

Online Support Services for Undergraduate Millennial Students

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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.

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 Farmingdale State College (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. A copy of the survey questions can be found in Appendix A.

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.

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 statistics. 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 1. 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 1
DEMOGRAPHIC CHARACTERISTICS OF THE SAMPLE

<u>Variable</u>	<u>n</u>	<u>Percent</u>
<u>Gender</u>		
Males	298	62.6%
Females	178	37.4%
<u>Status</u>		
Online	4	< 1.0%
On-campus	385	81.0%
Both	87	18.2%
<u>Age</u>		
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%
<u>Hours Completed</u>		
0 – 30 hours	116	24.3%
31- 60 hours	144	30.2%
61+ hours	216	45.3%

Variable	<u>n</u>	Percent
<u>Employment Status</u>		
Employed	348	73.1%
Not Employed	128	26.8%
<u>Hours Worked</u>		
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%

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 2. 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 2
MEAN AND STANDARD DEVIATION 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 3 and findings from the ANOVA are presented in Table 4. 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 3
INDEPENDENT T-TEST BASED ON AGE: NEED FOR SERVICES**

Survey Item	Millennial		Non-Traditional		t	p
	M	SD	M	SD		
Access to Student Services beyond 8 a.m. – 5 p.m.	3.94	1.00	4.28	1.07	-2.59	1.01
Online access to the academic honesty policy.	3.76	.963	4.01	.077	-1.98	3.04
An orientation that explains available student services such as orientation, advising, bookstore or library.	3.79	.989	4.06	1.04	2.01	9.04
Information regarding confidentiality in regard to counseling services.	3.76	.934	4.00	.953	-1.98	1.04
Online Library Journals (e-journals)	3.92	1.00	4.25	.990	-2.54	6.01

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 4.

**TABLE 4
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 5 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 5
INDEPENDENT T-TEST BASED ON GENDER: NEED FOR SERVICES

Survey Item	Females		Males		t	p
	M	SD	M	SD		
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.

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.

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. Related discussions 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

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. 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.

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.

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.

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 breaches. 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.

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 deterrent 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 versus 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 Distinction

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.

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 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. 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.

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APPENDIX A SURVEY

Distance Learning Needs

Access to Student Services beyond 8a.m - 5p.m.	
Students need this	1 2 3 4 5
This is available to me	1 2 3 4 5
Training in distance learning environments.	
Students need this	1 2 3 4 5
This is available to me	1 2 3 4 5
Easy access to a live person via remote methods such as online chats, emails, telephone, or fax.	
Students need this	1 2 3 4 5
This is available to me	1 2 3 4 5
Interactive student services, allowing for self-services as well as live support.	
Students need this	1 2 3 4 5
This is available to me	1 2 3 4 5

Online Admissions and Administrative Needs

Online access to the college catalog. Students need this This is available to me	1 2 3 4 5 1 2 3 4 5
Online access to the academic honesty policy. Students need this This is available to me	1 2 3 4 5 1 2 3 4 5
Online access to my institutions information confidentiality policy prior to enrollment. Students need this This is available to me	1 2 3 4 5 1 2 3 4 5
Online access to the student handbook. Students need this This is available to me	1 2 3 4 5 1 2 3 4 5
Online access to a listing of services provided by the institution. Students need this This is available to me	1 2 3 4 5 1 2 3 4 5

Online Orientation Services

An orientation that includes preparation for the time management skills necessary to be a successful learner. Students need this This is available to me	1 2 3 4 5 1 2 3 4 5
An orientation that gives details of all school policies. Students need this This is available to me	1 2 3 4 5 1 2 3 4 5
An orientation that includes technology training. Students need this This is available to me	1 2 3 4 5 1 2 3 4 5
Access to an orientation web site throughout the year. Students need this This is available to me	1 2 3 4 5 1 2 3 4 5
An orientation that explained available student services. Students need this This is available to me	1 2 3 4 5 1 2 3 4 5
An orientation that explains the Student Academic Honesty policy Students need this This is available to me	1 2 3 4 5 1 2 3 4 5

Online Academic Advising

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

Online Career Services

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

Online Services for Students with Disabilities

Information on eligibility and documentation requirements for disability services. Students need this This is available to me	1 2 3 4 5 1 2 3 4 5
Descriptions of what are reasonable and appropriate accommodations available through disability services. Students need this This is available to me	1 2 3 4 5 1 2 3 4 5
Access to assistive technology. Students need this This is available to me	1 2 3 4 5 1 2 3 4 5

Online Personal Counseling

A website that clearly describes the counseling resources, including self-help materials. Students need this This is available to me	1 2 3 4 5 1 2 3 4 5
Access to referral information. Students need this This is available to me	1 2 3 4 5 1 2 3 4 5
Access to contact information for staff. Students need this This is available to me	1 2 3 4 5 1 2 3 4 5
Information regarding confidentiality in regard to counseling services. Students need this This is available to me	1 2 3 4 5 1 2 3 4 5
A website that links to other colleges and universities counseling center sites. Students need this This is available to me	1 2 3 4 5 1 2 3 4 5
Counseling or appropriate referral services for those experiencing mental health crises. Students need this This is available to me	1 2 3 4 5 1 2 3 4 5

Access to self-help tools. Students need this This is available to me	1 2 3 4 5 1 2 3 4 5
Access to online links and information regarding locally based counseling services. Students need this This is available to me	1 2 3 4 5 1 2 3 4 5
Access to information about health and wellness programs. Students need this This is available to me	1 2 3 4 5 1 2 3 4 5

Online Academic Support

An online writing lab. Students need this This is available to me	1 2 3 4 5 1 2 3 4 5
Online study tips. Students need this This is available to me	1 2 3 4 5 1 2 3 4 5
An online math lab. Students need this This is available to me	1 2 3 4 5 1 2 3 4 5
Information regarding learning assistance. Students need this This is available to me	1 2 3 4 5 1 2 3 4 5
Information regarding tutorial services. Students need this This is available to me	1 2 3 4 5 1 2 3 4 5
Information regarding supplemental instruction and other academic support services. Students need this This is available to me	1 2 3 4 5 1 2 3 4 5

Online Opportunities for Community

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

Online Library Services

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

Students need this This is available to me	1 2 3 4 5 1 2 3 4 5
Online library assistance. Students need this This is available to me	1 2 3 4 5 1 2 3 4 5
Online library book renewal. Students need this This is available to me	1 2 3 4 5 1 2 3 4 5
Online ILL (Inter library loan) Students need this This is available to me	1 2 3 4 5 1 2 3 4 5
Online Bookstore Services	
An online bookstore that includes online textbook lookup. Students need this This is available to me	1 2 3 4 5 1 2 3 4 5
An online bookstore that includes online textbook ordering. Students need this This is available to me	1 2 3 4 5 1 2 3 4 5
An online bookstore that clearly describes all delivery methods. Students need this This is available to me	1 2 3 4 5 1 2 3 4 5
An online bookstore that clearly describes all relevant policies. Students need this This is available to me	1 2 3 4 5 1 2 3 4 5
Online payment and tracking of orders. Students need this This is available to me	1 2 3 4 5 1 2 3 4 5