	Number	Percentage
Science (ISSA)	63	36.6%	109	63.4%	172	100%
Management (STM)	92	79.3%	24	20.7%	116	100%
Engineering (SOE)	153	36.4%	267	63.6%	420	100%
TOTAL	**308**	**43.5%**	**400**	**56.5%**	**708**	**100%**

Table 3. Migration of Stevens Graduate Courses to Online Delivery

IV. SYNCHRONOUS DELIVERY

In 2005, WebCampus introduced synchronous technology to enhance student learning and to permit the introduction of more blended courses. Using Interwise, a voice-over-IP web-conferencing system, instructors conduct real-time and recorded lectures. Interwise enables students to deliver online presentations to others in their virtual class and engage in online team projects. About 15% of WebCampus online courses now offer Interwise as an option. The school plans to expand its use to all WebCampus courses in the next few years.

Synchronous learning tools enhance online delivery, particularly for local students. Those far from campus, especially in different time zones, are less likely to engage in live synchronous sessions. Interwise opens additional blending options, giving instructors alternative delivery methods, including ALN, conventional classroom instruction, and now online synchronous education.

V. BLENDED LEARNING

Stevens' System Design and Operational Effectiveness (SDOE) program offers blended delivery consisting of two- to three-day, face-to-face sessions extended over a number of weeks online. Launched three years ago, it is the most robust and fastest-growing of Stevens' hybrid programs. SDOE delivers courses to a number of local institutions, including the Federal Aeronautics Administration (FAA), IBM, ITT, Lockheed-Martin, and Northrop Grumman, among others. SDOE partners with about a dozen corporations and government agencies, delivering 20 traditional face-to-face courses with 12 taught online. A parallel blended program in project management began in the spring of 2006 at FAA in Atlantic City.

The school encourages local students to earn their graduate degrees in hybrid mode [5]. Taking some of their courses online and others on campus, students who live within commuting distance can earn their degrees more rapidly by traveling to campus for some of their courses while taking others online from home or elsewhere. Stevens plans to offer blended learning options for most graduate programs to permit wider acceptance at local corporations seeking alternative, flexible education and training options.

VI. LOCAL CORPORATE STRATEGY

Stevens has a long and solid tradition of offering graduate programs directly to local corporate and government clients. Stevens offered online education to regional corporate clients immediately after WebCampus was launched. Today, the school provides more than 50 industry and government organizations with onsite, online and blended education. The school's most important regional clients are Citigroup, Consolidated Edison Company of N.Y., Inc., Honeywell, Johnson & Johnson, Lockheed-Martin, Picatinny Arsenal, and Verizon Communications. The aim now is to play an even greater role in

supporting these key regional industries—pharmaceutical/life sciences, media and publishing, banking and finance, telecommunications and cable, energy, and defense.

VII. ONLINE CORPORATE TRAINING

Under the School's newly introduced School of Professional Education, Stevens has embarked on a regional effort to deliver corporate training to Fortune 500 and other companies. Working closely with company learning officers, Stevens' faculty and staff modularize graduate courses, abbreviating and customizing them for more efficient and effective training. Upon completing certain courses, Stevens provides employees with CEU and PDU credits, especially those in project management.

In mid-2006, Stevens completed an eight-week ALN course, incorporating Interwise synchronous elements, to Consolidated Edison's senior management. Following its successful implementation, the company agreed to offer it to other ConEd personnel. Hybrid and online corporate training programs are either in progress or in discussions with learning officers at local divisions of FAA, Ethicon, IBM, and others. Stevens' SDOE program also provides partially online corporate training regionally to IBM, US Army and Navy, and Lockheed-Martin, among others.

The extension of the school's online and hybrid learning capabilities into the corporate training marketplace is a natural outgrowth of Stevens' systematic effort to collaborate with local industry, not only in research and education, but in corporate training as well. These pilot programs in delivering ALN-style training to company personnel are among the very first anywhere.

In order to accomplish its ambitious goals, Stevens' staff enters into contractual arrangements with training officials, heads of functional groups, or human-resources executives at local companies. Faculty and staff visit local corporate executives to negotiate these and other options:

- Posting announcements of WebCampus online programs on corporate education and training websites
- Providing tuition discounts for online and blended learning employees
- Establishing WebCampus as a "preferred educational provider"
- Sending e-mail alerts to employees about Stevens online and blended programs
- Announcing WebCampus programs in corporate online and print newsletters
- Distributing Stevens marketing and adverting materials to employees
- Attending local corporate education fairs
- Arranging exclusive online and blended learning vendor agreements
- Customizing corporate training to meet company objectives

WebCampus has grown from merely 23 enrollments in its first semester five years ago to more than 10,000 cumulative enrollments in the fall of 2006. The chart below illustrates dramatic annual increases year to year. For the last completed academic year (2004–2005), WebCampus total online graduate enrollment reached 1,832, representing 14% of the school's graduate enrollment, ahead of US higher education's national average of 11% for online courses (as of fall 2002).

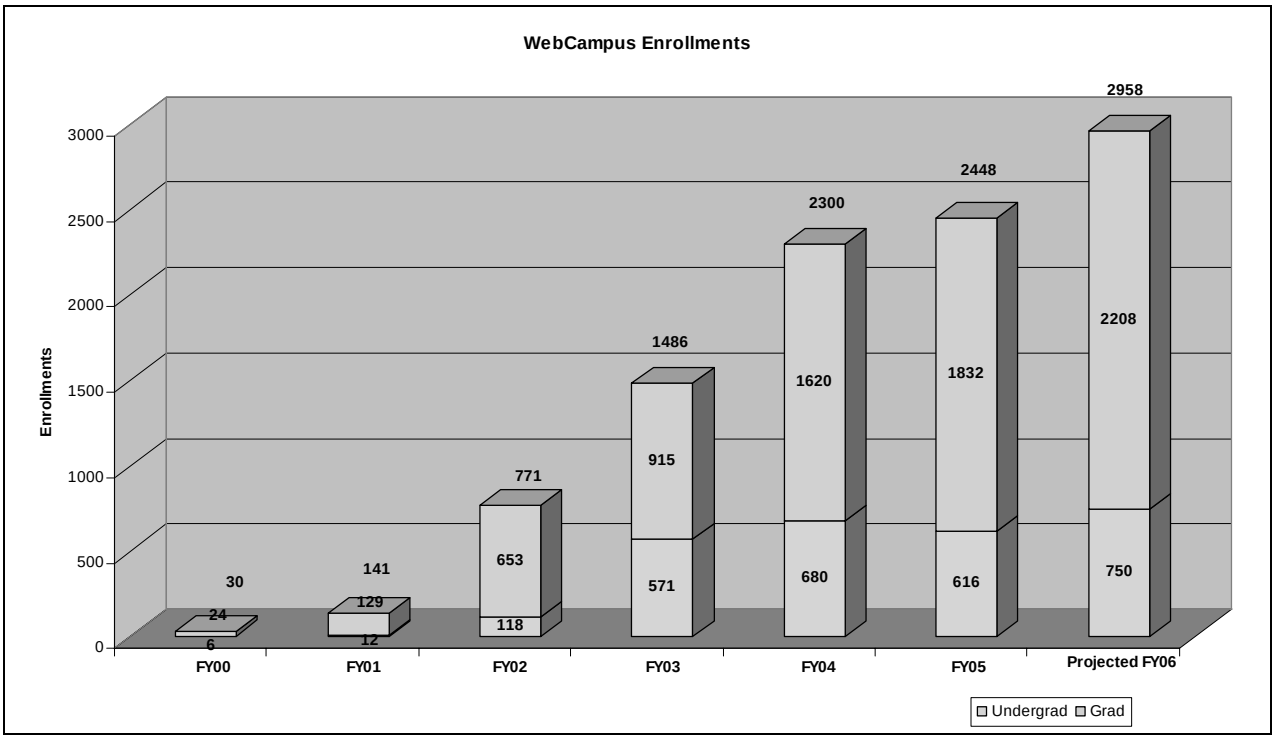


Table 4. Web Campus Enrollments

VIII. ONLINE AND BLENDED FACULTY

Of approximately 328 Stevens faculty, 105 teach WebCampus courses, representing about 32% of the school's faculty. About two-thirds are full-time, another third, part-time. The same faculty who teach on campus also teach online with the same curriculum as in conventional classes. Oversight of online curriculum is in the hands of the school's Graduate School Committee, which is equally responsible for on-campus as well as online and blended instruction. Nearly all WebCampus faculty who provide instruction return afterwards to teach online again.

Given Stevens' accomplished record of providing local industry with a variety of educational and training options—on campus, on-site, online, and blended delivery—the school anticipates that tri-state area companies will join Stevens in partnerships to offer their employees a full range of technical and management programs to allow them to compete nationally and, perhaps more importantly, globally.

IX. ABOUT THE AUTHOR

Robert Ubell is Dean of the School of Professional Education at WebCampus Stevens Institute of Technology. He has held a number of positions in publishing, e-commerce, and education. He was vice-president and editor-in-chief of Plenum Publishing Corporation, editor of The New York Academy of Sciences monthly, *The Sciences*, and American publisher of *Nature*. He was also founding publisher of *Nature Biotechnology*. He has held senior posts as an Internet executive-president of BioMedNet and executive vice president for new media at Marcel Dekker. Ubell was head of his own consulting firm, Robert Ubell Associates, representing such clients as Elsevier, Harcourt, Wiley, and McGraw-Hill, among dozens of others, including various nonprofit groups, such as the American Cancer Society and the American Institute of Physics. Ubell has consulted for numerous corporations and nonprofit groups, including the National Academy of Sciences, National Academy of Engineering, IBM, Xerox, Lotus, and

MIT, Cambridge, and Columbia University presses.

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CHARACTERISTICS OF SUCCESSFUL LOCAL BLENDED PROGRAMS IN THE CONTEXT OF THE SLOAN-C PILLARS

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ABSTRACT

Drawing on the University of Massachusetts experience in developing successful blended local programs, this paper suggests guiding principles that include mission-driven responsiveness to local contexts and partnerships; using low-cost marketing strategies available through local relationships and brand; attending to students' preferences for blending face-to-face and online services and instruction throughout the college experience; supporting faculty in working with partners to develop local blended programs; and providing activities that anchor students to the campus and program.

KEYWORDS

Localness, Blended, Principles, Competitive Advantage, Women's Studies Minor, Master's In Educational Administration, Registered Nurse To Bachelor Of Science In Nursing, Master's In Business Administration

I. INTRODUCTION

During the early nineties, the internet entered higher education with great force as faculty and institutions raced to integrate the World Wide Web into courses and programs. According to the Sloan-C *Growing By Degrees* report [1] both asynchronous online teaching and web-enhanced teaching expanded rapidly during that period and continues to do so. However, the report also suggests that blended learning,

instruction that combines online instruction with face to face instruction, has the great potential to become—beyond face-to-face and online learning—a third, high growth opportunity for increasing access to higher education.

To realize that potential, The Sloan Foundation, an early supporter of asynchronous online education, began funding institutions to develop blended learning nearly three years ago. As a result, numerous papers and conceptual frameworks have emerged around teaching and learning and administrative approaches to supporting blended learning [2, 3, 4]. This article summarizes research funded by The Sloan Foundation to study how blended learning and online learning can meet the needs of local constituencies, a 'localness' approach to online education. The researchers wrote four case studies of programs that exemplified the best practices of local blended learning programs and then analyzed the cases to identify characteristics common to the four cases.

II. BACKGROUND ON BLENDED LEARNING AND LOCALNESS

The Sloan-Consortium's (Sloan-C), mission is to "help learning organizations continually improve quality, scale, and breadth according to their own distinctive missions, so that education will become a part of everyday life, accessible and affordable for anyone, anywhere, at any time, in a wide variety of disciplines" [5]. To advance that mission and to create a framework for conducting research on online education, the Consortium developed the Sloan-C Five Pillars of Quality Online Education: Access, Learning Effectiveness, Student Satisfaction, Faculty Satisfaction and Cost Effectiveness. The research conducted on the cases drew heavily on this framework.

As mentioned previously, Sloan-C researchers have identified blended learning as a new area prime for expansion, yet very much under-studied by practitioners in the field [3]. Blended learning is described as "both simple and complex. At its simplest, blended learning is the thoughtful integration of classroom face-to-face learning experiences with online learning experiences…. At the same time, there is considerable complexity in its implementation with the challenge of virtually limitless design possibilities and applicability to so many contexts" [4]. In a document written by a number of blended learning experts and edited by Janet C. Moore of the Sloan Consortium [6], twelve principles for blended learning environments are outlined from the perspectives of institutions and administration, learners, teachers, student services, and information technology. From institutional and administrative perspectives, it is imperative to begin with a shared vision of how technology can improve teaching and learning, and develop efficiencies in cost and scalability. From the perspective of learners, blended learning should identify ways to meet the needs of individual learners and provide continuous support for role adjustment—moving from a primarily on-campus to an environment integrated with online. For teachers, blended environments must provide active institutional support and recognition for faculty; ensure learning design appropriately integrates face to face and online components; promote metacognitive reflection on the process of learning; and provide timely feedback and clear expectations for response time. From the perspective of student services, integration of student services for on-campus and online students is imperative. From an information technology perspective, an early plan for course development must be in place; continuous training and support must be provided; and appropriate technology must be chosen [6].

The research reported in this article draws on the work of the researchers mentioned above by adding a new dimension to the previous studies called localness. A. Frank Mayadas, President of The Sloan Consortium and Project Director for The Sloan Foundation, coined this new term to capture what he thinks is a competitive advantage for institutions across the country. Mayadas wrote in a white paper on the topic: "We'd like to use Asynchronous Learning Networks coupled with blending to get some focus

back on locality and localness strategies". He further envisioned, "a strong ALN and blended effort would further permit the institution to expand its effective radius of influence, say from 50 miles to more like 100 or even 150 miles" [7].

While many leaders suspect that blended learning has the potential to provide students with the best of both the internet and face to face experiences in the classroom, the localness strategy suggested by Mayadas has yet to be defined. In a paper prepared for the 2005 Sloan-C Summer Workshop, authors George Otte and Mary Niemiec [3] point to the need for cases or pilots that can be studied to examine conceptual frameworks in a more systematic way.

For this reason, four case studies were conducted to explore common characteristics of programs that blend online learning and extra-curricular activities with face to face experiences to meet the needs of local constituencies. A qualitative study of the cases was conducted to determine if these successful programs had underlying characteristics that made them successful. The common characteristics were then organized into a framework for developing successful local blended programs based on the Sloan-C Pillars.

In this article, we describe the methodologies used to conduct this research, a framework of characteristics common to the cases and a condensed version of each case. Finally, we will provide a set of suggested guiding principles for developing successful blended local programs.

III. METHODOLOGY

A. Case Selection

The cases were selected from four of the five University of Massachusetts' campuses located across the state (the Medical School was not included in the study). All of the programs are offered in collaboration with UMassOnline, the system's portal to online education. Cases were selected from each participating campus. All of the cases summarized a program that provided access for a local company, constituency or organization**;** used some element of blended courses, services or programs and some mix of each; and had some evidence of enhancing student achievement through blended learning.

The UMass Amherst's Professional Master's in Business Administration was selected because of its intelligent use of satellite locations, including corporate sites, to supplement online courses and services with face-to-face courses and services. UMass Boston's Registered Nurse to Bachelor of Science in Nursing program was selected for its highly structured use of blended services and instruction to increase retention of adult learners in an online program. UMass Lowell's partnership with the Lawrence School System to develop and deliver a customized Master's in Educational Administration online degree (Leadership in Educational Advancement Program, LinEAP) was selected as an exemplar of customizing programs to suit the needs of a local organization. UMass Dartmouth's Women's Studies Minor blended program was chosen for its unique ability to provide access to adult women returning to college in the Dartmouth area by supporting students in taking a mix of online courses and face to face courses to complete their degrees. A graphic summary of these programs along with other selected information is provided in Table 1.

Program	Distinguishing Localness Program Characteristic	First Launched (full launch or with some blend)	Program Composition	One Important Aspect of This Blended Program	Selected Demographics
Amherst: PMBA (Professional MBA)	MBA program that makes use of satellite and employer locations	2001	37 credits; choice of online or f2f	Large scale increases student options for format and location to address learning effectiveness, satisfaction and access	750 matriculated students including 50 at one employer and 60 at another employer.
Boston: RN to BS	Online BS in Nursing uses cohort model with mandatory technology orientation	2004	Includes 5, 6-credit nursing courses: 1 entirely online; 4 blended	Articulation agreements and partnerships with community colleges and area employers	25 students in Spring 2006 cohort
Dartmouth: WMS (Women's Studies Minor)	Degree Minor motivating local students to complete their degrees	2003	6 courses; 3 required and 3 WMS electives	Increased access to degree completers in Dartmouth area, particularly those in Business and Nursing programs	Average of 28 enrolled in WMS minor. Summer 2006 yielded 78 enrollments in WMS courses.
Lowell: LinEAP (Leadership in Educational Administration)	Customized M.Ed. developed for Lawrence School District	2003	6 courses: all blended to some extent	Intentional integration of Lawrence leaders and circumstances into pedagogy aimed at growing a cadre of district leaders	25 completers in first cohort; 14 enrolled in second (current) cohort

Table 1: UMass Programs Profiled as Cases that Characterize Successful Local Blended Programs

A case-writer most closely associated with the program was identified and recruited to write from each campus. The case writers composed a description of the program and used a prescribed set of guiding interview questions to explore one or more perspectives from three categories of stakeholders: students, faculty members, and administrators/corporate partners.

B. Cross-case Analysis

To conduct this research, the case studies were combined and analyzed using qualitative research software called NVivo®, a software application designed to aid in qualitative research. Qualitative research extracts meaning from a range of textual information such as field or case notes, articles, and in-depth interview or focus group transcripts. "NVivo® software offers researchers the opportunity for analysis and insight at a whole new level with a powerful, intelligent application that helps with managing, shaping, and analyzing virtually any information" [8]. NVivo® served as the workhorse, in place of folders, highlighters, and post-its, to help the researchers manage and analyze the individual case data.

The Sloan-C Pillars served as a framework for creating a preliminary set of pre-determined codes that served as a guide for our analysis of the case data. Once analysis began, the researchers examined the cases for other descriptive characteristics or codes.

The researchers who conducted the cross case analysis are experienced online education program developers and researchers. Each case was then imported into an NVivo® document file. The constant-comparative method of data analysis [9] was used to examine the cases for best practices and characteristics. The first level of analysis [10] was performed by thoroughly reading each case at least

once, but more often several times. This allows the reader to obtain a general understanding of the case. A second level of analysis involved the coordinator beginning with the first level of coding and matching instances to the Sloan-C Five Pillar Codes. A third level of analysis involved taking a different cross-section of the data. The coordinator and the PI used the tools provided by NVivo® to search for and select appropriate passages containing particular words or phrases such as 'mix' or 'blend'.

Simultaneous to the data analysis in NVivo®, the coordinators used Inspiration® Software to develop a visual model of the themes emerging from the data. This encouraged and supported a combination of inductive and deductive reasoning during the analysis.

IV. OVERVIEW OF THE FINDINGS

Each of the cases studied presented unique approaches to blending the learning environment to respond to the needs of various local constituencies. Yet, there were several characteristics that were common to all of the cases. The researchers searched identified key characteristics by searching both for frequency of mention as well as the emergence of the characteristics across the four cases.

The pillar framework was used as the basis for grouping the characteristics of the successful local blended learning programs. The resulting graphic shown below provides a visualization of the characteristics of the successful programs.

Findings are represented visually in Figure 1.

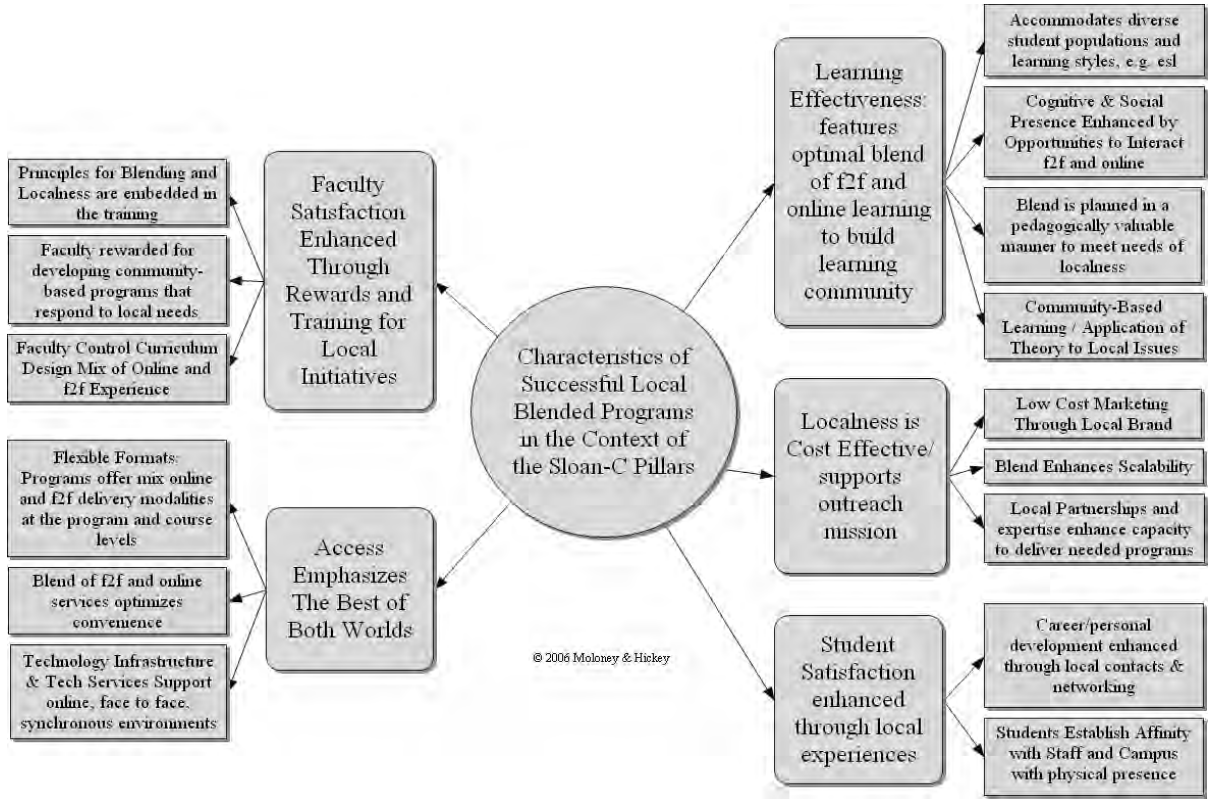

Figure 1. Characteristics of Successful Local Blended Programs in the Context of the Sloan-C Pillars

As shown, central to the graphic is the characteristic that each of the programs started from and that was the intentional use of blended learning to respond to local needs. The remainder of the characteristics are grouped under a pillar to provide greater definition of the attributes of the pillar in localness terms. The next sections of this paper provide specific examples of the characteristics.

A. Localness Supports Outreach Mission and Facilitates Cost Effective Solutions

Cases illustrated that localness contributes in unique ways to cost effectiveness and institutional commitment. Three major findings emerged in this area.

First, each case demonstrated how using local blended programs enhanced the institution's capacity to fulfill its outreach mission to various constituencies in a way that neither face-to-face nor online education programs alone could do. UMass Amherst was able to work with companies to develop blended programs that utilized on-site, satellite and online courses to enable employees to access their programs. UMass Lowell's Education program enabled the campus to support a struggling inner-city school system's need for school leaders, very much a part of the campus mission. UMass Dartmouth's Women's Studies program and UMass Boston's Nursing Program provided opportunities for adult learners to return to college to earn degrees needed to advance in the workforce.

Second, all of the cases were able to take advantage of low cost marketing through the local brand of the campus. The Lowell Campus case best illustrated this with the LinEAP program when a marketing and advertising type of synergy was created among the program faculty, staff and students, the university and the Lawrence Public School District, local politicians, and students' families. The Lowell case indicated,

> …the program is advertised within the Lawrence Public Schools through the Lawrence Teachers Union and the Lawrence Administrators' Association. The Superintendent also hosted a dinner midway through the first cohort to acknowledge and celebrate the partnership with UML, and recognize the faculty and students involved. Civic and educational leaders were invited and in-district press coverage was provided. The first cohort was similarly feted at a lavish graduation celebration attended by their families and faculty; again, press coverage within the district was used to share news of the program [11].

In the condensed cases below the reader will find evidence that each of the exploited local knowledge of their programs to market to local/regional organizations and businesses. For example, UMass Boston worked closely with local hospitals and health care providers to recruit students into their program.

Third, all of the programs offered a cost-effective solution to their local constituencies by either reducing tuition, or by providing high quality, customized programs at an affordable cost. For example, UMass Amherst's PMBA provided blended, sometimes customized programs to regional companies at a rate that fell well below what it would have cost the company to develop their own training. Similarly, UMass Lowell was able to discount tuition for the Lawrence Schools because the cost of services was reduced by using the cohort model. Not only did the school system get the benefit of reduced tuition, it was able to generate a pipeline of high quality school administrators by linking successful completion of the education program to tuition subsidies and contracts "…a pre-program meeting that includes signing a contract that… [indicates the teacher must] remain in the district for 3 years, or pay back the costs of the courses to the district" [11].

Fourth, the cases showed that local partnerships and expertise enhanced the capacity for the campuses to

develop and deliver the kind of programs needed by the local region. Polley wrote that in Boston's case, "The Program seeks to achieve this by forging partnerships with the community colleges in Massachusetts, designing culturally competent RN specific curriculum… It is critical that these goals are achieved while decreasing institutional barriers to remote students at an affordable cost" [12].

Finally, the cases describe success in scaling their programs by reaching out to local constituencies in this new way. For example, UMass Boston's Nursing program scaled by 30% annually after blending its program and tailoring its curriculum to local health care providers. UMass Amherst's PMBA scaled to the largest online program in the state by using the blend of services, courses at satellite and corporate sites.

B. Access Emphasizes the Best of Both Worlds

Three primary findings about the Access Pillar emerged from the analysis of the cases. First, each case exemplified different types of flexible formats, offering a mix of online and face to face delivery modalities at both the program and course levels. The Amherst case writer remarked that "…students feel the flexibility of choosing the course format that works best for them was a deciding factor in choosing the PMBA program…" [13].

The second characteristic that emerged as having a significant effect on the success of the program was an emphasis on blended services. In other words, students had the opportunity, and in some instances the requirement, to obtain services face to face and/or online based on which was more convenient or effective for students. For example, as an introduction to the blended learning environment, orientations or information sessions were offered by each campus with face to face, online, or blended options, providing a smooth transition to this modality, while simultaneously offering a connection to the campus. Other services that may be considered are enrollment, library services, alumni events, and campus communications, for example.

Third, cases indicated that technology infrastructure and technical services support was offered online, face to face, and in synchronous environments. Cases showed us that technological support online should be complemented by personal support on campus or over the phone. Selection of the type of technology used should also lend itself to blending. Centra or Horizon-Wimba are examples of types of technology that have the potential to work as a positive tool for students, faculty, and the local region. The Boston case showed us that "strategies to avert or ameliorate technology problems included having a six-hour face to face technology orientation…. A face to face meeting fosters a connection between the students, and a personal connection is made with the Director" [12].

C. Student Satisfaction Enhanced through Local Experiences

Two primary findings emerged from examination of student satisfaction in the cases. First, localness makes a unique contribution to the enhancement of career and personal development through local contacts made by participation in the program and blended learning and through opportunities for networking. The LinEAP program case best represented this benefit by highlighting a student opinion that "at the same time that she found the online learning convenient and powerful, she 'loved' the face to face meetings embedded in each course. The close professional connections established…continue…as a support network in her current leadership role" [11].

A second aspect of the Student Satisfaction pillar illustrated that students establish an affinity with the campus and the campus staff through physical presence that is a characteristic of localness. Students are

more satisfied when they can create that connection with someone on campus, whether a staff person, faculty, or other students who they can share with. The Boston case explains that,

> The second face to face meeting…to form a book club. They develop a presentation that will be presented to the faculty...at a luncheon…allows students to develop their presentation skills and meet with the faculty in a very casual setting…. The students have enjoyed and benefited from dialogue with the faculty [12].

D. Faculty Satisfaction Enhanced through Rewards and Training for Local Initiatives

Indications of faculty satisfaction in the cases yielded unique aspects of localness. Three primary findings highlighted these aspects. First, the cases indicated that principles for blended learning and localness are embedded in training that faculty receive from the campuses. One example of this was provided in the Amherst case. Bergin quoted one faculty member as stating, "The faculty who teach in the program have monthly brown bag lunches to discuss hot topics, teaching tools and applications, etc. which gives us time together to discuss ways to better improve the program" [13].

Second, faculty are rewarded for developing community-based programs that respond to local needs. Dartmouth's Women's Studies Program acknowledged progress by faculty toward the blended model through stipends.

> Faculty who responded to the request [to develop online courses] demonstrated their rationale for putting a particular course online and then if the proposal was approved by the WMS curriculum committee, the faculty member received a $3500 development grant [funded by UMassOnline]. [Then]… the WMS program turned to PCE for continued development funding and arranged for faculty who developed new courses for fully online delivery to be paid an additional $1000 the first time the course was taught [14].

Third, faculty in successful blended programs are able to control the design mix of online and face to face experiences for themselves and students. This control is enhanced by the faculty member's knowledge of the local context/culture, which in turn, enhances their teaching experience. One faculty member from Amherst explains the benefit of teaching in a blended environment, "A pure online format makes it difficult to connect with students and establish a more personal relationship; professors must work harder to connect with online students so having the ability to make personal connections with students face-to-face makes it a better teaching experience for me" [13].

Teaching experience can also be enhanced by the model chosen for the program such as the cohort model. From a LinEAP student point of view, the cohort model was "…valued…with its mixed grade levels as a valuable framework for understanding the entire school system and a structure for building community among participants" [11]. Additionally, a LinEAP faculty member "…acknowledged the value of the cohort for building community and a commitment to helping and sharing with colleagues" [11]. Another LinEAP faculty member

> …believes the cohort model and customized content of LinEAP is one of its most attractive features for faculty members. The shared common experiences in curriculum and instruction the group brings to the course work give him a foundation on which to build his course material and an opportunity to focus on critical issues. He is convinced the cohort helps people get through a challenging program by forging a group identity and providing peer support for learning. He also thinks that meeting in school environments provides a highly relevant setting for face to face classes, and gives teachers from different grade levels the chance to experience the work

> environments of colleagues who teach at other levels. Paul believes LinEAP is a strong model of leadership development because it is a holistic program, based in a single district, utilizing a cohort of peers who meet both face to face for community building, and asynchronously where they have the time to reflect on their learning [11].

E. Learning Effectiveness Features Optimal Blend of F2F and Online Learning to Build Learning Community

Learning effectiveness is one of the key features of the quality pillars. Four major outcomes emerged from analysis of the campus cases. First, effective local blended learning accommodates diverse student populations and learning styles. For example, English-As-A-Second-Language (ESL) students are of special consideration when focusing on learning effectiveness for all populations in the local area.

Second, both cognitive and social presence are enhanced by opportunities to interact face to face and online [2]. Students appreciate the flexibility in choice and the way that they can adapt blended learning to address their most effective way of learning. An Amherst student is quoted as saying, "This program allows me the opportunity to choose different learning environments so I know what works best for me…. I feel I learn best when I can sit with people and see their expressions and body language" [13]. Another example supports the value of the optimal mix in blended learning. One student

> …liked the convenience of the online learning but found the face to face meetings indispensable. Indeed, she and a group of classmates set up a face to face study group during the online sessions as a way to support their learning and socialize. She thought the combination of the two learning modes accommodated different learning styles in the cohort, and provided each member a variety of ways to master course content [11].

Third, blended learning is planned in a pedagogically valuable manner to meet the needs of localness. As illustrated in the Boston case, local students in this particular program require a significant amount of technology training and confidence-building prior to the beginning of their program. This barrier provides both a challenge and an opportunity for a teaching moment for students that sets the tone of their entire program. "While familiarizing themselves with the tools used in online learning students build bridges with their peers which are then expanded through the design of the curriculum" [12].

Fourth and finally, learning effectiveness is enhanced by combining community-based learning, and application of theory to local issues, for a real-world learning experience. This theme is illustrated throughout the cases. Boston students enjoy the mix of community based learning, partnerships and planned pedagogy that is based in the context of the students' work environment. Of the Amherst PMBA Program, Bergin writes that the "…distinction and partnership accomplishment between UMass and a corporate partner serves as a perfect example of how the non-traditional model of the…program is having a significant local impact on employee satisfaction, performance, retention, and overall organizational improvement" [13]. The deep roots of the Lawrence LinEAP in the community provide the best example of community-based learning for learning effectiveness. Boccia describes the reaction of Dr. Laboy, the Superintendent:

> …in the current climate where urban school leaders are difficult to find, he considered it essential to build a cadre of leaders with deep stakes in the community, who commit to building a future for Lawrence youth, and leaving a legacy in the district…. All the…issues have national scale, and LinEAP applies those to the local setting in an entirely appropriate way [11].

V. CASE SUMMARIES

This framework, as illustrated in Figure 1, was developed by extracting particular instances from the full case as written by each case writer. In this article, we have included condensed versions of the cases that preserve and highlight the localness of each. These represent a "collage" of the four cases, each written in the unique and different voice of the campus case-writer. The condensed versions of these cases are presented below.

A. Professional MBA (PMBA) Program: UMass Amherst Case Writer Amy Bergin

The Professional MBA (PMBA) program at the University of Massachusetts Amherst allows students the option of taking courses face-to-face at one of our Massachusetts campus locations (Shrewsbury, Holyoke, Pittsfield) or online (WebCT Vista) or a combination of both formats throughout the life of the 37-credit curriculum. In addition, PMBA students have access to the same University services as full-time residency-based MBA students and may participate in any Isenberg or University sponsored events.

The PMBA program currently enrolls 750 students from every state and 15 foreign countries, and enjoys an average annual growth rate of 25%. Hosting, maintenance and support of the learning portal (now WebCT Vista), hardware, third party software applications, and 24 hour technical support to students and staff for the PMBA Program are contracted from UMASSOnline.

The PMBA program attracts many corporate clients. One advantage of the PMBA program cited by these corporate clients is course format flexibility (online or face-to-face). Learning effectiveness is driven by employees having the option of choosing their preferred learning environment with a well known and respected University. Since many companies are global in nature, having online course options works extremely well for employees who travel extensively and is a necessary component to sustaining a successful relationship. An option for many of one company's employees is the opportunity to participate in their corporate sponsored evening education program. The PMBA program currently offers one, three-hour evening course during the Fall and Spring semesters onsite. This onsite face-to-face classroom learning format is convenient for many employees who do not want to travel offsite for class. Other employees choose to participate in courses offered offsite at one of the other PMBA campuses as well as online because they wish to accelerate their progression through the program or because they desire student perspectives outside of the company. One company has suggested that UMASS Amherst offer more hybrid courses within the PMBA blended program.

Employees of another corporate partner also value the opportunity to choose their preferred method of learning. One company manager acknowledged that, "we each learn differently and UMASS understands the need for multiple delivery options. Our employees can attend on campus at different locations, attend classes entirely online, or in many cases a blend of the two methods is offered. This is extremely helpful for those employees who travel."

Corporate representatives also feel that the PMBA educational partnership has helped increase employee retention through providing a high quality, reputable MBA program with relevant course material and outstanding faculty. The company selected the UMass PMBA as an educational partner because of reputation, faculty, national and international accreditation, and cost.

Two companies expressed that the primary benefits of being an educational partner with the PMBA

program are: responsiveness and full cooperation of Isenberg Program Administrators, Faculty, and Staff; and trust and willingness to work as a team to promote and enhance the relationship and educational offerings for their company and employees.

PMBA students and faculty perceive significant benefits from the program. For students, the program boasts a diverse and experienced group of students that enrich the learning experience. The program's course format flexibility offers a wide range of opportunities for optimal learning, facilitated by quality and engaged faculty, and offered at a reasonable cost.

Faculty enjoy how the wide range of student perspectives and experience enrich the teaching and learning process. Similar to the students, faculty also appreciate the program format flexibility which enables them to more effectively manage their teaching, research, and personal schedules. Faculty also remark how the program is well supported throughout the university.

In summary, we have found that the PMBA has several common perceived benefits among Student, Faculty, and Educational Partnership populations. First and foremost is the flexibility in choosing course format that best facilitates learning effectiveness. All constituencies agree that having both face-to-face "traditional" classroom format coupled with the option of taking online courses is of great benefit to understanding and learning. The diversity in which these two formats expand a student's global business perspective is perceived as extremely beneficial to learning effectiveness and employee retention. Second, the quality of Isenberg faculty plays a significant role in the student experience. Third, the effectiveness of the PMBA Program Administrators coupled with the support received by Students, Faculty, and Educational Partners from the University, staff, and supporting departments positively impacts program success. Educational partners feel their administrators and employees receive excellent customer service from the program. When reviewing program options across the board, program accreditation and University reputation play major roles in choosing the PMBA program over competitors.

It is evident from student, faculty, and corporate perspectives that the PMBA program positively impacts and satisfies the needs of each constituency on a global and regional basis.

B. LinEAP (Leadership in Educational Advancement Program): UMass Lowell Casewriter Judith Boccia

LinEAP is a customized educational administrator licensure program collaboratively developed and offered by the University of Massachusetts Lowell Graduate School of Education and the Lawrence, MA Public Schools and facilitated by the university's Center for Field Services and Studies. The goal for Lawrence is to "grow" a cadre of its own school leaders and supervisors to meet future leadership needs in the district. Two cohort groups, totaling 39 Lawrence Public Schools educators, have participated to date. Currently, over half the LinEAP participants have been promoted to leadership roles in the school district.

LinEAP consists of 6 courses, including 5 academic offerings and a full-year supervised practicum that is the equivalent of one course. Four courses are primarily online, with monthly face to face meetings at a school in Lawrence; the fifth is a hybrid course, with weekly face to face meetings and online discussions and chat. The practicum is a faculty supervised and district mentored administrative experience in the Lawrence schools with an online component. The program takes 2½ years to complete, including summers. Students who complete the sequence of courses satisfactorily are recommended for state administrative licensure by the university and eligible for administrative appointment in the Lawrence

Public Schools. While it is possible to earn administrative licensure at the university in exclusively face to face or online 10 course programs, LinEAP is currently the only means available to do so in a 6 course sequence consisting of a cohort enrollment, customized content, and blended learning.

Student and faculty assessment of the program was consistently positive. The cohort model with educators from varied schools and grade levels in Lawrence gave participants a framework for understanding the entire school system and a structure for building community. The cohort also helped working teachers manage a demanding program by creating a group identity and providing peer support for learning. Further, the monthly face to face sessions provided an opportunity to develop professional and personal connections with colleagues from throughout the district. Some of these connections have endured and matured into close friendships that provide support both in work and in personal lives even after the program is finished. Shared knowledge, understanding, and commitment around leadership in urban schools are distinctive outcomes of the LinEAP cohort experience, according to students and faculty.

The exclusively Lawrence membership of the cohort was generally seen as a strength of LinEAP since it allowed participants to learn with colleagues who face the same challenges in the workplace. In addition, the cohort's shared experience with the Lawrence Public School district's curriculum and instructional programs gave faculty a basis for developing relevant course material and a source of field based assignments. While course content addressed broad educational theories and national issues, all faculty made use of Lawrence school administrators as guest presenters or co-instructors to bring a local, world of practice perspective into courses. The involvement of Lawrence administrators in classes also signaled to students the importance and relevance of the learning taking place, and indicated the district's commitment to "grow" its own leaders from this program. Indeed, the school administration sees this program as an essential means to shape its future leaders from individuals who are committed to the community and who will continue to serve it in new roles as principals and supervisors.

The blended nature of the program received high marks from students and faculty. Combining online learning with face to face meetings offered convenient access to courses and accommodated different learning styles within each cohort. Sharing of journal entries on a discussion board during the practicum, for example, provided students peer support as they encountered challenges in the many different schools where they were assigned. Faculty found that online discussion gave students time and opportunity to reflect on their learning, something not always possible in face to face classes. At the same time, face to face meeting in schools brought university faculty into schools and put them in the real world of schools while giving participants from different grade levels and schools the chance to experience the work environments of colleagues. In addition, face to face meetings promoted group identity and supported online learning projects.

In addition to program specific features, individuals who facilitated faculty and student work were credited with LinEAP's success. The university's course development and technical support teams received high marks from faculty and students for making the online experience smooth. Course development specialists worked closely with faculty to create their online course materials, and continued to be available throughout the semester to troubleshoot and advise. Similarly, the university's online technical support desk was always available to assist students with technical issues in accessing online courses. All respondents also agreed that the presence of a liaison between the university and the Lawrence Public Schools was vital to the program's success. The liaison not only oriented students to the program, but also handled all the bureaucratic details associated with registration, scheduling, billing, book purchase and state licensure application. Additionally, he was able to access the leadership of both organizations to resolve questions, provide feedback from students, and plan for future courses and cohorts.

LinEAP is a cost-effective means for the school district to develop a cadre of future leaders and for the students to earn state licensure as principals or supervisors. The district pays all tuition and fees for the program, in exchange for a promise from students to work three years in the district after completing their study. Those who do not must repay the costs to the district. To date, two individuals have left the district and have repaid their tuition and fees. Students report the cost-free nature of the program, as well as its competitive admission and promise of promotion to higher salaried positions, are significant incentives to participate. The district leadership feels that subsidizing LinEAP is a solid investment as the costs of hiring, training, and retaining an outsider in a leadership role is significantly higher than the tuition and fees for a single student in the program. For the university, LinEAP is also cost effective since no new personnel needed to be hired and the courses generate revenue. The 2½ year sequence of courses, with guaranteed enrollment, facilitates faculty scheduling and provides a pipeline of graduate students into the educational administration degree programs.

LinEAP's distinctive use of program co-design and course co-instruction with the client district has the potential to alter the way professional education curriculum and instruction takes place. While adhering to state and national standards for administrative licensure, LinEAP provides a customized course sequence of local relevance to one urban school district. There is no reason to believe this model could not be replicated elsewhere, provided faculty are willing to adapt their courses and their practice in response to school district needs.

C. Online RN-BS: UMass Boston Casewriter Kathleen Polley

Statistics indicate that about half of the nurses graduating from nursing education programs in Massachusetts were prepared at the associate degree level [15]. However, recent research points to the significant positive impact that baccalaureate-level nursing education can have for employers and patients [16].

Despite this research and employers' call for nurses to be prepared at the baccalaureate level, UMASS Boston experienced a decline in the number of registered nurses applying for admission. RNs voiced concerns over the difficulty with transfer credits, frustration with the repetition in course work, the rigidity in scheduling and the span of time needed to complete their degree. In an effort to meet the needs of the students and increase access (recruiting, retaining and graduating) for students who were challenged by family obligations, work schedules, and geographic distance, the College of Nursing and Health Sciences at UMASS Boston developed an Online RN-BS. The goal of the program is to increase the number of baccalaureate-prepared nurses by 150 RNs per year. The Program seeks to achieve this by forging partnerships with the community colleges in Massachusetts; designing culturally competent RN-specific curriculum; combining user-friendly distance technology with face-to-face interactions at pedagogically intentional junctures in the program; and community-based learning. It is critical that these goals are achieved while decreasing institutional barriers to remote students at an affordable cost.

Administratively, the program is designed to be a self-supporting. Financially it bridges the policies and procedures structured for the state-funded University and the self-supporting corporate structure of Corporate, Continuing, and Distance Education (CCDE). Program content is delivered through the auspices of CCDE, who provides the learning management platform, instructional design support services and the support for the synchronous environment. The Department of Nursing retains control of the program including admission and progression standards, curriculum and faculty selection. There have been an abundance of opportunities to reassess systems and processes of both CCDE and the University to meet the needs of the online students which have also enhanced the interface with the University for the traditional face-to-face student.

The Online RN-BS Program has prerequisites that are met with most associate degree granting programs. Upon license verification students are awarded 38 credits for passing the NCLEX examination which demonstrates proficiency in their associate degree nursing course work. Students are then eligible to start the nursing sequence of courses. In addition to other general education courses, there are five six-credit nursing courses that are offered online which meets the university residency requirement. The program is designed to take eighteen calendar months to complete and currently costs $8700, including tuition, fees and books.

Ninety percent of the students in the Online RN-BS program reside in Massachusetts. These students are challenged by family responsibilities, work demands, financial constraints and living geographically remote to a four-year university. The students report the appeal of the program is that it allows for anytime, anyplace learning demanded by their personal schedules and work. The reputation of the University of Massachusetts Boston Nursing Program also increases nurses' desire to enroll.

Community college partnerships with UMass Boston serve a vital role in providing student access to affordable education. Seven articulation agreements between UMass Boston and area community colleges allow for a seamless transition to a baccalaureate education. The seamless transition is partially facilitated by academic advising sheets developed to list the courses at the community colleges that can be taken to fulfill the prerequisites of the Online RN-BS Program prior to applying for admission.

Another notable aspect of this RN-BS program is that once a student is admitted to a nursing cohort they are required to attend a face-to-face technology and University orientation hosted by the Director of the Online RN-BS Program. While familiarizing themselves with the tools used in online learning, students build bridges with their peers which are then expanded through the design of the curriculum. The average student comes to the program with significant deficits in their technological skills which are addressed during the orientation. Additionally, the cohort model of the program allows students to form bonds with one another. If nurtured and sustained, the relationship among students provides a network of support that encourages retention in the program.

The Online RN-BS makes optimal use of both synchronous and asynchronous tools. The synchronous environment is one way to build relationships among students and the design of the curriculum builds upon the foundation established during the face-to-face orientation. The various communication tools help students feel a sense of connection. A synchronous text chat environment is available 24/7 and is frequently used for group projects, just for students to socialize, or during weekly synchronous sessions. The Online RN-BS program uses the synchronous environment with each weekly session. Student attendance in the virtual classroom is not mandatory but it has a 95% attendance rate for each of the five classes in the program. The synchronous environment allows student access to community leaders and content experts who would otherwise not have that opportunity for interaction. Sessions are recorded for students who wish to listen to the classroom interaction asynchronously at a later time. The recorded sessions capture the student attendance, student/instructor interchanges between students, the whiteboard, PowerPoint lectures, and peers' use of emoticons. Threaded discussions give students the opportunity to be both learners and resources for the course content. This pedagogy is repeated throughout the program.

Community-based learning, including contributions by content experts, enhances the workforce development and localness aspects of the Online RN-BS Program. Recognizing students as both learners and resources takes advantage of students' work environment and gives other students a view into some of the top healthcare organizations in the country. Industry leaders are available within the area to participate in both the synchronized classroom and through video streaming. Involvement of regional

health-care employers as hosts of student orientation sessions, contributors to instructional experiences, providers of community-based learning, and employers of UMass Boston students signals the embedded nature of the program in the region.

The design of the Online RN-BS program is meant to make an intimate connection among the students in the program, the professors teaching in the program, the Program Director, and community-based constituencies. Without the online component of the program most of the RNs would not be able to continue their education due to the need for flexible scheduling. This is an exciting program that in 24 months has met enrollment goals and graduated two cohorts of students.

D. Women's Studies (WMS) Program: UMass Dartmouth Casewriter Jen Riley

The UMass Dartmouth Women's Studies (WMS) Program offers a minor degree program fully online via the Division of Professional and Continuing Education (PCE). WMS online students, the majority of whom live in Massachusetts, fit into two categories: adult learners and traditional age students. While all students interviewed have experienced both face to face and fully online courses, the consensus is that online courses offer more convenience for working women with families and enable degree progress. Students value the ability to take classes, remain assets to their employers, and meet family needs. For example, one student noted that "it's easier for to participate in an online environment because, as a full time mom, wife, and employee with an already hectic schedule, [she has] more opportunities to access each course at [her] convenience." Another student commented that WMS online courses offer "more interaction and ideas sharing among the students" in comparison to other courses. Students observed that the WMS online courses were challenging; as one student stated, the courses were "more thought-provoking" and "online courses have strengthened my writing skills as well as my reading interpretation skills."

Significantly, program cost is not a factor and each student believes that the online experience has transformed their educations. As one student commented, she might not have returned to higher education without the option for e-learning, while another student noted that she prefers all online courses since "if they are set up correctly, they offer much more interaction and collaboration than what I've found in my traditional on campus PCE courses." Another student stated that online learning brought her back to school fulltime.

The four faculty interviewed value the intellectual engagement WMS courses offer them, and they recognize the program appeal to non-traditional returning women students who would not otherwise have educational access. Each faculty member believes that e-learning offers benefits. For example, while two faculty members regret the loss of spontaneity in face-to-face classroom discussions, the same faculty members realize that the online format creates discussions where all students *have* to participate. One faculty member suggested that students "need to be prepared to exercise a certain degree of flexibility in the "real world" and "mixing up" their learning opportunities and responsibilities will help them do that." Furthermore, online teaching, as one faculty member noted, requires faculty "to examine one's own pedagogy," a key ingredient that has improved teaching practices.

Faculty agree that the WMS program supports them in developing courses and providing resources. A significant issue for faculty is class size, and faculty firmly stated that to maintain what one called "the integrity of the learning that occurs online," an enrollment cap of 20 students per fully online course must remain in place. Each faculty member also asserted that the workload for fully online courses is

significantly higher than a face to face class, something they believe administrators fail to understand.

The WMS Program is meeting its mission to provide educational access for adult learners in the South Coast region. The online format, as one administrator commented, is "one of the most exciting avenues to support this work" as online opportunities "enable adult learners to manage their personal, professional and education needs." In addition to providing course access, the WMS online program is transforming students and faculty. Students assert that the WMS courses are structured, rigorous learning experiences that add to personal growth. Faculty note that learning to teach effectively online has forced them to reflect on student progress and how they assess their courses. Support services meet student and faculty needs. Students report no difficulties with enrollment services, financial aid, the registrar, or bookstore. Additionally, students indicate that access to library resources is effective. Faculty indicate that the university support systems are responsive to technical needs and questions.

As with any initiative, limitations exist. Further development is needed in the areas of curriculum, course scheduling, online course development, and course partnerships with the Colleges of Business and Nursing. Development incentives for faculty will be necessary to broaden the scope of the online course offerings. Also, PCE students need assistance in understanding the value of the minor degree. Yet, the 3-year old program, as evidenced by steady enrollments, has solid roots. Most importantly, students, in particular non-traditional women students, are experiencing transformative learning experiences, which have brought them back to the university and helped them progress toward degrees and personal goals.

VI. NEW POPULATIONS TO BE SERVED

Asynchronous online education has opened opportunities to millions of learners around the world who were willing to give up face to face interactions with their faculty and peers for the convenience of learning anytime, anywhere. While we anticipate continued growth in this area, we believe that there is a tremendous opportunity to increase access by developing programs that intentionally blend face to face and online services and courses especially when the services and courses are tailored to meet the needs of a local constituency.

There is increasing evidence of the demand for such programs including a recent study released by Eduventures and Sloan-C [17, 18, 19]. Evidence indicates that even asynchronous online students enroll with institutions that are closest to them geographically. This trend reveals a seemingly natural desire for students to affiliate with a bricks and mortar campus. For example, UMass Lowell Master's degree in Educational Administration had very low enrollments until the faculty reluctantly agreed to move the program online. Within a year, the program yielded record growth in enrollments and quadrupled the number of students matriculated in the program by the 2nd year. Analysis of zip codes for those enrolled, revealed that the majority of the students lived within commuting distance of the school. Clearly proximity to a local institution made the difference for these students who decided to enroll in the Lowell program.

The cases reviewed suggest that intentional and creative uses of combinations of online courses, services and programs with face to face courses, services and programs will attract new audiences to higher education. However, institutions will benefit from principles and frameworks that will guide their work. In much the same way that early research on asynchronous online education helped institutions to create successful quality asynchronous learning networks, research on blended learning and localness can help inform future development of programs to meet local needs.

Drawing from the characteristics outlined above, we would like to offer the following themes that emerged from the cases and research:

1. Local blended programs should be driven by an institutional mission to serve the local region and engage local/regional partnerships to build curricula that are contextually responsive.
2. Local blended programs can and should take advantage of low-cost marketing strategies available through local relationships and brand.
3. Many students prefer to have some blend of face to face and online services and instruction threaded throughout their college experience as long as it is intentional, leading to improved access and learning effectiveness.
4. Faculty enjoy working with partners to develop local blended programs tailored to meet the needs of local constituencies and organizations when the efforts are mission driven and supported by the institution.
5. Access is greatly enhanced when local blended programs provide students with an activity (such as face to face orientations) or person that anchors the student to the campus and program.

VII. FUTURE DIRECTIONS

A new generation of programs that combine elements of asynchronous education with blended learning and campus based services has emerged which address the existing skepticism and enhance access by providing a rich mix of face to face activities, learning experiences and services with online activities, learning experiences and services.

The cases reviewed in this article serve as exemplars of the kind of creative program development institutions might engage to take advantage of the local competitive edge.

Hopefully, the Framework for Characteristics of successful Local Blended Programs proposed in the article will serve as guide for developing quality local blended programs. However, the framework needs to be further researched and defined to determine its applicability and effectiveness as a framework for building and assessing local blended programs.

This article shows that institutions can serve new audiences by developing quality blended programs tailored to meet the needs of local students and/or regional organizations and businesses. Developing programs and marketing along this framework will enable institutions to deepen their portfolio of programs and services and thereby expand their prospective pool of students and the quality of their programs. Creative and responsive marketing that addresses the student needs for local affiliation with institutions in their region should give local institutions a competitive edge against outside competitors. Finally, we all should continue to seek and highlight examples of successful local blended programs as we have done here, and use the framework to intentionally build and scale for greater access and localness.

VIII. ABOUT THE AUTHORS

Jacqueline F. Moloney is the dean of the Division of Continuing Studies, Corporate and Distance Education at UMass Lowell, and Executive in Residence for UMassOnline. She is known for her leadership in online education, innovation in curriculum and instruction, entrepreneurship and assessment. After founding the Centers for Learning and the Faculty Teaching Center at UMass Lowell, she went on to redesign its traditional continuing education program into a highly successful professional education

program known for its quality, responsiveness to students and business and for its high caliber online education programs. Under her leadership, UMass Lowell's online programs developed a national reputation for its quality and received two prestigious awards from the Sloan Consortium for Outstanding Faculty Development and Outstanding Institution-wide Programming. In addition, she has crafted numerous innovative partnerships with business and industry that have yielded impressive results for the Lowell campus.

As a member of the Board of Directors for the Sloan Consortium of Asynchronous Learning Networks, Moloney has served as a contributor to the national dialogue on the emergence of online learning programs. She has served as a member of numerous professional organizations including the AACU, and the American Association of Higher Education and is on the Board of Directors for the Merrimack Valley Venture Forum. Moloney has authored numerous articles on the development and assessment of online programs, the use of technologies in the classroom; cross-disciplinary approaches to curriculum reform; and the organizational reform of higher education. She is committed to community involvement and has served on numerous civic boards including the Greater Lowell Community Foundation, House of Hope, Girls Inc. and Whistler House.

Charmaine P. Hickey has worked for twenty years in public higher education and earned her Ed.D. in Leadership in Schooling from the Graduate School of Education at University of Massachusetts Lowell. She is currently Director of the Faculty Teaching Center at University of Massachusetts Lowell and Project Director for a UMass system-wide Alfred P. Sloan Foundation Grant for Local Blended Learning. Her wide array of educational interests include teachers' efficacy beliefs, transitions in higher education, faculty development, and technology.

Amy L. Bergin is director of marketing, business development and professional programs at UMass.

Judith Boccia is Director of the Center for Field Services and Studies at the University of Massachusetts Lowell. She received her Ed.D. from Teachers College Columbia University, and also holds undergraduate and graduate degrees in English. Her work focuses on building and sustaining school-university collaborative programs, including urban educator professional development and technology integration in support of curriculum, both topics on which she has written and presented widely. She has also developed and taught several customized, blended learning courses for urban school districts, and continues to explore use of online resources to enhance course access and delivery.

Kathleen Polley RN MS is the Director of the Online RN-BS Program at the University of Massachusetts Boston. She graduated from Simmons College in 2003 with her Master's degree in Primary Pediatric Care. She has been a pediatric nurse for 25 years and worked in Pediatric Critical Care and Pediatric Oncology, Bone Marrow Transplant. She has held various staff and management positions at Children's Hospital, Seattle: Mary Bridge Children's Hospital, Tacoma Washington and Lucille Salter Packard Children's Hospital, Palo Alto, Ca. She began teaching in 2003 and in 2004 implemented the first online undergraduate degree at the University of Massachusetts Boston and became Director of the Online RN-BS Program in 2005. The Online RN-BS Program was developed to meet a workforce development need within the Commonwealth of Massachusetts.

Jeannette E. Riley is Associate Professor in English & Women's Studies at the University of Massachusetts Dartmouth. She earned her Ph.D. in Contemporary American & British literature and literary theory in 1998 from the University of New Mexico. Riley's research and teaching focuses upon post-1945 American literature, contemporary women's literature, and feminist theory. In addition, Riley

directs the Women's Studies program. Riley has published articles on Irish poet Eavan Boland, Adrienne Rich, Toni Morrison, Terry Tempest Williams, and Wallace Stegner, as well as articles on feminist pedagogy and online teaching.

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EXPANDING DEMAND FOR ONLINE HIGHER EDUCATION: SURVEYING PROSPECTIVE STUDENTS

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ABSTRACT
The Eduventures survey examined next-generation demand for online postsecondary education, assessing online experience, delivery mode and marketing channels preferences, and perceptions of price, quality and location, identifying key takeaways in each area.

KEYWORDS
Perceptions, Delivery Mode, Age, Credential, Discipline, Price, Geography, Prior Educational Experience

I. INTRODUCTION

In June 2006, Eduventures, LLC surveyed over 2,000 consumers interested in postsecondary education in the next three years [1]. The objective of the study was to better understand next-generation demand for online higher education, and to get a clearer sense of how large the market may become. "Online higher education" is used here to mean wholly online programs/courses, where attendance at a physical campus is rare or not required. On behalf of members of Eduventures' Online Higher Education (OHE) program, OHE staff gathered a unique dataset, offering greater detail than ever before on consumer views and preferences, and permitting valuable insights into the development of online higher education in the United States.

Eduventures estimates that at the close of 2005, wholly online higher education accounted for only 7% of higher education students in the United States (c.1.2 million students). How big might this market become? Will online come to represent 15% of the market, and by when? Is 25% or higher realistic, and in what time frame?

Eduventures' *Assessing Consumer Attitudes Toward Online Education* report in May 2005 [2], found that a significant majority of consumers reported either uncertainty or negative views about online higher education. The report argued that what were termed *Believers* (i.e. consumers predisposed to the value proposition of online higher education) accounted for the vast majority of online enrollments to date, but cautioned that increased competition risked market saturation. To circumvent competition, universities and colleges must move beyond the increasingly cutthroat *Believer* segment, and begin to address the needs and values of the wider population. Building on the findings of Eduventures' *Competing in Online Higher Education* report in February 2006 [3], improved understanding of consumer views and motivations resulting from this new study, will help OHE members pinpoint robust positioning and differentiation strategies.

It is important to determine the accuracy and stability of three categories (Believer, Fence-Sitter, Skeptic),

and the extent to which consumers are moving from one category to another, based on increased exposure to online delivery, or other factors. It is also critical to ascertain how different consumers build up a view of online higher education, what such views are based on, and what channels online universities and colleges might use to reach particular groups. Interest in online relative to key demographics (e.g., age, ethnicity, prior education), and less tested variables (e.g., location of the institution offering online provision, and institutional control) are important questions. How do consumers think about teaching and learning in higher education, and how is online delivery seen to fit into the equation?

Staff of Eduventures' *Online Higher Education* (OHE) program [4] developed a project proposal and survey tool, refined by OHE members. The survey elicited 2,033 qualified consumer responses from across the country. Consumers were qualified in three ways:

1. *Age* — must be at least 16 years old;
2. *Residence* — must reside in the United States;
3. *Interest in postsecondary study* — must anticipate enrolling in a course, including non-credit courses, degree, certificate, or other program at a college/university within the next three years.

To provide hard number estimates of the total addressable market stratified by delivery mode, in a number of places both reports model to the U.S. adult population interested in postsecondary education in the next three years.

II. KEY TAKEAWAYS

The following is a high-level summary of the key findings of the study.

A. Demand for Postsecondary Education

- ***Interest in postsecondary education.*** Out of a total surveyed population of 4,660, 44% indicated interest in postsecondary education in the next three years.
- ***Addressable population.*** Based on a 44% reported rate of interest, the modeled total addressable U.S. market for postsecondary education is around 103 million people.

***Key takeaway*:** Reported interest in postsecondary education suggests a potentially massive market opportunity. Of course, "interest" and enrollment are distinct. Based on enrollment trends, a 5:1 interest/enrollment ratio is projected. Online providers' differentiation and marketing strategies will play a role in improving this ratio.

B. Online Experience, Preference & Likelihood

- ***Online experience.*** Almost one-third of respondents cited experience of a wholly online or blended course, while around 6% reported experience of a wholly online program (e.g. degree or certificate). Fifty-five percent of the sample claimed no online postsecondary experience. When blended delivery was factored in, non-experience dropped to 48%.
- ***Delivery mode preference***. There is an encouraging gap between current experience of wholly online programs (6%) and stated preference for this mode of delivery (19%). More generally, around 50% of consumers say they prefer a mode of delivery either dominated by online or at least balanced between online and on-campus.

- ***Delivery mode & "likelihood."*** The survey distinguished between delivery mode preference and "real world" decision-making. For example, 19% of consumers expressed a preference for wholly online delivery, but 41% said, given other factors, that it was "likely" they would undertake a program/course wholly online in the next three years.

Key takeaway: Extraordinary openness to forms of online delivery means consumers are receptive to messaging from online providers. The fact that "likelihood" to take an online program exceeds "preference," suggests other factors at work (e.g., convenience) that may permit tradeoffs against first choice. This tension between preference and likelihood is key to understanding effective messaging.

C. Delivery Mode: Age, Credential & Discipline

- ***Delivery mode preference & age***. The two youngest age bands expressed strong preference for campus-based study, and were most open to online when it constituted a minority component of a campus-based experience. For the 25–34 age group, campus-dominant options retain priority, alongside much stronger interest in online-dominant options. For the 35–44 and 45–54 age groups, campus-based study falls out of favor, dropping into last place; and online options vie for prominence. However, for the two oldest age groups, campus-dominant options experience a resurgence, particularly for the 65 and older category.
- ***Delivery mode & discipline.*** There was clear clustering of disciplinary interest in terms of general scale and delivery mode preference. Business, IT, education, and healthcare continue to offer the best combination of scale and online interest, but consumers interested in a wide range of other disciplines also exhibited openness to online delivery.
- ***Delivery mode & credential.*** By credential, prospective students interested in associate, bachelor's and master's degrees were most open to wholly online delivery. These consumers were also open to campus-based and blended delivery. Irrespective of credential of interest, most respondents were similarly open-minded.

Key takeaway: The survey reveals consumer interest in online delivery by age, credential and discipline in line with market trends to date. Working adults, degrees and a small number of career-oriented, mass market disciplines remain strongly associated with interest in online delivery. Alongside this predictable configuration, niche/emerging markets among non-traditional age groups, credentials and disciplines are visible. The online higher education market of the future will prove a combination of enduring core and growing diversity. Online providers must determine where best to steer their development relative to this pattern.

D. Marketing Channels

- ***Information sources.*** Respondents cited online advertising as the most prominent source of information about online programs, but pointed to various personal/neutral sources (e.g., family/friends, faculty/teachers, national rankings) as most influential sources when selecting a school short list.

Key takeaway: Online providers must be careful to distinguish between most prominent and most influential marketing channels. Personal/neutral information sources hold far more weight with consumers, helping them cut through school marketing and increased choice. As the online space becomes more competitive, and schools' differentiation strategies remain relatively under-developed, school-led marketing that emphasizes substantive and distinct value relative to the competition, will win

consumer attention. In the absence of substantive differentiation, marketing volume (favoring the largest providers) and niche programming will boast an advantage.

E. Perceptions of Quality, Price & Geography

- ***Perceptions of quality.*** Perceptions of quality suggest a maturation of consumer views – a willingness to assess individual online and on-campus programs on their merits, rather than in terms of delivery mode pure and simple. However, there is also a sustained skeptical minority who continue to regard online delivery in monolithic terms, and as poor quality.
- ***Perceptions of price.*** Although 42% of the sample was willing to judge the quality of individual online programs/courses on their merits, only 27% were willing to reserve judgment on price. Almost half the sample said they would only be willing to pay less for an online program/course compared to an on-campus experience.
- ***Online delivery & geography.*** Sixty-three percent of respondents who were willing to consider a wholly online program preferred the online provider to have some physical presence (branch campus or main campus) at least within their state. Only 37% of respondents willing to consider wholly online delivery disregarded location as a factor.

Key takeaway: These trends suggest significant limitations on online higher education in terms of pricing power and marketing reach; and arguably favor local brands over national players. Consumers are open to online delivery, but at the same time exhibit hesitation about value. Noticeable willingness to judge individual online programs on their merits did not translate into comparable willingness to judge price on a per-program basis. Similarly, the majority of consumers most open to online delivery reject the notion of a truly national market, and are more comfortable with combining online delivery and geographical proximity. The challenge for online providers is to refine messaging that bolsters perceptions of quality; and for national players, to emphasize the breadth and depth of the wholly online, remote experience. Both tactics will support greater pricing power.

F. Online Value & Experience

- ***Conceptions of the online value and experience.*** Alongside strong openness to forms of online delivery, consumers also revealed less positive or narrower conceptions of the nature and value of the online experience. Interest in online appears to be dominated by notions of convenience, and is seen to imply a quality/experience tradeoff.

Key takeaway: Online providers face a tricky balancing act between playing to majority consumer value perceptions centered on convenience, versus emphasizing broader conceptions of online higher education (e.g. around pedagogy, technology). Breadth is essential to overcoming consumer hesitation and allowing individual schools to stand out in an increasingly crowded market. Online providers need to both accommodate and educate consumers.

III. ABOUT THE AUTHOR

Richard Garrett is the Senior Research Analyst serving Eduventures' Learning Collaborative program for Online Higher Education. A recent addition to the Eduventures team, Richard is widely regarded as one of Europe's foremost online higher education experts. Prior to joining Eduventures, Richard was deputy director of the Observatory on Borderless Higher Education in the United Kingdom, a position he held from 2001 to 2005. His research and consulting work has focused on higher education trends

worldwide, particularly online learning, internationalization, and commercial activity. Among his recent publications is E-learning in *Tertiary Education- where do we stand?*, a 2005 book commissioned by the OECD, Paris. Richard has been quoted in the London *Times Higher Education Supplement*, Australia's *Campus Review*, and the *South China Morning Post*. He has also served as a researcher in the School of Education, University of Surrey and at the Quality Assurance Agency for Higher Education (U.K.). Richard earned both a B.A. and an M.A. from King's College, University of London, as well as a Post-Graduate Certificate of Education from the University of Cambridge.

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1. This consumer study was undertaken under the auspices of Eduventures' *Online Higher Education* (OHE) program, a membership program that offers universities and colleges a wealth of collaborative and custom research opportunities focused on online higher education. The OHE program helps online providers grow their enrollments, and operate more effectively. The OHE program is privileged to count many of the leading online universities and colleges in the United States among its members. For more information, please visit www.eduventures.com, or contact Richard Garrett, Senior Analyst: rgarrett@eduventures.com, 617-532-6081.
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4. Each of these findings is analyzed in more depth in the full reports, available only to members of Eduventures' *Online Higher Education* program. As part of their membership, universities and colleges that are members of Eduventures' *Online Higher Education* program are able to draw on a range of data customization services to extract additional detail from the dataset, and commission primary research that speaks to the conclusions of this report. For more information about Eduventures' *Online Higher Education* program, please visit www.eduventures.com, or contact Richard Garrett, Senior Analyst: rgarrett@eduventures.com, 617-532-6081.

RESEARCH ON ONLINE LEARNING

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I. INTRODUCTION

Over the past decade, the Internet has had a profound impact on higher education by enabling the phenomenal growth of online learning. Moreover, just as we were getting used to fully online courses, blended courses, courses which integrate online and face-to-face instruction, seem to be growing in similar, perhaps even more spectacular, manner. Add to that a plethora of emerging digital technologies such as wikis, blogs, podcasting, social software, and serious gaming technologies that are increasingly being incorporated into online or online portions of courses, and one is tempted to despair of ever making sense of online learning. The altered learning environments created by web-based technologies, not only eliminate barriers of time, space and arguably learning styles, providing increased access to higher education, they challenge our traditional notions of teaching and learning, and indeed higher education itself.

The second session of the Sloan-C Summer Workshop focused on research and how it might help us meet this challenge. In particular, presenters in this session were charged with addressing what the research to date can tell us about student, faculty and institutional change, what directions for future research seem most promising, and what we really need to do to move research on online learning to more rigorous and more informative levels.

The papers they wrote are collected in this section. They include: a critical review of what the research literature can tell us about blended learning relative to each of Sloan-C's five pillars of quality in online learning; two papers on one of the more promising lines of research in online learning, research involving the Community of Inquiry framework; an intriguing look at what very large data sets and innovative methodologies can tell us about our students and their reactions to blended course offerings; and an equally provocative thought piece on research on online learning in general which asks us to reconsider how we frame that enterprise, arguing that research on online *education* might generate more meaningful outcomes. The papers are both informative and thought provoking, and although they may generate more questions than they answer, they clearly suggest directions for future research that could move our understanding of online education forward in interesting and important ways. They are briefly introduced below.

II. THE FIVE PILLARS

The problem with making any generalizations from research concerning blended learning is that it involves, well, blended learning. Not only has very little research to date focused specifically on blended courses or programs, blended learning itself encompasses a wide range and variety of implementations. In the first paper in this section, Karen Vignare makes a terrific first pass at this task which seems by its very nature to resemble nothing so much as herding cats.

She begins with a good definition of blended learning: courses or programs that "integrate online with

face-to-face instruction in a planned, pedagogically valuable manner" and that "do not just combine but trade-off face-to-face time with online activity." What is important about this definition is that it cuts the blended learning problem down to manageable, if still daunting, size. She makes the task, and that of her readers, even more manageable by addressing blended learning research in the context of each of the Sloan-C quality pillars. These are learning effectiveness, faculty satisfaction, student satisfaction, access, and cost effectiveness. For each of these, Vignare combines findings from research on online learning, research on higher education, and what little research exists on blended learning to provide useful summaries of the state of our knowledge to date. She concludes by identifying what she views as the most promising directions for future research. In particular, she argues for moving beyond case studies to identify variables that might be quantifiable and generalizable.

Indeed, as educators implement and report on blended learning courses and programs, it is critical that we develop structures and measures for characterizing them well enough that we can begin to generalize from them. As Vignare notes, most of the reports on blended learning are case studies. That is reasonable as the field is exploratory at the moment, but case studies would be much more generally informative if they provided important details concerning their design and implementation. One structure that might help is the inputs-processes-outcomes framework Sloan-C effective practices editors are evolving to make sense of the effective practice descriptions we have been collecting. This framework characterizes best practices, not only in terms of measurable outcomes, but also in terms of how they are constituted (inputs) and implemented (processes). A similar framework applied to blended learning cases might tell us a good deal about what specific blends work for which students and courses. It also could suggest promising variables for further investigation.

III. COMMUNITY OF INQUIRY MODEL

The second set of papers in this section examine the Community of Inquiry (CoI) framework developed by Garrison and colleagues at the University of Alberta [1] to explore how features of written language used in computer conferencing promote critical thinking. The CoI framework recognizes the importance of developing learning communities online, and situates such development primarily in online discussion. It contends that effective learning in online discussions results from the interaction of three elements: cognitive presence, teaching presence, and social presence. Cognitive presence refers to the collaborative exploration, creation and refinement of understandings through discourse. Teaching presence refers to the design, facilitation, and direction of discourse for the purpose of realizing personally meaningful and educationally worthwhile learning. Social presence refers to the ability of learners to project themselves socially and emotionally in online environments. The CoI framework assets that all three elements must be present to support higher order learning in online discussions.

The CoI model has formed the basis for a good deal of research on online learning. Most of this research has focused on one of the three presences, social presence being the most frequently investigated, and much of it has involved content analysis of online discussion transcripts. The two CoI papers in this section argue that, while the framework is one of the most promising for moving research on online learning forward, we must develop more rigorous means for measuring and quantifying its three elements so that such research can be generalized across institutional contexts.

In the first of two papers on the CoI framework, Randy Garrison revisits the research to date on cognitive, teaching and social presence and identifies four issues that a review of the research literature raises. He begins with the most researched of these, social presence, and argues that our understanding of its more important characteristics needs to expand from simply recognizing the importance of establishing socio-emotional relationships on the individual level to include the notion of group cohesion around a common

educational purpose or goal. The second issue Garrison explores is one that has deviled research on online discourse from its very beginnings, namely, the question of moving online discussion beyond the exploration phase to knowledge creation and resolution. Here he explores what might be called the tension between social and cognitive presence, but argues that a redefinition of social presence as above and the provision of appropriate tasks to move students through to resolution might resolve this. He also points to the importance of instructors in facilitating such progression—which brings him to teaching presence; the third issue Garrison addresses concerns how we define teaching presence, an issue raised by recent survey research on the topic. Specifically, Garrison asks whether there is a meaningful distinction between facilitation of discourse and direct instruction in online forums. While conceding there may be little difference between them from a student's point of view, he argues that there are significant differences between them from an instructor's point of view which have important pedagogical implications.

Finally, Garrison addresses methodological concerns about qualitative transcript analysis and the validity of coding protocols. He points out several problems with content coding including issues concerning units of analysis and specific indicators, arguing for commonly agreed upon protocols. He further contends that the CoI framework has been tested enough to begin to move from qualitative to quantitative analysis. In particular, he argues for the development, testing, and widespread acceptance of social, teaching, and cognitive presence survey items that might support studies that bridged courses, content domains, and institutions.

Ben Arbaugh has done some good research that moves us forward in this direction. In the second CoI paper in this section, he reports on an empirical verification of the CoI framework that he undertook with students enrolled in 55 online classes in the MBA program at his institution using survey data. The survey he developed was based on previous survey research on teaching presence [2], social presence [3], and cognitive presence [3]. It included 18 teaching presence items, 8 social presence items and 4 cognitive presence items. Arbaugh performed an exploratory factor analysis on the items and found that they indeed loaded on factors that described teaching presence, social presence and cognitive presence, with the possible inclusion of a factor he labeled course design and organization (as it was composed of items from those aspects of teaching presence which also loaded the teaching presence factor). As he notes, "the results of this study should provide some encouragement to those researchers interesting in testing the generalizability of the CoI framework."

Indeed, they should. In my opinion, the CoI framework is important both for its theoretical grounding and for its research applications. These two papers together do a very good job of exploring its usefulness as well as how we might to begin to device quantitative and generalizable applications of it. Obviously, there is still much work to be done, especially concerning cognitive presence. A big question for me concerns generalizability. The CoI framework was developed to investigate learning in online discussions, yet survey questions designed to address its components, at least implicitly, address whole courses. The big question, then, is whether or not CoI is or could be a good model of whole courses. If the answer is yes, and I think it might well be, at least for one type of online course, then perhaps we need to look beyond even survey research to more specific and varied measures of learning.

IV. REACTIVE BEHAVIOR, AMBIVALENCE, AND THE GENERATIONS

The fourth paper in this section, which again focuses on blended learning, provides an inkling of what survey research, large data sets, and clever data analyses can reveal. Written by Charles Dziuban, Patsy Moskal and Linda Futch from the University of Central Florida, the paper explores students' satisfaction

with blended formats and attempts to explain this in terms of two theoretical models—one generational and the other having to do with adolescent patterns of behavior. The generational model categorizes learners by generations—baby boomer, generation X, millennial—and suggests that students born in differing eras differentially approach learning tasks. The Long-Dziuban Reactive Behavior Patterns model [4] describes behavior patterns formed in adolescence that likewise affect how students behave academically. It describes four behavior patterns based a combination of students' activity levels (aggressive/passive) and their need for approval (independent/dependent).

Dziuban and colleagues investigated relationships between students' generations, reactive behavior patterns, and their satisfaction with and perceived interaction within blended courses through some very interesting manipulations of data gleaned through a survey given to all students enrolled in blended courses at the University of Central Florida in the 2004/2005 academic year. One problem with their findings is a very low return rate (.07) on the survey, but even with low returns they analyzed 980 surveys. Moreover, the researchers' methods are intriguing and their interpretations of the data not only thought provoking but replete with implications for practice. They thus suggest interesting avenues for the large scale data analyses Vignare advocates in the opening paper in this section.

Dziuban and colleagues begin with a very interesting premise—that the survey responses to their Likert-type rating are characterized by ambivalence—and an even more interesting solution—categorizing them as exhibiting or not exhibiting positive, negative, and ambivalent responses (the three responses in the middle range of a five point Likert scale). They then apply these classifications to show differences in student satisfaction with and perceived interactivity within blended courses related to gender, work status, generational affiliation, and reactive behavior models. Finally, they use classification and decision trees to predict student satisfaction, dissatisfaction and ambivalence in blended learning environments by generations and reactive behavior that may have important implications for both instruction and advising. As previously noted, these notions clearly deserve further investigation.

V. WE SHOULD WATCH OUR LANGUAGE

The final paper in this section, written by Melody Thompson in response to the other papers in this group, cautions us to be careful of the language we use when discussing online education. Thompson first points to the common usage of the word "learning" across these papers to describe the whole educational enterprise, as in "online learning" or "blended learning," a usage I imagine many of us employ. She argues that while substituting "learning" for "education" admirably evokes a student-centered stance, it also encourages us to marginalize the rest of the educational enterprise. In particular, it draws our attention away from instructors and teaching, arguably a critical element in both online and blended courses. Similarly, she argues that recent trends in usage away from "distance education" and towards "eLearning" may be marginalizing distant students. Thompson makes a strong argument for the power of language to shape our thoughts and her observations clearly deserve reflection.

VI. ABOUT THE AUTHOR

Karen Swan is Research Professor in the Research Center for Educational Technology at Kent State University. Dr. Swan's research has been focused mainly in the general area of media and learning on which she has published and presented nationally and internationally. Her current research focuses on online learning, mobile computing and on student learning in ubiquitous computing environments. Dr. Swan has authored several hypermedia programs, co-edited a book on Social Learning from Broadcast Television and is currently working on a co-edited book on ubiquitous computing and a DVD ROM on the latter topic. She served as a project director on several large scale grants including work for the US

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ONLINE COMMUNITY OF INQUIRY REVIEW: SOCIAL, COGNITIVE, AND TEACHING PRESENCE ISSUES

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ABSTRACT

This paper explores four issues that have emerged from the research on social, cognitive and teaching presence in an online community of inquiry. The early research in the area of online communities of inquiry has raised several issues with regard to the creation and maintenance of social, cognitive and teaching presence that require further research and analysis. The other overarching issue is the methodological validity associated with the community of inquiry framework.

The first issue is about shifting social presence from socio-emotional support to a focus on group cohesion (from personal to purposeful relationships). The second issue concerns the progressive development of cognitive presence (inquiry) from exploration to resolution. That is, moving discussion beyond the exploration phase. The third issue has to do with how we conceive of teaching presence (design, facilitation, direct instruction). More specifically, is there an important distinction between facilitation and direct instruction? Finally, the methodological issue concerns qualitative transcript analysis and the validity of the coding protocol.

KEYWORDS

Social, Cognitive, and Teaching Presence, Community of Inquiry Framework, Methodological Validity, Transcript Analysis

I. COMMUNITY OF INQUIRY

While we have been relatively successful in identifying the properties of asynchronous learning networks, a more in-depth analysis of the educational and transactional issues requires a theoretical framework that can provide order and parsimony to the complexities of online learning. A construct that has attracted considerable attention in higher education that serves this purpose is that of a community of learners. Higher education has consistently viewed community as essential to support collaborative learning and discourse associated with higher levels of learning. Moreover, the asynchronous nature of online communication and the potential for disconnectedness has focused attention on the issue of community. In support of this perspective, there is evidence that a sense of community can be created online, although this is not a trivial challenge [1, 2]. It has also been shown that sense of community is significantly associated with perceived learning [3, 4].

One of, if not the first, framework that identified both social and cognitive dimensions for studying online learning was provided by Henri [5]. This work inspired Garrison, Anderson and Archer [6] to develop a comprehensive framework as an online learning research tool (see Figure 1). The framework consisted of three elements—social, teaching and cognitive presence—as well as categories and indicators to define each of the presences and to guide the coding of transcripts (see Figure 2). It had its genesis in the work of

John Dewey and is consistent with constructivist approaches to learning in higher education. This framework has provided significant insights and methodological solutions for studying online learning [7, 8]. The structure of the community of inquiry framework has also been confirmed through factor analysis by Garrison, Cleveland-Innes and Fung [9] and Arbaugh and Hwang [10].

Figure 1. Community of Inquiry Framework

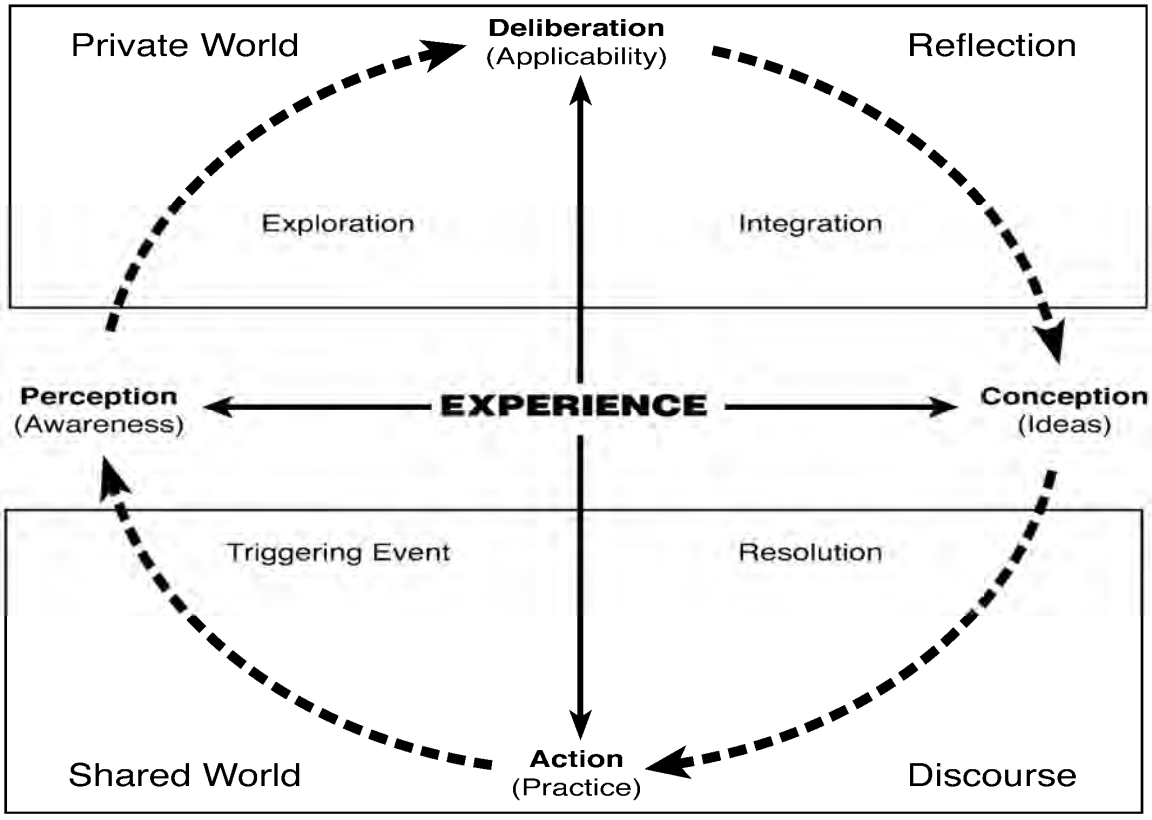

Figure 2. Practical Inquiry Model

As we shall see, the quantity of research and our understanding of each of the presences have progressed at very different rates. Each of the three key issues discussed here emerged from the online learning research literature.

A. Social Presence

Social presence is described as the ability to project one's self and establish personal and purposeful relationships. The three main aspects of social presence, as defined here, are effective communication, open communication and group cohesion (see Figure 2). Social presence attracted most of the initial online learning research attention. While this may have been an appropriate and important place to begin the study of online learning considering its asynchronous nature, much of this research was done independently of cognitive and teaching presence. It is at the intersection of social and cognitive presence where the primary issue of concern emerges. Students recognize that they are not there for purely social reasons. A sense of community is based upon common purposes and inquiry. Moreover, social presence is of less importance if the learning activities are information acquisition and there are no collaborative assignments where students can benefit from the perspectives of others [11].

The issue addressed here concerns the nature of social presence and how it needs to shift as a course of study evolves. As valuable as it is to establish effective communication and developing social bonds, it is essential that the group feels secure to communicate openly and coalesces around a common goal or purpose for a community to sustain itself [2]. Social presence must move beyond simply establishing socio-emotional presence and personal relationships. Cohesion requires intellectual focus (i.e., open and purposeful communication) and respect. For example, Swan and Shih [12] found that group cohesion is

significantly associated with social presence and perceived learning outcomes. It is argued here that social presence in a community of inquiry must create personal but purposeful relationships. However, developing personal relationships take time and it may be that we should be focusing on open communication first. What is required is a clear understanding of how social presence shifts to support the educational objective of the community.

It was Swan [13] who first revealed the apparent shift of social presence over time in online course discussions. She reports that effective and interactive (i.e., open communication) categories increased while cohesive indicators decreased. The explanation was that it was "possible that the use of such reference became less necessary as a clear classroom community was formed." Another possible explanation addresses the fact that the discussion was more exploratory than collaborative. Cohesion may well have been a secondary issue under this circumstance. That is, collaborative tasks focused on practical outcomes may well reduce the focus on the effective and emphasize cohesive comments to achieve a successful outcome. Another consideration in interpreting these findings is the gender balance of the sample. Two thirds were female. In this regard, Arbaugh [14] has pointed to the possible differences in how male and female students communicate. This, of course, would be confounded by other issues such as community development and nature of the task. To address these issues, findings need to be interpreted in the broader context of a community of inquiry that concurrently considers social, cognitive and teaching presence issues and variables.

Contrary to the nature of the shift in social presence reported by Swan [13], Vaughan [15, 16] found that the frequency of effective and open communication comments decreased, while group cohesion comments increased. The interpretation was that effective and open communication was necessary to establish a sense of community. It was only after the social relationships were established and the group became more focused on purposeful activities did cohesive comments begin to take precedence. Not only did the focus change but it is hypothesized that because a sense of community was established, there was less need for social reinforcement. Social presence online becomes somewhat transparent as the focus shifts to academic purposes and activities.

It is important to note that the context of the Vaughan study [15] was a blended professional development community. The participants were evenly split in terms of gender and were particularly task focused. In addition, participants had the advantage to establish social presence in a face-to-face context. From a research perspective, it is not clear how much influence the blended design had on the social presence patterns reported here. Further study is required to understand exactly how social presence patterns develop. Can social presence detract from cognitive presence? Do participants in a community of inquiry naturally progress from socio-emotional connections, to establishing a climate of open communication, and then naturally engage in purposeful activities (and cohesive comments)? Or is the progression from open communication, to collaboration and cohesion, and then finally to personal relationships? Is the online environment focused primarily on academic goals [9]? Is there a qualitative difference between online and face-to-face social presence that we need to understand? Certainly, there is some evidence to suggest that the face-to-face environment can more easily provide socio-emotional support [17].

Implications arising from this issue and related research questions have practical implications for establishing and maintaining social presence in an online community of inquiry. Certainly care must be taken to encourage social interaction and to provide structure and support early on. However, social presence should not be measured simply in terms of the quantity of interaction it engenders. The purpose of social presence in an educational context is to create the conditions for inquiry and quality interaction (reflective and threaded discussions) in order to collaboratively achieve worthwhile educational goals. While effective communication may be important, it is not sufficient for educational purposes. Personal

relationships and interaction must be defined in academic terms. Social presence for educational purposes cannot be artificially separated from the purposeful nature of educational communication (i.e., cognitive and teaching presence).

B. Cognitive Presence

Cognitive presence is defined as the exploration, construction, resolution and confirmation of understanding through collaboration and reflection in a community of inquiry. The practical inquiry model operationalizes cognitive presence and is ground in the work of Dewey [18] on reflective thinking (see Figure 3). Four phases are defined in the interests of parsimony, but in practice inquiry is not so discretely defined nor is it immutable [19].

Elements	Categories	Indicators
Social Presence	**Effective Expression**	**Emoticons**
	Open Communication	Risk-free Expression
	Group Cohesion	Encourage Collaboration
Cognitive Presence	**Triggering Event**	**Sense of Puzzlement**
	Exploration	Information Exchange
	Integration	Connecting Ideas
	Resolution	Apply New Ideas
Teaching Presence	**Design & Organization**	**Setting Curriculum & Methods**
	Facilitating Discourse	Sharing Personal Meaning
	Direct Instruction	Focusing Discussion

Table 1. Some Examples of Cognitive Presence

The primary issue worthy of further exploration in terms of cognitive presence relates to the progressive development of inquiry in an online learning environment. Cognitive presence is defined in terms of a cycle of practical inquiry where participants move deliberately from understanding the problem or issue through to exploration, integration and application. The issue revealed consistently in the research findings is that it appears that inquiry invariably has great difficulty moving beyond the exploration phase [20, 21, 22, 23, 24, 25, 26, 27, 28, 29].

The question is why is it so difficult to move the process of inquiry through to resolution? Is this an artifact of the inquiry model, the contrived nature of the educational context, the communication medium, or perhaps it is the nature of the task and teaching presence (design, facilitation, and direction)? There is evidence that this pervasive finding may have more to do with aspects of teaching presence, than it is to the other possible factors. Meyer observes that integration and resolution is more demanding than exploration and, as a result, increased time for reflection is required. More specifically, she states that, “Faculty need to be more directive in their assignments … [24].” Similarly, Celentin [20] concluded that the reason discussions do not reach the highest levels of inquiry is “strictly related to the role of the tutor”. Others have also speculated that the role of the instructor is a major factor [21, 23].

In another study by Meyer, she noted that “the question initiating each of the online discussions influenced the level of the responses from students” [26]. There is evidence that the questions or tasks

"play an important role in the type of cognitive activity evident in the discussions" [30]. When questions specifically asked students to engage in practical applications, discussions did progress to the synthesis and resolution phase. Interestingly, it was suggested that confirmation did not come from the group; the individual confirmed or rejected their own solutions [30]. If there are no shared goals requiring a collaborative solution or artifact, the transcripts of online discourse will not reveal discourse that has moved to the resolution phase. Individual reflection may take place and, if required, solutions may be posted, but there will not be any discourse. Thus, in addition to teaching presence dimensions such as facilitation and direction, as noted previously, well designed tasks are also important to see evidence of resolution in a community of inquiry.

The importance of designing appropriate tasks to move students through to resolution is also reinforced in a study specifically focused on online collaborative problem solving [31]. Where learners were specifically tasked to formulate and resolve a problem, responses were distributed throughout all of the five problem solving processes (understanding the problem, building knowledge, identifying solutions, evaluating solutions, acting on solutions). In fact, "participants engaged more in problem resolution than in problem formulation" [31]—the converse of previous cognitive presence (practical inquiry) studies. This speaks strongly to the purpose and design of the learning activity. If the activity is problem or case based, there are clear expectations, and appropriate teaching presence is provided—will participants in a community of inquiry have difficulty moving to the resolution phase?

Progression requires direction. Vaughan [15] found that design and facilitation comments decreased in online transcripts, while direct instruction comments increased. It is very important to facilitate and yet not dominate the discourse and, at the same time, be prepared to provide crucial input to ensure that the community moves to resolution. As a subject matter expert, relevant information should be interjected and diagnoses of misconceptions are crucial to productive discourse. This is a delicate and challenging balance of which an experienced teacher would or should be very cognizant. Educational leadership comes in more than one form. From an educational perspective, the distinction between facilitation and direct instruction may be worth preserving.

A supporting explanation and reason why discussions may get stalled at the exploration phase is found in the group dynamics literature. The group dynamics literature has shown that groups do not easily progress to the "performing" stage. Participants need to connect to the group and collaborative decision making proceeds along four hypothesized stages—forming, norming, storming, and performing [32]. Groups need clear goals and time to come together and function in a productive manner. The point is that groups do not naturally coalesce and move to integration and resolution phases, particularly in situations where the task and challenge is to make sense of complex and disparate information. Direction and facilitation is required to establish cohesion and ensure messages are developmental (i.e., more than "serial monologues" or personal declarations).

From the participants' perspective, moving the discussion developmentally would be enhanced considerably by enhancing the metacognitive awareness of the stages of inquiry and how this relates to the particular task at hand. One suggestion is for participants to be metacognitively aware of their contributions by requiring that they identify the level of the response. Pawan, Paulus, Yalcin, and Chang [33] recommend that students self-code their postings. They go on to say:

> The strategy would encourage students to keep track of and to think about how their responses relate to the collaborative learning objectives set by their instructors. Self-coding their own roles and responses may raise students' awareness, for example, of the four cyclical categories of the practical inquiry model.

Pawan et al. [33] also suggest that the instructor should provide direct instruction and model self-coding. In this regard, it may be helpful for the instructor to provide a metacognitive commentary as to what they are doing and why. This is clearly a teaching presence issue and challenge.

C. Teaching Presence

The third issue worth exploring is a validation issue. To be sure, validation of the community of inquiry and its constructs is an important issue. However, the focus here is the teaching presence construct and whether it has three distinct categories—design, facilitation and direct instruction.

Before we address the validity of the construct, it may be useful to discuss the influence of teaching presence on the success of an online learning experience. The body of evidence is growing rapidly, attesting to the importance of teaching presence for successful online learning [12, 13, 15, 25, 27, 33, 34, 35, 36, 37]. The consensus is that teaching presence is a significant determinate of student satisfaction, perceived learning, and sense of community.

Interaction and discourse plays a key role in higher-order learning but not without structure (design) and leadership (facilitation and direction). For example, without explicit guidance, students will "engage primarily in 'serial monologues'" [33]. Obversely, "faculty may need to be more directive in their assignments for threaded discussions, charging the participants to resolve a particular problem, and pressing the group to integrate their ideas…" [25]. Murphy is clear "that in order for the highest-level collaborative processes to occur within an OAD [online asynchronous discussion], there must be explicit strategies or techniques aimed at promoting these processes" [27]. Similarly, Gilbert and Dabbagh concluded that "the number and type of facilitator postings also increased the level of interaction between students" [38]. They make it clear that structure and facilitation have a significant influence on discourse.

That said, it is important to understand the composition of teaching presence. Whether there are two or three distinct categories is more than a theoretical issue. It has practical implications for a community of inquiry and supporting social and cognitive presence. A recent study questioned whether there are three categories corresponding to the hypothesized structure. Shea [4] completed an extensive study of teaching presence and online learning. After factor analyzing survey data of over 2000 students across multiple institutions, it was concluded that a two factor solution was most interpretable. The two factors were labeled design and "directed facilitation". The latter apparently being the amalgamation of facilitation and direct instruction. It should be noted as well that the directed facilitation factor contributed the most to predicting a sense of community and learning.

The key point in this study is that this is the perspective of students. One interpretation is that students may not distinguish between facilitation and direct instruction. This would not seem to be surprising. To students this is a subtle distinction. Students do not come at this from an educational perspective and a full consideration of the nature of critical discourse. From a teaching perspective, this is the difference between dialogue and discourse [39]. Facilitation supports dialogue with minimal shaping of the course of the discussion. Discourse, on the other hand, is disciplined inquiry that requires a knowledgeable teacher with the expectation that discourse progresses in a collaborative constructive manner and students gain an awareness of the inquiry process.

On the other hand, a study of MBA students did validate the categories of teaching presence [10]. This survey of 191 students across multiple courses used an instrument based on the Shea, Fredericksen, Pickett and Pelz [40] instrument. Thus, using essentially the same instrument and using a confirmatory

factor analysis, Arbaugh and Hwang "validated the three components of teaching presence as posited in the…Community of Inquiry model" [10]. Beyond the fact that the teaching presence construct was validated, the interesting question here is why this study confirmed the three components of teaching presence construct, and the Shea et al. [40] study found only two when both used virtually the same instrument? One explanation may be the nature of the analysis. Another explanation may be related to the fact that "all three components are distinct yet highly correlated with each other" [40]. That is, the design (curriculum, goals, method) may have a great influence on how the students perceive other components of teaching presence. Similarly, social and cognitive presences will also influence teaching presence and how it is perceived. As noted previously, another explanation to these divergent findings may be due to student perspectives. That is, undergraduates may not be sophisticated enough to distinguish between facilitation and direct instruction.

II. CODING AND VALIDITY

The community of inquiry framework has provided a useful tool and approach to studying online learning. The methodology to date can best be described as an exploratory qualitative approach to provide "insights for the purposes of constructing meaningful propositions to be explored in further research" [8]. This research begins with a credible framework and, therefore, is not inductive theory building. To date, much of the research could be best described as interpretivist, in that there is an attempt to understand interactions through text analysis [41]. While issues of validity are relevant to qualitative transcript analysis,

> … assigning frequencies to the classifications is an aid in understanding patterns, this does not make it a quantitative, inferential statistical procedure. We are in the early stages of understanding and explaining the complexities of online conferencing and educational discourse. The goal is descriptive, not predictive [8].

That said, the question has been raised about moving the validity of the coding protocol to a quantitative approach. Rourke and Anderson argue for a quantitative content analysis technique and question the rigor of the research in this area. They frame the argument as description versus inference. Their point is that much of the online transcript analysis is descriptive and at some point there needs to be a transition to inference and "a richer definition of test validity" [42]. Rourke and Anderson [42] state that if researchers wish to proceed to the inferential, it must be done mindfully and with understanding as to the steps required to validate coding protocols.

For purposes of discussion we make a distinction between the broad theoretical framework and specific coding schemes, notwithstanding that they are intimately related. With regard to the validity of the theoretical framework, other constructs have been proposed [26, 31, 43] that are not entirely dissimilar to elements of the community of inquiry framework. It would seem, however, that the community of inquiry framework offers a more comprehensive perspective capable of identifying interaction effects among social, cognitive and teaching presence dynamics. There has been surprisingly little discussion about the reasonableness and usefulness of the community of inquiry framework in studying online learning. A key question is whether the three elements capture the core dynamics of a community of inquiry?

On the other hand, there is greater diversity of practice with regard to coding protocols [44]. The issue here is whether the elements have been well defined and the categories are valid (representative of the element). Do the categories fully describe the elements (i.e., presences) of the community of inquiry? Should different protocols be considered for certain research questions? Shifting our focus to the indicators, certainly the indicators must reliably reflect the appropriate category. That is, do the indicators reflect the essence of the categories? Are the indicators of sufficient detail and range to be useful in coding?

There is the question, however, as to why we would want to code at the indicator level? Coding at the indicator level is difficult [45]. Is it not a bit premature considering the early stage of this research and testing of the framework? What research questions would coding at the indicator level answer? How does being able to distinguish among the indicators add to the validity of the model? Are indicators too context specific to expect a standard set of indicators across all online educational environments?

Other coding issues are what unit of analysis (e.g., sentence, paragraph, message, or theme) should be employed? While there has been some discussion around this issue [8, 46, 47] it remains a crucial but challenging decision. Certainly the research question and context will influence this decision. The importance of training for reliability is another important reliability and validity issue where more attention would be beneficial. In summary, what is clear is that much work remains in addressing coding schemes and validating the community of inquiry framework.

Finally, are we ready to emerge from the early exploratory and descriptive phase of researching online communities of inquiry? The time may be right to transition to a phase that utilizes both qualitative and quantitative approaches to studying online learning communities. The focus will likely shift to developing and employing psychometrically sound instruments capable of studying larger inter-disciplinary and inter-institutional samples over time. The foundation for this shift has been laid. Swan and Shih [12] have developed a sound social presence survey based on the work of Gunawardena and Zittle [48] and Richardson and Swan [49]. Arbaugh and Hwang [10] have validated a teaching presence survey questionnaire based on the work of Shea et al. [40]. Preliminary items reflecting the cognitive presence construct have been offered by Garrison et al. [50]. The theoretical framework and research to date would support development of these instruments and their use to study online communities of inquiry. Both qualitative and quantitative efforts will contribute to the refinement of the community of inquiry framework and the categories and indicators of its elements/constructs [8].

III. CONCLUSION

The issues discussed previously are not just theoretical issues of interest to researchers. They have important practical pedagogical implications. Understanding the role of social presence is essential in creating a community of inquiry and in designing, facilitating, and directing higher-order learning. This is not a simple one-off task. Balancing socio-emotional interaction, building group cohesion and facilitating and modeling respectful critical discourse is essential for productive inquiry. As Baker discovered, “instructor immediacy [i.e., teaching presence] was more predictive of effective and cognitive learning” than “whether students felt close to each other” [51]. Some cohorts are academically focused and do not need or want to engage in a virtual social space [52]. These cohorts usually have well defined practical outcomes that are collaboratively based. As important as social presence may be, a community of inquiry is associated with a sense of common purpose and cognitive presence.

A community of inquiry needs to have clear expectations as to the nature of critical discourse and their postings. Participants need to be aware of the academic objectives, the phases of inquiry, and the level of discourse. These educational challenges raise the importance and role of teaching presence. The distinction between facilitation and direction must also be clear from a design perspective. Teaching presence must consider the dual role of both moderating and shaping the direction of the discourse. Both are essential for a successful community of inquiry.

The previous discussion raises many challenges with regard to social, cognitive and teaching presence as well as coding and validity demands. While the community of inquiry framework has shown itself to be

useful in guiding research into online learning, the more we understand online learning the more we raise other questions and issues (not unlike other areas of research). The goal here has been to begin documenting the issues and challenges for others to address and build upon.

IV. ABOUT THE AUTHOR

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AN EMPIRICAL VERIFICATION OF THE COMMUNITY OF INQUIRY FRAMEWORK

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I. INTRODUCTION

Despite the explosion of empirical research on online learning effectiveness over the last decade, development and acceptance of theoretical frameworks unique to the online learning environment are still relatively lacking. While there are several emerging models [1, 2, 3], one that has attracted some of the most attention is the Community of Inquiry (CoI) framework developed by Garrison, Anderson and Archer [4]. A search of Google Scholar shows that Garrison and colleagues' article describing the framework has been cited in other works at least 161 times as of September 2006, making it by far the most cited article in *The Internet and Higher Education* to date. However, while individual components of the CoI framework have been examined empirically [5, 6, 7, 8], studies that simultaneously study all three components of the framework are extremely limited, and those that do exist tend to be conducted by those who developed the framework [9].

The purpose of this paper is to report on the results of a study that examines whether the CoI dimensions of social, teaching and cognitive presence distinctively exist in e-learning environments. The rest of the paper is organized as follows. First, I will briefly review recent studies on the dimensions of this framework: social, cognitive, and teaching presence. Second, I discuss the development of the sample of MBA students in online courses over a two-year period at a Midwestern U.S. university and the items used to measure the CoI dimensions. Next, I will describe the results of an exploratory factor analysis, including an interpretation of the emerging factors. Finally, I will discuss how these findings relate to conclusions presented in Garrison's review of recent research related to the CoI [10] and present some possible directions for future research.

II. THE COMMUNITY OF INQUIRY FRAMEWORK

Garrison and colleagues developed the CoI framework to investigate how features of written language used in computer conferencing activities promote critical/higher-order thinking [4]. They contend that higher-order learning experiences are best conducted as a community of inquiry composed of teachers and learners requiring both the demonstration of critical thinking and the engagement of "real" persons to be successful. The framework assumes that effective online learning is a function of the interaction of three elements: social presence, cognitive presence, and teaching presence. In the following section, I will describe and review some recent literature on each of these types of presence.

A. Social Presence

Social presence in online learning has been described as the ability of learners to project themselves socially and emotionally, thereby representing themselves as "real people" in mediated communication [11, 12]. Of the three types of presence included in the CoI framework, social presence has been the most extensively studied, both in online and face-to-face course settings [6, 11, 13, 14].

Presently there is an emerging debate on whether social presence has a causal or correlational relationship with online course outcomes [6, 8]. Recent research on social presence in online learning also has focused on its role in facilitating cognitive development and critical thinking. To date, this research suggests that while social presence alone will not ensure the development of critical discourse in online learning, it is extremely difficult for such discourse to develop without a foundation of social presence [15]. A recent study on the effects of interpersonality in online learning [16] suggest that increased sociability of course participants leads to increased interaction, therefore implying that social presence is necessary for the development of cognitive presence. Anagnostopoulos and colleagues' [17] identification of a concept they called intersubjective modality that provides further support for this premise. According to these authors, intersubjective modality in the online environment occurs when a participant explicitly refers to another participant's statement when developing their own post, thereby both connecting themselves to the other participant and laying the foundation for higher level inquiry. Other recent studies supporting the "social presence as foundation for cognitive presence" perspective include those by Molinari [18] and Celani and Collins [19].

B. Cognitive Presence

Garrison, Anderson, and Archer [20] described cognitive presence as the extent to which learners are able to construct and confirm meaning through sustained reflection and discourse. Rooted in Dewey's [21] construction of practical inquiry and the critical thinking it seeks as an outcome, cognitive presence has long been considered to be a distinguishing characteristic of higher education [22, 23]. Garrison and colleagues [20] argue that cognitive presence in online learning is developed as the result of a four phase process. These phases are: (1) a triggering event, where some issue or problem is identified for further inquiry; (2) exploration, where students explore the issue both individually and corporately through critical reflection and discourse; (3) integration, where learners construct meaning from the ideas developed during exploration—Garrison and colleagues [20] proposed that this phase typically requires enhanced teaching presence to probe and diagnose ideas so that learners will move to higher level thinking in developing their ideas; and (4) resolution, where learners apply the newly gained knowledge to educational contexts or workplace settings.

Of the three types of presence in the CoI framework, cognitive presence likely is the one most challenging to develop in online courses [19, 15, 24]. While participant interaction certainly is foundational for developing cognitive presence, it appears that critical thinking skill might be enhanced via a variety of online course formats [24, 25, 26]. One possible approach for increasing collective cognitive engagement within online groups is the SQUAD approach developed by Oriogun and colleagues [27] The SQUAD approach encourages participants to make posts in one of five categories: suggestion, question, unclassified, answer, and/or delivery. Conversely, Moore and Mara [24] found that developing discussions using an argumentative approach appears to adversely affect both the quantity and quality of participant interaction. A possible explanation for why multiple formats may be effective for enhancing cognitive presence may be that group composition is more important than discussion format. Lee and Lee [28] recently found that student groups with a variety of personalities may be more effective in developing metacognitive interaction than do groups comprised of only extroverted or introverted learners.

Emerging research suggests a complementary relationship between teaching presence and cognitive presence. While social presence lays the groundwork for higher-level discourse, the structure, organization, and leadership associated with teaching presence creates the environment where cognitive presence can be developed. Garrison and Cleveland-Innes [15] found that course design, structure and leadership significantly impact the extent to which learners engage course content in a deep and meaningful manner. These findings suggest that the role of instructors in cultivating cognitive presence is

significant, both in terms of how they structure the course content and participant interactions.

C. Teaching Presence

Teaching presence is described by Garrison and colleagues [4] as the design, facilitation, and direction of cognitive social processes for the purpose of realizing personally meaningful and educationally worthwhile learning outcomes. They conceptualized teaching presence as having three components: (1) instructional design and organization; (2) facilitating discourse (originally called "building understanding"); and (3) direct instruction.

While teaching presence is conceptualized as being equally important as social presence and cognitive presence in the CoI framework, it generally hasn't received research attention until the adoption of the internet as a mainstream instructional medium [4]. As a result, while the number of studies of teaching presence has markedly increased over the last five years, they have tended to be exploratory in nature. These studies have relied primarily either on transcript analysis studies of a limited number of courses [29, 30, 31] or basic statistical techniques such as frequency distributions and correlational analyses to determine the extent to which teaching presence exists in online classrooms [7].

The most recent research on teaching presence has focused on two areas: (1) empirical verification of the dimensionality of the construct; and (2) the extent to which teaching presence relies upon the actual presence of the instructor in the online course. In a recent study of the SUNY Learning Network [32], Shea found that items developed to measure the three dimensions of teaching presence yielded a two factor solution he interpreted as "Instructional Design and Organization" and "Directed Facilitation," thereby merging the instructor behavior dimensions of the construct. Conversely, in a study of MBA students, Arbaugh and Hwang [5] found support for the three-dimensional teaching construct. Therefore, since the institutions from which Shea [32] developed his sample were mostly community colleges, it is possible that the differences in student and instructor populations may explain the divergence in these findings.

The fact that both of these studies found that Instructional Design and Organization was a distinct construct is particularly relevant to research on the importance of the teacher's role in teaching presence. While Garrison and Cleveland-Innes [15] found strong support for the instructor's role in creating teaching presence, other recent research suggests the possibility that a well-designed course may limit or even negate the need for the instructor. For example, Anagnostopoulos and colleagues [17] found that design features of a graduate-level course in literature education actually allowed students to navigate around the presence of the instructor, prompting the instructor to adopt a more democratized participation style in asynchronous discussions in order to get students to interact with her. However, they also found that the instructor was able to play a more traditional role in synchronous discussions. These findings were also supported in LaPointe and Gunawardena's study [33] finding positive relationships between course design, direct instruction and perceived teaching style, but a negative relationship between facilitation and teaching style in a convenience sample comprised largely of community college students. However, other recent studies have found strong support for the importance of instructor presence (informational, social, and content-wise) early in the online course for helping both building community and easing students into online communication [34, 35].

Based on the results of this brief review, it appears that the much of the recent empirical research on these types of presence has relied upon relatively small sample sizes (typically less than 50) in limited numbers of class sections within the same discipline (often one course, rarely more than five) and for the most part is qualitative in nature. As a result, the generalizability of these findings is somewhat questionable.

Therefore, research on the CoI would greatly benefit from more quantitatively-oriented studies that examine multiple courses and disciplines. Hence, this study appears to be particularly timely.

III. RESEARCH METHODOLOGY

A. Sample and Data Collection

The sample for this study came from 55 of the 56 online courses conducted in the MBA program of a Mid-Western U. S. university over six semesters from February 2004 through January 2006. These classes covered topics including organizational behavior/theory, international business, business strategy, human resource management, project management, operations management, information systems, finance, accounting, and professional development. This university was in the midst of a transition between course management software systems during the period of the study. Therefore, six of the courses in the first two semesters of the study were conducted using the Blackboard software platform, while the remaining courses were conducted on a relatively new platform called Desire To Learn (D2L). Both course management systems have synchronous and asynchronous interaction capability. The classes were distance learning classes with students taught primarily through asynchronous web-based interactions, and forty of the class sections had an on-site orientation meeting. Class sizes ranged from 7 to 49.

Data collection was completed in a two-step process. In the first step, students were emailed a survey during the final week of the course regarding their perceptions of the learning environment, course management system, instructor behaviors, the knowledge they acquired, and their satisfaction with the internet as the course delivery medium. The second step was conducted 7–10 days after the electronic survey was sent. In this step, students who had not responded to the electronic survey were mailed a paper copy of the original survey. 667 students provided useable responses, resulting in a response rate of 55.1% (667 of 1,211). All respondents were graduate business students. The mean student age was 32.6 (SD = 6.90), and 57% of the respondents were male.

B. Measures

While the dimensions of the CoI framework have been examined via content analysis [20, 29, 31], the survey-based measures that were adopted in this study allow for the use of a larger and wider sample in a relatively efficient way, thereby increasing the generalizability of the findings. The scales for teaching presence (Course Design and Organization—6 items; Facilitating Discourse—7 items; and Direct Instruction—5 items) were developed by Shea and colleagues in their study of teaching presence in the SUNY Learning Network [7]. Eight items measuring social presence were adapted from measures used in Richardson and Swan's study [6], which in turn were developed from Gunawardena and Zittle's and Short and colleagues' conceptualizations [11, 12] of the construct. While some survey-based measures of cognitive presence are now available [9], these were not available at the beginning of this study. Therefore, four items were developed based on Garrison and colleagues' conceptualization [20] of cognitive presence. These items place particular focus on the final three (exploration, integration, and resolution) phases of construct since the first phase, the "triggering event", often is expressed as part of teaching presence [15]. All survey items were anchored on a 7-point scale ranging from "Strongly Agree" to "Strongly Disagree."

IV. RESULTS

While survey-based measures for social presence are well established in previous research, valid and reliable measures of teaching presence can be best described as a work in progress [5, 32]. Furthermore,

measures of cognitive presence are extremely limited. With the exception of Garrison and colleagues' study [9], there are no known studies that simultaneously examine these three constructs. Therefore, for these reasons as well as the relative newness of the CoI framework and the use of new measures for cognitive presence, the data were analyzed using exploratory factor analysis via principal components analysis using SAS's Factor procedure with varimax rotation [36, 37], Cattell's Scree test [38] and Kaiser's eigenvalues [39] greater than 1 criteria each identified four factors, which collectively accounted for 68.75% of the variance in the survey items. The four factors and their loadings from each of the survey items are presented in Table 1. As Table 1 shows, all factors have reliability alphas of .86 or higher, which is well above the recommended .7 for exploratory research [40]. A description of each of the factors is provided in the following paragraphs. Based on guidelines developed by Gorsuch [41] and Stevens [37], only survey items that loaded at .40 or higher were used to interpret the factors. A description of each of the factors is provided below.

Table 1. Factor Loadings for CoI Survey Items (n=667)

	Factor 1: Teaching Presence	Factor 2: Social Presence	Factor 3: Cognitive Presence	Factor 4: Course Design & Organization
Chronbach's Alpha	.97	.88	.90	.89
P1 The instructor clearly communicated important course goals	.52	.18	.22	.65
P2 The instructor clearly communicated important course topics	.52	.20	.20	.59
P3 The instructor provided clear instructions on how to participate in course learning activities	.49	.17	.22	.65
P4 The instructor clearly communicated important due dates/time frames for learning activities	.24	.18	.10	.72
P5 The instructor helped me take advantage of the online environment to assist my learning	.75	.25	.19	.26
P6 The instructor helped students understand and practice acceptable behaviors in online learning environments	.73	.22	.16	.28
P7 The instructor was helpful in identifying areas of agreement and disagreement on course topics that helped me to learn	.80	.20	.21	.21
P8 Other learners were helpful in identifying areas of agreement and disagreement that helped me learn	.52	.44	.22	.02
P9 The instructor was helpful in guiding the class towards agreement/understanding about course topics that helped me to learn	.82	.16	.26	.18
P11 The instructor acknowledged student participation in the course	.75	.16	.15	.23

P13 The instructor encouraged students to explore concepts in the course	.78	.20	.17	.21
P15 The instructor helped to keep students engaged and participating in productive dialogue	.88	.15	.12	.10
P17 The instructor helped keep the participants on task in a way that helped me to learn	.85	.18	.18	.16
P19 The quality of interaction with my online instructor was very high in this course	.83	.16	.23	.21
P21 The instructor presented content or questions that helped me to learn	.72	.23	.29	.29
P23 The instructor helped to focus discussion on relevant issues in a way that helped me to learn	.76	.23	.26	.23
P25 The instructor provided explanatory feedback that helped me to learn	.77	.14	.25	.20
P27 The instructor helped me to revise my thinking	.74	.16	.35	.08
P28 Other participants helped me to revise my thinking	.43	.40	.36	-.11
P29 The instructor provided useful information from a variety of sources that helped me to learn	.61	.16	.41	.28
P32 Online courses are an excellent medium for social interaction	.17	.64	.28	-.08
P33 I felt comfortable conversing through the online medium	.08	.81	.07	.15
P34 Participant introductions enabled me to form a sense of online community	.35	.56	.26	-.12
P35 I felt comfortable participating in the course discussions	.11	.76	.08	.30
P36 The instructor created a feeling of online community	.70	.36	.22	.05
P38 I felt comfortable interacting with other course participants	.15	.79	.13	.28
P39 I felt that my point of view was acknowledged by other course participants	.19	.71	.16	.13
P40 I was able to form distinct impressions of some course participants	.28	.55	.17	.16
P41 I have been able to apply knowledge created in this course to subsequent class assignments	.30	.19	.72	.18
P42 I have been able to apply the	.34	.20	.81	.08

knowledge created in this course to my work or other non-class related activities				
P43 I can describe ways to test and apply the knowledge created in this course	.29	.28	.76	.21
P44 I will be able to apply the knowledge created in this course to future work or other non-class related activities	.29	.24	.79	.19

Note: Loadings .40 or greater noted in bold.

A. Factor 1: Teaching Presence

Considering that 20 of the 32 items used in the survey were originally used to measure teaching presence, it is not surprising that this factor had the most items with significant loadings. Nineteen of the 20 items used to measure teaching presence loaded significantly upon this factor. One item previously used to measure the course design and organization characteristic of this construct, "The instructor clearly communicated important due dates/time frames for learning activities (P4)," did not load significantly onto this factor. One of the items previously used to measure social presence "The instructor created a feeling of online community (P36)," loaded significantly on this factor. Considering the importance of instructor behaviors in the roles of facilitating discourse and direct instruction [32], the fact that this item would load onto the teaching presence rather than the social presence factor is not surprising.

B. Factor 2: Social Presence

Seven of the eight items historically used to measure social presence loaded at .55 or higher on this variable. The other item used to measure social presence, "The instructor created a feeling of online community (P36)," had a moderate .36 loading on this factor. Two items previously developed to measure the role that other learners have in creating teaching presence [4, 7], "Other learners were helpful in identifying areas of agreement and disagreement that helped me learn (P8)" and "Other participants helped me to revise my thinking (P28)," had moderate loadings upon this factor (.44 and .40 respectively).

C. Factor 3: Cognitive Presence

Each of the four items developed for this study to measure cognitive presence loaded onto this factor at .72 or higher. The combination of these loadings and a reliability coefficient of .90 suggest preliminary support for the construct validity of these items [40]. Three items used to previously used to measure direct instruction, "The instructor helped me to revise my thinking (P27)", "Other participants helped me to revise my thinking (P28)", and "The instructor provided useful information from a variety of sources that helped me to learn (P29)," also loaded at least moderately onto this factor (.35, .36, and .41 respectively). Those loadings may reflect that these items capture some of the aspects of the practical inquiry model, particularly the exploration and integration phases [20].

D. Factor 4: Course Design and Organization

Four of the six items originally developed to measure the course design and organization dimension of teaching presence [4, 7] loaded at .59 or higher on this factor. Three of these four items also loaded at .49 or higher on the teaching presence factor, indicating that this could be an extraneous factor. However, the fact that these four items have high reliability (alpha = .89) and that no other item in the survey loaded higher than .30 on this factor suggest at least the possibility that course design and organization is a

distinct construct from teaching presence. This finding could have significant implications given the results of recent research on the teaching presence construct [10], and these potential implications will be addressed in the next section of this paper.

V. DISCUSSION

The results of this study should provide some encouragement to those researchers interested in testing the generalizability of the CoI framework. The results indicate that these survey items are highly reliable, somewhat empirically distinct measures for each of the three elements. However, in some ways these results may generate as many questions as answers for future research. In this section of the paper, we will interpret the findings of the study in light of issues recently raised by Garrison [10] regarding research on the CoI framework and propose additional directions for future CoI research.

In a recent review of social presence research, Garrison [10] notes that most of the initial research on this element of the CoI examined it independently of the other two types of presence. Therefore, the fact that this study examines social presence in concert with teaching and cognitive presence represents an advance in research on the CoI framework. However, given the emerging discussion of social presence in e-learning environments, there may be some limitations to these measures of social presence. While empirically distinct and reliable, the items measuring social presence in this study do not capture the shift from personal to purposeful relationships that Garrison [10] calls for. Garrison's review raises several questions related to the role of collaborative processes and the interaction of social and cognitive presence. Perhaps future research in this area can examine the literature on trust and performance in global virtual teams for useful insights into the nature of the interaction between these two elements [42, 43].

By addressing the later stages of the critical inquiry process, the items developed to measure cognitive presence for this study may address Garrison's call [10] for a "step forward" in research on this element. There are at least two possible explanations for this finding that merit further research. First, while some approaches to online learning research criticize using data collected after the learning experience is completed [44]; such an approach may be advantageous for studying cognitive presence because it allows for the possibility that learners might need time to complete the higher-order phases of the critical inquiry process. Therefore, techniques such as transcript analysis [10] may not completely capture the cognitive inquiry process and should be supplemented with some sort of data collection at the end of the course. Second, these findings suggest the possibility that characteristics of degree program and level of study might influence the occurrence of cognitive presence in online learning. While the nature of assignments and discussion questions provided in e-learning environments can encourage progression to higher stages of cognitive inquiry [45, 46], learner contexts also may be important in promoting inquiry. Online courses conducted in an MBA program targeted at students that have full-time professional positions may draw participants that can readily identify experiences to which they can apply higher level cognitive processes, where this may not be the case in learning environments such as community college or undergraduate level general education courses.

While this measure of cognitive presence may help advance survey-based research on the CoI, there are two methodological concerns that can be addressed by future researchers. First, while the items address higher-order phases of the cognitive inquiry process, they may not adequately capture earlier stages, particularly the "triggering event". Future research should consider integrating the items from this study with Garrison and colleagues' measures for cognitive presence [9]. Another benefit of such an approach is that it would improve the balance between the numbers of items used to measure the three CoI elements. Using 4–6 items to measure cognitive presence when up to 20 items are used to measure teaching

presence likely will result in unbalanced coverage of the elements of the framework.

In his review of research on the CoI framework, Garrison [10] noted that one of the primary questions regarding the study of teaching presence is whether it is a two- or three-dimensional construct. Recent studies by Shea [31] and Arbaugh and Hwang [5] make compelling arguments for the importance of this question. While a possible explanation for the divergence of findings of these studies could be degree level of the samples (Shea examined primarily undergraduates while Arbaugh and Hwang studied graduate students exclusively), unfortunately, the results of this study of a sample of MBA students if anything further muddles this issue. On one hand, items designed to measure each of the three conceptualized dimensions loaded strongly on one factor. On the other hand, several of the items designed to measure course design and organization loaded strongly on a separate factor, suggesting the possibility that "teaching presence" could be two factors: course design and directed facilitation [31].

A possible explanation for this these types of findings may be the way that teaching presence is being operationalized. In spite of initial conceptualization of the possibility that teaching presence could be created by either an instructor or fellow learners [4], these recent studies operationalizations of teaching presence have focused on instructor behavior. So therefore, what we may actually be measuring is "teacher presence." Given recent research results indicating the importance of instructors in virtual learning environments [47, 48, 49, 50] this may merely reflect the reality of the online environment rather than a flawed conceptualization. These initial studies might suggest a modified CoI model based on sequence of activities. Since course design and organization occurs prior to the beginning of the course, it could be a distinct variable followed by the intermingled elements of social presence, cognitive presence, and teacher presence. However, another possible explanation for the finding of a fourth factor may be due to the analytical technique. Garrison and colleagues [9] have argued that empirical studies of the CoI components using factor analysis should use oblique rotations due to the highly interdependent nature of the three types of presence. While testing newly developed measures for cognitive presence and combining measures previously not used together for the other types of presence were the motivations for using varimax rotation for this study, one consequence of that approach may have been a confounding of the constructs.

Regardless of conclusions reached regarding the dimensionality and distinctiveness of the components of this construct, a practical matter that needs to be addressed by future researchers is the need to determine how teaching presence can be measured more efficiently relative to the other elements of the CoI framework. Both Shea's and Arbaugh and Hwang's studies [31, 5] used at least seventeen items to measure teaching presence. While using such a large number of items to help precisely define a relatively new construct is understandable and desirable, a more efficient measure of teaching presence likely will help increase survey response rates for future studies of the CoI framework. Again, future researchers should examine the items used in these studies and those used by Garrison and colleagues [9] to determine the optimal combination of items for construct validity, reliability, and efficiency. While Garrison and colleagues [9] developed measures for social, cognitive, and teaching presence that had factor loadings that may address some of the concerns about the interaction of social and cognitive presence, that study's relatively small sample size (n=65) forces conclusions drawn from it to be somewhat tentative. Table 2 compares the sample characteristics of this study with that of Shea's (2006) and Garrison and colleagues (2004).

Table 2. Contextual Factors in Recent CoI Studies

	Garrison, Cleveland-Innes, & Fung (2004)	Shea (2006)	Present Study
Sample Ssize	65	2314	667
Student Level	Graduate - Education	Associate & Bachelor's	Graduate - Business
Courses Surveyed	6	Up to 581	55
Disciplines	Education	Numerous	Business
Institutions Sampled	1	32	1

One suggestion for future researchers may be to combine items from the two surveys to determine the best measures of these elements, particularly for cognitive presence.

In addition to the issues raised by Garrison [10], the findings presented here suggest new opportunities for future researchers. The items used in this study should allow for more robust testing of how the CoI elements coexist with, and/or moderate the effects of other variables associated with online learning outcomes. While the elements of the CoI framework are seen as overlapping in nature [4, 9, 51], Garrison's discussions [10] of the interaction between the types of presence and results of the studies reviewed in this article suggest that studies using moderated regression to determine the extent to which the elements moderate each others' relationship to learning outcomes is much needed. In addition to examining relationships between the elements of the framework, some other variables that researchers should consider studying in concert with the CoI elements include the course or subject matter [50, 52, 53], the software used to deliver the course [54, 55, 56], and characteristics of learners and/or instructors [50, 55, 57, 58, 59].

VI. CONCLUSION

This article reported on an empirical verification of the elements of the CoI framework, which found empirically distinct measures of social, cognitive, and teaching presence. The results of the study strongly support Garrison's conclusion [10] that CoI research now needs to move beyond exploratory descriptive studies to the use of both qualitative and quantitative methods. Now that there are some initial tools in place, it is up to future researchers to use and refine these measures to advance CoI research.

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STUDENT SATISFACTION WITH ASYNCHRONOUS LEARNING

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ABSTRACT
The authors discuss elements that potentially impact student satisfaction with asynchronous learning: the media culture, digital, personal and mobile technologies, student learning preferences, pedagogy, complexities of measurement, and the digital generation. They describe a pilot study to identify the underlying dimensions of student satisfaction with online learning and present examples of techniques for engaging students in classes that respond to their uses of technology.

KEYWORDS
Student Satisfaction, Media Culture, Digital, Personal and Mobile Technologies, Student Learning Preferences, Pedagogy, Complexities of Measurement, Digital Generation

I. INTRODUCTION

Student satisfaction with asynchronous learning (ALN) is a complex blend of elements that mediates students' perceptions about their educational experiences. Recent work suggests that student evaluation of asynchronous classes is not bound entirely by satisfaction and dissatisfaction, but rather, lies on a continuum that extends from satisfaction to ambivalence, where very few students are genuinely dissatisfied with their online learning experiences [1]. Apparently, satisfaction results from the interaction of demographic profiles, generational membership, and some affiliation to a loosely defined learning style construct. The underlying question becomes: are the constructs by which students evaluate their classes constant or variable? That is, when students are dissatisfied with their online learning experience, is it because they are on the opposite side of the same dimensions that produced satisfied respondents, or are they dissatisfied for completely different reasons?

II. SATISFACTION IN THE MEDIA CULTURE AND A DIGITAL AGE

A. The Media

A variety of authors have argued that technology and new media have a profound impact on individual, cultural, and social development [2, 3, 4]. Kellner, for example, suggests that contemporary media culture in this country is the primary mechanism for socialization of our young people and the major incubator for change [5]. He contends that the images, patterns, sequences, and sounds presented to the American public sculpt our day-to-day lives; define our political, social, and ethical values; define right from wrong; and provide the basic foundation for our information society. Certainly, the media culture has migrated to the web where sites such as Digg and Technorati scour the Internet, producing an algorithmic collection

of news. Sites such as YouTube make images from around the world instantly accessible, while others allow anyone to contribute to blogs and wikis on sites such as Wikipedia.

These developments have not gone unnoticed. Wikipedia, for example, has generated significant interest from a wide range of authors [6, 7, 8]. Lanier cites Wikipedia as the prime example of the new online collectivism that centers influence in a bottleneck [9]. He argues that, presently, there is a frantic race to become the meta-site that develops the highest level of aggregation, subsuming and marginalizing the contributions of all other sites. He describes this as the "Hive Mind" that reveals what people with the most time and determination communicate. Friedman, however, cites this phenomenon as the new, world-wide information democracy that equalizes the opportunities for an individual to effectively compete with the conglomerate [10]. Doctrow declares that "Wikipedia isn't great because it's like the Britannica. The Britannica is great because it's authoritative, edited, expensive, and monolithic. Wikipedia is great at being free, brawling, universal, and instantaneous" [11]. Certainly, these technologies play a large part in framing student satisfaction with online learning on college campuses.

B. Digital, Personal, and Mobile

The past decade has seen the emergence of asynchronous learning networks in higher education and the parallel development of equally important personal technologies. In the digital information world, students' personal communication and social networking primarily center on cell phones, iPods, MP3s, personal computers, text messaging, and recently, video blogging. Social networking sites such as Friendster, MySpace, and Facebook allow global personal profiling and communication. Also, students have ready access to computing with instant information available through the Internet and responsive resources such as Google and Ask.com. The majority of today's students use the Internet for research far more often than the library [12]. These findings produce suppositions such as Library 2.0 that ask whether or not libraries in their present form continue to be relevant [13].

A tour across almost any campus reveals exercise equipment in recreation rooms equipped with cable television, and a media center in the student union that offers news, information, games, and entertainment. Colorful images abound in dining areas with students involved in electronic activities of every imaginable variety. Residence halls are filled with electronic devices that host marathon gaming tournaments with virtual groups from around the world. Our tour reveals a population of Net Generation students who have never known a world without PCs, the Internet, digitally recorded music, and mass communication [14]. Outwardly, students are social, collaborative, and interactive. The technologies they utilize are virtual, digital, and personal; therefore, they expect immediate access and response [15, 16, 17]. These developments in technology, news, information, and media can influence the satisfaction students express with their online courses.

III. WHO ARE TODAY'S STUDENTS?

A. What Are They Like?

Students on today's campuses are a subset of the millennial generation presenting substantial challenges to educators, who were trained in a command and control educational culture where "knowledge was power" and information was sequestered in libraries and in the offices of professors [18]. Students of the digital age, however, prefer to work in teams and take a community approach to problem solving and creativity. They grew up in relative economic security and their sense of entitlement emboldens their approach to higher education. The media attributes them with superior intellectual capacity and a higher motivation for achievement than any generation that preceded them. The Net generation is confident, sophisticated, articulate, and possess a strong sense of personal agency. These young people describe

themselves as special, entitled, and empowered with an ability to achieve, succeed, and accomplish great things in their personal lives and in society [19,20]. Many believe that they have developed a strong sense of community and will make the world a better place because it provided them with so many advantages.

B. How Do They Learn?

Considering learning preference and technology skills, digital culture students are compelling in their multitasking with the apparent ability to change context and medium in a smooth and efficient manner, growing impatient with learning situations where information presents itself in a controlled linear process [21]. Some suggest that this generation prefers graphics to text and approaches learning as play rather than work [22]. The gaming approach allows them to use a trial-and-error strategy, effectively iterating to the solution [23]. Many of today's students process information quickly with an enhanced ability for pattern recognition and integrating multiple information components into constructs and visual images. A variety of authors argue that many in this generation view technology as a friend rather than a challenge. Their learning preferences give them a clear advantage in the digital sound bite age [24, 25, 26].

C. What is the Downside?

There are disadvantages in their approach to learning however, evidenced by some studies that describe their reliance on the instantaneous nature of digital information access as a surface intellectual functioning that inhibits their ability to delve deeply into a problem-solving situation [27]. This inability can result in a lack of sustained determination to finish a task and function at higher cognitive levels. Some find these students difficult to teach because they have been accustomed to a hyper-rich media environment. These students will shun any learning situation that does not involve their preferred modality and will communicate a lack of satisfaction [28].

Recent work by Twenge reinforces this lesser optimistic picture of the digital culture students. She sees this generation as matter-of-fact and self-focused–thus her designation of "Generation Me" (a term devised from prior attempts to label this "Net" or "Millennial" generation that coincides with the Microsoft operating system: Windows Millennium Edition, or ME) [29]. As a group, she sees them as imbued with an artificial sense of self-esteem spawned from many years of a curriculum that over inflated their self-concepts and instilled them with unrealistic expectations. She characterizes these digital natives by their belief in life determination by lottery, where good things will just happen and everyone deserves to be an "American Idol."

D. Complexities of Satisfaction

The cacophony of conflicting views about the generation of students on our college campuses underscores the reason why assessing satisfaction with asynchronous learning may be a complex undertaking. Is this the brightest, most motivated, and empowered generation in history or is this group of young people disinterested, disdainful, and cynical? Are today's university students the most tech savvy and information fluent generation in history, who navigate information and technology literacy, critical thinking, their social spaces, and the media culture seamlessly, or do they operate at a superficial level, failing to analyze, synthesize, and evaluate? Is this group of young people the most civic-minded and service-oriented in history or are they politically marginalized and even more cynical than Generation X? Understanding these social, economic, political, and collaborative dynamics is key to discovering student motivation in learning online, and thus identifying the underpinnings of satisfaction.

IV. STUDENT SATISFACTION WITH ASYNCHRONOUS LEARNING

A. Foundational Studies

Early work on measuring student evaluation of instruction provides further insights about the evolvement of student satisfaction with the online environment. For instance, some studies define three higher order dimensions for students expressing their satisfaction with classes: presentation, facilitation, and regulation [30]. A more complex nine-component model defines the satisfaction domain in terms of learning value, instructor enthusiasm, organization, interaction, rapport, coverage, assessment, assignments, and difficulty [31]. Other investigators demonstrate that students will show a high probability of assigning an excellent overall rating to an instructor (satisfaction) if, in their view, he or she facilitates their learning, effectively communicates ideas and information, organizes the course effectively, assesses student progress accurately, shows interest in students' learning, and demonstrates respect for his or her students [32]. Instructors who score high on those dimensions have the majority of their students expressing high levels of satisfaction with their learning environment independent of the course mode: face-to-face, fully-online, blended, technology-enhanced, or interactive television.

B. Satisfaction with ALN

Recent research about online courses shows that students express satisfaction and experience success when they are involved in cohort, team-based learning experiences and have extensive access to faculty feedback and interaction [33]. Studies of satisfaction dimensionality with the online environment identify four underlying factors: student faculty interaction, active learning, time on task, and cooperation among students [34]. Interestingly, these elements closely correspond to those identified by Chickering, Erhmann and Kuh—emphasizing the principle that engaged students are satisfied students [35, 36]. When compared to their on-campus peers, online students tend to be more satisfied with student services and online learning appears to increase instructor efficiency with no decrease in student satisfaction [37, 38]. Effective instructional design components and facilitation of effective discourse tend to be precursors of student satisfaction as do models that that build a strong sense of learning community embedded in the social presence construct [39, 40, 41]. This supports the argument that satisfaction derives from students valuing interaction and the opportunities that enable them to communicate actively [42]. Introverted students appreciate having time to think problems through carefully with time to reflect and be heard. Extroverted students value the additional opportunities to interact with the outside world, experiencing perspectives that would never be available to them in the face-to-face setting [43]. Apparently, however, logistic elements such as a well-defined course structure are also increasing satisfaction [44, 45]. These studies confirm our supposition that measures of student satisfaction with asynchronous courses are mediated by many elements that reflect student, faculty, and course characteristics. Moreover, these elements and several others cannot be considered independently because context is probably as important as the individual elements.

V. A PILOT STUDY OF STUDENT SATISFACTION: PRELIMINARY FINDINGS

A cooperative study between the University of Central Florida and the University at Albany funded by the Alfred P. Sloan Foundation will attempt to identify underlying student satisfaction dimensions with asynchronous learning. After a literature review and several student focus groups, survey instruments will be administered to a sample of students involved in online learning. A similar study that focuses on the reasons that faculty members choose to teach in the asynchronous environment, also funded by the Alfred P. Sloan Foundation, is underway at the University at Albany and the New Jersey Institute of Technology. The two studies intend to provide cross-validated data from faculty members and students about their

reasons for persisting in online teaching and learning.

Early results from student focus groups and pilot survey items indicate that the majority of students who are involved in asynchronous courses prefer that modality over other formats and register repeatedly for online sections. This multiple registration process negates any adverse effects of students dropping courses because of the online modality. Most responses indicate that students enroll in fully online courses before they migrate to blended sections. Students choose the format that they believe will provide the most learning. Curiously, a high percentage of respondents designate the face-to-face mode (possibly explaining the desirability of the blended format). Universally, their notion of convenience appears to be the primary motivational factor for enrolling in asynchronous courses, with students indicating that not having to come to campus plays a significant role in their choice of formats. Convenience, however, requires a careful analysis to identify specific elements of this "catch all" term. Some preliminary reasons for high satisfaction levels show that their initial fear of online learning is unfounded and they use the word "enjoy" in their evaluation comments. Those who feel inhibited in face to-face-sections feel more comfortable communicating with their instructors and peers. Students believe that instructors' expectations are more clearly specified in online courses than in face-to-face sections, and indicate that their time management skills improve with experience. Although few in number, dissatisfied students prefer the face-to-face mode. Ambivalent students express skepticism about learning, feeling that class quality depends primarily on the instructor's teaching prowess.

These preliminary results will provide the basis for a further and more detailed study of general concepts such as flexibility, improved time management, engagement, responsiveness, ambivalence, skepticism, and what motivates students to prefer various course modalities.

VI. CONCLUSION: JAY BROPHY'S ENGAGEMENT STRATEGIES

A. Cell Phones

On the first day of class I ask my students to hold up their cell phones. In a flash there are 470 cell phones waving in the air. When I ask them what they should do with them, they respond: "TURN THEM OFF." Instead of the "iron boot" control method, I tell them that I frequently forget to turn off my cell phone. Many times I take the call and weave it into the class discussion. My students are amazed at my response, and I find that fewer phones ring.

B. A Ten-Minute Investment of Class Time

About the third week of class, we have "cell phone" day. If enough cell phones ring during the first five minutes of class, I give the students 10-bonus points. The points impact minimally because there are 1,000 points in the course. Students arrange to have someone outside of class call them at precisely 3:30 p.m., the time class begins. We have videotaped the event and it is a cacophonous symphony. By 3:35 p.m. it is all over and we then discuss social networking and the role of support groups in their lives. It fits in nicely with discussions about stress and health. Rather than consider cells as a negative experience, we celebrate something that the students really love. It is great fun and well worth the small amount of class time.

C. Movies and Music in Psychology

At the beginning of the term in my introductory psychology course, I set up discussion groups in WebCT so that students can record their favorite movies and music. I used to have trouble getting students to log

on and explore the site. Now, over 90% log in within 24 hours. We port this information into an Excel spreadsheet, sort it, and make a top 100 list for the music and a top 50 list for the films. I purchase the DVDs and put the music on my iPod. I learn the lyrics to the top fifty songs and play cuts of the songs to introduce ideas for the class. Frequently, my students know all the lyrics and lines from the songs and films, so it is easy to connect course content to what is already well learned. Students respond positively to the idea that I am interested in what they like and am willing to learn about it.

D. Coalescing Student Interests to Improve Engagement

A casual observation reveals that Net Generation students immerse themselves in pursuits involving digital media that are becoming increasingly portable. A recent New York Times article featured the Digg website developers and their response to continuing interest in video blogging vs. text-based versions [46]. These new digital devices and their updates reveal their popularity with college-age students, who spend increasingly more money on personal technologies.

These personal devices are far more engaging than academic applications of technology. If one compared a typical course management system to Facebook, YouTube, or the computer game, Grand Theft Auto, the outcome for student engagement would be obvious. Therefore, we need to develop instructional strategies with that same compelling power to captivate in the asynchronous learning environment. The best way to gain that insight is to learn what students are doing with their free time. Successful companies spend great sums to engage their customers. Shouldn't the academy do the same if it wants real student engagement and satisfaction?

VII. ABOUT THE AUTHORS

Chuck Dziuban is director of the Research Initiative for Teaching Effectiveness (RITE) at the University of Central Florida where he has been a faculty member for the past 33 years. RITE's charge is to gauge the impact of UCF's distributed learning initiative on students, faculty and the institution. In addition, Chuck Dziuban and Patsy Moskal assist faculty members with their research on improving university teaching. Dr. Dziuban specializes in applied multivariate analysis and psychometrics. His work on psychometric adequacy earned him a citation in the SAS manual and was the basis for a factor analysis strategy used in the SPSS statistical package. He is founding director of the Faculty Center for Teaching and Learning at UCF and serves as the university liaison to the Tangelo Park urban reform project sponsored by Orlando hotelier, Harris Rosen. Chuck has received UCF awards for excellence in research and graduate teaching and has been twice recognized for nationally outstanding research in teacher education by the Association of Teacher Educators. Currently, he works with the Sloan Consortium and the National Learning Infrastructure Initiative on evaluating the nation's distributed learning initiative. Dr. Dziuban was named UCF's first ever Pegasus Professor for extraordinary teaching, research, and service.

Patsy Moskal is Associate Director for the Research Initiative for Teaching Effectiveness at the University of Central Florida (UCF) where she has been a faculty member since 1989. She received an Ed.D. from UCF specializing in Instructional Technology and Research Methods and holds BS and MS degrees in computer science. Since 1996 she has served as the liaison for faculty research of distributed learning at UCF. Patsy specializes in statistics, graphics, and applied data analysis. She has extensive experience in research methods including survey development, interviewing, and conducting focus groups and frequently serves as a consultant to school districts, industry, and government organizations.

Jay Brophy is an Associate Professor of Psychology at the University of Central Florida. Jay studied at Stetson University where he received his BA and earned his Ph.D. in Psychology from Vanderbilt in 1969

in Learning Theory and Physiological Psychology. During Jay's 36-year career at UCF, he has been instrumental in bringing innovative technology into the classroom. He has been involved with Course Development and Web Services at UCF since its inception. An early user of WebCT, he has offered courses in traditional, hybrid-reduced seat time, and fully Web-based courses since 1996. During the last five years Jay has been teaching large sections (400+ students) of General and Physiological Psychology with a heavy emphasis on web enhanced instruction. Jay has earned numerous teaching awards, and is currently a Senior Teaching Fellow with the UCF Faculty Center for Teaching and Learning.

Peter Shea is an assistant professor in the department of Educational Theory and Practice with a joint appointment in the College of Computing and Information at the University at Albany, State University of New York. Previously he served as the Director of the SUNY Learning Network, the multiple-award winning, online education system for the State University of New York. Peter has also served as manager of the SUNY Teaching, Learning, and Technology Program and as Project Director in the Multimedia Educational Resource for Learning and Online Teaching (MERLOT), as well as a SUNY representative to the EDUCAUSE National Learning Infrastructure Initiative (NLII—now ELI).

Peter's current research focuses on the student and faculty experience in technology-mediated teaching and learning, most recently on the topics of "teaching presence" and community in asynchronous learning networks. He is the author of many articles and several book chapters on the topic of online learning, co-author of the book, *The Successful Distance Learning Student* (Thomson-Wadsworth) and a contributor to the recent book, *Learning Together Online, Research on Asynchronous Learning Networks* (Erlbaum). He is a co-recipient of several awards including the EDUCAUSE Award for Systemic Progress in Teaching and Learning for the State University of New York, and two Sloan Consortium Awards for Excellence in Faculty Development and Asynchronous Learning Networks Programs. He is a member of the American Educational Research Association and the editorial board for the Journal of Asynchronous Learning Networks. His research has appeared in the Journal of Educational Computing Research, The International Review of Research in Open and Distance Learning, and the Journal of Asynchronous Learning Networks among others.

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ARE WE RE-MARGINALIZING DISTANCE EDUCATION STUDENTS AND TEACHERS?

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ABSTRACT

Using four papers from the 2006 Sloan-C Invitational Summer Research Workshop as a foundation, this paper explores the potentially damaging effects of the increasingly limited (and limiting) terminology and a concomitant shift in emphasis to blended—rather than completely asynchronous—programming.

KEYWORDS

Language, Distance Education, Blended Learning, Online Learning, E-Learning

I. INTRODUCTION

The Sloan-C mission is to make education "a part of everyday life, accessible and affordable for anyone, anywhere, at any time" and "to improve online education in learning effectiveness, access, affordability for learners and providers, and student and faculty satisfaction." This paper explores possible effects of two trends on particular aspects of the experiences of students and faculty: 1) changes in the language we use to talk about our activities in service of this mission and 2) a concomitant increased emphasis on blended learning. The starting place for this exploration will be the four main Session 2 papers for the 2006 Sloan-C Invitational Summer Research Workshop. In highlighting specific issues in these papers, I will use the terminology the authors themselves employ to talk about our educational endeavors, that is, blended learning, online learning, and e-learning. Subsequently, however, I will offer an argument for the inadequacy—one might even go as far as to say the dangerous inadequacy—of these terms to appropriately describe and guide what the educational community does in these new teaching and learning environments.

II. SELECTED ISSUES FROM THE FOUR PAPERS

Dziuban, Moskal, and Futch offer an intriguing look at generational differences in student attitudes toward blended learning. They correctly note that "blended learning is a mental model that is evolving, rather than a well-defined pedagogical entity" [1]. This statement has a number of implications for students and teachers in blended programs, for our study of the elements of the phenomenon and, subsequently, for our ability to have an impact on how the model develops linguistically, conceptually, and pedagogically. The authors' emphasis on the metaphorical portrayal of reality is extremely important but may be overlooked or discounted by those who think of language only as a reflection of reality, rather than as both reflection and shaper. This point will be discussed at length below. Another implication to which I will return later is the connection between blended learning and access; these authors offer important insights into the psychological responses of students *in* blended learning courses and programs; yet what of those students who are *not in* the those courses, particularly those who reject the blended option because its on-campus component effectively cuts them off from access to these educational opportunities? A final area of shared interest is that of the faculty experience; I will focus particularly on issues of expertise and satisfaction in the discussion below.

Vignare's impressive review of the literature underlines Dziuban and colleagues' point about the still-ambiguous nature of blended learning. Her vacillation between discussions of research on blended learning and that examining online learning illustrates some of the difficulties in trying to make definitive statements about the effectiveness of blended learning. There has been little research on the many manifestations of blended learning—with what has been done showing conflicting results—and at this point we don't know just how much of what we have learned about online education is applicable to the blended learning environment(s). Indeed, to the extent that the phenomenon matches its name, that is, becomes truly "blended," the face-to-face and online elements of the phenomenon will disappear into a new and different whole, making it difficult to identify the contribution of particular elements to effectiveness. The variable nature of the concept of effectiveness in both technology-supported and "traditional" face-to-face instruction intensifies the challenge of making sense of the research. These challenges lead to somewhat questionable conclusions in both papers, such as the idea that blended learning is the "best of the classroom and the best of online learning" [1] or that it should be implemented because it is easier to get institutions to adopt blended learning than it is to get them to adopt approaches that research suggests are more effective, but too "dramatic," for slow-to-change institutions to adopt [2]. Vignare raises the key issue of access when she notes that "requiring online learning for students who lack internet access is problematic" [2]; what she does not address is the at least equally problematic requirement that students in blended courses and programs take some portions of classes and programs on campus. Implications of this characteristic of blended programs will be discussed below.

Garrison [3] focuses his attention on the online community of inquiry (CoI). The specific connection to the ideas that I would like to develop is through the concept of teaching presence. Interestingly, a focus on teachers first appears in Garrison's discussion of cognitive presence, where he quotes Meyer as suggesting that "Faculty need to be more directive in their assignments", and then goes on to note that "others have also speculated that the role of the instructor is a major factor" in the progressive development and resolution of inquiry. Garrison further underlines the level of expertise necessary for faculty to provide appropriate input and direction, describing the necessary skills as "crucial," "delicate," and "challenging." Moving into the actual discussion of teaching presence, Garrison again underlines the importance of faculty: "The body of evidence is growing rapidly attesting to the importance of teaching presence for successful online learning…. The consensus is that teaching presence is a significant determinate of student satisfaction, perceived learning, and sense of community" [3]. The intent of my focus here on the importance of teachers and teaching behaviors will, I hope, become clear below.

Finally, Arbaugh's paper [4] offers results of a study that examined the idea that the three CoI elements—social, teaching, and cognitive presence—exist distinctively in e-learning environments. Again, my interest is specifically on Arbaugh's view of the faculty experience. With Garrison, he notes "the importance of instructor behaviors" and makes the interesting comment that past attempts to operationalize and measure the concept of teaching presence may actually have been focused on "teacher presence", as opposed to teaching presence, which in earlier conceptualizations was understood to be exhibited by both teachers and students. This distinction, Arbaugh suggests, may "reflect the reality of the online environment" [4]. Some implications of this view will be discussed below.

In the next part of the paper I will discuss the importance of the language we use to talk about our educational practice. Both what we say and what we *don't* say have a profound impact in shaping individual practice, institutional policies, and research agendas. Specifically I argue that the current "terms of art" serve to limit our conceptualization of our practice, as well as potentially to marginalize certain students and faculty members. Portions of the following section will appear in a slightly different form in the chapter "From distance education to e-learning" in the forthcoming *Handbook of E-learning Research* [5].

III. THE POWER OF LANGUAGE

Linguistic theory and research suggest that language is a social process that both reflects reality and dynamically contributes to the construction of reality: "it is necessary to examine not only the social determination of language use but also the linguistic determination of society" [6]. This latter idea, the linguistic determination of society, has particular relevance as we discuss the aspect of society comprising professional educators.

Issues of language are central to understanding any work community or profession. Language, particularly in the form of texts, dynamically creates and maintains a particular profession by first structuring human activity within it to shape initial visions of professional reality and then by shaping the subsequent actions of individuals within that community [7]. Such shaping takes place through a variety of textual channels including institutional policy documents and professional newsletters, journals, and conferences.

Together these discourse channels work to influence judgments about research agendas, prioritization of institutional support, and the decision-making process as it relates to institutional change. Linguistic conventions that make it more or less difficult to conceive of or communicate about certain ideas either expand or limit a profession's views of reality both in terms of what is, as well as what could be and should be [7, 8]. For this reason we need to ensure that our communications about what we do not only reflect the reality of our practice, but also enable and encourage its robust development in ways that maximize the benefits to all participants.

IV. DISTANCE EDUCATION AND ITS TERMINOLOGY

According to Anderson and Elloumi [9], during the last 150 years distance education has "evolved" through four generations: 1) correspondence study, 2) those approaches characterized by the mass media (television and radio), 3) synchronous technologies (video- and audio-conferencing), and 4) computer conferencing. They further suggest the emergence of a fifth generation, "the educational Semantic Web." Each new generation has been added to the preceding ones, with the result that all five are now operating concurrently in the overall educational context.

In the first three generations, distance education was a relatively minor, often marginalized, activity conducted and studied by a small group of educators dedicated to broadening access to educational programming to un-served or under-served populations of students. These educators employed a variety of media and media combinations to offer programs to students who were unable to participate in educational programs at traditional institutions. Traditional colleges and universities generally viewed such efforts as ancillary to their core institutional mission, and the limited support they provided focused on ensuring that such programs did not detract from the institution's reputation. [10].

Then, largely as a result of the power and reach of the World Wide Web, distance education was "discovered" by higher education. Recast first as online learning, then as e-learning, and finally as blended learning, it has moved from the margins into the mainstream. No longer is it an alternative primarily for non-traditional students; indeed, it is rapidly being incorporated into programs serving traditional campus-based students [10]. This rapid movement into the mainstream of higher education reflects a new image for distance education. Indeed, the "*The E Is For Everything"* promise [11] is a technology-based transformation of most if not all aspects of society, including education. Yet there is a seemingly minor catch necessary to "lock in" this success: distance education must adopt a more current terminology. The term "distance education"—perceived as outdated by some, unknown to others, and suspect to others still—must be changed to something more relevant, to something that "sells": online learning, e-learning, or blended learning.

V. FROM THE MARGINS TO THE MAINSTREAM…AND BACK?

Even as distance education began to achieve long-deferred recognition for the benefits it has provided and continues to provide, this established field of practice and research was almost immediately threatened with re-marginalization. This threat has taken the form of an ahistorical attitude reflected in 1) the almost universal rejection of the term "distance education" in favor of new terms coined to describe a type of education characterized not by "distance"—a field of little interest to all but a few people—but rather by the term "electronic" (shortened to "e"), which was of great interest to most people, and 2) the failure of e-learning researchers to build on earlier theories and studies of prior forms of distance delivery.

It is the first point, above, that I will develop in this paper. Specifically I am asking: What are the implications of this change in terminology, particularly for students and faculty?

A variety of reasons have been offered for rejecting the term "distance education." Some have suggested that the term has associations with a marginalized activity, particularly correspondence study. Others note that many "online learners" are physically present on campuses rather than at a distance. Still others believe that "distance" refers to a physical positioning characterized by institutions and teachers at the center, making the term "distance education" inappropriate for the widely prescribed "learner-centered" experience.

This change in terminology is probably a foregone conclusion, in spite of efforts by some distance educators to forestall it [12, 13, 14]. Yet I believe that the reasons for change presented above have at best only partial validity, and that substitution of new terms, while solving some difficulties, introduces others. For this reason I would like to present an argument, if not for retaining the term distance education, at least for recognizing the crucial nature of both elements of the term and for incorporating a focus on both "distance" and "education" in developing theories, practice, and research of online and blended learning.

A. Distance Is Not Dead

Rumors relating to the "death of distance" [15] are reminiscent of Mark Twain's statement that rumors of his death had been greatly exaggerated. Merely stating that distance is dead does not make it so. The "distance" in distance education has been assumed by many outside the field and new to the practice of online education as referring to a straightforward physical property: the physical space separating learners from institution, teacher, and each other. Given this understanding of distance, some educators have suggested a need to "update" terminology. Since physical distance can be effectively bridged by new information and communications technologies, keeping distance as the defining characteristic of teaching and learning supported by such technologies is no longer appropriate.

This line of thinking has several weaknesses. First, if one physical property is inadequate for defining a particular activity, simply replacing the property of distance with another physical property—"online," "electronic" (shortened to "e"), "blended," etc.—is both conceptually confusing and at least equally inadequate for defining the phenomenon [14]. "Online," which originally referred to actual connection to a physical line, provides little conceptual or definitional guidance when connections *may* be maintained by physical "lines" but just as often are supported by wireless means. Similarly, the "e" in e-learning stands for electronic, an appropriate designation for a wide range of technologies, although it is used almost always to refer to computer networks. And "blended" can refer to the mixing of a number of elements: e-learning with traditional learning, online learning with face-to-face, different media, different contexts, different learning theories, different learning objectives, and different pedagogies [16]. These terminological shortcomings have led Saba [14] to conclude that none of the terms currently proposed to replace distance education offer a valid descriptive, explanatory, or organizing construct.

Second, distance educators never viewed themselves as working to bridge a merely physical distance. Rather, their conceptualization of their teaching-learning environment reflected a social science perspective that recognized "distance" as a factor that strongly influences all interpersonal interactions, including that known as "education" [14]. For distance educators, "distance" has always referred to both a physical space that needs to be bridged and, even more importantly, the psychological distance that characterizes *any* educational activity, whether blended, online, or face-to-face [17, 18]. Peters, for example, notes that "pedagogic distance" can be present whether the instructor is separated from the student or is located in the same room, as in a large lecture class [16]. In *Learning to Listen, Learning to Teach*, Jane Vella, writing about face-to-face adult education, suggests that "a significant issue when educating adults is the perceived distance between teacher and students" and finding dialogic ways to close this distance [19]. Saba reinforces this idea with his observation that

> [Physical] separation can be bridged by communication technology, a fact demonstrated by teachers and students everywhere. But if students and teachers are separated by the total absence of dialog, as occurs in many classrooms across the country and around the world, bringing them together until they stand nose to nose will not offer a solution [13].

Clearly, the concept of distance is relevant to both technologically mediated and face-to-face education. To underestimate the relevance to either environment suggests a fundamental lack understanding of a universal educational challenge.

B. Education vs. Learning

The term "education" is also out of favor with proponents of up-to-date terminology. Perceptions that teaching-learning environments have in the past focused too narrowly on the instructor or the institution rather than on the student prompted educators to coin new terms intended—remember the power of language—to refocus attention on the students, who are simultaneously renamed "learners." This change is terminology, although well-intentioned, effectively eliminates one half of the social interaction formerly referred to as education. Whereas education is a multifaceted activity understood to involve a variety of players and activities—teachers and teaching, students and studying, information, knowledge and, it is hoped, learning—online learning, e-learning, and blended learning are terms comprising one word or letter representing a physical property of technology and the *hoped-for* outcome (learning) for one participant in the interaction.

The substitution of "learning" for "education" is one response to the call to "democratize" education by empowering students or learners. Yet it also has the feel of magical thinking about it: Name the promise (learning) and it's yours. This attitude is a natural outgrowth of our attitude toward technology and its perceived ability to deliver a variety of astonishing results completely divorced from any need to understand how and why it works. However, an attitude that is relatively harmless in relation to our DVD players and iPods becomes more problematic when we begin to use such shorthand thinking for complex social systems such as education. Does shorthand terminology lead to shorthand thinking? I believe it has in the case of online learning, e-learning, and blended learning.

C. Re-marginalizing Distant Students

Things that are not named (whether through spoken word, text, or images) are commonly devalued or ignored. This result is a function of the "exclusionary power" of language [20]. Belief in this dynamic is reflected in society's efforts over the last several decades to more equitably represent women and minorities in a variety of textual and visual contexts. Similarly, we must carefully consider how we name educational activities and how we communicate about them if we want to maximize their effectiveness and ensure that their value is recognized practically through institutional resource, planning, and research decisions. Differences in terminology are not mere hairsplitting distinctions; they have very real and

potentially profound implications for excluding important aspects from our thinking about higher education. Specifically, unless care is taken to forestall this result, our terminology may contribute to the re-marginalization of both true distant students (e.g., those who can never attend a physical campus) and those who teach in these new environments.

Motivated by a desire to increase institutional enrolments with students outside their traditional service areas [21], many institutions in the last decade became interested in Web-based education. These institutions quickly learned what distance education providers had long known: Distant students have unique needs related to physical and psychological separation, and the cost of providing appropriate services to bridge that distance is high. At the same time, the higher education community was becoming aware that its "traditional" resident students were no longer traditional in either their characteristics or expectations. Faced with both the unforeseen costs of serving distant students and the technological expectations of "a generation hardwired since birth…[and] impatient with a lack of technological sophistication in others" [22], many institutions pulled back from plans to expand delivery to new populations and decided instead to incorporate the concept of e-learning into the traditional educational environment via blended programs. Blended programs promise no focus on distant students; indeed, in many cases institutions view these programs as a way to re-vitalize, in some cases even transform, traditional campus-based teaching and learning. This is indeed a benefit that we should not undervalue, particularly in that it not only enhances the educational experience of traditional students but also truly increases access for some students: those who have the flexibility to pursue a portion, but not all, of their studies on a physical campus. However, because resources initially planned to support extension of programs to distant students are now in many cases being used to strengthen campus-based education, this shift gives renewed credence to charges that technology-based education, rather than decreasing the gap between the educational "haves" and "have-not," gives more educational capital to those who already have it [23, 24].

D. The Invisible Teacher

A major determinant in the ultimate success of technology-based higher education programs will be a strong faculty commitment to teaching in this new environment. Many faculty members have voluntarily embraced these new approaches and have reported benefits that make the new educational environment a satisfying addition or alternative to traditional face-to-face instruction [25, 26, 27, 28].

However, the fact that some faculty members (erroneously labeled "early adopters" based on a misapplication of Everett Rogers' diffusion of innovations theory) have embraced technology-based education is not necessarily evidence of the gradual but ultimately universal adoption by all faculty members [29]. Many others have signaled resistance to participating, and much of the resistance seems to be grounded in concern about the ability of these new approaches to provide the personal and professional satisfaction people naturally seek in their vocations. Such concerns make the linguistic invisibility of the teaching function in the terms online learning, e-learning, and blended learning particularly problematic.

Those who teach in higher education are more than service providers or content experts; they are professionals who seek personal as well as professional satisfaction from their chosen fields. Student needs related to networked teaching-learning environments are discussed frequently in publications and institutional policy deliberations; however, the equally legitimate personal needs and motivations of faculty are often lost in today's "learner-centered" rhetoric. The 2000 American Faculty Poll reported that, for higher education faculty, "one of the most important factors…in their decision to pursue an academic career was the enjoyment of working with students" [30]. Other research has shown that satisfaction with teaching in the online environment is directly related to the extent to which it allows faculty members to attain this and other personal rewards, including "self-gratification," and "overall job satisfaction" [31].

Unfortunately, much of the recent discourse has in effect relegated teachers to a minor role. Naming what they do as some form of "learning" obscures their professional contribution (i.e. teaching or educating). Equally disheartening to many faculty members are calls for their "disaggregation" and for "training" in the skills they need and the tasks they must perform; such terminology essentially de-professionalizes faculty. As a participant in one research study on faculty satisfaction noted, "this change in the pattern of my working day…has reduced and decentered intellectual tasks to competency and generic skill" [32]. Jaffee [33] suggests that this type of faculty dissatisfaction results from a fundamental challenge to one's core professional identity, a challenge exacerbated by the shift in power relations resulting from a perceived need on the part of institutions to exercise more-than-usual administrative control over this academic endeavor in order to justify and "protect" institutional investments. As Shedletsky and Aitken [34] observe, "Although administrators may have no expertise in computer pedagogy, scholarship, or general computer operation, administrators often make decisions on behalf of faculty." Faculty success subsequently becomes more and more dependent on factors outside of their control. This generalized shift in power relations often leads to other changes that leave many faculty members feeling that their roles have been de-professionalized, including:

- required training workshops in which faculty are made to feel incompetent or ignorant by "impatient, patronizing, or insolent support staff;"
- assumption of ownership by the institution of faculty members' online courses; and
- lack of recognition for e-learning work within the institutional reward structure [34].

bell hooks [35], writing about face-to-face higher education, quotes Thich Nhat Hanh's statement that "the practice of a…teacher or any helping professional should be directed toward his or herself first, because if the helper is unhappy, he or she cannot help many people." hooks adds that "it is rare…to hear anyone suggest that teachers have any responsibility to be self-actualized." Rather than "the objectification of the teacher" that seems to "denigrate notions of wholeness" [35], our terminology, practice, and research should reflect a holistic approach to learning *and* teaching that stresses both learner and teacher self-actualization. In conceptualizing, labeling, and communicating about online teaching and learning we should keep teachers as well as students at the center of a process aimed at fostering the personal growth of *all* participants. Otherwise, we may perpetuate the ambivalence many higher education faculty members express about participating in this new form of education [36].

VI. BACK TO THE FOUR PAPERS

In this section I will try to make explicit the connections between the issues from the four papers I identified in the first section of my paper and my subsequent arguments. I believe that seeing these connections and responding to them is crucial if we hope to realize the Sloan-C vision through appropriately focused research and practice.

The first issue has to do with the power of language to shape our thinking and subsequently guide our research and practice. Of the four sets of authors, Dziuban, Moskal, and Futch explicitly note the importance of linguistic issues in our communication with each other, yet I believe their own rhetoric operates against one of their stated goals: a "less constraining" language [1]. Dziuban and colleagues, Vignare, Garrison, and Arbaugh all agree on the crucial nature of the faculty function, yet all four papers—reflecting almost universal current usage—use terminology that leaves that function un-named: online learning, e-learning, blended learning. Not only is this language *more* constraining since it leaves out a crucial function in the educational process, but it also has the potential to contribute to a de-valuing of that function since naming confers value and attention. This result is already apparent in institutional attitudes and actions that de-professionalize faculty, with resultant negative impact on faculty satisfaction. If, indeed, the "reality of the online environment" [4] shows that the teaching function is "crucial," that "instruction is at the heart" [2] of online and blended learning, why are teachers and teaching so obviously

absent from the terms we apply to these activities? In my own writing I try where possible to minimize these limitations through the use of what is admittedly not ideal, but is hopefully "less constraining," terminology, such as technology-based education, online education, and online teaching and learning. Yet even given an intentional effort I sometimes find myself constrained by others' requirements, such as prescribed titles or editorial policy.

Both the new terminology and my own inadequate substitutions fail to address the other limitation above: the fact that rejection of the term "distance education" also obscures a key educational challenge—distance—and instead focuses attention in a linguistically muddled way on physical characteristics of delivery systems (online, electronic, blended). Psychological and pedagogical distances are very real threats to success in all educational environments. By failing to name the challenge are we decreasing the chances that appropriate attention is given to it in research and practice? Given the popular acceptance of the new terminology, it is unlikely that, as Saba proposes, "distance education" will not only be re-instated as the preferred term, but will become the all-encompassing term of art for both traditional and technology-based education [13]. However, as we move forward under the banners of the new terminology to improve practice, develop policy, and determine research agendas, let us make sure that we remember the distance that inevitably separates stakeholders in our activities.

The persistence of distance as a challenge connects to the second issue I would like to highlight, that of access. This issue is made explicit in Vignare's and Dziuban, Moskal, and Futch's papers [2, 1] on blended learning. Both papers suggest that blended learning increases access to educational opportunities for students, and Vignare specifically mentions increased access for disabled students. However, neither paper addresses the other side of the coin: the limitations on access imposed by hybrid courses' or blended programs' requirement for some level of campus attendance. Dziuban and colleagues offer important insights into the attitudes and psychological responses of students in blended programs, with their focus intentionally limited to the students whose initial attitude was positive enough to motivate them to enroll in these courses. However, there is another population of students who will never present themselves for us to study: those whose situations preclude *any* attendance on campus. For these students, both able-bodied and disabled, blended programs close off access to educational opportunities as completely as do traditional programs. Given the increasing proportion of adult students in higher education, it is important to realize that blended programs are not the best of both worlds for many students facing a variety of situational barriers; re-channeling resources from distance programs to blended programs, while better serving some shuts out others, thereby limiting achievement of the Sloan-C mission.

VII. CONCLUSION

The practices currently referred to as online learning, e-learning, and blended learning are the most recent iterations of a field of practice with a long tradition of theory building, research, and practice. Change in terminology is an inevitable aspect of social change; however, we need to ensure that in making such changes we neither lose important meaning and knowledge associated with earlier practice nor limit our thinking by unnecessarily circumscribed discourse.

To develop and support a robust understanding of the educational activities discussed here we need to maintain 1) an intentional awareness of the "distance" inherent in the activities and 2) a focus on the multidimensional nature of "education," which includes but is hardly co-terminus with "learning." Our ability to achieve the Sloan-C mission through research and improved practice will be enhanced to the extent that we maintain a focus on *all* of the essential elements of these activities.

VIII. ABOUT THE AUTHOR

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USING FOCUS GROUPS TO STUDY ALN FACULTY MOTIVATION

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ABSTRACT

What are the most significant factors that motivate and inhibit faculty with regard to teaching in online environments? And what are the specific kinds of experiences that underlie and explain the importance of these factors? One goal of this study was to add to understanding of these issues, but the primary purpose of this study is determining how well these questions can be answered using the method of structured focus groups. This paper describes the methods and results of a pilot study conducted using four focus group interviews of faculty experienced in teaching using "Asynchronous Learning Networks" (ALN) at one university, and a single focus group at a second university in order to explore generalizability. For the university at which four group interviews were conducted, the rank orders of leading motivators and demotivators were quite consistent. Leading motivators include the flexibility allowed by being able to teach "anytime/anywhere;" better/more personal interaction and community building supported by the medium; the technical and creativity challenges offered by this mode of teaching; being able to reach more (and more diverse) students; and better course management. Major sources of dissatisfaction are more work, medium limitations, lack of adequate support and policies for teaching online, and the fact that the medium is not a good fit for some students. Very similar results were found through the replication focus group conducted at a different institution.

KEYWORDS

Motivating Faculty, Demotivating Faculty, Focus Groups, Generalizability, Faculty Satisfaction

I. INTRODUCTION

Online education is increasing access to college in ways that were never before possible. With estimates of more than three million students enrolled in online courses and with forecasts of continued growth far outpacing growth in enrollments in traditional college classrooms, it is critical that we investigate this "booming" phenomenon. While expanding access to higher education remains a laudable goal, increasing access without ensuring quality is meaningless—or worse, dangerous. Historically, faculty have played a central role in the quality of college courses and degree programs, and faculty acceptance of online education will be essential if online and traditional modes of delivery are to be equivalent. Evidence exists, however, to suggest that faculty may not accept online teaching and learning to the extent

necessary to ensure this equivalence and therefore to allow continued meaningful expansion. In a recent national study, for example Allen and Seaman [1] report that less than one-third of chief academic officers believe that faculty at their institutions feel online and traditional modes are equivalent:

> Although online education continues to penetrate into all types of institutions, a relatively stable minority of Chief Academic Officers (28% in 2003 compared with 31% in 2005) continue to believe that their faculty fully accept the value and legitimacy of online education [1].

We need more systematic evidence to understand why faculty at many institutions have firmly embraced online teaching while their peers at others colleges continue to question its legitimacy. What are the concerns, challenges and barriers professors confront in the adoption of online education? What are the affordances and advantages that successful online faculty report? In this paper we will address these issues through an examination of "motivators and demotivators" for online teaching and learning.

This paper presents the methods and preliminary findings from focus group interviews of experienced online faculty conducted in two institutional settings in the northeastern United States, one a medium sized technological university which we will refer to as "TechU" and the other a small community college. The total study includes both online surveys of faculty and focus group interviews at two universities. Subsequently, we hope to include a wider variety of institutions of various sizes, types, and geographical locations more representative of higher education in the United States.

Teaching via Asynchronous Learning Networks (ALN) integrates social and technical aspects. It depends upon technologies such as the Internet and the World Wide Web to link together teachers and learners and learning resources, but it is an effective means of learning only when collaborative social/pedagogical processes emerge from the communication that is supported by the technology [2]. Key to this process is the role of the faculty member to structure and facilitate the online interaction.

For focus group studies reported in this paper, our research questions are:

- Can structured focus groups produce reliable, useful information about faculty motivators at a reasonable expenditure of time and effort?
- When faculty are asked to name their top sources of motivation and demotivation for teaching online, and to discuss them in a group of peers, does a consistent set of factors emerge from different focus groups at the same university?
- What are the underlying experiences or components of these factors that explain why they are so important?
- What are the implications of these findings for steps that could be taken to increase the number of faculty for whom online teaching is a satisfying and rewarding experience?

II. REVIEW OF THEORETICAL FRAMEWORKS AND THE RESEARCH LITERATURE

We have reached a stage in ALN in which the early adopters are, to a large extent, already involved. We need to know more about the factors that lead faculty to become and remain engaged and enthusiastic. Models of social change and adoption of innovation can help to provide a framework for acquiring this knowledge. A number of relevant change and adoption models exist [3, 4, 5, 6, 7, 8, 9, 10, 11] and a component of this research will be to identify which of these models is best suited to understanding adoption of online teaching to guide subsequent stages of the study. A promising direction in this regard

may be to look at the adoption of online teaching as a process, rather than an event, reflecting Fuller's Stages of Concern Model [6], and Hall's Concerns Based Adoption Model (CBAM) [9].

Another benefit of an analysis of current theoretical models is the guidance it can offer in the development of the study design. Roger's Diffusion of Innovation Model [11] was applied to the design of the focus group questioning route. It suggests we simultaneously examine characteristics of the individual adopter, the institutional setting, and the technology itself—steps that have not often been taken in research on faculty adoption of online teaching in higher education. It follows that we expect the leading motivators and demotivators for faculty will differ according to the institutional setting, may be related to the specifics of the software platform and media used, and may also be related to individual characteristics, particularly the status of the faculty member in regard to tenure and promotion. Thus, for the focus group study presented in this paper, we designed the questioning route to begin with each faculty member describing their individual academic status and prior experiences with teaching online, including the software platform(s) used. This research will eventually compare and contrast results for different colleges and universities, to see to what extent the institutional context does shape the results. Most of the emerging empirical research on ALNs has focused on students, but the assessment of faculty roles and characteristics that influence their satisfaction with ALNs has received limited empirical attention [12].

Several challenges for prospective faculty were identified in a study by Muilenberg and Berge [13], which examined the barriers that instructors encounter when they transition from face-to-face to distance teaching. Responding instructors identified organizational change and administrative support structures as their main concerns, and also identified lack of technical expertise and social interaction difficulties as important problems. These findings were further supported in a more recent study by Alavi and Gallupe [14], who concluded that institutions often underestimate the need for faculty training and support structures, especially for those who are new to online instruction.

Most studies of faculty behavior and attitudes in relation to online learning point out that substantial change in teaching roles must take place in order to be an effective teacher in this environment. In a series of influential papers, Garrison and Anderson and their colleagues [15] claim that online instructors must reassess their roles in terms of a series of constructs, including "social presence," "teaching presence" and resultant "cognitive presence" in order to build an effective "community of inquiry." Coppola, Hiltz and Rotter [16] analyzed 20 semi-structured interviews with ALN faculty at a technological university in terms of role changes that occur when they become virtual professors. They classify role changes enacted by instructors in ALN settings in terms of cognitive roles, affective roles, and managerial roles. The cognitive role, which relates to mental processes of learning, information storage, and thinking, shifts to one of deeper cognitive complexity. The affective role, which relates to influencing the relationships between students, the instructor, and the classroom atmosphere, requires faculty to find new tools to express emotion, yet most of the faculty interviewed felt that their relationships with students became more intimate. The managerial role, which deals with class and course management, requires greater attention to detail, more structure, and additional student monitoring. Overall, faculty reported a change in their teaching persona, towards more precision in their presentation of materials and instructions, combined with a shift to a more Socratic pedagogy, emphasizing multilogues with students.

There have been a relatively small number of prior empirical studies of faculty satisfaction with teaching online. Almeda and Rose [17] interviewed nine instructors teaching writing courses online at one university and reported that instructors were generally satisfied with their experience. Concerns related to lack of student motivation, difficulties adjusting to asynchronous course delivery, and compensation. In two of the largest study to date, Fredericksen et al. [18] and Shea et al. [19] found very high levels of

satisfaction among SUNY Learning Network faculty who responded to an online survey. For instance, Shea et al. found:

- 33% of the faculty surveyed felt that their online students performed better, and 41% felt that there was no difference between their online students and their classroom students. Satisfaction with online teaching was higher for those faculty members who assessed their online student performance to be relatively better.
- 51% felt that student interaction was higher in online courses, 25% felt there was no difference, and 24% felt it was lower in online courses.
- 60% cited interest in on-line teaching and learning as their motivation for teaching online courses, 9% cited interest in technology/internet as the motivation. Results indicate that satisfaction with online teaching was much higher for these cited motivations, relative to others.
- 33% strongly agreed and 64% agreed that technology had a positive effect on their teaching. Satisfaction with online teaching was higher, the stronger the feeling that technology had a positive effect.
- Only 23% felt that technical difficulties made online teaching more difficult. For this group, the satisfaction with online teaching was significantly lower relative to the remaining group.
- 58% of respondents reported more systematic design of instruction in their online courses, 37% reported no difference and only 6% reported less systematic design of instruction.
- 85% felt the experience of designing and teaching an online course would improve their classroom teaching [19].

At the University of Central Florida, Hartman, Dzuiban, and Moskal [20] surveyed 39 faculty members teaching in totally online courses, mixed mode courses with reduced “seat time” for the face-to-face portion, and mixed mode with no reduced seat time. The results of the impact evaluation at UCF indicate that faculty feel that their workload increases with teaching online, along with the quality and amount of interaction with and between students. On the other hand, they are concerned that on-line teaching may not fit into the academy culture. The authors argue that faculty satisfaction and student outcomes are strongly related and that their interaction is the most important outcome. Finally, the authors conclude that faculty satisfaction is both a dependent and independent variable that is nested within colleges, departments, and program areas.

Shea, Pickett and Li [21] performed a multivariate analysis on survey data from 913 faculty members in 36 New York colleges. The authors found that a significant portion of variance in a composite factor reflecting faculty satisfaction with online teaching could be modeled based on other composite factors reflecting levels of interaction with students: learning that faculty had gained from online teaching, adequate technical support faculty had received, and the discipline in which they taught. Despite a large and diverse sample size and a relatively sophisticated analytical approach, a majority of the variance in online faculty satisfaction among this sample was unexplained. Clearly, additional research is required.

These prior studies and some of the instrumentation served as the basis for development of an online questionnaire which solicited ratings by faculty of the importance to them of various sources of potential satisfaction or dissatisfaction with teaching online at their university, as explained further below. The online questionnaire was used in this study only as a means of providing “common ground” for faculty participating in the focus groups, prior to their discussions. Data collection via the questionnaires was not completed until August 2006, and the results have not yet been analyzed.

III. METHOD: DEVELOPMENT OF THE STRUCTURED FOCUS GROUP TECHNIQUE

The major component of this study has been to develop procedures and instruments to assess faculty satisfaction and motivation to teach online. Two modes of inquiry have been undertaken at this stage: a quantitative method involving the development and administration of an online questionnaire which all faculty at the two participating universities were invited to answer, and a qualitative approach involving the development of interview protocols to be conducted with focus groups. This paper concentrates on the focus group technique and results. The procedures developed over a series of four sessions at TechU are described in detail, since we hope that other institutions may use them, and compare the results to ours. Only when the same instrumentation has been used in a variety of higher education settings will we know which motivators and demotivators seem to be universally important to current and prospective ALN faculty, and which vary with the organizational culture and policies.

Guided group discussion methods such as Nominal Group Technique and Focus Groups are especially well suited to uncovering and documenting the "why" behind opinions, and in obtaining much more depth and breadth of analysis from participants than are available from individual data collection methods [22, 23, 24]. In Nominal Group Technique, there is a period of individual generation of ideas before sharing with the group at large, and also typically, a rank ordering of the importance of various "lists" that participants develop. In focus groups, there is an extensive group discussion of issues that can benefit from complementary insights. The focus group discussions were structured by first making sure that all participants were aware of the full known range of possible motivators and demotivators; then having each participant write down their "top three," in line with Nominal Group Technique; and then discussing these factors systematically, often using a round-robin approach to make sure everyone had an equal opportunity to participate. The final step was voting, as in Nominal Group Technique. The sessions lasted 2.5 to 3 hours each.

The process which we developed consisted of several steps, which are described briefly below. The Appendix gives the complete, detailed script and procedures used in preparing faculty for the focus group and in conducting the sessions.

- Group composition: Each of the groups consisted of five to seven experienced ALN faculty; some of whom have tried it once and not repeated. All faculty who had taught at least one online course during the previous three years at a mid-sized Eastern research university were contacted and given a list of available meeting times. Purposive sampling procedures were employed to ensure a balanced sample of relatively new and more experienced online instructors and to include instructors in a range of academic disciplines. Participants were given a lunch or light supper prior to the session, and a $50.00 gift card for an online bookstore.
- Participants were asked to first take the online survey, which systematically listed every possible motivator and demotivator that was found in the literature, and asked them to rate the importance of each factor to them. The questionnaire consists of 65 items. Based on previous studies of faculty satisfaction with teaching online, this questionnaire is an expansion and generalization of instruments previously used at SUNY (e.g. [18, 19]) and extensively tested in prior research for the validity of constructs. The items measuring importance of potential sources of satisfaction or dissatisfaction were presented in labeled sets which included opportunities for professional growth, interest in reaching new student audiences, job security and tenure and promotion factors, collegiality, material incentives, the reputation of online teaching, complexity of developing and teaching courses online, technical support issues, time issues, compensation issues, and quality issues.
- Besides completing the questionnaire, focus group participants were asked to think about all of

the potential sources of satisfaction and of dissatisfaction (including factors that may not have been included in the questionnaire) before arrival at the sessions, and to write down their "top three" in each category and bring this to the meeting. This two-step preparation process gave the focus group participants a common grounding in the range of factors that might be considered and also assured that they would have their own independent rankings of factors before the focus group discussion began.

- A questioning route/set of steps was developed for the Focus Group sessions, which consisted of several parts:
    - Following a light lunch or supper and completion of consent forms, self introductions included experience teaching online and software platforms used.
    - Each faculty member was asked to describe his or her most important motivator that had not already been mentioned, which was then posted. This "nomination" proceeded in a round robin fashion until there were no more "top motivators" that had not already been suggested. Similar concepts were combined, resulting in a composite list of motivators. Discussion of each of these in some detail followed, with each faculty member invited to share experiences or reactions related to each of the constructs in turn. Then rank ordering of this list by the participants was accomplished by each participant giving five points to their first choice, four to their second, etc., with a maximum of five of the items on the lists to be given points by each individual. The points were then totaled and reported to produce the rank ordering. The generated lists and the final voting were recorded on large sheets of self-sticking paper placed along the wall in the front of the room and re-arranged as topics were combined or split, for all to see during the discussion and voting, and as a record of the results.
    - After a break, the same process was followed for sources of dissatisfaction and demotivators.
    - Taking the top reasons for lack of satisfaction, the focus group discussion developed an understanding of stakeholders related to these problems, and also actions that could be taken by specific stakeholders to decrease or solve the sources of dissatisfaction with teaching via ALN.

Two recorders were used, transcripts were made and then the results were coded and analyzed. Individual transcripts ranged up to 60 pages long. After the initial four groups were completed at TechU, we used the same script and procedures for one session at the community college to test their replicability.

IV. RESULTS: TECHU

There was considerable agreement among the different groups about the top reasons for wanting to teach online, and also the top sources of dissatisfaction and frustration, although there were a few ideas that were unique to one particular group. We will first summarize the rank order of factors in the different groups, and then expand upon the factors that faculty feel most strongly about, by presenting representative quotes from the discussions.

A. Motivators

Table 1 shows the top ranked motivators using the terms developed by each group themselves.

Table 1. Motivators by group: TechU

	Group 1
1	Flexible schedule (22) A
2	Personal interaction (20) B
3	Learning community (10) B
4	Pedagogical challenge (8) C
5	Reach more students (7) D
6	Challenge of technology (4) C
7	More effectiveness than face-to-face (2)
	Group 2
1	Time/location flexibility (23) A
2	Diverse students (22) D
3	Faculty creativity (18) C
4	Better interaction/quality (17) B
5	Easier record keeping/course management (10) E
	Group 3
1	Self-scheduling: anytime/anywhere (23) A
2	Learn new technology (22) C
3	Medium (being online) (20) B
4	Better control (19) E
5	Reaching non-traditional students (10) D
6	Mentoring others (5)
	Group 4
1	Flexibility of schedule (anytime/anywhere) (14) A
2	Opportunity to work intensively with students (14) B
3	Course management (11) E
4	Meeting students' needs/desires (10) D
5	Professional development (6) C
6	Diverse community (4) D

The same procedures were repeated for the demotivators, and Table 4 presents a combined list of demotivators. We noted that several of the different terms are essentially synonyms for the same idea. Thus, all motivators of each group were pooled together, and similar ideas were combined by adopting a common terminology to generate a consolidated list of motivators. Letters in the lists in Tables 1 (and 3) show the categories into which differently worded factors that refer essentially to the same idea were combined. Table 2 shows the combined motivators.

Table 2. Combined motivators: TechU

	Leading Motivators
A	Flexible schedules: anytime & anywhere (82)
B	Better and more personal interaction- medium characteristics improve pedagogy (81)
C	Challenge/creativity/professional development (58)
D	Reach more diverse students (53)
E	Better course management (40)

As can be seen, when the results of the four groups are combined, the top motivator is flexibility of schedules due to fact that teaching can be done "any time, any place" where an internet connection can be obtained. This is followed by aspects having to do with the pedagogical advantages of the medium (e.g., more personal interaction, being able to build a learning community); the challenge and stimulation of learning new technology and creatively developing new pedagogical techniques; reaching more and more diverse students; and improved course management capabilities (largely due to software tools).

Flexible schedules enabled by any time, anywhere teaching/learning topped the list of motivators. One female professor with extensive administrative as well as teaching responsibilities says, "It enables me to teach and I think that really goes under self scheduling because my calendar is so full and needs to be so

flexible that if I were to teach a face to course or more then one face to course, it would be impossible for me to schedule other things that need to be scheduled." Another faculty member says, "For example, one of the courses I teach is only going once a year and if we offered it face-to-face, our students [could have conflicts] but by offering it online it satisfies all possibilities."

Ability to accommodate family responsibilities also was frequently connected to the advantages of teaching online. For instance, a mother of three young children mentioned, "the ability to move around if you need to, and the other thing is family balance, which is part of the moving. If you're in another location, you're still accessible (to your students)." An older faculty member with elder care responsibilities stated, "It came in very handy for me during my mother's illness a couple years ago, because I had to be in Florida for a couple weeks." Still another theme related to time and place flexibility is the ability to take advantage of professional opportunities such as attending conferences or spending part or all of a semester abroad. For example, a faculty member mentioned, "Flexibility of location and time. I spent one semester in France; I was teaching here distance learning, so that it was real distance learning!"

Essentially tied as a leading motivator is the perception that pedagogy is improved by unique characteristics of online teaching using asynchronous text based discussion. There are several dimensions to this. Self pacing for the students was mentioned frequently. But so was the ability to interact more, and more personally, with students. "You begin to learn about the work habits of your students very quickly and I think you get to know them, because you're dealing with them in a verbal way as opposed to a visual way… You don't have these interactions in the classrooms, where mostly I'm doing the talking in front of the classroom and (only) some students will raise their hands, but I won't get to know them better." "You can really get to each student and bring each student along much more." Another explanation ties together the nature of text based asynchronous communication with greater participation and better faculty knowledge about the students as follows: "In the online classes, I get to know my students better because I spend so much more time with them because when they write, they don't write the way we speak in a class. We speak one sentence, two sentences at the most; but in an online course the students will write for four or five paragraphs, and so you get much, much more input from every student, and you get to know each student much better." "It's not just deeper, they're more creative," stated a participant in another group.

Another aspect is the advantage of written text based communication for students for whom English is not the native language: "In the classroom, if a student has a heavy accent, or somebody is not there, or they mumble, or someone is paying attention to something else at the moment, what they say is lost; whereas online, there is a transcript of everything that goes on. So, that's what I meant by (stating that) they learn more from each other."

Mentioned frequently as an advantage of the medium is its support for the emergence of a learning community among the students. "Students in e-learning have told me that they formed better relationships with other students than they would if they were in a face-to-face environment. That's kind of a motivator for me because I feel I get closer to students."

The challenges and satisfaction of learning new technologies and creatively applying them to teaching were also frequently mentioned. In particular, it was pointed out that use of technology in online teaching can improve the creativity of instructors. One faculty member says, "One of the things that I like about teaching online is it encourages the instructor to use creativity to create interesting things online which we don't always do in the classroom. It's enhancing creativity on the part of the instructor." Another faculty

member explained, “I have to think a lot about how to motivate students to catch up with readings and assignments. It was really challenging for me and I really enjoyed it and I find many different ways to motivate them. That was the reason that I really like online teaching. I had to think. It was a big challenge for me to motivate them. It was kind of an experiment for me.” Many faculty members also echoed the sentiments of an instructor who described “the challenge of the technology… I just happened to enjoy using new technology that I haven’t used before and most of the time they worked well, occasionally they were frustrating, and exploring how I can use the new technology such as using WebCT. What new ways can I use it that I haven’t used it before? Personally, it is interesting and in the classroom, the technology is almost always the same.”

That online courses can reach more, and more diverse, students is the fourth biggest motivator. Participants say that increased diversity of students can add more value to online learning. For example, a faculty member says, “In my class I know there are students who are taking my class while they are working in England or in California or in Oregon. Now these students came from Microsoft. They really add a lot of richness to the discussion. That's a really good quality.” Geographic and cultural diversity was also mentioned: “I’ve had students in Japan, Singapore, and India…” The expansion of opportunity to students who could not otherwise take university courses came up in every group. For example, one faculty member stated, “This way I can reach the students who might not have the opportunity to attend classes but they are very enthusiastic and they really want to learn.” As an example, she described “The ladies in my class that were in their 40s, and one of them was pregnant and she was telling me that she had three other kids. That was the only way that she could attend the classes.”

It was also pointed out that online courses not only meet students’ needs for time and place flexibility, but also their desires, in terms of preferred mode of delivery, in a conversation that shows the synergistic thinking that often occurred. In one group, a faculty member observed, “There are a lot of students here who really enjoy this [online courses] and they seek us out semester after semester.” Another added, “Yeah, there is an interesting controversy related to that; in the administration here some don’t like the idea that students living in our dorms take an online course. They think it shouldn’t be allowed.” A third responded, “That’s wildly inappropriate. They enjoy doing this.”

Easier course management is another big motivator. Participants say that the virtual classroom environment can allow more effective and efficient management of course materials and student participation. One female faculty member described the advantages of course management systems for, “Easier record-keeping for the class. Tracking students’ participations and having all their assignments in one place, it’s easier for them too because they then can see their grades when they’re posted and they can keep track of the teacher’s comments.” Another aspect is easier and more efficient distribution of course materials; students cannot lose or misplace the materials, since they can always find them online. Still another aspect is the ease of integrating rich, current material from websites: “I can round up the best websites on a topic that happens to come up… and all the student has to do is one click and the student is there.”

B. Demotivators

Table 3 shows the results for each individual focus group, whereas Table 4 combines similar terms and shows the overall rank order that results from combining the ranking results.

Table 3. Demotivators by group: TechU

Group 1	
1	More work overall (25) A

2	Lack of visual/direct connection with students (14) B
3	Expectations of higher availability and attention from students (7) A
4	Exam process (5) B
4	Course development (5) A
6	Loneliness from working alone at home (4)
6	Evaluation process (4) E
8	Too many unqualified students are allowed to take DL courses (3) C
9	Some class sizes are too large (2) C
	Group 2
1	Lack of face-to-face/synchronous contact (19) B
2	More work/no more pay (18) A
3	Characteristics of DL students (15) D
4	Dropouts/losing students (13)
4	Lower student evaluation (13) E
6	Issues of control (6) B
7	Lack of technology at (university) (5) C
8	DL exam (1)
	Group 3
1	Medium problems (28) B
2	Workload (20) A
3	Lack of recognition from peers/administration/general staff/students (14) F
4	Course evaluation (10) E
5	Training and support at (university) (11) C
6	Lack of compensation/control (7) A
	Group 4
1	More work/time (17) A
1	Lack of policy in (university) (17)C
3	Lean text-only medium (14) B
3	Does not fit all students (14) D
5	(University) emphasizes profits over quality (9) C
6	Lack of peer/administration recognition (4) F

Table 4. Combined Demotivators

	Leading Demotivators
A	More work/inadequate compensation (99)
B	Medium problems (86)
C	Lack of support/appropriate policies for online teaching (48)
D	Does not fit all students (29)
E	Ineffective/poor evaluation (27)
F	Lack of recognition (18)

In terms of demotivators, two factors stand out: more work and problems with the medium. Participants perceive that online teaching requires more time and energy than face-to-face teaching. An experienced part time faculty member who has taught the same course both online and face-to-face for several years summed up her feelings by saying, “I think it’s more work, stressful and more time consuming too.” Another led off the conversation on demotivators by saying, “The thing that is most difficult to me is that it’s double to triple the time, while teaching the course, plus also it’s also an unpaid two to three months to develop it.” In another group, a faculty member said, “I have a face-to-face class that’s three hours a night and I feel I'm short-changing them very badly because maybe I read their papers for eight hours, and I'm there for three hours so that’s eleven hours; but with the online course, I'm off and on and reading their papers and responding to them for maybe twenty hours for one course, and that doesn’t count developing the course either.”

A faculty member says, “It’s a lot tougher to teach a distance course; it’s a lot more work for the instructor. It forces us to communicate better. And it also forces us to create better learning materials. Because just attaching the textbook with some videos, or whatever, is not really the norm anymore.” Another faculty member describes the constant demand to be online and responsive, a theme repeated by many others: “I had to log in a couple of times a day, or sometimes more than that. I had to respond to them immediately, otherwise they wouldn’t have done their assignments, they would have said, ‘Oh, you didn’t answer my emails.”

Finally, there were complaints about lack of policy to provide course releases or extra pay for preparing and recording the digital materials for online courses at TechU. For example, “I’ve been doing an extra three hours of work a week all last semester taping a course, for which I don’t get paid one cent.”

The amount of time it takes to respond to students in writing rather than orally is one of the frequently mentioned “medium problems,” that is related to “more work. A faculty member describes her time consuming process of trying to make sure that every posting is clear and has the right “tone.” “I do my bulletin board postings in Word, and that checks for the spelling and stuff, and then I usually re-read it two or three times before I post it. It's all they know of you on the bulletin board postings, and it's also all they know of you with the assignments and things. If you say something in one way in one place, and then a slightly different way in another place they get confused.”

The administrative difficulty of dealing with a barrage of assignments handed in online is also described frequently in terms of adding to the workload. “Opening up all those files and trying to organize them. I have to open it up, read through and grade it, make sure that the grade gets recorded in my spreadsheet, move that email into a separate folder so that I have a record of it, and reply to the student.”

Regarding problems with the medium, participants pointed out that they are highly related to the fact that the major communications method in online teaching is based on text. One female participant says, “I'm going to bring one up that's different but what you're really talking about again, it has to do with the medium, is that I think it really is because it's a text based, lean medium and you lose a lot of emotional cues.”

Interestingly enough, it was also pointed out that more work in online teaching is mostly caused by media problems, implying that solutions to media problems may reduce workload of instructors teaching online. For example, one participant says, “I think workload for me is related to media problems. Inextricably, of all the things that I said and other people said about the medium… it's text based, if we’re going to another modality and that's the fix, that's not solely text based, I think you’ll change [decrease] the workload a lot.”

Lack of appropriate institutional support and policies for online teaching ranks third. Many participants said that they feel the lack of administrative and technical support discourages online teaching. For example, one participant states, “Well, it's hard to argue that if you have to do more with fewer resources. It is a problem that's daunting because we know in fact the kinds of technology that would make this a much richer kind of thing, all of which cost money which we don't have.”

Another important demotivators is that the unique characteristics of online learning may not fit some students. “The older ones are uneasy with discussion. They come in (to the class) with, you know, young people who grew up with computers, so it's like swimming to them, but older people… sometimes their

skills are dated.. But if they've been working in a police department, or have been working as a reporter, for instance, they sometimes have skills. So there's people with no skills, and people with super skills at the same time" (and teaching to both in the same class can be difficult).

At the institution studied, in recent years, the average student teaching ratings for online courses have tended to be lower than the average for face-to-face courses. Lower evaluations harm the faculty in terms of promotion, tenure, merit raises, and recognition. There was considerable speculation about the causes of this phenomenon in the groups. One reason suggested was that face-to-face evaluations are given in class and thus have a very high response rate. For online course evaluations, students have to choose to go to the web site and complete the questionnaire on their "own" time rather than during class time. Response rates are much lower. Several faculty suggested that the most disgruntled students are the most likely to take the time to complete these evaluations, just as it seems that a disproportionate number of unhappy students use optional teacher rating sites such as "RateMyProfessors.com." In another group, one professor expanded on the idea of selection bias: "I also think that there is some selection bias not only in responses, but in [who is] taking the course, they're probably too busy, they have to do something else and their commitment to the expectations of the course are that this is going to be easier, then they find out it's not."

Others speculated that both some faculty and some students have incorrect assumptions about what it takes in terms of effort to successfully teach and learn online. For example, a woman who had both taught online and been a student in graduate courses said, "you know a lot of instructors, they teach DL because they think it's easier to teach, and at the same time a lot of students take it because they think it's easier to study that way, both of them are wrong." A senior faculty member chimed in, "And I think that accounts for some of the lower evaluations of DL faculty." A third said she had talked to some of the students who had not done well and who seemed dissatisfied, and they said, "Oh, you were giving us a lot of work, we didn't expect to do that much in a DL course, its just so much work."

Several faculty spoke very passionately about the fact that they felt that they worked harder (and did a better job) online, but were actually devalued or stigmatized by the administration and their peers for teaching online. For example, one instructor lamented, "I have a huge problem about lack of recognition from the community…. Lack of recognition from my peers--all of my buddies in my school of management, they all laugh at me, because I don't go to the class. As if I'm not doing anything. So I wonder whether the administrators also think that way, that we are getting away with nothing… distance learning takes more time than face-to-face. But I don't worry about it, that's ok with me. The point is that people all laugh at me, they think that you are very lazy." Another faculty member in the group jumped in saying, "Not only peers and administration, I think there's a general stigma like "mail order degree" kind of thing."

V. A SINGLE REPLICATION AT ANOTHER UNIVERSITY

Following the procedural guidelines previously described, a replication focus group was conducted at a single college in a different state situated in a large state system of higher education in the Northeastern United States. The replication group consisted of one meeting of eight participants who represented full-time and adjunct faculty members from a two-year community college that offers eighteen online degree programs serving approximately 2,800 students. Participants ranged from absolute novices to highly experienced. Two participants had never taught online but were interested in doing so. One participant had just completed teaching his first online course. Four participants had taught online more than once and one had taught a full five course load online for fifteen semesters in a row.

Table 5 provides a list of the overall rank order that resulted from combining all participants' top five motivators.

Table 5. Combined Motivators for Replication Group

	Leading Motivators
A	Time flexibility (i.e., convenience anytime/anywhere, flexibility of schedule) (27)
B	Personal satisfaction of serving students without access to traditional higher education experience (14)
C	Learning new technology (12)
D	Pedagogy - more student participation, more engagement, more learning (11)
E	Additional pay for extra services (i.e., salary increased, better end salary) (10)

The results for the replication focus group were very similar to those of the primary focus groups. Both identified motivators of time and schedule flexibility, personal satisfaction of serving more students, learning new technology, and pedagogy enhancements created by the online modality. Time flexibility, i.e., flexibility and convenience in their schedules, led the list of motivators for both the primary and replication group. In the replication group, two participants, one female and one male, commented that full-time administrative responsibilities paired with family obligations limited their opportunities to teach on campus and online courses provide an opportunity to continue to teach. The male instructor noted that "just the opportunity to teach, as I work fulltime… I would not be able to teach during the day, and I have a family… instead of teaching at night, it [online teaching] just gives me a chance to do something different and new."

When comparing the replication groups' top five motivators to the initial focus groups' list, one noticeable difference was that the replication group indicated the motivation of opportunities for additional pay for online teaching as one of their top motivations. One faculty member stated that "the chance to do extra services; which for me means extra money" was a main factor for teaching online. These contextual differences appear to be related to institutional variables and will be investigated further in follow-up reports of survey data collected in this study.

The top demotivators were collected from the focus group following the same procedure previously described. Here the respondents indicated that their top de-motivator was the feeling that they were "never off," i.e., they needed to respond to students' needs and questions immediately in order to meet students' expectations and that this resulted in additional work. Table 6 displays the overall rank order that resulted from combining all participants' ranking results.

Table 6. Combined Demotivators for Replication Group

	Leading Demotivators
A	Never "off" (i.e., need to be responsive 24/7 to meet students' expectations, therefore more work) (23)
B	Lack of support for Distance Learning from administration at all levels for purchasing technology and for policy implementation (18)
C	Students with poor academic preparation, behaviors, and attitudes (15)
D	Lack or absence of face-to-face contact with students (10)
E	Uncertainty of who the students are (i.e., is the registered student actually doing the course work) (7)

Once again the clearest result is the similarity between the primary and replication focus groups. Three of the top five demotivators were common to both groups including perceptions of additional work, lack of support and student issues (poor preparation, attitudes or poor fit). The demotivators also differed somewhat, the replication group identified lack of face-to-face contact as a serious issue. They also had uncertainty about who their online students were and whether there might be issues with registered students getting others to do their coursework. They were less concerned about recognition. These dissimilarities between the primary and replication groups also appear related to differing institutional cultures. Again these types of differences will be further analyzed in results of the survey research.

VI. DISCUSSION AND CONCLUSION

The combination of nominal group technique and focus group discussion that we used has the advantage of generating evidence about why and how various motivators and demotivators are important to faculty. Just as online discussions can be synergistic, the group discussion stimulated faculty to think of examples and extensions of ideas that they otherwise would not have thought of. It was evident during the discussions that the discussion process itself changed the thinking of some participants about what were the most important sources of satisfaction and dissatisfaction. Though not reported here, the discussion of steps that could be taken to alleviate some of the demotivators also benefited from the group interaction. Thus, the method is recommended to other institutions that wish to obtain a better understanding of their online faculty and of steps that can be taken to improve their motivation for teaching online.

Though the results of separate groups' rankings were combined in this paper to produce an overall ranking, the numbers produced should be interpreted in a qualitative rather than a quantitative way, meaning that a different set of groups would undoubtedly produce different "numbers." *However, the striking similarities in top motivators and demotivators among all four groups, as well as the replication group at a different institution, indicate that the overall results appear to have a reasonably strong measure of validity.*

Among the most actionable results that we obtained is the following puzzle: faculty at TechU say that they work harder online, and that they think that most of the students they teach learn more via this medium, and that they are able to reach more students and a greater diversity of students. However, many feel that their efforts are not only not rewarded, but actually devalued by the institution and by many of their colleagues. They lament the absence of policies that adequately train, guide, and reward online faculty. Certainly, the institution at which this study took place could take steps to change this situation. Official praise and encouragement from high administrative levels, which costs nothing, would go a long way towards eliminating this source of dissatisfaction.

The most interesting methodological results of this study will come from comparing the statistics gathered from the online survey taken by a much larger number of faculty, with the outcomes of the focus groups. We expect that they will be complementary. Secondly, we expect that the results for the two initial universities studied will be different in substantial ways and similar in others; however, as we do not have the two sets of outcomes available for this paper, this remains a speculation. If they are different, this will add support to theories such as those by Rogers [11] about the importance of contextual factors in modifying the impacts and effects of a technology such as ALN. In terms of the practical implications of the results, we need to determine generalizability beyond these first two institutions, to a much broader set of institutions, ideally outside of the U.S. as well as inside.

By understanding faculty motivations related to teaching online, we hope to generate recommendations

that will help to engage and retain a larger number of online instructors. Ultimately the objective of increasing access to quality higher education for a far larger number of students, many of whom cannot easily attend traditional courses, will thereby be advanced.

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VIII. ABOUT THE AUTHORS

Starr Roxanne Hiltz is a Distinguished Professor in the Department of Information Systems College of Computing Sciences at the New Jersey Institute of Technology. She conducts research on applications and social impacts of computer technology, focusing on computer-mediated communication. She conducted one of the earliest and pioneering longitudinal studies of "Online Communities" (1984). Subsequently she conceived of the possibility of an online "virtual classroom" environment; designed, implemented, and studied the first version of such a system in 1986. She was project director of the "WebCenter for Learning Networks Effectiveness Research", an online knowledge repository and research community to improve the quality, quantity, and dissemination of research on online courses. In November 2004, she won the Sloan Consortium award for "Most Outstanding Achievement in Online Teaching and Learning by an Individual."

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Peter's current research focuses on the student and faculty experience in technology-mediated teaching and learning, most recently on the topics of "teaching presence" and community in asynchronous learning networks. He is the author of many articles and several book chapters on the topic of online learning, co-author of the book, *The Successful Distance Learning Student* (Thomson-Wadsworth) and a contributor to the recent book, *Learning Together Online: Research on Asynchronous Learning Networks* (Erlbaum). He is a co-recipient of several awards including the EDUCAUSE Award for Systemic Progress in Teaching and Learning for the State University of New York, and two Sloan Consortium Awards for Excellence in Faculty Development and Asynchronous Learning Networks Programs. He is a member of the American Educational Research Association and the editorial board for the *Journal of Asynchronous Learning Networks*. His research has appeared in the *Journal of Educational Computing Research*, *The International Review of Research in Open and Distance Learning*, and the *Journal of Asynchronous Learning Networks* among others.

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X. APPENDIX: FOCUS GROUP PROCEDURES AND QUESTIONING ROUTE

1) Ahead of time: confirm attendees and ask for their cell phone numbers. Send them email instructions one week ahead which confirms date and time and place and refreshments, and also states the following:

   The purpose of our focus group study is to gain an understanding of the main sources of satisfaction and dissatisfaction (or "motivators" and "demotivators") for teaching courses online, for TECHU faculty. We also want to develop ideas about possible actions that could be taken to improve faculty satisfaction.

   In preparation for this discussion, sometime during the three days before the meeting, please do the following:

   a. To get an overview of a wide spectrum of possible motivators and demotivators, take the Faculty Survey on this topic (designed by Peter Shea of SUNY Albany and Moderator Hiltz of TECHU).
   b. Write down approximately THREE (2–4) things that are your personal "top motivators" or sources of satisfaction. Be prepared to explain why these are important to you.
   c. Then write down the top approximately THREE "demotivators" or sources of dissatisfaction for you in regard to teaching online courses at TECHU. Also be prepared to explain why you think these are important. Finally, think about what could be done by whom, in order to improve the situation in regard to these "demotivators."
   d. Please bring these lists and maybe some notes with you, to share during our focus group discussion.

2) Procedures and Questioning Route at the Meeting

   NOTE: Roles include a MODERATOR and an ASSISTANT MODERATOR.

   SETUP: Ideally a U-shaped table; moderator and assistant moderator are at front of the "U" and have a wall to post sticky- chart pages. At least two audio recorders or one recorder and a videotape recorder are used.

   a. As people arrive: ASSISTANT - greets them by name, hands them a gift card and has them sign that they received it, helps them hang up coats, takes them to the table to put down their things and invite them to help themselves to the snacks. Moderator will stay at table and Assistant stays near door. Introductions and small talk while they eat for about 15 minutes. Anyone who is late is called on a cell phone if available.
   b. When everybody has had at least 10 minutes to chat and snack, Moderator starts the self-introductions, which should be recorded. Participants are asked to give their name, department, and the courses they have taught online or hybrid and the software systems or technologies they have used.
   c. Assistant draws seating chart. (Note; throughout meeting, assistant listens for tapes running out and replaces them as necessary).

d. Moderator conducts consent form procedure, followed by emphasis on confidentiality: Participants need to be encouraged to keep confidential what they hear during the meeting.

e. Then the focus group begins, using a round robin procedure. The first task is creating a composite list of top motivators; as each new idea is contributed, and a brief explanation given, Assistant writes in it compact form on a flip chart page, leaving space for a few key words to be added later. Put down only about 1–2 ideas a page to leave room, and start pasting the pages up on the white board or a wall. We go around group until there are no more new ideas.

f. The Moderator leads the group back to examine and expand upon each of the set of ideas, and the Assistant briefly notes these expansions and examples under each heading. (Try to make sure everybody is participating, start at different places around the table for different ideas). Some very similar ideas may then be combined.

g. Participants write down their rank order of the top FIVE motivators for them. Each participant then calls out their rank number 1 (given 5 points), two (4 points; 3 (3 points); 4 (2 points) and 5 (1 points) - these points are recorded on the chart and then totaled.

h. Examination and discussion of these; if it is not clear that there are two to three "top best things," conduct a re-ranking from just among the top ten or so, scoring to give us the "top three" for the group.

i. The above takes about an hour and fifteen minutes. Participants are invited to take a five minute stretch, bathroom break and refill refreshments. Assistant collects flip chart pages and rolls them up for later use.

j. The same process is repeated for sources of dissatisfaction and demotivators.

k. Taking the top reasons for lack of satisfaction, and through the focus group discussion, develop an understanding of stakeholders related to these problems, and of actions that could be taken by specific stakeholders to decrease or solve the sources of dissatisfaction with teaching via ALN.

l. If time allows, go to the top three motivators and think about what could be done to capitalize on them.

m. Thank participants. If time, get feedback on process.

n. Immediately after the meeting, the moderator (and assistant moderator) should create a meeting summary- perhaps a recorded discussion rather than a written report- in which they give their perceptions of the critical points and notable quotes that occurred during the session.

o. By the next day: assistant uses flip charts to create a summary of the motivators and demotivators and the "votes."

p. A transcript is made (by the assistant or other helpers) and then the results coded and later analyzed using a qualitative text analysis tool such as N-Vivo.

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