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Support Services for Millennial Undergraduates

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by
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A dissertation submitted in partial fulfillment of the requirements
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We hereby certify that this dissertation, submitted by Marie C. Pullan, conforms to acceptable standards and is fully adequate in scope and quality to fulfill the dissertation requirements for the degree of Doctor of Philosophy.

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An Abstract of a Dissertation Submitted to Nova Southeastern University in Partial Fulfillment of the Requirement for the Degree of Doctor of Philosophy

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Education has changed as a result of technological advances. Distance learning, particularly online learning, has rapidly increased its presence in higher education. Millennials, a new generation of students who have grown up with the Internet, are college-age. They expect access to the Internet to manage their daily lives. However, as they enter college, many discover that support services that are requisite to a successful college experience, are available on-campus but not online. The goal was to determine what contemporary college-aged students expect as online student support services so that institutions will know what to provide.

Data gathered through interviews with administrative support staff were used to modify a published survey and to guide construction of new questions. The modified instrument was validated by three experts and revised accordingly. All current students at Farmingdale State College were invited to respond to the web-based instrument that examined the current status of online support services. Following full-scale implementation, the data were analyzed. Results were used to create recommendations and considerations for the implementation of online support services at the college reviewed by the Vice President of Student Affairs and Enrollment Management.

The final report is a comprehensive resource for college administrators who serve millennial undergraduates. It contains valuable information and guidance for the development and implementation of student support services in the 21st century. A serendipitous finding was that many non-traditional, older students expressed comparable needs for online support services.

Acknowledgments

The African proverb *It takes a village to raise a child* originated from the Nigerian Igbo culture and demonstrates the importance of community in child rearing. I have learned the importance of community in the dissertation process. While only one name appears on the final report, the magnitude of the work, assistance, encouragement, and support received from family, friends, and colleagues cannot be overstated.

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Thank you to my husband Chris and my daughter Taylor for their support, understanding and endless meals with a laptop in front of me. They gave up so much and never complained. Thanks to family and friends who listened for hours on end to my thoughts and ideas.

Last but not least, thank you to my parents, Marion and Kenneth DeGruchy. They gave me the strength and fortitude to complete this process. It is to my mother and in her memory that I proudly dedicate this work.

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Chapter 1

Introduction

Higher education is changing. Educational institutions are transforming themselves by integrating information and communication technologies into curriculum delivery. The term online course describes an educational experience in which the student and the instructional source are separated by physical distance and may interact synchronously or asynchronously. The online market is strong; enrollments have been growing at a rate which exceeds the overall higher education enrollment rate. Almost 3.5 million students took an online course during the fall 2006 semester, a 9.7 % increase from fall 2005. This increase far exceeds the 1.5 % growth rate of the overall higher education population. Indications are that this trend will continue with virtually all schools reporting that they view online education as important to their long-term strategy (Allen & Seaman, 2007).

The original target group of distance education courses was adults with work, social and family commitments (Maurino, 2006). The typical online student has been described as over 25, balancing work and family commitments and who has completed some higher education (Maurino, 2006; Diaz, 2002; Tesone, Alexakis & Platt, 2003). These learner characteristics may have been true in the past, but they no longer describe the typical post-secondary online student. The National Center for Education Statistics (NCES) reports that online education now spans all age groups noting 57% of traditional undergraduates aged 19-23 has enrolled in at least one online course (Livingston & Wurt, 2004). The 18- to- 24- year-old student population is expected to be one of the fastest growing segments of new students; male enrollment is lagging as compared to female enrollment; and the *digital natives* have arrived (Scarafiotti & Cleveland-Innes, 2006; Society of College and University Planning [SCUP], 2005). Digital Natives, a term

coined by Prensky (2001), refer to those who have grown up with Internet technology. These students are part of a growing population – those who are taking both on-campus and online courses (Dare, Zapata & Thomas, 2005; Maurino, 2006; Moore, 2007).

Context

Digital Natives, also referred to as millennials, are characterized as being the first generation to grow up with the Internet (Oblinger, 2003). They have never known life without it. Information technology is woven throughout their lives and they view technology as a natural part of the environment. They take connectivity for granted. The ability to access their college records, register and pay for classes online and participate in online classes is no more remarkable to them than color television was for the prior generation. One generation's technology is taken for granted by the next. Computers, the Internet, online resources and instantaneous access are simply the way things are done (Oblinger & Oblinger, 2005).

While it has been reported that there is no significant difference in achievement between online courses and their traditionally offered counterparts (Hauck, 2006), the online environment is less than perfect as it currently exists (Diaz, 2002; Wojciechowski & Palmer, 2005; Herbert, 2006). Student attrition rates are higher in online courses than traditional face-to-face courses (Smith, Fergson & Caris, 2002; Hubert, 2006; Diaz, 2002; Wojciechowski & Palmer, 2005). Students have reported that it is much easier to fall behind in an online course. Characteristics such as self-motivation, commitment and personal responsibility are vital to online success (Uhlig, 2002; Ury, 2004; Diaz, 2002). These traits are more prevalent in non-traditional students, who are generally older and have completed more college credit hours (Diaz, 2002).

Diaz (2002) suggests a positive correlation between student age and online success noting that age may play an important part in performance differences between distance and on-campus

students. Tyler-Smith (2006) notes that adult learners tend to be self-directed and are often able to generate the internal motivation required for their learning and successful completion of the course. Wojciechowski and Palmer (2005) collected data from students taking an online business course offered through a small, rural community college in western Michigan examining various student characteristics to determine their relationship to success in an online course, and found that overall, the younger the student, the lower the final grade in the course.

The literature focuses primarily on the in-course experience of students (Herbert, 2006; Swan, 2003; Shea, Pickett & Pelz, 2003). Less attention is focused on the non-academic student support services that universities can and should provide for millennial students. With increasing numbers of younger, first-time students enrolling in online courses combined with the challenges associated with retention and successful completion; student support services need to be revisited.

The study site was Farmingdale State College (FSC), a campus of the State University of New York (SUNY). It is a coeducational public college of applied science and technology located in the Long Island village of Farmingdale, approximately 25 miles from New York City with an enrollment of over 6,200 undergraduate students and over 76,000 graduates www.farmingdale.edu. There were approximately 1,800 students enrolled in at least one online class for the fall 2007 semester. Some students enroll in more than one distance education course, so the total enrollment is greater than the number of students. The median age of a student is 21 years old, with 4,531 students between the ages of 18-24 years old (IPEDS, 2007). Over 500 students registered for online courses in the fall 2007 semester within the target demographic population (There was no published reference. Data were obtained by an internal search of BANNER records).

The online courses offered at FSC are part of the SUNY Learning Network (SLN). SLN is the online instructional program created for the 64 colleges and over 400,000 students in the SUNY network. Starting as a regional project in the Mid-Hudson Valley involving eight SUNY campuses, SLN has evolved into a fully integrated virtual learning environment with the ultimate goal of creating one virtual campus that will be open 7 days a week, 24 hours a day to students across the globe (http://tlt.suny.edu/originaldocumentation/library/researchsln/ALNWorkshop2000.pdf). Farmingdale State College (FSC) is representative of a typical SUNY school.

Problem Statement

Online courses were put into place without any consideration for more than technology issues (Dare et al., 2005). Course delivery has improved steadily across academia as new ways of teaching and learning have been developed (Tinto, 2002). Completion and satisfaction rates continue to be smaller and lesser in online courses (Nash, 2005; Herbert, 2006). Nevertheless, an increasing number of undergraduate institutions are making online courses a requirement of graduation (http://online.semo.edu/content/what_is_southeast_online.asp).

One major responsibility confronting institutions that offer online programs and courses is to ensure that online students receive an educational experience comparable to their on-campus counterparts. Support mechanisms and non-academic services that are readily available to on-campus students often are lacking in online programs leading to isolation, loneliness, discouragement and ultimately failure of online students (LaPadula, 2003; Rinear, 2003; Dare et al., 2005; Herbert, 2006). These services are arguably even more important for college-aged students, commonly described as less self-directed and motivated that their non-traditional counterparts (Wojciechowski & Palmer, 2005). The problem identified for the dissertation is

that services typically provided to support on-campus students may not be available in kind for online learners leaving them to fend for themselves (LaPadula, 2003; Rinear, 2003; Dare et al., 2005). Additionally, it is likely that other services, yet to be identified, might be required by millennial students.

As increasing numbers of undergraduates take online courses, a full set of student services should be readily available through the Internet. Students require online support services that will allow them to succeed in their educational endeavors. Ideally, support services should be pervasive and available without time and place restrictions (Shea, 2005). Data from the Campus Computing Survey (Green, 2003) suggest that many academic web sites and online campus services lag well behind the consumer sector (SCUP, 2007; Shea, 2005; Dare et al., 2005).

Goal Statement

The goal was to improve the college experience of millennials by providing a full range of online support services. Following a comprehensive evaluation and discussion of the data collected, recommendations were made to help administrations put into place the non-academic services that students indicated were most important.

Accrediting bodies, professional associations and published standards for higher education acknowledge the importance of attending to learners' non-academic needs. Institutions offering online courses also acknowledge this importance. (Middle States Commission on Higher Education [MSCHE], 2006; SCUP, 2007; Sullivan-Vance, 2008; Southern Regional Educational Board [SREB], 2007). According to Shea (2005), meeting the goal will help reengineer support services.

The goal will be fully met when the recommendations are implemented. A baseline of current support services and their mode of delivery were constructed via interviews with the various administrative offices at FSC who have relationships with students; examination of published literature and examination of the school website. A similar baseline was constructed that addresses the range of services comparable colleges provide to undergraduates across academe. A list of colleges to be examined was developed using Middle States to guide which schools were considered. Much of the information that was available was on websites of various colleges. The qualitative data were collected through an examination of documents (Gay et al., 2006). The resulting data enabled the compilation of services currently offered at FSC and other colleges to their undergraduates' on-campus and online.

Students were surveyed to examine the current status of online student support services. Following the pilot distribution of the survey instrument, a full-scale, campus-wide deployment took place. A detailed report was prepared which analyzes and discusses the data collected from the survey along with suggested recommendations and presented to Dr. Lucia Cepriano, Vice President of Student Affairs and Enrollment Management, who has consistently been supportive of the dissertation effort. Her responses are summarized in Chapter 5 and can be found in their entirety in the Appendices.

Research Questions

1. Describe the current state of non-academic, undergraduate support services provided by FSC and by other colleges as per their websites, published literature and when possible, through interviews with administrative faculty.
2. What services do millennials want online in order to enhance their college experience?
3. Are students receiving all of the support services they feel they need to be successful?

Significance and Relevance

College students easily access and retrieve information about their bank accounts, cell phones and monthly bills online. They have become accustomed to using the Internet - having surfed the Web since elementary school. For retail shopping, they frequent sites such as Amazon.com and e-Bay. They make plans by Instant Messaging (IM), and get their news, weather and directions from the Web (Oblinger & Oblinger, 2005). According to Newsday (2008), about 80% of Internet users have searched the Internet for information on medicine and health. The top source for medical information, WebMD, gets 17 million unique hits every month.

However, the colleges they attend do not make available comparable services. Activities such as online registration or applying online for financial aid, when available, can be difficult to use and even more difficult to find (Shea, 2005; Dare et al., 2005). While there are data that show improvement in the availability of web based resources and services in the college environment (Dare et al., 2005) they pale when measured against the expectations of the contemporary college-aged student (Shea, 2005).

In 1985, the New York State Board of Regents officially awarded FSC status to offer bachelors' degrees. Since then, the college has evolved into an academically strong institution that is responsive to the needs of its students, the community and the regional economy. The evolution continues today as FSC seeks to expand its mission. To strengthen academic programs and expand into new arenas, the college has undertaken a process of strategic planning and resource allocation. The Strategic Planning Task Force is assigned the goal of identifying strategic initiatives for the college. Within this plan, six focus areas are defined which articulate long and short term and goals. (The plan is an internal document and is not available to the

public). Focus Area 5 deals directly with student affairs; only objectives specific to improving and expanding student support services and programs are noted below:

Strategic Goal 1: Expand student support services and programs.

Objective 1: Continue to expand the career development center.

Objective 3: Continue to enhance the student success center.

Strategic Goal 2: Enhance student life through better communication.

Objective 1: Increase awareness among current and incoming students of the full scope of student services.

Objective 2: Develop a sense of community among students.

Objective 3: Continue to update the campus website with state-of-the-art technology.

Objective 5: Continue to provide websites that provide information about student clubs.

In a recent report prepared for the FSC president Hubert Keen, strategic goal 1 and 2 along with the associated objectives have been designated as having an ongoing status and continue to be developed and implemented (Personal communication- College Planning and Resource Allocation Committee (CPRA) April, 2008). Specific details concerning the status of the objectives are not available to the public.

Limitations

A limitation is some aspect that the researcher recognizes many have some affect on the study, but over which he or she has no control (Gay, et al., 2006). One limitation of survey research is that the information gleaned from the survey is limited to what the respondents are willing to divulge (Fowler, 2002). Due to the fact that the survey questions concerned student

support services and no sensitive or personal information were asked, it is likely that respondents completed the survey completely and honestly.

Another limitation involved gaining cooperation from the support services administration staff at FSC. There were no issues involved in obtaining cooperation from the administrative staff at FSC.

Definitions of Terms and Acronyms

ACE- American Council on Education (ACE) is the major coordinating body for all of the nation's higher education institutions, seeks to provide leadership and a unifying voice on key higher education issues and to influence public policy through advocacy, research, and program initiatives (www.acenet.edu).

ACHA - American College Health Association (ACHA) will be the principal advocate and leadership organization for college and university health. The association will provide advocacy, education, communications, products, and services, as well as promote research and culturally competent practices to enhance its members' ability to advance the health of all students and the campus community (www.acha.org).

ATM -An automated teller machine (ATM) is a computerized telecommunications device that provides the customers of a financial institutions access to financial transactions in a public space without the need for a human clerk (www.wikipedia.org).

Asynchronous communication - a mode of communication where the transfer takes place over a period of time, or in separate time frames, not requiring the transmission to take place simultaneously (http://www.cteconline.org/terms.html).

CAS - The Council for the Advancement of Standards in Higher Education (CAS) has been promoting standards in student affairs, student services, and student development programs

since 1979. The ultimate purpose is to foster and enhance student learning and development through increasingly effective operation and improvement of the programs and services that serve them (www.nacs.org).

CPRA - College Planning and Resource Allocation Committee at Farmingdale State College. The CPRA was given the charge of developing a Strategic Plan for the College to be completed by the end of the spring 2006 semester (Personal communication- College Planning and Resource Allocation Committee (CPRA) April, 2008).

CCSSE- Community College Survey of Student Engagement (CCSSE) was established in 2001 as a project of the Community College Leadership Program at The University of Texas at Austin. Since 2002, CCSSE has surveyed more than 1 million community college students (www.ccsse.org).

CUNY- City University of New York (CUNY) the nation's largest urban public university, comprised of 23 institutions: 11 senior colleges, six community colleges, the William E. Macaulay Honors College at CUNY, the Graduate School and University Center, the City University School of Law at Queens College, the CUNY Graduate School of Journalism, the Sophie Davis School of Biomedical Education, and the CUNY School of Professional Studies (www.cuny.edu).

Digital native - a term used when referring to someone that has grown up with Internet technology (Prensky, 2001).

Digital immigrant - a term used when referring to someone that has grown up before the proliferation of Internet Technology (Prensky, 2001).

Distance education - a term used to describe education that takes place when the instructor and student are separated by space and/or time. The gap between the two can be bridged through the use of technology such as audio tapes, videoconferencing, satellite

broadcasts and online technology and/or more traditional delivery methods, such as the postal service (http://oregonone.org/glossary.htm).

ECAR - EDUCAUSE Center for Applied Research (ECAR) The mission of the EDUCAUSE Center for Applied Research is to foster better decision making by conducting and disseminating research and analysis about the role and implications of information technology in higher education. ECAR systematically addresses many of the challenges brought more sharply into focus by information technologies (http://www.educause.edu/ECAR/ECARHome/AboutECAR/94).

FIPSE - Fund for the Improvement of Secondary Education (FIPSE), a unit within the U.S. Department of Education's Office of Postsecondary Education. FIPSE's main activity each year is conducting a grant program intended to support innovative educational reform projects that can serve as national models for the improvement of postsecondary education (www.ed.gov).

FSC- Farmingdale State College a campus of the State University of New York (SUNY).

IM - Instant messaging (IM) a form of real-time communication between two or more people based on typed text. The text is conveyed via devices connected over a network such as the Internet (www.wikipedia.org).

IT- Information technology (IT) includes all matters concerned with the furtherance of computer science and technology and with the design, development, installation, and implementation of information systems and applications (www.ichnet.org).

ITC – Instructional Technology Council (ITC) The Instructional Technology Council provides exceptional leadership and professional development to its network of eLearning

experts by advocating, collaborating, researching, and sharing exemplary, innovative practices and potential in learning technologies (www.itc.org).

LAAP- Learning Anytime Anywhere project (LAAP) a grant program for asynchronous, innovative, scalable, and nationally significant distance education projects. Eligibility requirements for LAAP include at least two partners and a one-to-one matching of requested federal funds (www.ed.gov).

MSCHE- Middle States Commission on Higher Education (MSCHE). The Middle States Commission on Higher Education is the unit of the Middle States Association of Colleges and Schools that accredits degree-granting colleges and universities in the Middle States region, which includes Delaware, the District of Columbia, Maryland, New Jersey, New York, Pennsylvania, Puerto Rico, the U.S. Virgin Islands, and several locations internationally (www.msche.org).

Millennials- people who are characterized as being the first generation to grow up with the Internet, born between 1985 and 2003. (Mills, 2008; Oblinger, 2003).

NCHA - National College Health Association (NCHA*)* is a nationally recognized research survey that can assist in collecting precise data about students' health habits, behaviors, and perceptions (http://www.acha-ncha.org/overview.html).

NCES - National Center for Education Statistics (NCES) is the primary federal entity for collecting and analyzing data related to education in the U.S. and other nations. NCES is located within the U.S. Department of Education and the Institute of Education Sciences (www.ed.gov).

Non-traditional learners - learners with the age criterion of twenty-five years of age or older, often being employed or a caregiver (Maurino, 2006; Tesone, Alexakis & Platt, 2003;).

NSSE- National Survey of Student Engagement (NSSE) obtains, on an annual basis, information from hundreds of four-year colleges and universities nationwide about student participation in programs and activities that institutions provide for their learning and personal development (www.nsse.edu).

NSU - Nova Southeastern University(NSU) a private, not-for-profit institution, offers a diverse array of innovative academic programs at the undergraduate, graduate, and professional levels, complementing on-campus educational opportunities and resources with accessible distance learning programs, and fostering intellectual inquiry, leadership, and commitment to community through engagement of students and faculty members in a dynamic, life-long learning environment (www.nova.edu),

Online course - computer-based instruction in which courses use the World-Wide-Web (WWW) as the primary delivery method of information. A text book may or may not be required and all other materials, as well as communication with the instructor, are provided through the course web-site. Web-based instruction is often used interchangeably with online courses (http://oregonone.org/glossary.htm).

PDA – Personal Digital Assistant (PDA) a handheld computer also known as a palmtop computer. Newer PDAs commonly have color screens and audio capabilities, enabling them to be used as mobile phones (smart phones), web browsers or portable media players (www.wikipedia.net).

RQ- Research Question (RQ). The research question is a statement of what the researcher wants to discover (Author).

SCUP- Society for College and University Planning (SCUP) a community that provides its members with the knowledge and resources to establish and achieve institutional planning goals within the context of best practices and emerging trends (www.scup.org).

SLN - SUNY Learning Network (SLN) is the online instructional program created for the 64 colleges and over 400,000 students in the network (http://sln.suny.edu/sln_aboutsln.htm).

SPSS - Statistical Package for the Social Sciences (SPSS) a leading worldwide provider of predictive analytics software and solutions (www.spss.com).

SREB- Southern Regional Education Board (SREB) designed to help students find and enroll in high-quality courses and programs at colleges and universities in SREB states. Students will be able to complete most of the course work electronically and may not need to leave their hometowns or campuses (http://www.ecinitiatives.org/publications/principles.asp).

Student services - encompasses services designed by a school entity to support the instructional program and to help students attain their educational and career goals (www.bucknell.edu/x4563.xml)

SUNY- State University of New York (SUNY) consists of 64 geographically dispersed campuses that provide educational opportunity within commuting distance of virtually all New Yorkers and comprise the nation's largest comprehensive system of public higher education (www.suny.edu).

WCET - Western Cooperative for Educational Telecommunications (WCET) a membership supported organization open to providers and users of educational technologies. Their mission is to promote and advance the effective use of technology in higher education (www.wcet.info).

WWW – World-Wide-Web (WWW) The hypermedia document presentation system that can be accessed over the Internet using software called a Web browser (www.ichnet.org).

Summary

College students require access to information beyond that which is disseminated in the classroom. They need access to information about the institution, the program in which they are enrolled, library resources and a way to purchase books and supplies. Also needed is an accessible means to people and services at the institution to assist them in answering questions and solving problems. The academy must strive to deliver this information is a variety of ways, not only to ensure ubiquitous access, but also to appeal to the contemporary student and to take advantage of the opportunities technology has made possible.

Chapter 2

Review of the Literature

Introduction

A broad base of current literature was reviewed in order to construct a solid foundation and to support efforts to define the support services needs of the contemporary college-aged student. In-depth analysis and scrutiny of the literature was used to develop a comprehensive argument for the development and implementation of online student support services. This chapter contains four general sections:

- A Different College Experience
- Profile of College-aged Learners
- Millennials as Consumers
    - Currency
    - Customer service
    - E-mail and Instant Messaging
    - Implications
- Support Services – On- campus and Online
    - Defining and Developing Online Student Services
    - Summary

A Different College Experience

During the past decade, online course and degree programs have been made available and serve millions of students in higher education. Online enrollment is expected to keep growing, with predictions indicating a 20% enrollment increase per year during the next few years (Maloney & Oakley, 2006; Allen & Seaman, 2005).

The number of students taking at least one online course is over three million, more precisely, over 3.2 million registered students in the fall 2005 (Foster & Carnevale, 2007). At the same time, the percentage of institutions that state that online education is important to their long-term strategy increased from 48% in 2003, to 53% in 2004 and 56% in 2005 (Allen & Seaman, 2006).

According to the SCUP (2005), the undergraduate student body is mobile with 59% of undergraduate students attending more than one college. More than likely, the expansion of online courses and degree programs will increase the number of mobile students who, in turn will demand greater ease, flexibility and efficiency in transferring credits between institutions.

Student mobility is being supported by innovations in computer hardware; advances that have made hardware ubiquitous, particularly now that mobile devices are nearly as capable as desktop computers were a few years ago. Virtually all colleges and universities are likely to be wireless within the next five years with the newest generation of Wi-Fi networks and the 802.11n standard (SCUP, 2008). The 802.11 n standard is expected to provide faster, more reliable wireless Internet connections, allow for faster audio and video streaming and high definition television at speeds which rival or exceed the speed of a wired network. As more students buy cell phones and laptops with *n* capabilities, many IT managers at colleges and universities have expressed a desire to test this new technology to see how it performs in the campus environment. If successful, it would allow campuses to do away with wired networks, releasing students from the constraints of working in on-campus computer laboratories. Given the 24/7 campus population which has grown up with Internet technology, the *n* standard is expected support their desire for faster more reliable wireless connections

http://www.eschoolnews.com/news/top-news/index.cfm?i=53725&page=3.

Millennials will continue to demand that more learning be delivered asynchronously, via whatever electronic telecommunications device they have at hand. Almost two-thirds of online students live within the region of the institution they are attending and one-third live within 50 miles (SCUP, 2007). This suggests that most students participate in online classes by choice rather than necessity. Scarafiotti and Cleveland-Innes (2006) maintain that the driving force behind the distance education movement was, and still is, access. Traditionally, large geographic distances, limited seating in traditional classrooms and time or family constraints were the major contributors to the demand for new learning modalities. Recently, a new factor is emerging which is contributing to the preference for distance education. The unending evolution of the digital communication tools combined with new, faster broadband technologies holds appeal with many younger learners and will lead them to a way of learning which is aligned with the digital skills they have acquired.

According to the American Council on Education, (ACE, 2006) the trend of students who work while attending school is likely to continue. An increasing number of college students in the 18-25 year old category work either part-time or full-time. During the 2003-04 academic years, 78% of all undergraduates worked while they were enrolled. In a further breakdown, a slightly higher percentage of 82.4% was reported in the 23-24 age brackets. In fact, Shea (2005) notes that more students attend college part-time than full-time and many work during the day, requiring them to access student support services beyond the usual business hours. Working students are ubiquitous in American higher education. Students are more likely to work than they are to live on-campus or to study full time. Students work regardless of their age, family responsibilities, income or expenses. Working while enrolled is perhaps the single most common factor among America's disparate undergraduate population. While the reasons that

students work is varied, 48 % state that work limits their class schedule followed by the number of classes they can take. Academic leaders must react to the fact that most students work while attending college. Giving working students the option to participate and manage their non-academic support needs online is one way college administrators can respond to the needs of the working student.

The college experience is changing. Younger, more mobile students who are working while attending college and seeking a learning experience aligned with their digital skills are drawn to the available, convenient and flexible online learning environments. Developing online support services will no longer be an option for colleges and universities. Postsecondary students expect to be able to interact with their institutions over the Web; they expect technological sophistication and twenty-four-hour access to support services and will align themselves with institutions that meet their needs (Shea, 2005; Lowery, 2004; Scarafiotti & Cleveland-Innes, 2006).

Profile of College-Age Learners

Non-traditional students are older (beyond the 18-24 cohort), employed, and often caregivers, who have completed some higher education (Maurino, 2006; Tesone, Alexakis & Platt, 2003; Diaz, 2002). One of the most striking differences between traditional and non-traditional students is the ability of the older student to be a self-directed learner possessing a high level of internal motivation (Diaz, 2002; Maurino, 2006; Wojciechowski & Palmer, 2005; Ury, 2004; Uhlig, 2002; Tyler-Smith, 2006).

Self-direction and discipline are traits that contribute to the success of online learners (Wade, 1999 as cited in Smith & Ferguson, 2005; Diaz, 2002; Wojciechowski & Palmer, 2005; Uhlig, 2002; Allen & Seaman, 2005; Tyler-Smith, 2006). Students have reported that it is much

easier to fall behind in an online course, and cite characteristics such as self-motivation, commitment and personal responsibility as fundamental to online success (Uhlig, 2002; Ury, 2004; Wojciechowski & Palmer, 2005).

Livingston and Wirt (2004) reported that online enrollment spans all age groups, with 57% of traditional undergraduates aged 19-23 having been enrolled in an online course. In most cases, these students were taking online courses to supplement or as an alternative to campus based courses. Dare et al., (2005) found that students who fit the traditional on-campus profile are increasingly interested in online courses as an alternative to on-campus ones. Moore (2007) concurs, observing that on most college campuses, the largest percentage of online learners are also taking on-campus classes. Based on the results of a distance education survey, the Instructional Technology Council (ITC, 2008) found that millennial students are increasingly attracted to online courses given their understanding and desire to use technology. A dominant theme seems to be emerging which shows increasing numbers of college-aged students combining online courses with on-campus courses to complete their degrees (Maurino, 2006; Maloney & Oakley, 2006; The Condition of Education, 2004; Moore, 2007; Dare et al., 2005). These students are part of a growing population, hybrid learners – who are taking both on-campus and online courses (Dare et al., 2005).

In addition to changing student profiles, colleges and universities are faced with changes in student skills, aptitudes and approaches to learning. As of the turn of the century, millennials have been enrolling in institutions of higher education. Born between 1985 and 2003, they are the first generation to have grown up with the Internet. They have spent their entire lives surrounded by and using computers, videogames, digital music players, PDA's, cell phones, and all the other toys and tools of the digital age. They are a media-rich generation with information

and communication tools available at their fingertips (Prensky, 2005; Scarafiotti & Cleveland-Innes, 2006). Oblinger and Oblinger (2005) describe these students as visually literate, multi-taskers who respond quickly, easily piece together information from multiple sources and expect rapid responses. Lowery (2004) concurs and observes that technological expertise is common among millennials, in most cases exceeding that of their elders and authority figures and fostering a sense of confidence and optimism amongst them. Schee (2008) notes that time spent by young men and woman listening to the radio and watching television is beginning to decline as time spent gaming using consoles, personal computers and online venues increases. They have an instinctive ability to weave together images, text and sound, and easily move between the real and the virtual. Evidence of the popularity of existence in virtual worlds is can be found in Second Life (www.secondlife.com) which boasts over 11 million registered users. Educators are invited to join Second Life free to learn how to use the virtual world to teach classes, network and interact with students in new and unique ways designed to appeal to them.

Junco and Mastrodicasa (2007) surveyed 7,705 college students in the United States and reported:

- 97% own a computer.
- 94% own a cell phone.
- 76% use Instant Messaging (IM).
- 15% of IM users are logged on 24 hours a day/7 days a week.
- 34% use websites as their primary source of news.
- 28% own a blog and 44% read blogs.
- 49% download music using peer-to-peer file sharing.
- 75% of students have a FaceBook account.

- 60% own some type of expensive portable music and/or video device such as an iPod.

Earlier, Oblinger and Oblinger (2005) reported similar responses from over 4,000 traditional-age college students who participated in a 2004 study conducted by the EDUCAUSE Center for Applied Research (ECAR).

The life experiences which have shaped the millennials are quite different from those that shaped previous eras; characteristics commonly found in the millennial student include:

- Preference toward group activity
- Close relationship with parents and identification with their values
- A fascination with technology
- Belief that being smart is cool
- Spend less time watching television
- Racially and ethnically diverse
- Connected generation
- Ambitious achievers
- Service oriented as well as high expectations regarding customer service

(Murray & Bank, 2007; Oblinger, 2003; McGlynn, 2005; Oblinger & Oblinger, 2005; Moore, 2007; Elam, Stratton & Gibson, 2007; SCUP, Demographics, 2007; Lowery, 2004).

Millennial students *live* online. They have a digital literacy that eludes previous generations. Having grown up with widespread access to technology, millennials are able to intuitively use a variety of devices and navigate the Internet (Oblinger & Oblinger, 2005; Prensky; 2004; Schee, 2008).

Millennial students are *connected*. For them, the world has always been a connected place (Prensky, 2005). Highly mobile, moving from work to classes to recreational activities, millennials expect connectivity. The particular device may change depending on circumstance (laptop, cell phone, Personal Digital Assistant (PDA)), but they are constantly connected and always on (Oblinger & Oblinger, 2005; Schee, 2008).

Millennial students expect *immediacy.* Whether it is the immediacy with which a response is expected or the speed at which they are used to receiving information, millennials are fast. They multitask, moving quickly from one activity to another (Prensky, 2001). Millennials have become accustomed to receiving information quickly, whether playing a game or responding to an Instant Message (IM), their expectations of immediacy are the same (Oblinger & Oblinger, 2005; Schee, 2008; Lowery, 2004).

As expanded upon above, digital literacy, connectivity and immediacy are key phrases used to describe millennial college students. Whether millennials are at work, recreational activities or in school their expectations concerning immediacy and connectivity are the same. Similarly, whether the class is online or on-campus, millennial students expect support services to be available anytime/anyplace over the Internet.

Millennials as Consumers

The expectations of the millennial student involve the services and how they are provided. Having grown up in a world of instant gratification made possible through the infusion of technology into their lives, their view of a delayed response results in the perception that their needs or issues are not being given adequate value or attention (Lowery, 2004; Schee, 2008). College-age students are unlike past generations. Millennial learners prefer doing to knowing, trial-and-error to logic, and typing to handwriting. Multitasking is a way of life for

them, staying connected is essential, and there is zero tolerance for delays or lack of service (Howell, Williams & Lindsay, 2003; Schee, 2008; Mills, 2008; Scarafiotti & Cleveland-Innes, 2006).

The business sector has recognized the millennials' need for immediacy and responded with advances in technology that have revolutionized daily life including:

Currency: Cash has begun to disappear from our lives and is being replaced by credit and debit cards. These cards are used to purchase everything from gasoline to groceries. In many cases, millennial students will avoid establishments where cards are not accepted (Oblinger & Oblinger, 2005).

Customer Service: Millennials would rather deal with customer service issues by computer than phone, and more and more institutions are accommodating them. Long wait times and longer lines have been replaced by the speed and accessibility offered by computers. They have grown accustomed to securing instructions, information, and advice as they need it. Younger generation students want to serve themselves (Oblinger & Oblinger, 2005; Lowery, 2004). By developing more self-service options institutions can reduce staff workloads for routine tasks, freeing professionals to focus on the more important individualized service students prefer.

E-Mail and Instant Messaging: Using e-mail to set up meetings and appointments is the chosen alternative to the phone and has become commonplace for millennial students. It allows them convenience and affords a certain degree of anonymity. Three-quarters of young people use Instant Messaging (IM) and more than half choose IM over the telephone (Schee, 2008).

Communication: When breaking news happens, millennials are more likely to turn on the computer than the television. Rather than waiting for a forecast on the local news, millennials are more likely to check a website for the weather. They are just as likely to get their news

online as from a newspaper and conduct research through Google as visit a library (Oblinger & Oblinger, 2005).

Implications: Using technology, which is natural and instinctive for millennials, holds the greatest assurance for responding to their desire for immediate gratification. Millennials have grown-up with information services that provide access all day every day and use mobile devices and the Internet to provide them with convenience and immediacy (Shee, 2008). In fact, Lowery (2004) contends that the millennial generation will demand technical sophistication along with 24 hour access to services they want and need from any institution they interact with – either a bank or university. The use of technology can also contribute to a positive student experience. Results of a recent survey on student engagement suggest that the effective use of technology can improve student engagement (NSSE, 2008).

Howell, et al., (2003) discuss student enrollment trends commenting that students are choosing courses that meet their schedules and circumstances. As previously expanded upon, increasing numbers of students require flexibility due to their life styles and work habits, and will shop for courses that accommodate their agendas. They have grown accustomed to doing business after midnight or shopping at two o'clock in the morning. As a result, they have come to demand 24-hour access to university services such as health care, dining, technical support and libraries. Even though many institutions have developed and provided basic services online, there are still significant opportunities for developing advanced, interactive services over the Internet. Lowery (2004) discusses innovations at Clemson University where academic advising is provided online using webcams – technology faculty may find intimidating, but well within the comfort zone of millennial students.

The demands of students are not only being acknowledged, they are also being met. In 1998, 83% of governors identified "allowing students to obtain education anytime and anyplace via technology" as a critical characteristic of the 21st century university (de Alva, 2000 pp. 34, 38 as cited in Howell, et al., 2003). Given the demand and the response, it is apparent that education is becoming a commodity, and students are the consumers. Schee (2008) reports that marketers who focus on youth consumers take the millennial generation seriously. In September 2007, they gathered at the Millennials Conference in New York City which focused on programming and marketing to their generation (http://www.millennialsconference.com/ny/).

Whether students attend classes on-campus or online, the lifestyle of millennial students necessitates a new evaluation of hours of operation and staff accessibility. Social networks, email, cellular phones, chat rooms and blogs are considered communication necessities for today's college students. The need to interact online is ever-present – with the Internet providing convenience and immediacy. As a result, the academy must respond by aspiring to provide services anyplace/anytime and in real-time if possible (Lowery, 2004; Schee, 2008; Shea, 2005).

Support Services – On-campus and Online

There are numerous situations students will encounter during their college years that require access to some type of supportive service. The expectation that they should get immediate answers to their questions or problems can create obstacles for the student affairs professionals who operate with slower, more deliberate constraints (Coleman, little & Lester, 2007). Oblinger (2003) observes that in a 24/7 customer service culture, delays cause dissatisfaction and disengagement. Providing anytime/anyplace access to student services may be one way that colleges and universities can meet students' expectation for service, immediacy and interactivity (Coleman, et al., 2007; Shea, 2005). The creation of a technology driven

solution would utilize the power of information technology and at the same time deliver services in a manner which would appeal to the millennial learner (Oblinger & Oblinger, 2005; Prensky, 2005; Lowery, 2004). However, putting student services online is not only for online students. The technically savvy millennials expect to be able to interact with their school over the Internet. As the number and extent of student support services continue to grow, millennials want the academy to provide a complete, full-service approach to access them. Students pay fees - and just as any other consumer would, expect services and convenience (Oblinger & Oblinger, 2005).

Institutions must move towards a model in which services are designed around the needs of the student, not the institution (Lowery, 2004; Shea, 2005). The eight regional accrediting commissions have issued a joint statement on the evaluation of online degree and certificate programs. This statement includes five components that makeup guidelines for evaluating services and programs: Institutional context and commitment, curriculum and instruction, faculty support, student support, and evaluation and assessment (Benson, 2003). Regional accrediting agencies require colleges to offer the same student services and support to their distance education and traditional campus-based students. With growing numbers of online students, campuses recognize the need to introduce or expand additional services and support (ITC, 2008). The Southern Regional Educations Board's Electronic Campus (SREB, 2007) designed to help students find and enroll in high quality online courses and programs, states as part of its Institutional Context and Commitment component that students must have reasonable and adequate access to student services and resources appropriate to support their learning. The Middle States Commission on Higher Education echoes this statement and also states that programs should be available to support diverse student populations including older, disabled,

international, distance and distributed students as well as students at sites other than the main campus (MSCHE, 2006).

Defining and Developing Online Student Services: According to the WCET (2003), when student services are considered, the most common services that are incorporated into and time and location independent format are those within the administrative core such as financial aid, admissions and registration. In other words, focus in the past was put on the necessities: availability of admission, registration, and financial aid. Important services a student might encounter and utilize in an on-campus situations such as career planning and placement, counseling, tutoring, advising and other commonly seen campus-based support services had not been given consideration to accommodate the special needs of the distance learning population (Raphael, 2006; Lowery, 2004).

Maloney and Oakley (2006) examined a number of institutions that have achieved significant size in their online programs, and noted common factors that contributed to their successes. Student support services that meet the needs of online students emerged as a trademark of successful for-profit institutions. However, a question arises *Which services are these?* At a more primal level, *What are student services*? The United States Department of Education funded the Learning Anytime Anywhere Partnership (LAAP) project, part of its Fund for the Improvement of Secondary Education (FIPSE), where the WCET worked with institutional and corporate partners to produce a collaborative description of best-practice student support services. For the purposes of the LAAP project, the services were divided into five categories; administrative core, personal services, student communities' suite, communications and academic services. Each category contains a collection of services that online learners

should have available to them. This description can be used to provide general guidance and direction to learning institutions in their efforts to design online student services (WCET, 2003).

Shea (2005) notes that best-practice support services also have other features equally important in the design of online support services including:

- Student centered – Language and procedures should be designed from the student rather than an institutional point of view. Language that students can easily understand should be used rather than the internal language of the institution.
- Blended – Design services holistically by integrating systems and services that historically were separate. For example admission, registration, financial aid and student accounts would fall under the enrollment management umbrella, rather than existing as separate entities.
- Personalized and Customized – Display personalized information and messages millennial students have come to expect. Ensure that students only see information and services which are applicable and relevant to them.
- Customizable – Allow students to change their views and personalize their sites with links or other information.
- Convenient – Ensure that the services, not just the information, are available for extended hours to meet the needs of working, part time and off-campus students.
- Just-in-time – Ensure students receive relevant information just before they need it to help them stay engaged and prevent information overload.

Summary-The student support services defined below represent the most common student services provided for on-campus students as reported in the literature. The services will be defined along with best-practice recommendations (Table 1).

Table 1. Student Support Services.

Service	**Best Practices**	**Literature citation**
Admissions- The first step students take to become associated with or enroll in an institution	• Describe the admissions process • State the admission requirements • Describe methods for obtaining and submitting and application • Online admission form	WCET, 2003; Lorenzetti, 2008
Financial Aid-Has a critical role in choices made by the student; may be crucial in determining which institution they attend, number of credits they take and could even be a determining factor in the student's ability to pursue higher education.	• General Information about financial aid • Identify types of financial aid available • Describe costs • Describe application process • Provide school code for FAFSA application • List deadlines • Supply application and other relevant forms • Provide links to related sites	WCET, 2003
Registration- An administrative service used to enroll in a course	• Describe the registration process • Identify and describe registration methods • Provide an online schedule planner • Provide an online registration form with clear instructions	WCET, 2003
Orientation – An administrative service that helps students become comfortable when enrolling in an online course. Orientation services can also include orienting new on-campus student to the institution.	• Provide a sense of what it is like to be a distance or online learner. • Provide strategies for success • Provide information or links to all pertinent information, requirements, cist information and technical support.	WCET, 2003; Lokken, 2009; SREB, 2007
Technical Support – a service used to assist students with issues related to the use of technology.	• Provide an overview of technical support services available from the institution. • Post scheduled network down times and maintenance • Provide online tutorials and self help tools • Offer assistance through a student help line	WCET, 2003; Lokken, 2009

Service	Best Practices	Literature citation
Career Services – Provide resources to help students develop career plans and well as locate potential employment opportunities.	• Describe services and eligibility requirements. • Provide self-help tools and online tutorials • Display job listings	WCET, 2003
Library Services –Provide online books, journals and reference material.	• Provide orientation materials • Include contact information for librarian • Offer support via email or phone • Provide document delivery Services • Provide self-help tools and online tutorials	WCET, 2003; Distance Education Report, 2008; SREB, 2007
Services for Student with Disabilities- Provide descriptions of services institutions have for disabled students.	• Include general information of the services available to students with disabilities • List eligibility and documentation requirements • Identify and describe available services • Offer assistance in determining assistive technology needs. • Provide a link to related sites • Offer career information specifically geared to students with disabilities.	WCET, 2003; SREB, 2007
Personal Counseling- Provide services to help students deal with psychological issues in their lives.	• Describe personal counseling services • Provide help for those experiencing a mental health crisis • List the counseling staff • Provide self help articles & links • Address confidentiality issues	WCET, 2003; SCUP, 2008
Bookstore- Provide students with the ability to purchase books online having similar offerings and the institution's on-campus bookstore.	• Show merchandise • State relevant policies • Online method to search for textbooks and materials • Identify methods available for ordering books • Provide phone or email help	WCET, 2003; Distance Education Report, 2008

Service	Best Practices	Literature citation
Instructional Support and Tutoring	• Online tutoring opportunities • Provide contact information to enable students to ask questions or see assistance via phone and/or fax • Links to external instructional resources and tutoring\ • Provide tips for study skills and test taking	WECT, 2003; SREB, 2007; Williams, Howell, Laws & Metheny, 2006

An efficient, well-organized and appropriate program of student services will support students and help them reach their educational goals. These services promote the development of the student and can help to fortify learning outcomes. Appropriate and comparable student services should support the learning of all students regardless of the educational delivery system (MSCHE, 2006; Scarafiotti & Cleveland-Innes, 2006). All students deserve access to a full array of student services. Until these are provided, it is unrealistic to expect the same levels of student success between on-campus and online courses (WCET, 2003; ITC, 2008).

Relationship of the Literature to the Study

The evolution of technology has enabled an increasing number of effective methods of teaching and learning in education. However, as Hruthka (2001) stated "excellence in education means much more than course delivery" (Paragraph 2). Support services must go hand in hand with teaching and learning. Students are more likely to finish programs when they are actively engaged with faculty both inside and outside the classroom (SCUP, 2008).

The modern, traditional-age college students are very different from past generations. They are interested in learning that can be done at home and fitted around work, family, and social obligations. They prefer doing to knowing, multitasking is a way of life, staying connected is essential and they have little tolerance for a delayed response.

As instructional delivery methods change, the academy must also change to meet the needs of learners. The investigation will yield proposed recommendations to help guide administrators in the development of online student support services, provide insight into the wants and needs of millennial students and add valuable data to the existing body of knowledge concerning online support services.

Chapter 3

Methodology

Online courses were put into place without consideration for anything other than technical issues (Dare et al., 2005). While technological advancements have made steady improvements in the delivery of online courses possible, little has been done to improve the accessibility and delivery of student services. Completion and satisfaction rates continue to be smaller and lesser in online courses (Nash, 2005; Herbert, 2006). Traditional, on-campus students benefit from student support services and there is mounting evidence that distance learners are more successful when provided with support services (Dare et al., 2005; SREB, 2007). To meet the need of the growing distance learning population and to deliver services in a manner that appeals to students and provides increased accessibility, student services must be pervasive and available without time and place restrictions (Shea, 2005).

The goal was to improve the college experience of millennials by providing a full range of online support services. Following a comprehensive evaluation and discussion of the data collected, recommendations were made to help administrations put into place the non-academic services that students indicated were most important.

Research Design

Descriptive research is used to discover, and then report upon the way things are and to assess preferences, attitudes, practices and interests of a certain group of people. Often when data are analyzed, subgroups are compared such as males and females or respondents of different age ranges. A common way to classify descriptive research involves how data are collected, either through self-report or through observation. The most often used type of self-report

research, survey research, uses questionnaires or interviews to collect data and requires individuals to respond to a series of questions or statements about themselves (Gay et al., 2006).

Data were collected using both surveys and interviews. A survey was used to collect data from respondents using a modified instrument that was tested for reliability and validity as expanded upon in the Instrument Development section of the chapter. Validity is concerned with whether the data or information being gathered is relevant to the decision being made. Reliability is concerned with the stability or consistency of the data or information (Gay et al., 2006). Testing for reliability involves ensuring that when two respondents are in the same situation, they will answer the question in the same way. Differences in answers stem from differences among people, rather than differences in the stimuli to which the respondents were exposed (Fowler, 2002). To assure reliability, the survey instrument was reviewed and modified to eliminate problems such as inadequate wording, undefined or poorly defined terminology and avoiding developing questions which measure more than one item.

A number of factors can diminish the validity of instruments because they can distort the results. The instrument was reviewed to ensure validity by reducing factors such as unclear directions, overly difficult sentence structure, inconsistent and subjective scoring methods or failure to follow standardized administration methods (Gay et al., 2006).

The survey results were analyzed in an effort to determine what non-academic support services and resources students are currently using and what support services or resources students would like to use online. The data were analyzed several ways:

- Subgroups were compared such as males and females or respondents of different age groups.

- Numerical descriptive statistics were used including measures of central tendency, measures of dispersion, measures of relative standing and measures of relationship.
- A series of independent t-tests were used to study the relationship between item responses and gender and item responses and age group.
- A paired t-test was used to study the relationship between need and availability of each item.
- A one way ANOVA was used to examine the relationship between item responses and age.

The survey can be categorized as cross-sectional in that data were collected at one point in time. The instrument can be found in Appendix A.

Interviews with administrative staff and examination of available documents at FSC were used to address the first research question which required the establishment of a list of current support services and their mode of delivery. The list was used as a baseline representing current support services offered at FSC and their mode of delivery. Interviews were the primary method used to gather this information because they allow probing, asking follow up questions and seeking explanations. As prescribed by Gay et al., (2006), an interview is an important qualitative data collection approach in which one person tries to get information from another. A copy of the interview questions can be found in Appendix B.

Instrument Development

If possible, it makes sense to take advantage of the work done by others. However, simply because a question or an entire survey has been used before does not mean that it is reliable and valid for another study. Questions should be reviewed to ensure that they are appropriate for the population, context and goals (Fowler, 2002). A careful review of literature

revealed several surveys and articles that collected data on student support services. Diepenbrock is the name that is currently used by Raphael (2005, 2006). As part of her dissertation, Raphael (2006) developed a survey instrument designed to query distance learners regarding support services. The 2006 article includes key parts of the instrument. Further investigation located the author's dissertation which was available online at the University of Georgia and contained the survey in its entirety http://dbs.galib.uga.edu/cgi-bin/ultimate.cgi?dbs=getd&userid=galileo&serverno=8&instcode=publ&_cc=1.

After examining the survey, it was determined that with modifications, it could be used in the proposed investigation. Permission was obtained from A. Diepenbrock (nee Raphael) to use and modify her survey (Appendix C).

The modifications were as follows:

- The original survey was divided into three sections; a demographic section, a support service section and a section that contained two checklists. The checklists were removed leaving two sections - a demographic section and a support service section.
- Questions that were not applicable to the FSC population were removed. The survey was originally designed for online graduate and undergraduate students; therefore questions were re-phased and geared toward on-campus and online undergraduate students.
- Several new questions were constructed based on the data gathered from interviews with administrative support staff at FSC and added to the survey.
- The heading at the top of each page of the survey was changed to be more concise.
- Directions were inserted at the top of each support service section.

Raphael (2005) discusses how the survey instrument was shown to be reliable and valid. Each of the questions in the original instrument was examined and reliability coefficients were created. Three types of statistical analysis were conducted. Both independent and paired t-tests were utilized as well as the one-way ANOVA procedure. When the data were analyzed using an independent t-test, Levine's test for equality of variances was used; equality of variances is assumed where appropriate. All statistical tests were evaluated at the .05 level. Many types of items are commonly used in questionnaires including scaled items such as a Likert scale, ranked checklist items and free response items. The modified survey retained the same format. Approvals for administering the instrument were obtained from Nova Southeastern University (NSU) and FSC.

Approach

Setting a Baseline: (RQ1) Describe the current state of non-academic, undergraduate support services provided by FSC and by other colleges as per their websites, published literature and when possible through interviews with administrative faculty.

A comprehensive list of services offered at FSC was compiled through personal interviews, examination of published literature and the school website. The list was used to modify some questions from the original survey instrument and to guide construction of new questions. A table was constructed from data gathered during interviews with administrative support staff at FSC to establish a baseline of services (Table 2). Table 2 is contained in Appendix D.

A list of services offered at similar colleges was created. MSCHE was used as a guide in selecting which colleges were chosen (http://www.msche.org/institutions_directory.asp). Schools were selected based on similar size, geographic vicinity and mission to FSC. Much of the information was available on the websites of these colleges. The qualitative data were

collected through an examination of these websites (Gay et al., 2006). The lists of services compiled from FSC and other colleges were referenced in the discussion when solutions and considerations were examined and recommendations were formed.

Constructing and Implementing an Investigation: What kinds of data should be addressed in a support services survey?

A modified survey was used. Several questions from the original survey were modified and new questions were written to ensure the survey would measure what it is intended to measure as outlined by Fowler (2002) and Sapsford (2007). The modified survey instrument was reviewed by Angela Danzi, Ph.D., a Professor of Social Sciences at FSC, by Paula San Millian Maurino, Ph. D., Associate Professor in Computer Systems and an online education specialist at FSC, and by Sheryl Schoenacker, Ph. D., Assistant Professor in Computer Systems and an information literacy specialist. Relevant data about contributing experts appear in Appendix E.

Following recommended modifications to ensure reliability, a pilot study using a sample of FSC students was conducted (Gay et al., 2006). Again, any necessary modifications were made.

How should the survey be implemented to ensure maximum participation?

The question concerns deployment and implementation of the survey. It was offered to all students at FSC using a web-based survey application. An email solicitation letter was sent through the FSC e-mail system and through the ANGEL course management system inviting students to participate. The solicitation letter can be found in Appendix F. Participation was voluntary. A link to a secure web-site was included on the bottom of the solicitation letter. Student who chose to participate followed the link to the web-site and viewed an online waiver of informed consent. The waiver of informed consent can be found in Appendix G. At the

bottom of the informed consent letter are two buttons. One states *I wish to participate in the survey* and the other states *I do not wish to participate in the survey*. The web address of the survey was camouflaged and could not be ascertained by a user. The only way to access the survey was by clicking the *I wish to participate in the survey* button. This security measure was undertaken to ensure that only the respondents who read the online waiver of informed consent and selected the button that indicated willingness to participate in the survey would be able to access it. The survey took approximately 15-20 minutes to complete. To encourage honest responses and participation the survey was administered anonymously; it was impossible to determine if a respondent had completed the survey more than once. This presented a problem because it could not be determined who had or had not replied. A second request was sent out with a letter explaining that anonymity means that the people who have already replied could not be identified and therefore to please ignore the second request (Sapsford, 2007).

Analyzing the Investigation: (RQ2) What services do millennials want online in order to enhance their college experience?

Research question 2 was addressed following an in-depth analysis of the data collected from the survey. The data analyses were conducted using Statistical Package for the Social Sciences (SPSS) statistical software. The statistical tests performed on the data included measures of central tendency, specifically the calculation of mean and standard deviation and other bivariate calculations including ANOVA and independent and paired t-tests. Only significant findings were reported. Differences in demographics amongst participants such as gender, employment status, hours worked each week and age were also examined. Age was focal; those participants deemed millennials had additional comparative examinations performed.

(RQ3) Are students receiving all of the support services they feel that they need to be successful?

In order to determine if students are receiving all of the support services that they feel they need, a paired t-test was used to analyze data in an effort to compare need and availability of services. Additionally, the difference in the means between need and availability were presented for all statistically significant pairs.

Multiple statistical tests were performed on the data gathered from the survey. These tests illuminated statistical significance amongst questions. Survey questions which had significant findings were indicative of which support services would most enhance the experience of millennial students.

Data Collection

Fowler (2002) notes the method to collect data is related to the sample frame, research topic, characteristics of the sample and available staff and facilities. It has implications for response rates and cost. It is not uncommon to use more than one method to collect data, for example using personal interviews and a survey. The role of self-administered techniques has grown largely due to the development of the Internet because of the anonymity and convenience it provides.

Fowler (2002) notes that in most surveys when factual data are being collected and respondents are asked to fit themselves or their experiences into a category the data are considered to be nominal. When the data being collected are subjective, respondents are asked to provide nominal and/or ordinal data about subjective states. The data gathered involved asking respondents to provide nominal data; they were asked to select a category into which their feelings, opinions or perceptions fall.

The procedure for data collection was as follows. Respondents who agreed to participate were directed to the survey as expanded upon above. When the survey was completed, the submit button was clicked for the data to be saved to the database. When the deadline for survey participation was reached, the web-link was no longer available. At that point a file was generated containing survey responses. The file was used as input for data analysis using SPSS statistical software. A report was prepared where significant findings were presented and analyzed and where recommendations were constructed to offer suggestions and considerations to better enable learning institutions to augment the student experience when accessing non-academic support services online.

Resources

People

In an effort to determine the current status of student services which currently exist at FSC, interviews were conducted with administrative faculty. The list of interview questions is contained in Appendix B. A table has been developed which displays the administrative faculty who were interviewed and their area of responsibility (Table 3).

Table 3. Administrative Faculty at FSC

Name	**Title and Area of Responsibility**
Dr. Lucia Cepriano	Vice President of Student Affairs and Enrollment Management
Sandy Lory-Snyder	Director – Student Activities
Dolores Ciaccio	Assistant Director – Career Development Center
Marguerite J. D'Alosio	Director – Student Success Center and Programs Student Life
Karen Gelles	Librarian
Malika Edelman	Director – Services for students with disabilities
Ruth Salarnis	Tutoring
Agnes Kalemaris	Math Center
Christine Sanchez	Writing Center
Carol Balewoski	Campus Housing
Dr. Andrew Berger	Personal Counseling and psychological services
Marvin Fisher	Campus Police

Materials or Technology

The survey was created by using the programming language ASP.net. The survey was located on a FSC private server. The data were stored in a database designed with Microsoft 2008 SQL database programming language on the same server. After all data were collected, a

file was generated which was used as input into the SPSS statistical software program for data analysis.

Delimitations

Delimitations are factors that may affect the study but are controlled by the investigator. There were two delimitations that affected the investigation. The first delimitation was the study location. The pool of potential participants was delimited to one SUNY campus with a total enrollment of approximately 7,000 students.

The second delimitation involved the time period in which the survey was available during the spring 2009 semester. The survey was available for approximately four weeks; however during that period of time the college campus was closed for approximately 10 days due to spring break and religious holidays.

Summary

The goal was to improve the college experience of millennials by providing a full range of online support services. This investigation explored to what extent learners express that their student support service needs are currently being met. To begin, interviews were conducted with various personnel at FSC to determine the state of current support services offered to students (Appendix D). A list of support services offered at similar institutions was also compiled. Survey development began with an instrument used by Raphael (2005) with her permission (Appendix C). Using the compiled list of support services offered at FSC, certain questions were modified and new questions were developed in order to capture the students' desire for online support services and to explore to what extent their needs were being satisfied. The survey document was programmed and stored on a college server and was made available to all FSC

students using the Internet. Reported demographic data facilitated the analysis of various sub-groups within the population.

The outcomes and recommendations were presented to the Vice President Student Affairs and Enrollment Management along with a short set of questions (Appendix I). A short summary of her responses are contain within Chapter 5. Her responses can be found in their entirety in Appendix Q. Additionally, Chapter 5 provides answers to and discussion of the research questions along with implications and recommendations for meeting the support service needs of undergraduate millennial college students. A summary of the dissertation research and processes are also included.

Chapter 4

Results

Introduction

Prior to college, most students have used a wide variety of technologies in their everyday lives, audio book cassettes as young nonreaders, e-books and sophisticated handheld games as adolescents, cell phones used to text to "talk to" their friends—and social networking sites such as FaceBook and Twitter to interact anytime, anywhere via the Internet. Undergraduate students between the ages of 17-24 are often referred to as millennials and are characterized as being the first generation to grow up with the Internet (Oblinger, 2003). They view information technology as a natural part of the environment and expect the ability to access their college records, register and pay for classes online, participate in online classes, manage their course and college needs online and at their convenience (Oblinger & Oblinger, 2005).

Yet too often, students' use of technology in higher education settings has been relatively unsophisticated, consisting of searching the Internet, accessing an online course or word-processing. Nowhere is the lack of technical sophistication more evident than in student support services for students studying online who want to interact with their institution without time and place constraints (Mills, 2008). While campus-based students have the option of accessing support services in person, quite often online students are left to fend for themselves.

Design and Development

After a thorough review of literature, an existing survey was chosen and modified guided by baseline data collected at FSC to gather data regarding online support services. The survey was divided into eleven categories - Distance Learning Needs, Online Admissions and Administrative Services, Online Orientation, Online Advising, Online Career Services, Online Services for Students with Disabilities, Online Personal Counseling, Online Academic Support,

Online Opportunities for Campus Life, Online Library Services and Online Bookstore Services. Additionally, there was a section where demographic data were collected including, age, gender, employment, campus status and credits completed. Permission was obtained from A. Diepenbrock (nee Raphael) to use and modify her survey (Appendix C).

A total of 476 online surveys were completed out of 6,419 surveys sent, 7.42% (There was no published reference. Data were obtained by an internal search of BANNER records). The survey was available on a private FSC server and accessible through the Internet from March 26th, 2009 until April 27th, 2009. The Senior Staff Support specialist for the School of Business at FSC maintained the server where the completed surveys were stored. The survey data were converted to Excel spreadsheets and stored on a flash drive. The stored data were then uploaded into the researchers' desktop computer and fed into SPSS 14.0 (statistical program) for analysis.

Sample Size

Sampling is the process of selecting a number of individuals for a study in such a way that the individuals represent the larger group from which they were selected. Individuals in the defined population must have an equal and independent chance of being selected for the sample. Every individual had the same probability of self-selection (Gay et al., 2006). A general approach was based on a formula originally developed by the United States Office of Education, where Krejcie and Morgan developed a table of appropriate sample sizes based on population (as cited in Gay et al., 2006). Based on this table, a minimum sample size of 364 is appropriate for a population of 7,000.

Gay et al., (2006) notes that beyond a certain point (about n=5,000), the population size is almost irrelevant and a sample size of 400 would be adequate. Thus, the 476 surveys completed were sufficient to produce a valid and reliable investigation.

Due to the nature of the data collection process, a completely accurate return rate could not be calculated. While there were 6,419 students who were invited to participate, it was not possible to track the students who did complete the survey. In an effort to increase return rate, flyers advertising the survey and inviting students to participate were distributed. Invitations to participate were forwarded to students by instructors or they were invited to participate through an e-mail solicitation letter which was delivered either through the FSC e-mail listserv and/or through ANGEL CMS course mail.

Limitations

While the results have implications for student affairs administrators who make decisions concerning the planning, preparation and implementation of support services, there are limitations to this investigation that must first be acknowledged. A convenience sample was used. A convenience sample is a sample where the participants, in part or in whole, were selected at the convenience of the researcher and where the researcher makes no attempt, or only a limited attempt, to ensure that this sample is an accurate representation of some larger group or population (Gay et al., 2006). As stated previously, FSC is a typical SUNY campus, with a demographic of students typical of any other regional SUNY school (http://www.suny.edu/About_suny/fastfacts/index.cfm). The results presented in this report can reasonably be extrapolated to other SUNY campuses.

There were limitations related to the data collection process. Invitations to participate were sent to students through FSC email and through ANGEL course mail. Additionally, posters

were placed in strategic locations throughout the campus. Furthermore, oral announcements were made at school related functions, clubs and events. While there were estimated numbers of students invited to participate, a totally accurate number could not be calculated. Despite best efforts, there were students who were unaware of the opportunity to participate, did not look at their e-mail, did not comprehend the instructions or overlooked the closing date of the web-based survey instrument.

Implementation

The survey was used to ascertain which online support services are currently available to students and which online support services they perceive as needed. Once the survey was closed, data were analyzed using a variety of statistical tests. Only results that were significant at the .05 alpha levels will be discussed. Furthermore, when the data were analyzed using an independent t-test, Levine's Test for Equality of Variances was used. Equal variances are assumed in data collected and were verified using Levine's Test for Equality of Variances.

Demographic data is presented first followed by analysis of the data collected using descriptive statics. Next, the data collected from the survey is presented. Participants varied in gender, age, credit hours completed, course delivery, employment status and number of hours worked per week. Demographic information of participants is summarized in Table 4. The respondents were 61.5% male and 37.4 % female. Age ranged from 17 to 50(+) years old. The average age of males was 21 and of females 23. Approximately 81% of the respondents attended classes on-campus, 18.2 % attended on-campus and online classes, and less than 1% attended only online classes. Approximately three-quarters were employed (73%) with 61.5% being male and 38.5% female. Both genders reported working an average of 27 hours per week.

Approximately 65% of the unemployed respondents were male. Employed and un-employed respondents had similar averages with respect to credits completed.

Table 4. Demographic Characteristics of the Sample

Variable	**n**	**Percent**
Gender		
Males	298	62.6%
Females	178	37.4%
Status		
Online	4	<1.0%
On-campus	385	81.0%
Both	87	18.2%
Age		
17-24 years old	409	85.9%
25-29 years old	28	5.8%
30-30 years old	21	4.4%
40-49 years old	10	2.1%
50+ years old	8	1.6%
Hours Completed		
0 – 30 hours	116	24.3%
31- 60 hours	144	30.2%
61+ hours	216	45.3%
Employment Status		
Employed	348	73.1%
Not Employed	128	26.8%
Hours Worked		
0 – 15 hours	190	39.9%
16 -30 hours	175	36.7%
31- 40 hours	92	19.3%
41- 50 hours	15	3.1%
Over 50 hours	3	0.6%

Analysis – Setting the Baseline

A comprehensive list of services offered at FSC was compiled through personal interviews, examination of published literature and the school website. The list was used to modify existing and/or guide construction of new questions on the survey instrument. The list was constructed from data gathered during interviews with administrative support staff at FSC and examination of the college website and published literature and can be found in (Appendix D).

A similar baseline was constructed to explore the range of services comparable colleges provide to undergraduates across academe. The colleges that were examined were City University of New York (CUNY) and State University of New York (SUNY) schools in New York State. All information concerning support services was obtained through examination of college websites and portals as per Gay et al., (2006) who recommended that qualitative researchers can gain valuable information from examining various types of records or documents found in educational environments. The Internet and the WWW provided information and resources on many education topics and were a useful resource. The resulting data enabled an analysis and comparison of services currently offered at FSC and other colleges to their undergraduates' on-campus and online.

CUNY is the nation's largest urban public university. It serves more than 243,000 degree-credit and 240,000 adult, continuing and professional education students. It connects students, faculty and staff with a directory of departments including the Help Desk, Human Resources, Registrar, Student Life and others. A basic description of the CUNY portal can be found in Table 5 (Appendix J).

The School of Professional Studies (SPS) at CUNY serves the New York City area and offers graduate and undergraduate certificates and degree programs in a wide range of fields, including CUNY's first online Baccalaureate program. The Online Baccalaureate now offers two majors, a Bachelor of Arts in Communication and Culture and a Bachelor of Science in Business. Both degrees use an interactive online format to take advantage of current technologies, providing flexible and convenient ways for working adults to complete their baccalaureate degree. Table 6 lists the online support services provided by SPS (Appendix K).

SUNY's 64 geographically dispersed campuses bring educational opportunity within commuting distance of virtually all New Yorkers and comprise the nation's largest comprehensive system of public higher education. The 64 campuses are divided into four categories, based on educational mission, the kinds of academic opportunities available, and degrees offered. They are: Community Colleges, Technology Colleges, Comprehensive Colleges, Research and University Centers. With a total enrollment of more than 427,000, students are pursuing traditional study in classrooms and laboratories or are working at home, at their own pace, through the SUNY Learning Network (SLN) and Empire State College.

Empire State College offers individual courses and full degrees through online learning. Students work asynchronously at convenient times and locations. Students communicate with faculty and course instructors by means of e-mail, telephone and through discussion areas online. Table 7 lists the online support services available through Empire State College (Appendix L).

SLN is a partnership in learning with SUNY campuses. SLN works with SUNY campus faculty and staff to provide online learning experiences at accredited New York State Institutions. SLN supports campuses with educational training specifically created for online teaching and learning. SLN also provides helpdesk services for both students and faculty who

participate in the SUNY Learning Network. Online courses are offered through select SUNY campuses. Table 8 summarizes the online support services available to students participating in an SLN course (Appendix M).

Both CUNY and SUNY are similar in terms of numbers of students. The CUNY campuses are located in a much smaller geographic area than the SUNY campuses, CUNY is urban; SUNY more rural. However, CUNY schools offer many more online student support services to their students through the CUNY Portal. SUNY provides limited online support to SLN students. While most SUNY campuses offer basic services online, for the most part they are limited to the administrative core including services such as online admission, registration, financial aid and library services. However, further examination of individual SUNY campuses reveal that many provide additional online support services. Online support services at selected SUNY campuses are detailed in Appendix N.

Evaluation

In order to determine what online support services undergraduate students want and need and which support services will enhance the college experience of millennial students, descriptive statistics for the 53 likert-type instrument items were analyzed. The five reported student services deemed most and least important are listed by mean in Table 9. The two items with the highest mean are *Online access to the college catalog* (M = 4.34 SD = .852) and *Clear, complete and timely information regarding curriculum requirements* (M = 4.17 SD = .1.00). The two items with the lowest mean are *A distance learning student government* (M = 3.43 SD = 1.08) and *A website that link to other colleges and universities counseling centers site* (M = 3.63 SD = 1.04).

Table 9. Means and Standard Deviations of the Five Most and Least Important Student Services

Most Important			Least Important		
Survey Item	**M**	**SD**	**Survey Item**	**M**	**SD**
Online access to the college catalog	4.34	.852	A distance learning student government	3.43	1.08
Clear, complete and timely information regarding curriculum requirements	4.17	1.00	A website that links to other colleges and universities counseling centers site	3.63	1.04
Online payment and tracking of orders	4.15	.976	An online information literacy workshop	3.76	1.01
Access to real-time academic advisors	4.13	.996	An online writing lab	3.76	1.09
An online bookstore that includes online textbook Ordering	4.12	.983	Access to online links and information regarding Locally based counseling services	3.73	.966

An independent t-test and a one-way ANOVA were utilized to analyze the data by age. Findings from the independent t-test are presented in Table 10 and findings from the ANOVA are presented in Table 11. For the independent t-test, the data were organized according to age and broken to students' status as (17-24 years of age) and (25 - 50+ years of age). There were five items that yielded significance, yet it was the non-traditional group (aged 25 – 50 +) that had the higher mean score, meaning that non-traditional students generally rated online support services with a higher need than the millennial students.

Table 10. Independent T-test Based on Age: Need for Services

Survey Item	Millennial M	Millennial SD	Non-Traditional M	Non-Traditional SD	t	p
Access to Student Services beyond 8 a.m. – 5 p.m.	3.94	1.00	4.28	1.07	-2.591	.01
Online access to the academic honesty policy.	3.76	.963	4.01	.077	-1.983	.04
An orientation that explains available student services such as orientation, advising, bookstore or library.	3.79	.989	4.06	1.04	-2.019	.04
Information regarding confidentiality in regard to counseling services.	3.76	.934	4.00	.953	-1.981	.04
Online Library Journals (e-journals)	3.92	1.00	4.25	.990	-2.546	.01

An ANOVA was also employed to analyze and compare different age groups. Six of the 53 items produced significant results at the .05 alpha level. These findings are presented in Table 11.

Table 11. ANOVA Test Based on Age: Need for Services

Survey Item	**F**	**df**	**p**	**Tukey**
Access to individual online advising	3.209	475	.013	5>2
Clear, complete and timely information regarding curriculum requirements	3.533	475	.007	5>2
Access to real-time academic advisors.	3.499	475	.007	1>2 5>2
Information regarding supplemental instruction and other academic support services.	2.998	475	.018	5>2
Online library journals (e-journals)	2.483	475	.043	5>1
Online library assistance	2.557	475	.038	5>2

Group 1 = 17-24 years old Group 2 = 25-29 years old Group 3 = 30-39 years old
Group 4 = 40-49 years old Group 5 = 50 + years old

An independent t-test was used to analyze gender differences. Table 12 presents the items on which female students rated the service more important than did male students. There were no items on which male students rated a service more important than female students.

Table 12. Independent T-Test Based on Gender: Need for Services

Survey Item	Females M	Females SD	Males M	Males SD	t	p
An online library catalog that includes online look-up	4.15.	074	3.91	1.09	-2.625	.009
An online information literacy workshop	3.90	1.09	3.67	.957	-2.469	.019
Online Library Books (e-books)	4.22	.983	3.91	.990	-3.406	.001
Online Library Journals (e-journals)	4.15	1.02	3.86	.986	-3.062	.002
Online Library Assistance	4.04	.996	3.77	.960	-3.035	.003
Online Library Book Renewal	4.02	1.06	3.82	.058	-2.087	.037
Online Study Tips	4.00	1.03	3.80	1.02	-2.074	.039
Information Regarding learning Assistance	3.94	.981	3.76	.927	-2.041	.042
Access to all-year academic advising	4.19	1.03	3.93	1.01	-2.645	.008
Access to real-time academic advisors	4.26	.916	4.05	1.03	-2.311	.021
Online access to Student handbook	4.02	.954	3.80	.997	-2.312	.021
Access to career services goal and decision making assistance	4.17	.862	3.92	.993	-2.879	.004
Counseling or appropriate referral services for those experiencing a mental health crisis	3.91	1.02	3.69	1.01	-2.267	.024
A sense of community that makes students feel connected to the institution.	3.96	.994	3.76	1.04	-2.085	.038

To determine if students are receiving all of the support services that they feel they need, a paired t-test was used to compare student need and availability of services. For each significant pair, the mean of the need scores was rated higher than the mean of the availability scores. For this research question only, all results were significant and displayed in Table 13 (Appendix O). To further illustrate the difference between the need for online support services and their availability, the difference in the mean values were calculated and presented. Results are displayed in Table 14 (Appendix P).

Summary

With a total of 476 surveys completed, data were analyzed using descriptive statistics to produce the mean and standard deviation of each question. The five questions that were deemed the most important and the five questions that were deemed the least important according to their mean value were presented. Furthermore, three types of statistical analysis were conducted. An independent t-test, a paired t-test and a one-way ANOVA procedure were utilized. When the data were analyzed using an independent t-test, Levine's test for equality of variances was used; equality of variances is assumed where appropriate. All statistical tests were evaluated at the .05 level.

Statistically significant results were found with respect to gender and age of participants. Additionally, significant results were found with regard to need and availability of services using a paired t-test. The difference in the mean between need and availability of services were presented in descending rank order to further illustrate the differences between need and availability of online support services. A discussion of these results follows in Chapter 5.

Chapter 5

Conclusions, Implications, Recommendations and Summary

The goal was to improve the college experience of millennials by providing a full range of online support services. To meet the goal, recommendations were constructed to better enable learning institutions to maximize the student experience and satisfaction when accessing non-academic services online. Answers to the research questions and related discussion are addressed in conclusions. Implications contain a discussion of the highlights of the findings and their significance to administrative and academic support people. Recommendations support the implications and offer suggestions for carrying the research further. A summary of the overall investigation ends the report.

Conclusions

Research Question 1 : Describe the current state of non-academic, undergraduate support services provided by FSC and by other colleges as per their websites, published literature and when possible, through interviews with administrative faculty.

A comprehensive list of services offered at FSC was compiled through personal interviews, examination of published literature and the school website. The list was used to modify existing and/or guide construction of new questions on the survey instrument. The resulting list Table 2 (Appendix D) reflects the support services offered at FSC and their mode of delivery. A similar baseline was constructed to explore the range of online services comparable colleges provide to undergraduates. The colleges that were examined were either CUNY or SUNY schools in New York State. The resulting lists were used to construct several tables which reflect the online support services offered at SUNY and CUNY schools. These are Table 5 - CUNY Portal (Appendix J), Table 6 - Online Support Services at SPS (Appendix K),

Table 7 – Online Support Services at Empire State College (Appendix L) and Table 8 – Online SLN Support Services (Appendix M).

It was surprising to discover that the CUNY schools offer a much more comprehensive array of online support services than do the SUNY schools, despite the fact that the CUNY schools are located in a much smaller geographic area. CUNY has developed a web-based portal where students can easily access a vast array of support services without time or place constraints. In contrast, online support services offered at SUNY campuses greatly vary from school to school. Examination of individual SUNY campuses indicates that remote and rural SUNY campuses have a more extensive online support system available to their students than their less rural counterparts.

Further research may provide additional factors or circumstances that explain the differences in online support services among the SUNY schools. Furthermore, it would be valuable to explore the potential of a SUNY-wide solution where online support services could be offered in a manner similar to the CUNY campuses.

Research Question 2: What services do millennials want online in order to enhance their college experience?

Evaluation consisted of several statistical techniques. Student services needs were determined with descriptive statistics; the mean was used to rank needs. The student services needs, *Online access to the college catalog* and *Clear, complete and timely information regarding curriculum requirements* were ranked with the highest need.

As noted in Chapter 2, the trend of students who work while attending school is likely to continue (ACE, 2006). An increasing number of millennial college students' work either part-time or full-time (Shea, 2005). The ability to access the college catalog in which programs and individual courses are described in detail and the ability to obtain timely information about

specific requirements of their curriculum is obviously extremely important for working students. Busy individuals who are dividing their time between work and school want to make sure that they register for courses that are applicable and pertinent to their degrees. Online access to the college catalog offers students detailed descriptions of course and degree programs providing them with the information they need to make informed decisions.

Online payment and tracking of orders and *An online bookstore that includes online textbook ordering* were also ranked as very important needs or services. It is not surprising that bookstore services are critical to the contemporary college student. The ability to purchase books at the physical campus bookstore may not be feasible for many students due to commitments at work. The ability to purchase books and track orders online makes it possible for working students to begin classes with all needed materials and supplies. Contemporary learners perceive that these services play a critical part in their success in relation to other student support services.

The item with the lowest mean was *A distance learning student government*. It appears that millennials do not consider a distance learning student government a priority, perhaps because most have other means of developing relationships with their cohorts. For example, young adults are typically the first to adopt new technologies (Oblinger & Oblinger, 2005). Many of these early adopters are new students who bring these technologies onto college campuses. Some of the biggest trends in 2008 include the emergence of Web 2.0 and social net-working phenomena such as blogs and wikis, as well as new online video repository and delivery websites such as YouTube, iTunes U, and Big Think. Additionally, the adoption of virtual reality websites such as Second Life has provided higher-education institutions with new venues for class gatherings and learning (Cisco Internet business solutions Group (IBSG), 2008).

Millennials may consider using these new technologies as an alternative to traditional student government.

A website that links to other colleges and universities counseling centers site and *Access to online links and information regarding locally based counseling services* were not ranked as crucial services. The low ranking of these items may be explained by the fact that students may have other avenues available to them for counseling through their place of employment (Raphael, 2005). For example, many companies have an Employee Assistance Program (EAP) that provides counseling services. However, in spite of the low ranking of this item, there is evidence that suggest students are seeking personal counseling on-campus more often. According to the SCUP (2008), the mental health of students attending college is increasingly becoming a cause for concern. Over 90% of campus counseling center directors report an increase in the number of students seeking counseling. Additionally, counseling directors are reporting an increasing number of students with severe psychological problems with 8.5% of enrolled students seeking counseling in 2007 (National Survey of Counseling Center Directors, 2007 as cited in SCUP, 2008). While *Online personal counseling* may have rated low as compared to other online student support services, this could change in the future given recent economic downturns, unemployment and other stress causing factors (Kelleher, 2009).

Ironically, the passage of the new GI bill is likely to aggravate the problem as veterans from Iraq and Afghanistan return to college with an increased likelihood of stress-related disorders, physical and mental abuse issues and physical disabilities http://www.insidehighered.com/news/2009/06/01/vets. Furthermore, the largest education-benefits payment in the 65 year history of the GI Bill started flowing on August 3, 2009 from the United States Treasury Department to more than 100,000 college-bound veterans. The expanded

Bill pays for veterans of the wars in Iraq and Afghanistan to attend in-state public colleges at no cost to them. Over 130,000 veterans have applied (Wright, 2009).

An online writing lab had the second lowest mean. This item addresses one very specific avenue for academic support and may not mean that learners deem this service un-important. It is possible that this activity is perceived to take up more time than these individuals want to invest in improving their writing skills.

An online information literacy workshop was ranked in the bottom five items by mean, however, it was one of only 14 items that proved to have significance at the .05 alpha level when tested using the independent t-test by gender. In fact, two items from the *Online library services section* were found to be significant amongst the female population in the independent t-test. One explanation for a low mean value could have been the gender ratio of the population. Given that the total population was 62.6% male, the low ranking of this item may have been influenced the larger male population.

Differences in independent t-test based on age: Need for Services

Millennials and non-traditional students were compared with respect to differences based on age. The data were organized according to age and broken down into two categories. The first category contained the survey results from millennial students (17-24 years of age) and the second group from all remaining students (25 - 50+ years of age). There were five items that yielded significance, yet for each item, it was non-traditional students who ranked the items as more important than the millennial students.

It was surprising to find that *Access to student services beyond 8 a.m. – 5 p.m*. had a higher mean score for older students. An explanation can again, be found in gender differences. Oblinger and Oblinger (2005) discuss the results of a 2004 survey designed to ascertain how

students spent their time using the computer; responses of 4,374 students were captured. They were mostly traditional-age (millennial) college students from 13 institutions in five states. Ninety-five percent of the students were 25 years old or younger and enrolled full-time. Males, especially the youngest in the sample, were reported more likely to spend time playing computer games, surfing the Internet and downloading music. Females were found to spend more time communicating. These gender differences could account for the lower mean score from millennials concerning accessing support services beyond 8 a.m. – 5 p.m. as almost two-thirds of the population surveyed were male. Males tend to use the Internet more for entertainment than for communication. It is not surprising that after regular business hours, males would use their computers more for entertainment than to take care of business or school needs.

The fact that the older students rated *Online access to the academic honesty policy* higher than millennials is not surprising. The millennials are a generation for whom technology has always been integrated into their lives. Oblinger and Oblinger (2005) observe that this technical expertise has caused traditional educational practices and ethics to come into question. For example, cheating- traditionally a major ethical infraction, is on the rise on college campuses. Technology is helping students cheat. Massive amounts of available information combined with the ease of cutting and pasting between documents makes plagiarism attractive and simple.

An orientation that explains available student services such as orientation, advising, bookstore or library was rated higher by the older students. Millennials are consumers, concerned with taking courses where they can see the relationship to their end goals. It is easy to imagine that millennials would not view this service as crucial, perhaps believing that they already have the ability to navigate the Web to glean this information.

Information regarding confidentiality in regard to counseling services was rated with a higher need by the older students. This may be explained by the older group of students having had more experience with lapses in confidentiality than their younger counterparts; non-traditional students may have suffered the consequences of confidentiality breeches. Furthermore, millennials have become accustomed to sharing information about themselves using a multitude of social networking sites such as FaceBook and Twitter. It is quite possible that millennials' views of confidentiality are different from those of older individuals.

The low ranking of *Online library journals (e-journals)* may be explained by the millennials reliance on, and comfort with technology. The average millennial college student increasingly relies on Web sites and Internet archives for information (Oblinger & Oblinger, 2005). For those reasons faculty and librarians must still teach and demonstrate basic research skills such as finding journals, evaluating primary sources, digging through archives, or even perusing library shelves. The low ranking of this item may be due to the belief by many of today's contemporary learners that they can learn solely on the Internet and use only the Web to glean information and complete their assignments, but they cannot.

Differences in ANOVA Test Based on Age: Need for Services

The one-way ANOVA was used to examine the relationship between item responses and age. There were six items which produced significant results. Three of the items dealt directly with obtaining information about curriculum requirements and access to advisors and the other items were concerned with library and academic support. *Access to individual online advising, Clear, complete and timely information regarding curriculum requirements* and *Access to real-time academic advisors* were rated with a higher need by older students. The only item yielding a higher need for millennials was *Access to real-time academic advisors*.

It is interesting to note that the oldest and youngest of the participants felt a strong need for *Online access to real-time academic advisors*. Additionally, *Online access to real-time academic advisors* proved to have the largest difference in the means between the need for the service and the availability of the service, clearly demonstrating that students do not have access to this service which they feel that they need. The importance of academic advising is further supported by several recent investigations (NSSE, 2007; CCSSE, 2007). Students who meet with their adviser are more likely to gain from college (NSSE, 2007) and 61% of respondents reported that academic advising is very important (CCSSE, 2007). However, both investigations indicate that advising is not happening for everyone as 10% of four-year students and 36% of community college students have never seen an advisor (NSSE, 2007; CCSSE, 2007). Participants 50+ rated *Access to individual online advising* and *Clear, complete and timely information regarding curriculum requirements* as a higher need than participants aged 25-29. This may be explained by a lack of experience with the rigors of choosing an academic schedule that fulfills degree requirements by new students and students who are long removed from the college experience (50+). There were also significant differences amongst participants 25-29 and 50+ and while such differences may reflect the different stages of life that students are in, both groups of students would be characterized as non-traditional on most campus-based institutions.

Online library journals (e-journals) and *Online library assistance* appear to be most important to students over 50. The importance of library assistance to students over 50 years old may be due to their inexperience with using library materials in electronic form. Most of these students have had little experience using electronic library materials; most would have completed their higher education before library materials were converted to electronic form or before

libraries regularly subscribed to electronic newspapers, magazines or journals. Older students may feel a need to have assistance readily available or be trained in the use of electronic information available through a library.

It is interesting to observe that in the above discussion of differences in need of services by age (millennial or non-traditional) in all but one of the services yielding significant differences between the groups, the non-traditional students rated the services with a higher need than the millennial students. It is also interesting to note that there is little existing literature that differentiates between services for students of different ages. While many campus-based institutions have provided offices and/or limited support services for non-traditional learners, these findings imply a need for providing all support services online as well.

Differences in Independent T-test Based on Gender: Need for Services

Fourteen items from seven sections yielded significant differences by gender. In each significant item, female students rated the service more important and none where male students rated a service more important. Six of the items deal with support for using the library and specifically with obtaining information that would support completing assignments and other student-related activities. Most institutions offer some type of orientation in the use of their library. It may be possible that female participants did not find the library orientation sufficient.

Four of the eight remaining significant items deal with academe, either in the area of academic support or academic advising. The last four items deal with obtaining specific types of information or obtaining access to individuals who will support the journey or enable connections with other persons.

Research Question 3: Are students receiving all of the support services they feel that they need to be successful?

To answer the question, a paired t-test was used to analyze the data. Every one of the survey question pairs bore significant results. Furthermore, for each significant pair, the mean of the need scores was rated significantly higher than the mean of the availability of service scores. While it was expected that many students would feel that they are not receiving the support services they need, these results were overwhelming. For every support service listed, the participants felt that they were not receiving the services to as high a degree that they needed them. While there are differences in the extent to which students ranked the need and availability of specific services, clearly a major issue has been uncovered. These results indicate that administrations must revise the way in which the services are delivered. The magnitude of the differences between the need and availability of support services demonstrates the degree to which the need for support services exceeds their either real or perceived availability.

Implications

The outcomes add to existing literature on online support services. The results suggest that providing support services online can help to support both millennial and non-traditional students who participate in both online and on-campus courses.

Furthermore, the outcomes add to the body of literature that report that providing anytime/anyplace access to student services may be one way that institutions can meet students' expectations for service, immediacy and interactivity (Coleman, et al., 2007, Shea, 2005). Institutions must move towards a model in which services are designed around the needs of the student, not the institution (Lowery, 2004; Shea, 2005, SREB, 2007). The MSCHE (2006) states that programs should be available to support diverse student populations including older, disabled, international, distance and distributed students as well as students at sites other than the

main campus. Findings presented could be used to support the development of online support services geared towards diverse student populations.

Additionally, regional accrediting agencies require colleges to offer the same student services to support distance and campus-based students. While colleges and universities have moved rapidly to develop online courses, equal effort has not been given to the development of support services that accompany those courses. Services should be available at the same times that academic courses are, yet very few institutions provide a full array of academic and administrative services that can be accessed at anytime from anyplace (SREB, 2007). The detailed findings provide insight into considerations for the design and implementation of online support services and offer recommendations to help administrations put into place the non-academic services that students indicated were most important.

The investigation revealed that students feel that they are not receiving online support services at a desired level. Any significant difference between the need and availability of service should be given consideration. Despite the overall rankings of need for services or differences between males and females, or participants of different age groups, the results show that for all the 53 likert-type items, participants overall did not perceive to be receiving adequate support services. Inadequate support services are a determent to the learning process (LaPadula, 2003, Herbert, 2006). Student services play a direct, vital role in success, including academic performance, psychological growth and program or certificate completion. Furthermore, evidence is mounting that services designed to serve distance learners also better serve those who live on or near the campus. Institutions that can provide quality, convenient services that are available at all times and in alternative formats are more likely to distinguish themselves from their peers and increase enrollment (SREB, 2007).

While many institutions have moved services in the administrative core online, others that are traditionally campus-based need equal consideration. Bookstore purchases and tracking, library, advising, career counseling, tutoring, services for students with disabilities and personal counseling need to be moved online and expanded for learners whose work schedules, physical distance from campus, family situation or other limitations impede them from traveling to campus. The growing use of technology in both on-and-off campus education makes possible new student services as well as new delivery formats for all students.

As administrative support staff continue to develop online student services, those services with the highest mean scores should be given first consideration. Additionally, services with the highest difference in means between need and availability scores should be a priority in deciding what services to create or expand. The magnitude of the differences in these scores illustrates the degree to which need exceeds provision.

Recommendations

The findings contribute to the knowledge base concerning the development and implementation on online student support services. Recommendations were formulated from an analysis of the findings, consideration of baseline data collected from similar institutions and demographics of contemporary students.

Need verses Availability

Of utmost importance, findings indicate that students perceive that they have a higher need for support services than is currently being met. Providing adequate student services and technology support services to distance learning students must be a priority. Previously, the focus of online student services was on the services which are part of the administrative core such as financial aid, admissions and registration. The findings clearly indicate that services

outside of the administrative core need equal consideration; specifically attention should be focused on the following student services:

Online Academic Advising

Online academic advising should be an option for students. It was one of the services which were ranked as most desired by students; as well as having one of the greatest differences between the need and availability. Several recent studies have demonstrated the connection between academic advising and student success, yet academic advising is not happening for all students (NSSE, 2007; CSSE, 2007).

According to NSSE (2008), academic disengagement is a major problem in undergraduate education; occurring when students enter college, go to class, but don't interact with professors or advisors outside of the class. Online academic advising will provide an opportunity for students who would otherwise not be able to benefit from traditional face-to-face academic advising and at the same time provide opportunities for students and faculty and advisors to form connections outside of the classroom.

Online Personal Counseling

Online personnel counseling and career services were generally rated with a lower need than other services, however these services need to be implemented in order to better serve students. The mental health of students attending college is increasingly becoming a cause for concern, in both the US and Canada (SCUP, 2008). According to the American College Health Association (ACHA) and the National College Health Association (NCHA) the top five impediments to academic performance are:

- stress
- cold/flu/sore throat

- sleep difficulties
- concern for friend or family
- depression/anxiety disorders

The rate of students reporting ever being diagnosed with depression has increased 56% in the six years from 10% in spring 2000 to 16% in spring 2005. Additionally, 13% of students reported experiencing an emotionally abusive relationship in the 2004-05 academic years http://www.acha-ncha.org/pubs_rpts.html. While personal counseling may not have been ranked as one of the most important online support services needed, findings indicate that learners are not currently receiving adequate personal counseling support at school. Additionally, with nearly all campus counseling center directors reporting an increase in the number of students seeking counseling, an online counseling system will provide a much needed alternative or supplemental service to students in crisis.

Gender Distinctions

Findings clearly indicate that student affairs professionals need to consider gender in the development of student support services. Females expressed a greater need for certain support services, specifically *Online library services, Online academic support* and *Online advising* than did males. Putting the most desired support services online will provide benefits for on-campus students as well as online students. The ITC (2008) recently released distance education report notes approximately 59% percent of distance education students are female. In that online courses offer the only real growth in enrollments at most colleges, student affairs professionals need to consider the implementation and development of services that are most in demand by their distance students.

Age Distinctions

Considerations regarding differences in services based on age are indicated – however, it was the non-traditional students who recorded a significantly higher need for most support services than the millennial group. These differences were scattered among the support service categories somewhat concentrated in the Online advising section. It was surprising to discover that non-traditional students consistently rated the implementation of online support services at a higher need than millennial students. Age distinctions should be considered in the development of support services as the support services needs of millennial students are different from those of non-traditional students.

Future studies should address the actual delivery of support services. Are many of these services already available and students are simply unaware of their existence or how to use them? This investigation did not examine whether students used or would use services they knew were available. Could a solution be found in the delivery and promotion of services rather than developing more services?

A similar study could focus on participants from a variety of institutions rather than a single school. Additionally, another study could make an effort to collect data from more online learners as well as students that take both online and on-campus courses to ascertain if their needs are significantly different.

Recommendation from FSC/SUNY Administrator

The final step in the process was the review of the recommendations above by the Vice President of Student Affairs and Enrollment Management, Dr. Lucia Cepriano. The questions posed and her responses appear in Appendix Q. Most significant is the following paragraph:

> Two excellent recommendations would be appropriate for FSC/SUNY and similar institutions – online academic advisement and online personal counseling. While we do concede that online services in these areas will not soon replace the traditional, campus-based, face to face service that most colleges and university now offer, to expand those traditional offerings to include an online component would allow a greater proportion of the campus community to avail themselves of these services. These online services would resolve a number to issues related to the reasons why some students do not avail themselves of the traditional face-to-face interactions.

Summary

Higher education is changing. For the past several years, online enrollments have been growing substantially faster than overall higher education with the most recent data showing no signs of a slowdown. While there will eventually be a limit on the growth of online enrollments; the current data show that this limit has not yet been reached, as double-digit growth rates continue (Allen & Seaman, 2008).

Traditional college students have also undergone significant changes. Millennials, a new generation of students who have grown up with the Internet, are college-age. They use the Internet daily to manage their lives – accessing bank accounts, paying bills and shopping online. They expect access to the Internet. However, the colleges they attend do not have a full range of support services available online. While many schools have some, their efforts are less than satisfactory when measured against the expectations of the contemporary college-aged student (Shea, 2005).

The goal was to improve the college experience of millennials by providing a full range of online support services. To reach the goal, recommendations were constructed to better enable learning institutions to maximize the student experience and satisfaction when accessing non-academic services online. A published survey was used to collect data from respondents. Permission was obtained to modify and use and the survey (Appendix B). Data gathered through interviews with administrative support staff at FSC were used to modify the survey and to guide

construction of new questions. The modified instrument consisted of 53 two-part questions on student services that students rated scales of need and availability along with six questions designed to collect demographic information. The survey was created by using the programming language ASP.net and located on a FSC private server. As data were collected, they were stored in a database designed with Microsoft 2008 SQL database programming language on the same server. The survey was available from March 26, 2009 – April 27, 2009. A total of 476 out of 6,419 were completed. The modified instrument can be found in Appendix A.

When the survey was closed, a file was generated which was used as input into the SPSS statistical software program for data analysis. Data analysis consisted of a variety of techniques. Descriptive statistics were prepared where the mean was calculated to display support services students deemed most and least important. In analyses where only two data sets were compared, t-tests were utilized. In all but one test, independent t-tests were used. One analysis was made using paired t-tests. To compare participants of different ages, a one-way ANOVA was utilized which facilitated comparison of multiple independent variables (age). For all significant findings using the ANOVA, a Tukey post-hoc test as well as a Bonferroni post-hoc test were conducted to determine where the differences lie. When the data were analyzed using an independent t-test, Levine's test for equality of variances was used; equality of variances is assumed where appropriate. All statistical tests were evaluated at the .05 level.

Survey results were analyzed and used to create recommendations and considerations for the implementation of online support services at the college. Significant results were found with respect to gender and age of participants. Additionally, significant results were found with regard to need and availability of services using a paired t-test. The difference in the mean between need and availability of services were presented to further illustrate the differences

between need and availability of online support services. Of utmost importance, the investigation revealed that students felt that they were not receiving online support services at a desired level. Despite the overall rankings of most desired and least desired support services or differences between males and females, or difference between different age groups, the results show that for all the 53 likert-type items, participants overall did not perceive to be receiving adequate online support services.

The investigation produced significant contributions about millennial students and non-traditional students with regard to online student support services. In particular, new insights were provided into their wants and needs concerning online student support services and to the degree to which these needs were currently being met. An unexpected finding was that many non-traditional students expressed comparable or even a greater need for online support services than their younger counterparts

The final report is a comprehensive resource for college administrators who serve millennial undergraduates and contains valuable information and guidance for the development and implementation of online student support services to meet the needs of students in the 21st century. The remarks of the Vice President at the study site (Appendix Q) indicate that the college plans to take the findings to the next step.

Appendix A

Survey Instrument

Support Services for Millennial Undergraduates

The purpose of this study is to examine what learners express as their perceived needs in regard to online student support services.

Demographic information for the study.

Gender ◉ Male ○ Female

Age [ ] *

Attendance ◉ On-campus ○ Online ○ Both

Completed credits [ ] *

Are you employed? ○ Yes ◉ No

If Yes, how many hours a week do you work? [0.00]

Distance Learning Needs

Please select the number that best represents to what extent you agree or disagree with the following statements.
1=Strongly Disagree 2=Disagree 3=Don't Know 4=Agree 5=Strongly Agree

		1	2	3	4	5
1.	Access to Student Services beyond 8a.m - 5p.m.					
	Students need this	○	○	◉	○	○
	This is available to me	○	○	◉	○	○
2.	Training in taking an online college course.					
	Students need this	○	○	◉	○	○
	This is available to me	○	○	◉	○	○
3.	Easy access to a live person to answer questions about online learning.					
	Students need this	○	○	◉	○	○
	This is available to me	○	○	◉	○	○
4.	Interactive student services, allowing for self-services as well as live support.					
	Students need this	○	○	◉	○	○
	This is available to me	○	○	◉	○	○

Online Admissions and Administrative Services

Please select the number that best represents to what extent you agree or disagree with the following statements.
1=Strongly Disagree 2=Disagree 3=Don't Know 4=Agree 5=Strongly Agree

		1	2	3	4	5
5.	Online access to the college catalog.					
	Students need this	☐	☐	☐	☐	☐
	This is available to me	☐	☐	☐	☐	☐
6.	Online access to the academic honesty policy.					
	Students need this	☐	☐	☐	☐	☐
	This is available to me	☐	☐	☐	☐	☐
7.	Online access to the student handbook.					
	Students need this	☐	☐	☐	☐	☐
	This is available to me	☐	☐	☐	☐	☐
8.	Online access to a listing of services provided by the institution.					
	Students need this	☐	☐	☐	☐	☐
	This is available to me	☐	☐	☐	☐	☐

Online Orientation Services

Please select the number that best represents to what extent you agree or disagree with the following statements.
1=Strongly Disagree 2=Disagree 3=Don't Know 4=Agree 5=Strongly Agree

		1	2	3	4	5
9.	An orientation that includes preparation for the time management skills necessary to be a successful learner.					
	Students need this	☐	☐	☐	☐	☐
	This is available to me	☐	☐	☐	☐	☐
10.	An orientation that includes technology training.					
	Students need this	☐	☐	☐	☐	☐
	This is available to me	☐	☐	☐	☐	☐
11.	An orientation that explains available student services such as orientation, advising, bookstore or library .					
	Students need this	☐	☐	☐	☐	☐
	This is available to me	☐	☐	☐	☐	☐

Online Advising

Please select the number that best represents to what extent you agree or disagree with the following statements.
1=Strongly Disagree 2=Disagree 3=Don't

Know 4=Agree 5=Strongly Agree

	1	2	3	4	5
12. Access to individual online advising.					
Students need this	○	○	◉	○	○
This is available to me	○	○	◉	○	○
13. Clear, complete, and timely information regarding curriculum requirements.					
Students need this	○	○	◉	○	○
This is available to me	○	○	◉	○	○
14. Access all year to one-on-one and/or group academic advising.					
Students need this	○	○	◉	○	○
This is available to me	○	○	◉	○	○
15. Access to real-time academic advisors.					
Students need this	○	○	◉	○	○
This is available to me	○	○	◉	○	○

Online Career Services

Please select the number that best represents to what extent you agree or disagree with the following statements.

1=Strongly Disagree 2=Disagree 3=Don't Know 4=Agree 5=Strongly Agree

	1	2	3	4	5
16. Clear descriptions and eligibility requirements for career planning and placement services.					
Students need this	○	○	◉	○	○
This is available to me	○	○	◉	○	○
17. Access to real time career counselors.					
Students need this	○	○	◉	○	○
This is available to me	○	○	◉	○	○
18. Notifications of important events, jobs, and other career related information.					
Students need this	○	○	◉	○	○
This is available to me	○	○	◉	○	○
19. Access to career services job search information.					
Students need this	○	○	◉	○	○
This is available to me	○	○	◉	○	○
20. Access to career services goal and decision-making assistance.					
Students need this	○	○	◉	○	○

This is available to me ○ ○ ◉ ○ ○

Online Services for Students with Disabilities

Please select the number that best represents to what extent you agree or disagree with the following statements.
1=Strongly Disagree 2=Disagree 3=Don't Know 4=Agree 5=Strongly Agree

21. Information on eligibility and documentation requirements for disability services. 1 2 3 4 5

Students need this ○ ○ ◉ ○ ○

This is available to me ○ ○ ◉ ○ ○

22. Descriptions of what are reasonable and appropriate accommodations available through disability services. 1 2 3 4 5

Students need this ○ ○ ◉ ○ ○

This is available to me ○ ○ ◉ ○ ○

23. Access to assistive technology. 1 2 3 4 5

Students need this ○ ○ ◉ ○ ○

This is available to me ○ ○ ◉ ○ ○

Online Personal Counseling

Please select the number that best represents to what extent you agree or disagree with the following statements.
1=Strongly Disagree 2=Disagree 3=Don't Know 4=Agree 5=Strongly Agree

24. A website that clearly describes the counseling resources, including self-help materials. 1 2 3 4 5

Students need this ○ ○ ◉ ○ ○

This is available to me ○ ○ ◉ ○ ○

25. Access to referral information. 1 2 3 4 5

Students need this ○ ○ ◉ ○ ○

This is available to me ○ ○ ◉ ○ ○

26. Access to contact information for staff. 1 2 3 4 5

Students need this ○ ○ ◉ ○ ○

This is available to me ○ ○ ◉ ○ ○

27. Information regarding confidentiality in regard to counseling services. 1 2 3 4 5

Students need this ○ ○ ◉ ○ ○

This is available to me ○ ○ ◉ ○ ○

	1	2	3	4	5
28. A website that links to other colleges and universities counseling center sites.					
Students need this	○	○	◉	○	○
This is available to me	○	○	◉	○	○
29. Counseling or appropriate referral services for those experiencing mental health crises.					
Students need this	○	○	◉	○	○
This is available to me	○	○	◉	○	○
30. Access to self-help tools.					
Students need this	○	○	◉	○	○
This is available to me	○	○	◉	○	○
31. Access to online links and information regarding locally based counseling services.					
Students need this	○	○	◉	○	○
This is available to me	○	○	◉	○	○
32. Access to information about health and wellness programs.					
Students need this	○	○	◉	○	○
This is available to me	○	○	◉	○	○

Online Academic Support

Please select the number that best represents to what extent you agree or disagree with the following statements.

1=Strongly Disagree 2=Disagree 3=Don't Know 4=Agree 5=Strongly Agree

	1	2	3	4	5
33. An online writing lab.					
Students need this	○	○	◉	○	○
This is available to me	○	○	◉	○	○
34. Online study tips.					
Students need this	○	○	◉	○	○
This is available to me	○	○	◉	○	○
35. An online math lab.					
Students need this	○	○	◉	○	○
This is available to me	○	○	◉	○	○
36. Information regarding learning assistance.					
Students need this	○	○	◉	○	○
This is available to me	○	○	◉	○	○

	1	2	3	4	5
37. Information regarding supplemental instruction and other academic support services.					
Students need this	○	○	◉	○	○
This is available to me	○	○	◉	○	○

Online Opportunities for Campus Life

Please select the number that best represents to what extent you agree or disagree with the following statements.
1=Strongly Disagree 2=Disagree 3=Don't Know 4=Agree 5=Strongly Agree

	1	2	3	4	5
38. A web portal/learning community that helps students feel connected to other students, faculty, staff, and the institution.					
Students need this	○	○	◉	○	○
This is available to me	○	○	◉	○	○
39. A distance learning student government.	1	2	3	4	5
Students need this	○	○	◉	○	○
This is available to me	○	○	◉	○	○
40. Newsletters and announcements regarding institution related information.	1	2	3	4	5
Students need this	○	○	◉	○	○
This is available to me	○	○	◉	○	○
41. A sense of community that makes students feel connected to the institution.	1	2	3	4	5
Students need this	○	○	◉	○	○
This is available to me	○	○	◉	○	○

Online Library Services

Please select the number that best represents to what extent you agree or disagree with the following statements.
1=Strongly Disagree 2=Disagree 3=Don't Know 4=Agree 5=Strongly Agree

	1	2	3	4	5
42. An online library catalog that includes online lookup.					
Students need this	○	○	◉	○	○
This is available to me	○	○	◉	○	○
43. An online information literacy workshop.	1	2	3	4	5
Students need this	○	○	◉	○	○
This is available to me	○	○	◉	○	○
44. Online library books (e-books).	1	2	3	4	5

	1	2	3	4	5
Students need this	○	○	◉	○	○
This is available to me	○	○	◉	○	○

45. Online library journals (e-journals).

	1	2	3	4	5
Students need this	○	○	◉	○	○
This is available to me	○	○	◉	○	○

46. Online library assistance.

	1	2	3	4	5
Students need this	○	○	◉	○	○
This is available to me	○	○	◉	○	○

47. Online library book renewal.

	1	2	3	4	5
Students need this	○	○	◉	○	○
This is available to me	○	○	◉	○	○

48. Online ILL (Inter library loan).

	1	2	3	4	5
Students need this	○	○	◉	○	○
This is available to me	○	○	◉	○	○

Online Bookstore Services

Please select the number that best represents to what extent you agree or disagree with the following statements.

1=Strongly Disagree 2=Disagree 3=Don't Know 4=Agree 5=Strongly Agree

49. An online bookstore that includes online textbook lookup.

	1	2	3	4	5
Students need this	○	○	◉	○	○
This is available to me	○	○	◉	○	○

50. An online bookstore that includes online textbook ordering.

	1	2	3	4	5
Students need this	○	○	◉	○	○
This is available to me	○	○	◉	○	○

51. An online bookstore that clearly describes all delivery methods.

	1	2	3	4	5
Students need this	○	○	◉	○	○
This is available to me	○	○	◉	○	○

52. An online bookstore that clearly describes all relevant policies.

	1	2	3	4	5
Students need this	○	○	◉	○	○
This is available to me	○	○	◉	○	○

53. Online payment and tracking of orders.

	1	2	3	4	5
Students need this	○	○	◉	○	○

This is available to me 

Submit

/w EWngQC96Ctc

Appendix B
Interview Questions

Interview questions for Administrative Staff at FSC for determining what student services are offered online and on-campus.

1- What is your official title?
2- What support services does your department offer to students at FSC?
3- Are the services offered online?
4- Are the services offered on-campus?
5- Are the services available both online and on-campus?

Appendix C
Letter of Permission to Use Survey

Hi Marie,

I received your voicemail yesterday about using my needs instrument for your dissertation study. (If you emailed me at the address on the OJDLA site, I have changed my name since then so I didn't receive your email). Anyway, yes, that is fine to use my instrument. I ask that you give credit/citation in your work to my instrument, and I would be interested in seeing your results, or how you alter the survey.

Thanks,
Amy

Amy Diepenbrock, PhD
Director, Career Services
Barry University
adiepenbrock@mail.barry.edu
(305) 899-4010

Note: Dr. Diepenbrock was Amy Raphael at the time her Dissertation was published in 2005.

Appendix D
Support Services at FSC

Table 2. Support Services at FSC

Service/ Department	Online	On-Campus
Student Advisement		X
Registration	X	X
Tutoring		X
Bookstore	X	X
Financial Aid	X	X
Bursar Services	X	X
Bookstore	X	X
Orientation		X
Tours		X
Student code of conduct Signoff		X
Health service forms	X	X
Housing tours		X
Library Services		
Orientation		X
Information literacy workshops		X
Catalog	X	X
Library Books	5000 e-books	100,000 books
Journals	Some citations and abstracts Some full text	2006 – present Journals on microfilm
Research Guide	X	X
Library assistance	e-mail 24hour response	X
Library book renewal		X
Library late fee payment		X
ILL (Inter Library Loan)	X only in OCLC Databases	X
Career Development		
Career Assessment		X
Resume Preparation		X
Interview Preparation		X
Job Search Skills		X
Career Related wkshps		X
Job Fair Internships		X

Service/ Department	Online	On-Campus
Career e-news	X	
Orientation		X
On-campus recruitment		X
Student Success Center		
Peer Mentoring		X
Electronic Student Information resource		X
Study Skills Workshop		X
Time Management Workshop		X
First Year Experience		X
Success Center Brochure & Newsletter		X
One on One student Counseling		X
Resource &Information Center		X
Services for Students with Disabilities		
Policies for students With disabilities	X	X
Counseling		X
Assistive technology Advisement and Preparation		X
Orientation support services		X
Alternate test site prep		X
E-book text	X	X
Job placement and job Readiness for students With disabilities		X

Appendix E
Biographies of Contributing Experts

Dr. Paula San Millan Maurino is an Associate Professor in the Computer Systems Department, School of Business, at Farmingdale State College, State University of New York, Farmingdale, New York. She has been teaching at the college level for over twenty years and holds a Ph.D. in Information Studies, a Master of Science Degree in Instructional Design, and a Bachelor of Administration Degree in Public Accounting. Her research interests lie in distance learning and human computer interaction.

Dr. Angela D. Danzi is a Professor of Sociology at Farmingdale State College, State University of New York. She was Chairperson of the Department of Sociology and Anthropology from 2000 to 2006. She earned a B. A. in Urban Studies from SUNY Old Westbury in 1983, and an M. A. and Ph. D. in Sociology from New York University, 1993. Her dissertation: *From Home to Hospital: Jewish and Italian American Women and Childbirth, 1920-1940* was published by University Press in 1997. Her research interests include ethnicity, gender and health, and her articles have appeared in journals and conference proceedings. She is the recipient of the Elena Cornaro Award for Outstanding Contributions to Education (2003), and the Farmingdale State College Alumni Award for Excellence in Education (2004).

Dr. Sheryl Schoenacher is a assistant professor in the Computer Systems Department at Farmingdale State College in New York since 1998. Her teaching interests include courses in systems analysis and design, management information systems, and Web development. She is a member of the College-Wide Curriculum Committee, active in curriculum development in her department, and played an integral part in the creation of the Department's new Web

Development Track. She successfully defended her dissertation entitled, "The Information-Gathering Behavior of Main Street Merchants and the Effect of Social Capital on Information Access". Her Ph.D. in Information Studies was awarded by the Palmer School of Long Island University in May 2008. She has won awards for the Elizabeth K. Reilly Scholarship and the Doctoral Students Research Competition for her work, "Orality and Literacy in a Suburban Town Community" as well as the Best Paper Award at the 2008 Business & Economics Conference.

Appendix F
E-mail Solicitation Letter

Email solicitation message to potential participants:

Here is your chance to make a difference! You are invited to participate in a research study designed to determine which online support services students want and need in today's digital world. Let your voice be heard! Please complete this brief online survey by going to (website address)

Thank you for participating
Marie Pullan – Assistant Professor Computer Systems Department
Doctoral Candidate – Nova Southeastern University – Computing Technology in Education Program

Appendix G
Online Waiver of Informed Consent

Support Services for Millennial Undergraduates

The purpose of this study is to examine what learners express as their perceived needs in regard to online student support services.

Default.aspx

Dear Farmingdale College Student:

You are invited to participate in a research study entitled; "Support Services for Millennial Undergraduates" conducted by Marie Pullan, Department of Computer Systems, Farmingdale State College, under the direction of Dr. Trudy Abramson, Nova Southeastern University, 3301 College Avenue Fort Lauderdale-Davie, FL 33314-7796.

The purpose is to examine what learners express as their perceived needs with regard to the usual student support services that exist on-campus. This study will also explore to what extent these needs are currently being met.

If you choose to participate, your participation will involve completing an online survey that asks about online student support services. It should take no more than 15-20 minutes to complete the survey. You will be asked which services you are currently receiving and which services you would like to receive online. In addition to being published in the researchers' dissertation, the results will be analyzed and shared with the dissertation candidate's committee.

Participation is voluntary and confidential. Your consent or refusal to participate will not affect your grades. Once your electronic survey data are received, standard confidentiality procedures will be employed. There is no risk involved. If you are not comfortable with the level of confidentiality provided by the Internet, please feel free to print out a copy of the survey, fill it out by hand and mail it to me at:

Farmingdale State College
Attn: M. Pullan
2350 Broadhollow Road
Farmingdale, NY 11735.

The researcher, Marie Pullan, will analyze the data collected from the survey. All completed survey data will be kept in a secure environment.

The researcher will answer any further questions about the research, now or during the course of the project. Contact Marie Pullan via email Marie.Pullan@farmingdale.edu or phone (631) 420-2639. You can also contact the Institutional Review Board (IRB) to answer any questions or

concerns. The IRB's phone number 954-262-5369, Toll Free: 866-499-0790. The email address is (IRB@nsu.nova.edu).

I have read the preceding consent form, or it has been read to me, and I fully understand the contents of this document and voluntarily consent to participate in the research study entitled "Support Services for Millennial Undergraduates". All of my questions concerning the research have been answered. I hereby agree to participate in this research study. If I have any questions in the future about this study they will be answered by Marie Pullan. A copy of this form has been given to me. This consent ends at the conclusion of this study."

I agree to take the survey | I don't agree to take the survey

Appendix H
Letter of Cooperation

Farmingdale State College
State University of New York

Memo to: Marie Pullen, Assistant Professor
Computer Systems Department

From: Dr. Lucia Cepriano, Vice President
Student Affairs and Enrollment Management

Date: April 21, 2008

Subject: Letter of Cooperation

This memo is to affirm that I will assist in the preparation of your doctoral thesis by reading your findings and providing you, in writing, with my feedback.

I am looking forward to seeing your results and wish you the very best in the conduction of your research.

Appendix I
Review Questions for Feedback from Recommendations

1. Are the recommendations readily understandable?
2. Are they appropriate to FSC/SUNY and similar institutions?
3. Is there anything that is unnecessary?
4. Is there anything that is missing?
5. How likely is it that the institution will move forward on the recommendations?

Please be as expansive as possible in your answers.

Thank you for your time and interest.

Marie Pullan, (August, 2009)

Appendix J
CUNY Portal

Table 5. CUNY Portal

E-Sims	**E-Permit**	**Cardinal Check**	**Online Career Vault**	**College Central Network**	**Focus career and educational planning system**	**TIPPS**
Change address/phone/email Pin Register Get transcript Check grades/schedule Financial aid/ tuition bill	Allows students to make arrangements to take courses at other CUNY colleges, without having to contact (in person) the host or home college for approval	An automated advising tool that provides information on students progress towards completing their degree requirements	Download information on industry career guides, industry employer guides and other career topic guides. Get advice, information and network with other job seekers on the largest online career community with VAULT'S electronic water cooler.	Post job, internship and career positions online. Jobs board link. Free service to students as well as corporate partners.	Online self-guided interactive program designed to help students select the correct college major and plan their career based on personal interests, values, skills, personality and aspirations	University database that contains course equivalents within the City of New York University system. This website also contains information concerning university transfer policies for students with associate degrees from CUNY.

Appendix K
Online Support Services at SPS

Table 6. Online support services for the SPS.

Health Insurance	**Virtual Bookstore**	**Blackboard**	**Library**	**Online advisors**	**FAQ's**
Health insurance is available to matriculated CUNY students who are enrolled for six credits or more each term through an HMO (Health Maintenance Organization) provided by GHI. The policy includes the provision of an array of hospital and medical benefits (including mental health care) as well as a "Good Health Incentives Program" that offers discounts on popular and widely used health-related products and services.	The CUNY School of Professional Studies Virtual Bookstore is your one-stop source for all your textbook and course material needs. This site was designed for you to: -Buy textbooks -Track textbook orders -Sell textbooks back from a previous semester	The CUNY Online Baccalaureate's virtual campus is supported by Blackboard. And will be used for all aspects of your classes and will be where you communicate with your professors and fellow students.	CUNY Online Baccalaureate students have access to library services both online and through Baruch College's Newman Library. Online Baccalaureate students will also have access to all CUNY libraries as well as a large multi-disciplinary electronic collection provided to all CUNY students.	Advisors are available to speak with you, day and evening, by chatting live online or by calling 212-652-CUNY (2869).	Students can go to Frequently Asked Questions searchable database for answers to any questions regarding the CUNY Online Baccalaureate and its programs

Appendix L
Online Support Services at Empire State College

Table 7. Online Support Services offered at Empire State College

Financial Services	**Bookstore**	**Specialized Services**	**Connect with Fellow students**	**Contacts**	**Learning Support**
Financial aid/student accounts	Purchase books/track orders/online book store	Resume builder/disability services/online voter registration forms	Student academic conference/ all alumni/student events	Online help desk/ Online and local tutoring services/student services professional for filing academic grievances or other academic or non academic issues.	Online library/writing center/ tutoring service/mathematics library

Appendix M
Online SLN Support Services

Table 8. Online Support Services offered through SLN.

SLN Helpdesk	**Training/Teaching Support**	**Technology Support**
Available 24 hours, 7 days a week via email, or by telephone during operating hours.	Online instructors participate in a wide variety of educational and professional development - from technology training to working in virtual online worlds. SLN is involved in online educational activities globally.	Campuses receive the best in technology support - from the latest versions of online learning systems to 24/7 to helpdesk support

Appendix N
Support Services at SUNY Schools

SUNY at Morrisville - http://www.morrisville.edu

- Online advisement
- Online chat to address admission/financial aid issues
- Online information channel that contains useful information about college events, class cancellations, college office hours, club information and financial aid.

SUNY at Alfred- http://www.alfredstate.edu/

- Online career services (career beam). Career Beam is a 24/7 virtual career center.
- Online parent newsletter
- Online news
- Online transfer credit eligibility

SUNY Old Westbury - http://www.oldwestbury.edu

- Online tours
- Online maps
- Online campus events
- Online career services
- Online mental health and alcohol counseling
- Online internship and job search

SUNY at Cobleskill - http://www.cobleskill.edu/

- Project muse - Project MUSE is a unique collaboration between libraries and publishers providing 100% full-text online access to over 380 high quality humanities and social sciences journals from over 60 scholarly publishers.
- Cobynet- Cobleskill's information network – One stop access to SUNY Cobleskill news, weather, class cancellations, web mail with FaceBook links
- Banner Web – provides access to many administrative functions for students, faculty and staff including course registration, bill payment, and access to grades.
- Online event map
- Online commuter student services
- Online list of approved programs and descriptions

SUNY at Oswego - http://www.oswego.edu

- MyOswego-On online forum where students can:
- Activate and Update NYAlert info

- Activate and/or forward SUNY Oswego email account
- Change PIN or Security Question
- View Address and Phone number
- Print Immunization Report
- Update Local Address
- Register – ADD/DROP classes/Check registration status
- View Holds/Schedule/Grades
- Apply to Graduate
- Request books from College Store
- View Status/Eligibility
- View Award Information
- View/Pay bill
- View Tax Notification

Rave Guardian- In the event of emergency, critical information will be provided to SUNY Oswego University Police to help them quickly respond. This service is provided free of charge by SUNY Oswego.

Discover- DISCOVER is a web based career planning program designed to assist all current students and alumni with many aspects of career/job search decisions. .

Appendix O
Paired T-Test Based on Need and Availability of Online Support Services

Table 13. Paired t-test Based on need and availability of Online Support Services

	Need				Availability	
Survey Item	**M**	**SD**	**t**	**p**	**M**	**SD**
Access to Student Services beyond 8 a.m. – 5p.m.	3.99	1.02	12.67	.000	3.19	1.04
Training in taking an online college course.	3.72	1.07	10.31	.000	3.03	.993
Easy access to a live person to answer questions about online learning.	3.83	1.05	15.24	.000	2.89	.955
Interactive student services, allowing for self-services as well as live support.	3.87	.943	15.14	.000	3.04	.841
Online access to the college catalog	4.34	.853	10.63	.000	3.85	1.02
Online access to the academic honesty policy	3.80	.968	6.22	.000	3.52	.903
Online access to the student handbook	3.88	.986	7.36	.000	3.53	.979
Online access to a listing of services provided by the institution.	4.11	.956	12.33	.000	3.48	.981
An orientation that includes preparation for the time management skills necessary to be a successful learner.	3.68	1.11	9.65	.000	3.09	.940
An orientation that includes technology training.	3.67	1.02	12.02	.000	3.00	.880
An orientation that explains available student services such as orientation, advising, bookstore or library.	3.83	1.00	10.75	.000	3.28	.921

Survey Item	Need M	SD	t	p	Availability M	SD
Access to Individual online advising	3.89	1.04	16.02	.000	2.82	1.01
Clear, complete, and timely information regarding curriculum requirements.	4.17	1.00	16.85	.000	3.05	1.13
Access all year to academic advising	4.03	1.02	16.36	.000	3.01	1.03
Access to real-time academic advisor	4.13	.996	16.82	.000	3.06	1.05
Clear descriptions and eligibility requirements for career planning & placement services	4.09	.953	19.05	.000	2.97	.918
Access to real time counselors.	4.09	.954	19.77	.000	2.96	.873
Access to career services job search information.	4.11	.921	15.68	.000	3.25	.935
Access to career services goal and decision making assistance.	4.01	.955	16.71	.000	3.06	.886
Notification of important events, jobs and other career related information	4.11	.893	12.86	.000	3.45	.989
Information on eligibility and documentation requirements for disability services.	3.80	.966	14.24	.000	3.10	.748
Descriptions of what are reasonable and appropriate accommodations available through disability services.	3.80	.970	13.94	.000	3.10	.751
Access to assistive technology	3.81	.978	13.47	.000	3.13	.747
A website that clearly describes the counseling resources, including self-help material.	3.87	.940	15.28	.000	3.03	.792

Survey Item	Need M	SD	t	p	Availability M	SD
Access to referral information.	3.83	.923	14.84	.000	3.02	.793
Access to contact information for staff.	4.02	.946	12.90	.000	3.37	.962
Information regarding confidentiality in regard to counseling services.	3.79	.939	13.59	.000	3.13	.817
A website that links to other colleges and Universities counseling center sites.	3.63	1.04	12.91	.000	2.88	.823
Counseling or appropriate referral services for those experiencing mental health crisis.	3.77	1.02	13.41	.000	3.00	.801
Access to self-help tools.	3.81	.955	14.06	.000	3.03	.770
Access to online links and information regarding locally based counseling.	3.73	.967	13.75	.000	3.00	.769
Access to information about health and wellness programs.	3.84	.968	14.46	.000	3.10	.867
An online writing lab.	3.76	1.09	13.80	.000	2.87	.870
Online study tips.	3.87	1.03	15.48	.000	2.92	.849
Online math lab.	3.79	1.05	15.38	.000	2.82	.810
Information regarding supplemental instruction and other academic support services.	3.83	.962	14.72	.000	2.97	.771
Information regarding learning assistance	3.82	.952	14.51	.000	2.98	.036
A web portal/learning community that helps students feel connected to other students, faculty, staff, and institution.	3.82	.952	14.51	.000	2.98	.794

Survey Item	Need M	SD	t	p	Availability M	SD
A distance learning student Government.	3.44	1.08	9.924	.000	2.88	.815
Newsletters and announcements regarding institution related information.	3.79	.983	9.652	.000	3.31	.907
A sense of community that makes students feel connected to the Institution.	3.84	1.02	13.48	.000	2.99	.942
Online library catalog that includes online lookup.	4.00	.972	13.74	.000	3.27	.933
Online information literacy Workshop.	3.76	1.01	14.43	.000	2.99	.742
Online Library books (e-books)	4.03	1.0	16.36	.000	3.01	.956
Online library Journals (e-journals)	3.96	1.01	15.09	.000	3.08	.920
Online Library Assistance	3.87	.982	15.56	.000	2.99	.868
Online library book renewal	3.89	1.02	15.82	.000	2.92	.828
Online ILL	3.75	1.02	13.14	.000	3.00	.793
An online bookstore that includes online textbook lookup.	4.10	1.01	15.01	.000	3.11	1.06
An online bookstore that includes online textbook ordering.	4.12	.983	13.84	.000	3.21	1.10
An online bookstore that clearly describes all delivery methods.	40.4	.995	15.33	.000	3.08	1.00
An online bookstore that clearly describes all relevant policies.	4.00	1.01	15.52	.000	3.04	.983
Online payment and tracking of orders.	4.15	.977	15.68	.000	3.20	1.00

Appendix P
Difference in Means between Need and Availability of Online Support Services

Table 14. Difference in Means between Need and Availability of Online Support Services.

Survey Item	Difference in Means
Access to real time career counselors.	1.13
Clear descriptions and eligibility requirements for career planning and placement services.	1.12
Access to real time academic advisors.	1.08
Access to individual online advising.	1.07
Access to career services goal and decision-making assistance.	1.05
Clear, complete, and timely information regarding curriculum requirements.	1.02
Access all year to academic advising.	1.02
Online library books (e-books).	1.02
An online bookstore that includes online textbook lookup.	.99
An online math lab.	.97
Online library book renewal.	.97
An online bookstore that clearly describes all delivery methods.	.96
An online bookstore that clearly describes all relevant policies.	.96
Access to career services goal and decision-making assistance.	.95
Online study tips.	.95
Online payment and tracking of orders.	.95
Easy access to a live person to answer questions about online learning.	.94

Survey Item	Difference in Means
An online bookstore that includes online textbook ordering.	.91
An online writing lab.	.89
Online library assistance.	.88
Online library journals (e-journals).	.88
Access to career services job search information.	.86
Information regarding supplemental instruction and other academic support services.	.86
A sense of community that makes students feel connected to the institution.	.85
Information regarding learning assistance.	.84
A website that clearly describes the counseling resources, including self-help materials.	.84
A web portal/learning community that helps students feel connected to other students, faculty, staff, and the institution.	.84
Interactive student services, allowing for self-services as well as live support.	.83
Access to referral information.	.81
Access to Student Services beyond 8a.m - 5p.m.	.80
Access to self-help tools.	.78
Counseling or appropriate referral services for those experiencing mental health crises.	.77
An online information literacy workshop.	.77
A website that links to other colleges and universities counseling center sites.	.75
Online ILL (Inter library loan).	.75

Survey Item	Difference in Means
Access to information about health and wellness programs.	.74
Access to online links and information regarding locally based counseling services.	.73
An online library catalog that includes online lookup.	.73
Information on eligibility and documentation requirements for disability services.	.70
Descriptions of what are reasonable and appropriate accommodations available through disability services.	.70
Training in taking an online college course.	.69
Access to assistive technology.	.68
An orientation that includes technology training.	.67
Notifications of important events, jobs, and other career related information.	.66
Information regarding confidentiality in regard to counseling services.	.66
Access to contact information for staff.	.65
Online access to a listing of services provided by the institution.	.63
An orientation that includes preparation for the time management skills necessary to be a successful learner.	.59
Information regarding supplemental instruction and other academic support services.	.56
An orientation that explains available student services such as orientation, advising, bookstore or library.	.55
Online access to the college catalog.	.49

Survey Item	Difference in Means
Newsletters and announcements regarding institution related information.	.48
Online access to the student handbook.	.35
Online access to the academic honesty policy.	.28

Appendix Q
Feedback from the Vice President of Student Affairs and Enrollment Management

To: Marie Pullen
From; Dr. Lucia Cepriano, Vice President
Date: August, 2009
Subject: Feedback on Recommendations

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1. Are the recommendations readily understandable?

The recommendations are readily understandable insofar as being clearly developed, well articulated and well written. Furthermore, all recommendations are clearly connected to pertinent facts and conclusions drawn from the data.

2. Are they appropriate to FSC/SUNY and similar institutions?

Two excellent recommendations would be appropriate for FSC/SUNY and similar institutions – online academic advisement and online personal counseling. While we do concede that online services in these areas will not soon replace the traditional, campus-based, face to face service that most colleges and university now offer, to expand those traditional offerings to include an online component would allow a greater proportion of the campus community to avail themselves of these services. These online services would resolve a number to issues related to the reasons why some students do not avail themselves of the traditional face-to-face interactions.

The recommendation for age and gender distinctions, while soundly based on the data presented, would be more difficult to implement if they were to target a specific gender or age groups. The data, however, compels institutions to be aware of the gender and age distribution of their student bodies in order to be sensitive to the online needs of their students.

3. Is there anything that is unnecessary?

No, the recommendations are fully appropriate with the data presented.

4. Is there anything that is missing?

No, the recommendations presented would fully address the needs highlighted by the data.

5. How likely is it that the institution will move forward on the recommendations?

FSC/SUNY is likely to examine the possibility of implementing these recommendations by bringing them to the attentions of the campus groups that are most involved with these services at the present time. For instance, academic advisement is currently under the jurisdiction of the faculty and ultimately it would be the faculty's decision as to whether or not this recommendation is implemented.

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