2009

An Online Community for Computer Technology Support and Training for College Office Support Staff

Mava F. Wilson
Nova Southeastern University, mwilson@leeuniversity.edu

An Online Community for Computer Technology Support and Training for College Office Support Staff

by

Mava F. Wilson

A dissertation submitted in partial fulfillment of the requirements
for the degree of Doctor of Philosophy
In Computing Technology in Education

Graduate School of Computer and Information Sciences
Nova Southeastern University

2009

We hereby certify that this dissertation, submitted by Mava F. Wilson, conforms to acceptable standards and is fully adequate in scope and quality to fulfill the dissertation requirements for the degree of Doctor of Philosophy.

_____ _____

Gertrude W. Abramson, Ed.D. Date
Chairperson of Dissertation Committee

_____ _____

Marlyn Littman, Ph.D. Date
Dissertation Committee Member

_____ _____

Helen St. Aubin, Ph.D. Date
Dissertation Committee Member

Approved:

_____ _____

Amon Seagull, Ph.D. Date
Interim Dean, Graduate School of Computer and Information Sciences

Graduate School of Computer and Information Sciences
Nova Southeastern University

2009

An Abstract of a dissertation submitted to Nova Southeastern University in partial fulfillment of the requirements for the degree of Doctor of Philosophy

An Online Community for Computer Technology Support and Training for College Office Support Staff

By
Mava F. Wilson

September 2009

Educational institutions strive to stay on the edge of technological advances in response to stakeholders' desire to receive value for their investment. Rapid changes in computer technology present a dilemma to colleges and universities in the support and training arena. An important segment of the institutional population, office support staff are vital to the everyday running of departments with extremely diverse responsibilities critical to the institutional mission. Office support staff seem to be left out when support and training programs for new technology are being planned. With technology changing so quickly it is vital that organizations have support and training programs in place that will continually provide office support staff with updated skills.

The developmental study used an implementation analysis method to develop an online support community (OSC) to provide a central location to find and contribute support for computer technology issues that affected productivity. A needs assessment comprised of literature reports, focus group feedback, and historical records as well as the results of a pre-survey and inventory ensured data triangulation and was used to define content areas for technology support and training. A Learning Management System was used to plan and design the OSC in the initial treatment and workplace software, SharePoint, for the second treatment. Discussion forums and content areas were created using the defined technology content areas. Office support staff participated in the study and data were collected using surveys, content postings, interviews and electronic reporting. The OSC was evaluated after the first and second treatments using an evaluation model of reaction, learning, behavior, and results.

The results indicated that an OSC can be effectively used to provide technology support for office support staff. Elements necessary for design include: long-term documentation, content matter experts, medium that allows for open-ended login, evidence of knowledgeable participants sharing useful data, participant leaders, and IM for immediate answers. The need for support and training for office support staff is ongoing and necessary for the productive and efficient completion of their job and work responsibilities. The results will be useful in designing online support communities and for planning support and training events.

Acknowledgements

With deepest appreciation, I would like to recognize those whom provided the encouragement, support and help to make this lifelong academic achievement a reality.

To my dissertation advisor Dr. Trudy Abramson, I would like to express my gratitude and heartfelt thanks for her support, guidance and encouragement. Her constructive recommendations, wisdom and patience motivated me to stay focused during this long process. I would also like to thank my committee members, Dr. Marlyn Littman and Dr. Helen St. Aubin for their reviews and comments that helped make this dissertation a finished product.

Special thanks go to the office support staff to the department chairs at Lee University. Without you this dissertation would not have been completed. I am so grateful that you were willing to take your time and effort to participate in the study.

Thank you, LeAnn McElrath, for your help and support. Your participation was invaluable. And Erin Looney, Breanna Gray, Nate Tucker, and the members of the focus group, thank you for your willingness to aid me when I asked. Thank you, Dr. Carolyn Dirksen, for providing your support and approval for the study to be conducted at Lee. To my Department Chair, Dr. Dewayne Thompson, and my colleagues in the Department of Business, thanks so much for being there for me. I appreciate everyone's support.

To my children who have grown up, graduated high school and college, and gotten married during these long ten years, thanks so much for hanging in there with me and not resenting all the time dedicated to this dissertation. I am so proud of each of you – Chuck & Alli Norton, Becky (Norton) & Michael DuBose and Jennifer Norton. Thank you, guys, for all your love and encouragement.

To my parents, Rev. Lloyd & Edna Frazier, this would not have happened without you. Your belief in me, your support, your prayers, and just being there made this possible. Thank you from the bottom of my heart for being my parents. To Aunt Edith Frazier and my late Grandpa Henry Frazier, your assistance made the beginning possible. Thank you. To Michael and Rhonda and all family members and friends who have been so supportive from the beginning through the end, I am deeply grateful.

To my husband Randy, thank you for being there during long periods of inattention. Thanks for supporting me and being so proud of my pursuit of this dream. I'm so glad we found each other.

And, finally, all my thanks and praise goes to the One who made all this possible. Without God's constant reminder that He was with me when I started and that He would be with me until I finished, I would have given up. My prayer is that the wisdom I have gained through this process will be used to do His will now and in the future.

Table of Contents

Abstract iii
List of Tables viii

Chapters
1. Introduction 1
Figure 1: Organizational Chart 2
Problem Statement 3
Goal and Research Questions 4
Relevance and Significance 5
Limitations 9
Definitions and Acronyms 9
Summary 12

2. Review of the Literature **13**
Office-Support Staff Role 13
Workplace Learning and Performance Improvement 16
Support and Training 18
Informal Learning 20
Communities of Practice 23
Virtual (Online) Communities 24
User Participation 25
Integrating Support and Performance Improvement in the Online Community 26
Instant Messenger 28
Summary 29

3. Methodology 30
Research Design 30
Instrument Development 31
Focus Group 32
Pre-Survey Creation and Initial Validation 33
Pre-Survey Final Validation and Reliability Testing 34
Other Data Collection Instruments 34
Post-Survey Creation and Validation 35
Second Study Instruments 36
Approach 36
Criteria Development and Assessing Needs 37
Initial OSC Planning and Design 39
Initial OSC Launch and Delivery 40
Initial OSC Evaluation and Improvement 44
Second OSC Planning and Design 45
Second OSC Launch and Delivery 45
Second OSC Study Evaluation and Improvement 46
Data Collection Strategies 46
Resources 47
People 47

Technology 48
Program Evaluation, Data Analysis, and Reporting Results 48
Summary 51

4. Results 52
Introduction 52
Needs Assessment 53
Historical Documents 54
Initial Program Design 55
Initial Program Delivery 56
Task List for Study Participants 57
Technology Support Needs Assessment Pre-Survey 58
Technology Support Pre-Inventory 60
Observer Participant 61
Data Analysis 62
Discussion Forums 62
Electronic Usage Reports 63
Final Survey Results 64
Interviews 65
Initial Treatment Discussion 68
Reaction 68
Learning 69
Behavior 69
Results 70
Recommendations and Redesign 70
Recommendations 71
The Redesigned OSC 71
Redesigned OSC Launch 74
Conclusion of the Second Treatment 75
SharePoint Support Site Survey Results 75
SharePoint Support Site Questionnaire Results 76
Interview with IT Staff Member 82
Electronic Records from Second OSC 83
Discussion 84
Reaction 84
Learning 85
Behavior 86
Results 87
Summary 88

5. Conclusions, Implications, Recommendations, and Summary 90
Conclusions 90
Implications 95
Recommendations 97
Summary 98

Appendixes
A. Technology Support Needs Assessment Pre-Survey 101
B. Technology Support Pre-Inventory 109
C. Online Support Community Study – Final Survey 111
D. SharePoint Support Site Study Survey & Questionnaire 114
E. Online Support Community Main Page 118
F. IRB Consent Form 119
G. Instructions for Study Participants 123
H. SharePoint Support Site for Department Level Assistants Home Page 124
I. Email & Attachments Sent to Study Participants for Second Study 125
J. Permission to Conduct Study at the Study Site 128
K. IRB Approval 129
L. 2007 Help Desk Requests by Office Support Staff 130
M. Email Invitation Sent to Study Participants 131
N. Task List for Study Participants 132
O. Technology Support Inventory Summary 133
P. Mid-Study Survey 134
Q. Participant Usage Categorized 135
R. Online Support Community Final Survey Results 136
S. General Interview Questions 138
T. Windows Instant Messenger 139
U. Instant Messenger Instructions 140
V. SharePoint Support Site Survey Results 143
W. SharePoint Support Site Questionnaire Results 145
X. Redesigned SharePoint Support Site 152
Y. Email with Support for Ongoing OSC 155

Reference List 156

List of Tables

Tables

1. 2007 Help Desk Requests after Purging 54

2. Technology Support Needs Assessment Summary 58

3. Discussion Forum Participation Summary 62

4. Site Usage for May and June 2009 83

Chapter 1

Introduction

Rapid changes in computer technology present a dilemma to educational institutions; the administration, faculty, and staff. Stakeholders of educational institutions, the students, parents, businesses, and others are impelling colleges and universities to stay on the edge of technological advances. Parents and students want to know they are getting value for their dollar investment (Johnson, Bartholomew & Miller, 2006; Wilson, 2003) and businesses want to hire graduates with up-to-date skills (Hartman, Bentley, Richards & Krebs, 2005). Pressure from these outside forces impels the institution to not fall behind a world that has become inundated with information technology (Tsai, Compeau & Haggerty, 2007; Allison et al., 2008a; Allison et al., 2008b; Minielli & Ferris, 2005). It also drives the institution to remain viable and competitive (Green, 2007; Ketter, 2006) and to provide the stakeholders with the quality product expected. The pressure for continuous technological change ensures that the institution is constantly in a state of change.

Most educational institutions are divided into schools or colleges and departments. The following figure demonstrates an organizational layout for a medium-size masters granting institution, Lee University, the institution where the study was conducted.

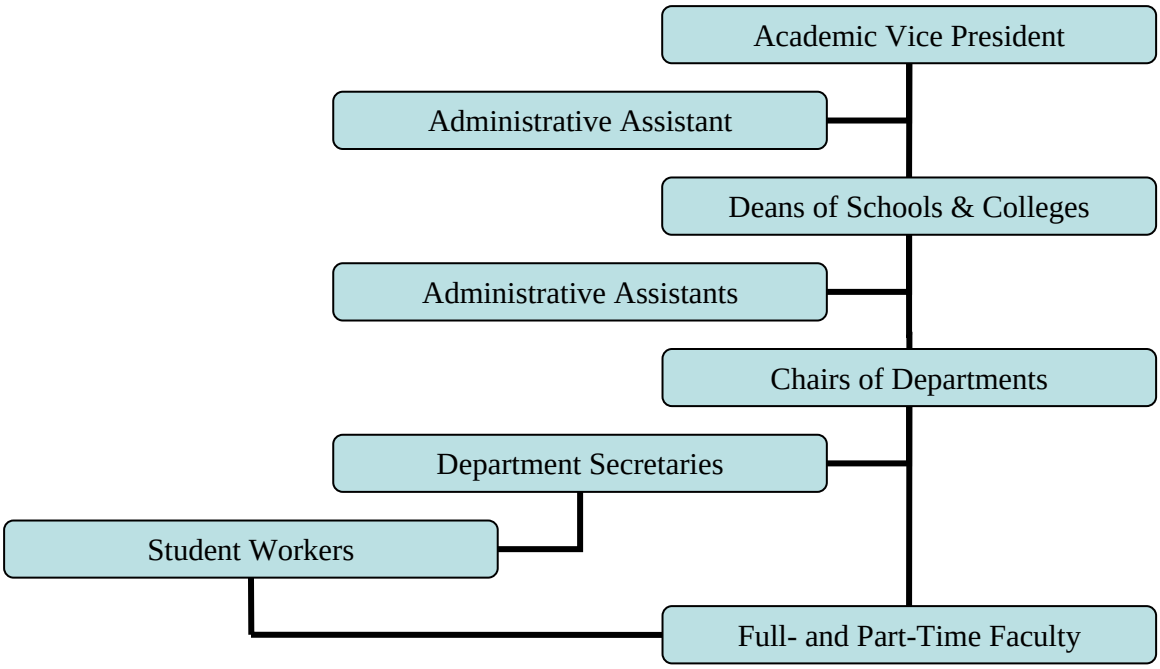


Figure 1: Organizational Chart

Departments are directed by a department chair (the head or leader) and depending on the size of the institution, supported by one or more office support staff members. The office support staff member is usually one secretary to the department chair along with several student workers who aid in necessary tasks in the department. A student worker may be the one to greet people as they enter the departmental office; however, it is the office support staff who ultimately deals with students, the public (parents and community members), administration, departmental faculty, the chair of the department, and supervising the departmental student workers. External documentation relating directly to the department as well as course creation and paperwork issues relating to faculty and students are created from this office. The office support staff member is expected to be able to provide requested information by utilizing the computer system to perform all necessary job related tasks using whatever software is needed whether it is the administrative information system, the office software being utilized by the institution, or

online. The office support staff is also expected to know how to use the current system even if the hardware is outdated or whether it has been replaced with the newest system that has the latest operating system and software.

The secretaries and administrative assistants to the educational department chairs are referred to as the office support staff. Because their job has traditionally been one of support (IAAP, 2007d), to the chair, the department faculty, and the department students, their contribution is sometimes overlooked as being of less importance than the IT staff who do the daily running, upkeep, and support of administrative and academic computing systems and consequently must stay up-to-speed with new technology (Stunden, 2006). However, office support staff are vital to the running of the departments and to the success of the institutional mission. The challenge for institutions is in having the necessary support and training for *all* the population of the community and doing so in a timely and efficient process (Terry, 2007; Stunden, 2006).

Problem Statement

The literature, while covering administrative, faculty, IT staff, and student issues, provides little data on office support staff. Computer technology support and training are essential to maintain excellent job performance in work tasks and responsibilities that are extremely diverse while crucial to the institutional mission. The Bureau of Labor Statistics (BLS, 2008) discusses the role changes that have taken place within office support staff members, the secretarial and administrative assistant group, mainly because of office automation and restructuring of office personnel (Hartman et al., 2005). Office support staff have assumed new responsibilities in office technologies once reserved for

higher level staff (Alexander, Zhao, Truell & Wiggins, 2007-2008). Core responsibilities, though unchanged, are now electronic instead of manual (IAAP, 2008; BLS 2008; Hartman et al., 2005).

Office support staff use computer technology on a daily basis to accomplish necessary tasks. Technology changes frequently as hardware is updated and new software and/or new versions are installed. With these changes, problems are encountered, new methods are required to accomplish routine tasks, and productivity is affected. Support and training for office support staff is generally not readily available; therefore, routine responsibilities take longer to complete than with previous methods. They are required to resolve how to accomplish tasks that might be answered by someone who has already encountered similar problems; however, there is no mechanism in place to facilitate the sharing of *how-to's* that affect productivity. They are also left on their own in transferring skills learned in training to their office tasks and individual responsibilities.

To be productive, the office support staff is expected to complete job related tasks quickly and efficiently in the required format utilizing existing computer systems. When problems are encountered pertaining to technology and the method to accomplish a given task, the help that is so vital in meeting deadlines and accomplishing job processes with minimal delays, is not available.

Goal and Research Questions

The goal of this dissertation was to develop an Online Support Community (OSC) to provide a central location for office support staff to find and contribute support for

computer technology issues that affect productivity. As a result of its implementation, office support staff would have a protected location to find answers to technology issues and a safe arena to pose questions and concerns that would encourage dialog, elicit solutions, and increase productivity within the workplace. The OSC would be mutually beneficial to all members as the give-and-take strengthened the commonalities that already existed among the office support staff across the schools and departments. Additionally, administrators and supervisors would recognize the value of an OSC and provide visible support for its continuation.

The following questions were used to guide the research. All questions related to office support staff:

1. What did the needs assessment reveal were the necessary technology content areas for support?
2. Was the OSC effective and what were the measures of effectiveness?
3. In view of the results of the evaluation, what modifications were necessary to ensure continued utilization of the OSC?

Relevance and Significance

Stakeholders of educational institutions are putting pressure on colleges and universities to stay up-to-date with the latest computer technology. Parents and students want to know their dollar investment will get a good return (Johnson et al., 2006; Wilson, 2003) and businesses want to hire graduates with current skills (Hartman et al., 2005). These outside forces are compelling the institution to stay up-to-date even though this requires continual technology changes (Tsai et al., 2007; Allison et al., 2008a; Allison et

al., 2008b; Minielli & Ferris, 2005). The driving force is to maintain an institution that is competitive (Green, 2007) and will provide stakeholders with the quality product expected.

Educational institutions face a tremendous challenge in providing computer support and training that is timely and effective (Burke & Hutchins, 2008; Kaplan & Lerouge, 2007; Watkins, 2007a; Riley, Davani, Chason, Findley, & Druyor, 2003). Technology changes so quickly that it is difficult to maintain not only the momentum with the hardware and software but also with the necessary financial considerations and human resources that are required (Allison et al., 2008a; Allison et al., 2008b; Kaplan & Lerouge, 2007; Tsai et al., 2007; Green, 2004; Hossler, 2006). The 2008 EDUCAUSE survey is the ninth annual (Allison et al., 2008a; Allison et al., 2008b) IT issues survey. In responses to three of the four questions, *Staffing/ Human Resource (HR) Management/ Training* progressed to the top-ten issues. The *Staffing/ HR Management/ Training* issue last appeared in the top-ten responses in 2001 (Allison et al., 2008b) and in the 2002 through 2007 survey results appeared close the top. The latest results establish the fact that training is an issue that does not fade away and is being acknowledged as such. As long as new software and hardware systems are introduced, there will be the need for technology support and training. In spite of the outcome of the survey, the identified issues fail to address office support staff concerns in the support, training, and development arena.

As colleges and university administrators struggle with responding to outside forces to stay abreast with technological changes, they have to resolve the issues of investing in human resources and finding the necessary funds to do so while at the same

time upgrading and maintaining the infrastructure (Allison et al., 2008a; Allison et al., 2008b; Hossler, 2006; Ketter, 2006; Green, 2004; Green, 2003). Students, parents, faculty, employers, and the general public expect the institution to provide the technological skills required for employment and success in the workplace (Johnson et al., 2006; Wilson, 2003). The stress of trying to please so many stakeholders can present a dilemma to the educational institution. To take advantage of available opportunities to advance in technological endeavors, administrators may have to make decisions quickly without traditional methods of slow research and decision making and exploring long-term outcomes (Hossler, 2006; Long & Ehrmann, 2005; Green, 2004).

College and universities have found that supporting the infrastructure of a complex and very visible administrative system while contributing to the teaching and learning goals of the institution can be a daunting task. Administrators have begun to realize that to remain a competitive and viable institution, academic and administrative systems must keep pace with changes in technology that will support the institutional mission and key goals and objectives (Green, 2007; Long & Ehrmann, 2005; Ehrmann, 2002). Administrators that strive to provide updated technology on their campus can sometimes feel they are on a merry-go-round as to *what is really driving what*. To acquire updated technology, they must have the necessary funding to purchase the hardware and software systems (Allison et al., 2008a; Allison et al., 2008b; Hossler, 2006; Green, 2004; Green, 2003). Success of the academic infrastructure depends on faculty using the technology in the classroom and their teaching (Wilson, 2003). Success also depends on administrative and office support staff utilizing the administrative system to the best advantage. IT staff must manage and operate the academic and administrative

systems and train and support the users (Kaplan & Lerouge, 2007; Hossler, 2006; Allison et al., 2008a; Allison et al., 2008b; Stunden, 2006). As the institution deals with management and support issues, it is vital that the HR department has policies in place to ensure that employees can develop necessary technology skills to be self-sufficient and use the knowledge gained on the job (Saks & Belcourt, 2006; Lohman, 2005).

Books, journal articles, popular magazines, websites, dissertations, and other research can be found on technology support and training for teachers and IT personnel (Kaplan & Lerouge, 2007; Allison et al., 2008a; Allison et al., 2008b; Wilson, 2003). Articles and reports are available on the necessity of support and training for office support staff in the business world (BLS, 2008; Burke & Hutchins, 2008; IAAP, 2008d; Walstrom & Duffy, 2003) but very few addresses the issue in educational institutions. Is it because training and continuous support are not necessary or needed? Is it because they are not available for office support staff? In most institutions, work accomplished by the office support staff in the department office will, in some way, affect the majority of the department students, the department faculty, the department chair, and other administrative offices throughout the institution. Technology support and training that is transferable to job performance are needed by office support staff (Burke & Hutchins, 2008).

As more and more technology is utilized, office support staff are taking on responsibilities and duties once reserved for managers and supervisors (Alexander et al., 2007-2008; BLS, 2008) such as training others on using available technology (Bartlett, 2003; BLS, 2008). They collect, process, and disseminate data to the supervisor and to various parts of the organization. The role has increased so that now most office support

staff have a primary role in the office and are considered one of the team (IAAP, 2008c; IAAP, 2008). They are vital to the success and operation of the organization. With these added responsibilities, it is imperative that the necessary technology training and ongoing support is provided so that the job can be done in a productive and efficient manner (IAAP, 2008c; IAAP, 2005).

Limitations

The following limitations may have affected the validity:

1. Several of the office support staff participating received prior technology training from the researcher as well as continuous technology support. A trust relationship had already been established which may have affected the time-frame necessary for building trust in the OSC.
2. In the educational arena, there were times during an academic year of extreme pressure and other times of less intense workload. There were times of deadlines that required technology questions to be answered immediately and other times that the need was slower. Conducting the study over a set timeframe may or may not have been over an intense period of deadlines and extreme pressure. This may have affected participation; however, it presented a true picture of the working environment.

Definitions and Acronyms

Administrative Support Systems or **Administrative Systems:** The computer system that is used for administrative duties in the institution; such as, accounting and budget

creation and maintenance; course creation including day/time selection and faculty and building/room assignments; student data including enrollment, class registration, transcripts and grade posting; student life data including dorm assignments and meal plans; and any other data used by the institution. The system may be complex and sophisticated with many layers and levels of security and access (Author).

ANGEL: A New Global Environment for Learning. ANGEL refers to itself as a learning management system (LMS) and contains the components of an LMS even though they are used primarily for academic use (Chan & Robbins, 2006). Lee has a software license to use ANGEL.

CMS: Course Management System. Software that allows for teaching and training to be administered in the online environment (Ullman & Rabinowitz, 2004) typically within the structure of a university or college. It provides areas for course content management, communication and collaboration, and for data management (Minielli & Ferris, 2005).

Focus Groups: Selected individuals that have expertise in certain areas and are convened for face-to-face interaction to provide quality information that cannot be obtained in any other method of gathering data (Love, 2004; Fitzpatrick, Sanders & Worthen, 2004; Goldenkoff, 2004).

IM: Instant Messenger. Software that allows real time conversing with text messages between two or more people. Messages are sent immediately without detailed formatting. The sender selects the recipient(s), types the message and presses <enter> (PCMag.com, 2009a).

IT: Information Technology. Refers to the department in the organization where information processed by the computer is accomplished (PCMag.com, 2009d).

LMS: Learning Management System. Software that is used primary for organizations doing training. It provides areas for enrollment, tracking progress of users, reporting methods, as well as a central location for materials to be used by learners (PCMag.com, 2009b).

Observer participant: The researcher who also becomes involved in the study by taking part and making herself known to the participants (Fitzpatrick et al., 2004; Merriam & Simpson, 2000; Gillham, 2000).

Office support staff or **office staff:** The person who is a secretary or administrative assistant to an administrator in the educational institution. For this study, the office support staff is the secretary to the head of the educational department, the chair (Author).

Online community: Online environment that is built using a Learning or Course Management System (Ullman & Rabinowitz, 2004).

OSC: Online Support Community. An online community that is designed as a community of practice providing the medium for support and training needs within an organization (Author; Hamilton, 2006).

SharePoint: Microsoft software that enables a Website to provide document and information sharing for work groups. There are templates to create areas where communities can share documents, calendars, announcements and postings (PCMag.com, 2009c). Lee has a software license to use SharePoint.

Summary

Computer technology changes so quickly that it is difficult for educational institutions to maintain consistent support and training programs for all the employees. Office support staff use computer technology on a daily basis. Their job tasks and responsibilities are vital to the success of the institutional mission. This segment of the institutional population lacks necessary support and training. The goal of the dissertation was to develop an OSC to provide a central location for office support staff to find and contribute support for computer technology issues that affect productivity.

Chapter 2

Review of the Literature

There are many factors that were examined in developing the online community framework for computer technology support and training for office support staff. The office support staff's role within the changing technological environment was looked at. Support and training issues were investigated along with their importance to workplace learning and performance improvement. Communities of practice, virtual communities, participation and usage were evaluated and described. And, finally, ways to integrate the support in the online community were explored.

Office Support Staff Role

With technology infused throughout educational campuses, there has been a significant shift in who is responsible for getting a job done and how and where the work is to be accomplished. Integration of technology requires that all employees be proficient in using the institutional systems (Hossler, 2006; Kaplan & Lerouge, 2007) and this has caused the traditional role of the IT personnel to shift. The IT department is no longer the only one that has access to information for report creation and to provide other necessary data that are utilized across the college campus. The use of available administrative and academic systems has caused a blur in the line of functional responsibilities between campus employees and traditional IT workers (BLS, 2008; Stunden, 2007; Kaplan &

Lerouge, 2007). With this shift, it has become apparent that office support staff not only need the ability to utilize the latest versions of word processing, spreadsheets, and database programs but because of an increasing involvement in using administrative support systems specific to the university, also need training and support in these systems (BLS, 2008; Hossler, 2006; IAAP, 2008c; IAAP, 2008).

The Educational & Professional Development Department of the IAAP (2005) lists 14 advanced skills that the office support staff needs in the office as roles continue to change for this group of employees. Out of the top six skills needed, four of them dealt with computer skills: software trainer, software adapter, web site maintainer, and online purchaser. And out of the 14, there were only two to three of the skills that did not include some kind of computer technology component depending on the organization (all could conceivable require technology for certain organizations.) For full-time employees who work nonstop in a dynamic workplace, keeping up with the changes is extremely difficult to do without training, time to spend on practicing, time to apply learned skills to the office duties, and/or support and help from someone that is knowledgeable already with the technology (Terry, 2007; Allen, Evans & Ure, 2005). As plans for changes in technology are initiated to enable the institution to continue as a viable, competitive organization, strategies need to be defined to ensure that office support staff are considered in the process of implementing these new changes (Watkins, 2007a; Walstrom & Duffy, 2003).

The Bureau of Labor Statistics (BLS, 2008) discusses the role changes that have taken place within the office support staff (secretarial and administrative assistant) group mainly because of office automation and restructuring of office personnel (IAAP, 2008c).

Office support staff are assuming new responsibilities in office technologies once reserved for higher level staff (Alexander et al., 2007-2008). Core responsibilities though the same, are now electronic instead of manual (Hartman et al., 2005; BLS 2008; IAAP, 2008). To be able to continue being productive with technology, office support staff need to have continued support as new technology is introduced in the office environment. Technology changes so quickly it is vital that organizations have support and training programs in place that will continually provide the employees with skills (BLS, 2008; Lee, 2008; Ley, Lindstaedt & Albert, 2005).

An IAAP survey (2005) on the profile of Administrative Professionals had 3,200 responses. Two questions, *Most significant issues affecting the administrative profession in next five to 10 years* and *Keeping up with changing technology* were rated the highest. A question to list *Areas of job responsibilities that have increased most over past five years* had13 options with six dealing with technology. *83%* responded that *Training was provided by Employer* with *42%* indicated *11+ hours, 23%* indicated *6-10 hours*, and *19%* indicated only *1-4 hours* training per year. The amount of training being provided in computer technology is not sufficient as the top two ranked responses to the question *Training most needed in following areas* were *Computer software applications* and *Technology applications, such as Web conferencing*. In also can be noted that *57%* of the respondents said they *Troubleshoot and/or train coworkers in computer applications*.

Over 50% of office support staff indicated they provide some kind of assistance with computer and software needs even though not included in their job description (IAAP, 2008; IAAP, 2005; BLS 2008). An area for mutual sharing, a community of practice (Chua, 2006; Loyarte & Rivera, 2007), is the place to provide support and

encouragement as the rapid changes in technology with new system requirements require office support staff to utilize new hardware, learn new office software and be introduced to new administrative systems at the same time. The community of practice could ease the feeling of being overwhelmed as normal office responsibilities continue while these new technologies are learned and methods need to be applied. A community of practice can also be the place to provide support and give opportunities to share workplace learning and convert training to performance improvement (Garavan, Carbery & Murphy, 2007; Allen et al., 2005; Preece, 2004; Wegner, 2000).

Workplace Learning and Performance Improvement

To obtain performance improvement with training and support, workplace learning should be linked to the organizational mission and goals (Allison et al., 2008a; Allison et al., 2008b; Watkins, 2007a; Brown, 2005; Gill, 2006; Bernandez, 2003; Hummel, 2003; O'Driscoll, 2003; Gill, 2003). For an organization to be successful, it needs employees who are continuously learning and growing and who apply training to the work place (Nguyen & Hanzel, 2007). The training concepts an employee is provided need to be converted to practical applications that produce useful results (Gill, 2006; Watkins, 2007a; Watkins, 2007b). The lack of transfer and failure of application will affect an organization's retention and can result in a high employee turnover (Palan, 2007).

Training to performance is not a simple phrase when examined carefully. Training to performance requires the organization to be proactive in discovering solutions to training and support problems and methods to transfer the training to job performance

(Watkins, 2007a; Saks & Belcourt, 2006). The organization must maintain a work environment that is conducive to learning and application, an environment of support for acquiring new knowledge, skills and attitudes (Gill, 2006; Gill, 2003), and an environment that will encourage employees as part of the team (IAAP, 2008b; IAAP, 2008) to work towards the organizational mission and goals (Chen & Hsiang, 2007; Brown, 2005; Bernandez, 2003; Hummel, 2003; O'Driscoll, 2003; Gill, 2003).

An organization that is proactive in its approach to performance improvement will provide support and training on-the-job instead of just knowledge and skills that may not be transferable to the workplace (Hummel, 2003). The organization will recognize that effective learning can be informal learning (Ellinger, 2005) and encourage it by providing mentors and areas for the learning to take place in a safe, protected environment (O'Driscoll, 2003). This community of learners will focus on solving real organizational problems by sharing knowledge and discovering new and innovated ways to find solutions to real world problems. An organization that encourages continuous improvement and support within the workplace environment will enhance the employee's skills and abilities. The benefit from the support and encouragement is an organization with employees that are working towards meeting the organizational goals and in adding value to everything accomplished (Rosenberg, 2007; Chen & Hsiang, 2007; Brown, 2005; Gill, 2003; Hummel, 2003).

A key component to an employee being able to apply training to on-the-job responsibilities is having support within the organization (Burke & Hutchins, 2008; Shultz, 2007; Saks & Belcourt, 2007; Watkins, 2007a; Chua, 2006; Wegner, 2000). Management and supervisors need to show support by allowing and encouraging

opportunities to try out new skills and to apply training concepts to office tasks. Employees also need to know that supervisors support the desire to continue learning and discovering ways to apply training within the office environment (Ellinger, 2005). These activities can be formal support and training courses or can be communities of informal learning that are created because of a mutual need and job responsibilities (Chua, 2006; Loyarte & Rivera, 2007; Wegner, 2000). The important aspect is the employee knows that there is support from the supervisor in the endeavor to obtain performance improvement as learning is applied to work tasks (Burke & Hutchins, 2008; Schultz, 2007; Ley et al., 2005).

Support and Training

The challenges organizations face today are maintaining employee's skills current with technological changes, applying skills on the job productively, and transferring training to performance (Burke & Hutchins, 2008; Kaplan & Lerouge, 2007; Watkins, 2007a; Riley et al., 2003). Meeting these challenges require continuing events for training and support. This may be difficult to accomplish because of the financial resources required (Allison et al., 2008a; Allison et al., 2008b; Hossler, 2006; Ketter, 2006; Green, 2003). Even with this challenge, these events should be the organizational norm instead of atypical (Chen & Hsiang, 2007; Saks & Belcourt, 2007). Organizations need to be creative in finding ways to make available the speedy support that conventional training cannot provide.

Programs with training and support strategies that aid employees attain self-sufficient technological skills will serve the institution well in the long run (Allen et al.,

2005; Preece, 2004). An institution that provides and supports consistent, ongoing training and support, with both formal or informal activities, will have office support staff that can consistently and productively use the acquired knowledge on the job (BLS, 2008; Allen et al., 2005). As training and support is developed, projects and activities should be defined that will provide useful knowledge and skills (Watkins, 2007a; Watkins, 2007b; Schultz, 2007; Saks & Belcourt, 2006). As training and support are assessed, projects and activities should be examined and evaluated to determine effectiveness (Watkins, 2007a; Watkins, 2007b; Swinney, 2007).

With the advent of frequent new software upgrades, if employees are to be truly productive, training is even more important than in the past (Kaplan & Lerouge, 2007; Johnston, 2002). Collin (2007) says that because of the rapid changes in the organization and system processes, training can actually become counterproductive if not provided when needed and the training becomes out of date. The organization that combines formal training and informal learning into collaborative learning will ensure that the employee receives an applicable return on their learning experience (Dobbs, 2006; Ellinger, 2005). The collaborative learning will strengthen the formal training process by encouraging the informal learning process. This exchange of knowledge and understanding of applicable training to job tasks will produce performance improvement within the workplace. The challenge for most organizations is to incorporate both and to find the right combination of formal training and informal learning (Rosenberg, 2007).

The training and support development process is not just one or two events but should be continuous activities that provide the support necessary for the office support staff to do their job effectively and productively (BLS, 2008; Chen & Hsiang, 2007) and

be progressively more successful in applying the technology to their job (Saks & Belcourt, 2006). Many organizations are hesitant to invest in technology training and support activities for fear that the newly trained staff member will then leave (Palan, 2007). However, research indicates that commitment to staff training and continuous support produces productivity improvement as well as an increased staff loyalty (Schmidt, 2007; Palan, 2007). It generates an employee who can do the job well with an increasing efficiency and is a satisfied, self-motivated employee. The employee will also take ownership of the job because they feel they are a part of the process, a team member, not just someone who is supporting the main players (IAAP, 2008c). Organizations should strive to create training and support events that ensure the employee can apply the learning to the job tasks. When this happens, the employee feels successful and the organization obtains a committed, more productive employee (Schmidt, 2007; Palan, 2007; Allen et al., 2005).

Informal Learning

Within an organization that is committed to providing training for workplace learning and performance improvement, it is imperative that the most important and crucial element of employee learning not be missed (O'Driscoll, 2003). Informal learning is being recognized as valuable to the organization and instead of a drain on productivity is good for business (Lee, 2008; Ellinger, 2005). Formal training is just the first step in the learning process. In fact, learning from someone at work who is unrecognized by the organization as a trainer, is becoming more and more common (BLS, 2008; IAAP, 2008; Poell et al., 2006; Mosher, 2004; Boud & Middleton, 2003).

Informal learning is getting assistance or questions answered from a colleague, a neighbor, a peer without it being a planned event. It is a lifelong event of continuous learning and sharing with others the values, skills, and knowledge acquired through many avenues (Conner, 2008). Informal learning can create communities of self-motivated employees that help each other. As these communities of practice are created, the interaction creates a location for a transfer of knowledge – knowledge that has been gained from workplace experience (Rosenberg, 2007). Participants of these communities use the informal learning arena to solve organizational issues, connect across organizational boundaries and combine forces and expertise (O'Driscoll, 2003). Formal training is an excellent place for new skills; however, a follow up time of reflection and application of the training is the place to emphasize and encourage informal learning throughout a department or organization. Even though considered informal, the organization can encourage and support this type of learning (Poell et al., 2006; Ellinger, 2005; Ley et al., 2005; Mosher, 2004). By doing so, the organization reinforces their commitment to the employees and to the improvement of skills and abilities needed for their particular job responsibilities.

Everyone needs someone who can answer questions such as: *How do I apply the head knowledge and content training to job and work related task?* To obtain the answer, an individual needs access to an expert or someone knowledgeable on the subject within the same job arena who will share their knowledge (Terry, 2007). Stevens and Frazer (2005) suggest that coaching is the missing ingredient in connecting the formal training to workplace practice. They describe an employee coach who is acknowledged as competent in a skillset and is able to guide a learner and provide direction on applying

formal training concepts to the workplace. For some organizations this is a formal process of providing a coach to employees (Stevens & Frazer, 2005) but in other organizations, coaches are informally emerging as employees recognized as experts and who are open and willing to share their expertise with others (Poell et al., 2006).

As this process enfolds, both the employee giving and the employee receiving aid benefits and the organizational structure of being supportive is reinforced. The process can only be beneficial to the organization as learning communities of practice are created (Allen et al., 2005). As employees participate in work activities such as teams, meetings, and peer-to-peer communication they develop skills and acquire knowledge that is vital for productivity and performance improvement in the workplace (Rosenberg, 2007). Training that is still traditionally defined, subject-focused and expert-driven, is built around what is perceived as being needed by the expert. However, when training and support events are built around what employees need, training becomes relevant and applicable on-the-job (Chen & Hsiang, 2007; Terry, 2007).

A benefit of informal learning is the immediacy of the transfer of knowledge (Allen et al., 2005; Mosher, 2004). Another is that it is personal and real. It is getting answers to real-time problems from someone who has knowledge to impart with either a solution or direction on finding the solution. Informal and formal learning can augment each other. The informal learning occurs during and after the formal learning (training) event. Many workers develop mastery through the blending of informal and formal learning (Mosher, 2004).

Communities of Practice

A community of practice is defined as a social structure where the participants engage in sharing, learning, and solving problems (Lave & Wegner, 1991; Hamilton, 2006). When discussing communities of practice within the job environment, it is the place where people of similar interests within the organization come together to share and receive knowledge (Loyarte & Rivera, 2007; Rosenberg, 2007; Chua, 2006; Hamilton, 2006). These communities may be supported by the organization but are generally informal and can cross organizational boundaries (Rosenberg, 2007; Allan & Lewis, 2006; Mittendorff, Geijsel, Hoeve, deLaat, & Niwuwenhuis, 2006).

Trust is a key ingredient in a community. For sharing to take place, participants within the community need to feel that others have the same goals (Garavan et al., 2007; Chen & Hsiang, 2007; Roberts, 2006; Hamilton, 2006; Allan & Lewis, 2006; Preece, 2004). Within an organization, this mutual desire to share and receive knowledge that is useful and applicable can be the key to cultivating the trust that will ensure willing participation. As employees share and receive knowledge, their continued participation will be because they find value and trust in the experience. Within an educational institution, this sharing can be across departmental units. As the office support staff work on office tasks required by the educational calendar, their colleagues are doing similar tasks. The community of practice can be the place where simple to difficult problems can be solved saving everyone time and effort in accomplishing job responsibilities (Garavan et al., 2007; Allen et al., 2005; Wegner, 2000).

Communities of practice are places of growth, the ebb and flow of information (Garavan et al., 2007; Roberts, 2006; Wegner, 2000). They are designed based on the

need to receive (and share) knowledge that is applicable. Wegner (2000) says communities of practice can fill the *white space* that exists when people across departmental units do similar tasks and job responsibilities. They provide the structural location that can be used to share knowledge, best practices, lessons learned, and feedback as each employee strives to transfer training to applicable workplace tasks (Rosenberg, 2007; Hamilton, 2006).

Virtual (Online) Communities

Online support communities (OSC) are being used to provide on-the-job and continuous support for technology issues. When a selected group of participants that have common issues and real-world problems to address are participants, learning can be accomplished by everyone from the novice to the expert. Professional skills can be built on by solving and applying what is learned in the workplace to real-world issues (Allan & Lewis, 2006b; Allen et al., 2005). Organizations are discovering that with careful design and structure, including support and encouragement from the organization, especially supervisors and the human resource office, there are many benefits that will be realized from building an online community (Allan & Lewis, 2006b; Tynjaia & Hakkinen, 2005; Ullman & Rabinowitz, 2004).

Online communities designed as community of practices can provide the medium for support and training needs within an organization (Hamilton, 2006). The online medium for the community ensures instant responses to requests for needed information. As participants become integrally involved in sharing and receiving knowledge, a network is created that aids in the success of the participants as they see the benefit of

their participation to help in changing work practices (Rosenberg, 2007; Tynjaia & Hakkinen, 2005; Allen et al., 2005).

User Participation

User participation, posting and viewing, is the fundamental reason for the success of an online community of practice (Koh, Kim, Butler, & Bock, 2007). Without users to provide content and viewers to view the content, the community is not sustainable. Both are an integral piece of its continuance. Predicting usage and acceptance has always been a key issue (Burton-Jones & Hubona, 2005) with many variables being taken into account. Leadership, trust, usefulness, ease of use, and social presence are necessary components within the online community.

Leadership from within the community can sustain the community goals and shape its successful implementation (Stinson, Pearson, & Lucas, 2006). A leader selected from the participants, who is seen as experienced in the organization's processes and procedures, will promote trust in the online community (Koh et al. 2007; Allan & Lewis, 2006; Hung, Chen, & Koh, 2006) and will encourage and influence participation. The right leader will aid in the successful building of the online community (Rossenberg, 2007), will lead by example (Stinson et al., 2006), and will cultivate active participation in the community (Koh et al. 2007).

Users must perceive value within the online community to continue participating (Bishop, 2007; Koh et al., 2007; Sun & Zhang, 2006; Zhang, Li, & Sun, 2006; Zhang & Li, 2005). Without content that is seen as being applicable to a job or work task, users will not be quick to return. Content matter experts who share their expertise on applying training and concepts in the workplace can be essential community members and help

users comprehend its usefulness (Poell, Van Der Krogt, Vermulst, Harris, & Simons, 2006). Users also need to be able to access the online community medium easily and reliably (Koh et al., 2007; Zhang et al., 2006; Zhang & Li, 2005). The infrastructure of the online community needs to be user friendly, free of effort, and require little time to access, to not be a major impediment to the online community activity (Koh et al., 2007; Zhang et al., 2006).

Within the workplace, social communication can be seen as a determent to a productive work environment. However, social ties within an online community can improve the activity in the community (Koh et al., 2007; Stinson et al., 2006; Hung et al., 2006) and increase productivity as users get to know each other and build trust fostering unity and cooperation. The social communication can be as simple as IMing during the work day or a face-to-face gathering at lunch or after hours (Pi, Chen, Liu, & Li, 2008; Koh et al., 2007; Stinson et al., 2006). This social activity can provide the basis for increased online community participation.

Integrating Support and Performance Improvement in the Online Community

For effective learning in the workplace and to establish continuous performance improvement, learning and application need to take place together. A "when and where it is needed" learning, where questions are answered as the problem or issue occurs so there can be an immediate application to work tasks (Gill, 2003, p. 23). Baldwin-Evans (2006) says that most learning takes place outside the formally designed event. This informal learning, which is extremely effective, can be blended with formal training activities to create a "learner-centric" (p.157) environment within the organization.

The OSC of practice can provide learning across organizational boundaries (Garavan et al., 2007; Rosenberg, 2007; Allen et al., 2005; Wegner, 2000). Using existing software to facilitate the community (Lee, 2008; Hamilton, 2006; Mosher, 2004) and with supervisors' support, a successful OSC can be implemented. As participants realize that the OSC is a place that is safe and protected and of mutual needs, it will become a place to not only receive needed applicable information but also a social, networking location for collaboration and problem solving (Garavan et al., 2007; Koh et al., 2007; Baldwin-Evans, 2006; Hamilton, 2006; Hung et al., 2006; Stinson et al., 2006).

The OSC needs a framework that is perceived as easy to use and reliable (Koh et al., 2007; Zhang et al., 2006; Zhang & Li, 2005). Using software that is readily available within the educational institution allows the OSC to be built without an additional outlay of resources. The framework can be built using a LMS, software that allows for teaching and training to be administered in the online environment (Mosher, 2004; Ullman & Rabinowitz, 2004) or workplace software such as Microsoft SharePoint (Charran, Dato-on, & Lang, 2007). Using existing software would be an added benefit that was not anticipated during the investigating, purchase, and implementation phases of the software (Hamilton, 2006). The online framework should be designed as a knowledge-building community that is recognized as a friendly, safe, and open environment to encourage dialog and participation. The topics addressed should be those of interest and perceived usefulness to the participants otherwise involvement in the online community may not happen (Bishop, 2007; Koh et al., 2007; Hamilton, 2006; Sun & Zhang, 2006; Zhang, Li, & Sun, 2006; Zhang & Li, 2005; Eveleth & Baker-Eveleth, 2003).

Within an organization, an OSC would be utilized to provide on-the-job and continuous support for technology issues. With a selected group of participants that have common issues and real-world problems to address, learning would be accomplished with everyone from the novice to the expert participating. Professional skills would be built on by solving and applying what is learned in the workplace to real-world issues (Rosenberg, 2007; Paloniemi, 2006).

Instant Messenger

Rosenberg (2007) says that performance support is when an answer or support is provided at the exact moment it is needed. Instant Messenger (IM) is an online tool that can be integrated within the OSC and utilized to provide the "just-in-time" support. IM, an instant chat or texting tool, can be perceived as interruptive and unproductive. However, because of the IM structure, users can effectively manage the interruptions (Pi et al., 2008; Garrett & Danziger, 2007). Users can ignore a message or set their IM status as "busy" or "unavailable". They can respond with a few short keystrokes while continuing another work task.

When support is needed, IM can be used to send out a quick message to one person or to all OSC members asking about the issue or work task. An answer can be provided immediately and all members of the OSC are informed or updated at the same time. This can all happen in a short timeframe without multiple emails or phone calls (Garrett & Danziger, 2007) going back and forth. Managed effectively, IM can positively affect both the formal and informal organizational structure (Pi et al, 2008).

Summary

The rapid change in technology has created a need for ongoing training and support. Educational institutions strive to maintain up-to-date technology, in hardware, software, and administrative systems and in doing so may create a void in who is getting appropriate, useful, and needed training and support. The literature seems to indicate that office support staff, who are vital to the running of the individual departments within the educational institution, are not receiving technology training and support when needed (IAAP, 2005; BLS, 2008). An OSC of practice may be the solution to providing informal support and training to augment formal training that is inadequate to promote consistent performance improvement and application to workplace tasks. An online support community that is accessible wherever, whenever for office support staff can provide the answer for an institution that strives to remain competitive in this changing environment.

Chapter 3

Methodology

Office support staff are the personnel that assist administrators, faculty, and students. Their job is to provide information when needed and to create, compile, and dispense data that sustains and ensures a smooth running department and institution. They are the staff whose responsibilities seem to be extremely diverse while critical to the institutional mission. As office responsibilities have changed and migrated to include diverse technological job tasks (BLS, 2008; IAAP, 2008; Hartman et al., 2005), the support and training for these new tasks has been minimal or lacking.

Research Design

The developmental study developed an online support community (OSC) for ongoing support and training at an educational institution. According to Richey, Klein, and Nelson (2004), most developmental research projects describe, analyze, and evaluate a product development process used in a particular situation. Development research can use a variety of tools and techniques (Richey et al., 2004; Richey & Klein, 2007) with traditional research methods facilitating the developmental endeavor. The investigation encompassed a needs analysis, pre- and post-survey results and a technology support inventory, focus groups, interviews, historical and electronic documentation. In the initial study, the OSC process was observed over a period of twelve weeks for the

purpose of collecting data that were examined and evaluated (Richey & Klein, 2007; Fitzpatrick et al., 2004; Merriam & Simpson, 2000; Gillham, 2000). After collating and analyzing the data, recommendations were used to redesign the OSC and the newly designed OSC was observed during an eight week period for the final evaluation.

The goal was to develop an OSC to provide office support staff the assistance needed to perform job tasks quickly and efficiently. The OSC was designed as a protected location to find answers to technology issues and a safe arena to pose questions and concerns to encourage dialog, elicit solutions, and increase productivity within the workplace. It was anticipated that office support staff, as well as administrators, would perceive its benefit as job performance was positively impacted.

Instrument Development

Several data collection instruments were used in the initial study: a *Technology Support Needs Pre-Assessment* and a *Technology Support Inventory* (Appendix A & B) at the beginning and an *Online Support Community Final Survey* (Appendix C) at the end. Survey instruments used in the second study were a *SharePoint Support Site Survey* and a *SharePoint Support Site Questionnaire* (Appendix D).

The format of the instruments was designed using examples (Richey & Klein, 2007; Merriam & Simpson, 2000; Kirkpatrick, 1998) with the topics coming from the needs assessment as well as demographic information and all data collected. Fitzpatrick et al (2004) says that survey instruments that "measure opinions, behaviors, attitudes, or life circumstances quite specific to the program" (p. 342) are usually developed by the

researcher. The development of the instruments was accomplished with the following process:

Focus Group

A focus group is made up of selected individuals that have expertise in certain areas and are convened for face-to-face interaction. Focus group members build on the group process and stimulate conversation, feedback, and reactions (Love, 2004; Fitzpatrick et al., 2004; Goldenkoff, 2004). The group dynamics can produce quality information that cannot be obtained in any other method of gathering data. According to Kirkpatrick (1998), including a focus group in the process can accomplish four purposes:

1. help to determine subject content
2. inform members of the efforts of the training to provide practical help
3. provide empathy regarding needs of subordinates
4. stimulate support of the OSC by including them in the process

A focus group made up of seven people was selected based on their areas of expertise:

- Four administrative assistants to the university Deans – one higher level than the participants. A good portion of work tasks accomplished by the participants goes through one of the Dean's offices. In addition, three of the four were office support staff to departmental chairs (same position as the participants) before being promoted to their present position.
- Two people from the IT department – the Associate IT Director and the Help Desk Manager. Both deal with questions, problems, and concerns on technology support and training issues on a daily basis.

- One person with ANGEL training experience – this individual has trained some of the participants in using ANGEL and has knowledge of some of the technology issues office support staff face.

Pre-Survey Creation and Initial Validation

After selecting and contacting the focus group via email, members were asked to examine a list of software and hardware areas that could be issues of technology support (Newcomer & Triplett, 2004). This list was based on the current needs and deficiencies of technology support as reported by Burke and Hutchins (2008), IAAP (2008c), and IAAP (2005) and the specific software and computer systems currently used. The members were asked to reply via email with any additions or deletions that were needed.

After receiving the responses, the list was divided into similar topics and the pre-survey and support inventory were designed into paper surveys using question design and formatting examples from several sources (Richey & Klein, 2007; Merriam & Simpson, 2000; Kirkpatrick, 1998). The survey drafts were emailed as an attachment to focus group members. The members were asked to review the documents and provided their response in a face-to-face discussion meeting. They were asked to examine the:

1. content – asking the office support questions of things that they do
2. content – is there something else that should be included
3. content – too many questions
4. wording of questions – is it clear

The survey drafts were also sent to the Office of Institutional Research for the formatting review.

After meeting with the focus group members and obtaining a response from the Office of Institutional Research, the surveys were revised based on suggested changes. The surveys were again sent via email attachment to the focus group members for the *initial* validation process. Before beginning the treatment, *final* validation and reliability testing was accomplished by the following:

Pre-Survey Final Validation and Reliability Testing

First, the pre- survey and inventory were created in the online format using ANGEL's survey creating feature.

Second, focus members were given access to the instruments. The four administrative assistants were asked to take the pre-survey and inventory in ANGEL. Newcomer and Triplett (2004) suggest pre-testing with a sample of the target population. However, using these four members accomplished the same results without reducing the limited population size. As they completed the pre-instruments, they were asked to consider understandability, flow, and areas of content that were lacking. The members were asked to respond via email with their suggestions for revisions or improvement.

Last, the suggestions and data collected were used to revise the instruments to complete the *final* validation process and determine reliability of the instruments.

Other Data Collection Instruments

During the process of the initial treatment, ANGEL (http://www.angellearning.com), the LMS that housed the OSC, was used to collect ongoing data. Built in to the LMS are several electronic reporting processes. These include but are not limited to:

- recording who logs in, what time, and for how long
- tracking time frames for each participant individually and collectively as a whole
- recording numbers of times participants post to the threaded discussion forums (new postings and replies) individually and collectively as a whole
- recording the postings
- recording emails sent and received

These data were used to create the *Online Support Community Final Survey* and the recommendations for the second study. The process would have been extremely time-consuming if it had to be done by hand. The electronic process was fast and accurate in keeping detailed records (Richey & Klein, 2007).

Post-Survey Creation and Validation

Using the records collected from the LMS electronic reports, logins and posting numbers were calculated to determine participation. With these results, the *Online Support Community Final Survey* (Appendix C) questions were written to collect data on the reasons the participants did or did not participate, determine participant's perception of the value of the OSC and its usefulness, and to ascertain impressions on the ease of using ANGEL, the OSC medium. Using the format of the pre-survey, the questions were created online using ANGEL's survey creating feature.

Second, focus members were given access to the instrument. The focus group members were asked to examine the instrument to determine clarity and flow of the survey questions and to recommend other questions to be included. The members were asked to respond via email with their suggestions for revisions, additions, or improvement.

Last, the suggestions and data collected were used to revise the instrument to complete the *final* validation process and determine reliability of the *Online Support Community Final Survey* instrument.

Second Study Instruments

The *SharePoint Support Site Survey* and *Questionnaire* (Appendix D) questions were written using the same process as the other instruments. Using examples, the questions were written to collect data on participation and need for technology support. Questions were also written to determine the participant's perception of the value and usefulness of the OSC, the redesigned site in SharePoint (PCMag.com, 2009c), their impression and use of Instant Messenger, and their desire to continue using the OSC after the study concluded.

Second, focus members were emailed the questions and asked to examine them to determine clarity and flow of the questions and to recommend others to be included. The members were asked to respond via email with their suggestions for revisions, additions, and improvement.

Last, the suggestions were used to revise the questions and the *SharePoint Support Site Survey* and *SharePoint Support Site Questionnaire* instruments were designed using templates predefined in SharePoint.

Approach

There are a wide array of methods of developing and evaluating support and training programs. Formative evaluation, process evaluation, descriptive evaluation, performance monitoring, and implementation analysis are some of the more common

strategies (Love, 2004; Fitzpatrick et al., 2004). Love's (2004) implementation analysis method has four stages in the process of planning, implementation and evaluation of an effective program.

1. assess needs and feasibility (includes determining needs)
2. program planning and design (includes setting objectives and subject content)
3. program delivery (includes selecting target population and coordinating the program)
4. program improvement (includes evaluating, feedback, and improvement)

Love's stages were used as a guide to develop and implement the OSC and to evaluate and assess the effectiveness of the learning process and the OSC model.

The following section describes the approach and the steps and process that took place as the OSC was developed, evaluated, redesigned and implemented:

Step One: Criteria Development and Assessing Needs

Step Two: OSC Planning and Design

Step Three: OSC Launch and Delivery

Step Four: OSC Evaluation and Improvement

Steps Two, Three, and Four were iterative. These were followed for the initial treatment and then again during the second treatment.

Criteria Development and Assessing Needs

The first step in the process of developing the OSC was to determine the areas where the office support staff need support and training. This was accomplished through literature reports, obtaining focus group feedback, and by examining existing historical source documents (Love, 2004).

Current needs and deficiencies of technology support were reported by Burke and Hutchins (2008), by the IAAP website (2008c; 2005), and by the latest report published by the BLS (2008). All concurred about needs related to today's office:

- integrated computer software applications
- organization and scheduling
- computer communications and research
- document preparation, storage, and retrieval

Using the above as a guideline, the specific software and hardware that are used at the institution were compiled into a list. Next, a focus group was selected (Love, 2004) based on their area of expertise. They were asked to examine the list and their feedback added to the list of areas of needed technology support. Using these data, the initial pre-survey and support inventory were created. The process of creating, validating and determining reliability is discussed in the Instrument Development section. The pre-survey and support inventory were administered when the study launched.

A third data gathering technique was used to verify the findings (Fitpatrick, Sanders & Worthen, 2004). Historical documents, the detailed records on requests for assistance that have been received by the university's help desk for technology related issues were examined. The data were used to determine the specific areas the participants requested technology assistance within the past year (Love, 2004; Yin, 2003; Bickman, Rog & Hedrick, 1998; Kirkpatrick, 1998). These existing records are excellent places to obtain data and are a rich source of the true picture of what has gone on in the past and requires examining computer databases and or paper records (Love, 2004; Yin, 2003; Bickman et al., 1998; Kirkpatrick, 1998).

LeAnn McElrath, the IT staff member, aided in querying and retrieving data from existing databases that were maintained by the helpdesk for the calendar year 2007. The data were categorized by department and the office support staff requests for help. Only data with pertinent information were collected. This was done by the following:

- First, the help desk records were queried for all requests by the participants.
- Second, within these records, the results were coded to categorize the requests for help. All requests that were not issues related to needed technology support and training for the participants were set aside for document purposes only (for example… the participants are support staff to a university department with a chair as their immediate boss as well as several faculty members they support. They may request technology assistance but it could be for a faculty member).
- Last, the results of the categorized records were tabulated and compared to the initial list examined by the focus group members. These data were used in the initial design of the community framework.

The results from the needs assessment were used in the next step.

Initial OSC Planning and Design

The second step in the process of developing the OSC was to use the information obtained in the needs assessment to plan and design the community framework. Kirkpatrick (1998) says that time and emphasis should be placed on the planning and implementation of a training program if it is going to be effective. Weeks of determining needs were followed by planning, designing, and setting up the online community framework before the implementation process could take place.

The OSC framework was developed using the LMS ANGEL. By using an existing LMS, the design and setting up of the OSC was a simple process. The majority of time and effort was on the planning of the contents and assuring an easy design flow for the participants understanding and ease of use. ANGEL allows for a protected online community framework that can be accessed via a username and password. Users can participate in threaded forums, surveys, online chats, and other community aspects that are needed to provide support and encourage dialog (Minielli & Ferris, 2005)

The OSC was developed with minimal general topic threaded discussion forums using the information gleaned from the needs assessment (Appendix E). The pre-survey and inventory instruments were also posted.

The OSC framework was designed in anticipation that the users would be encouraged to provide questions, answers, and dialog but also to ensure that they would feel safe and comfortable to present new issues of support and training concerns that need addressing (Li, 2004).

Initial OSC Launch and Delivery

After determining and assessing the needs, planning and designing the online community framework, the OSC was launched. During this timeframe the OSC was an ongoing building process with the researcher as an observer participant.

Office support staff to the administrative head (chair) of the educational department were invited to participate as a purposeful sample (Love, 2004; Kirkpatrick, 1998; Fraenkel & Wallen, 2000; Gay, 1996). Purposeful sampling allows for specific participant selection based on the criterion and purpose. This method of sampling was chosen as the office support staff are the focus of the OSC (Richey & Klein, 2007).

There are 17 educational departments (undergraduate, graduate, and continuing education) at the university who provide the office support to department chairs. Each chair in the university has from nine to 15 full-time faculty, 10 to 30 part-time faculty, and from 100 to 500 students for whom they are responsible. The office support staff is the one who directly supports the chair with the duties and tasks that come with this massive responsibility. They provide indirect support to the full-time and part-time faculty as well as all the students in the department.

The office support staff participants were introduced to the OSC framework in a face-to-face meeting to explain the process, procedures, and intended use. During the first meeting questions were answered and assurance given that support for the usage of ANGEL, the online community framework, would be provided. They were assured that the OSC process responds to a need for providing ongoing support for technology usage in their daily tasks and responsibilities. The OSC was a safe and protected place for all issues and concerns no matter how small or large (Li, 2004), and should aid in the productivity of their responsibilities - not add more time and effort. They were reassured that they may withdraw without any repercussions.

The office support staff participants were provided logins and passwords. Since some participants were using ANGEL for other tasks, some usernames was not new. All participants agreed that names (first, initial, or last names) were not an issue as all participants work at the same institution. They were assured by the investigator that their privacy and confidentiality would be maintained during the reporting process (Kirkpatrick, 1998; Gay, 1996; Fraenkel & Wallen, 2000). Data collected from or about them would be held in confidence and at no time would real identities be used in any

publications that describe the research. Participants were advised that as a result of their participation, administration would understand the benefits of providing ongoing technology support and training and it is anticipated that a community of support for technology issues and problems encountered on the job would evolve.

In addition to participating in the OSC, the office support staff participants were asked to do the following:

- Upon the first login, answer the questions on the *Technology Support Needs Assessment Pre-Survey* and the *Technology Support Pre-Inventory*. Data were collected using their login to gather demographic information (Richey & Klein, 2007), data on the categories from which technology support has been requested by the participants in the past year, and data on the skill level and needs assessment in specific technology areas as defined by the criteria development. The results of the pre-survey and inventory were used to confirm the topics of the threaded discussion forums.
- At the end timeframe, answer the questions in the *Online Support Community Study Final Survey*. Data collected were used in the final evaluation.

The office support staff participants were given consent forms (Appendix F) with the description, explanations of the risk/benefits, costs to participate, confidentiality statement, and participant's rights to withdraw at any time. They were asked to sign the statement for documenting purposes and were given a copy for their records. The following written instructions for ANGEL were given to each participant (Appendix G):

- Instructions on forwarding any email sent through ANGEL.
- Instructions on subscribing to discussion forums so that postings would be forwarded to their email address.
- Instructions on posting to discussion forums

The initial treatment ran for twelve weeks with the OSC monitored by the researcher as an observer participant. Participant research is aimed at examining and evaluating data for practical purposes. The researcher and the participants become partners in the process. Gillham (2000) says that first the observer participant must identify herself and tell what will be done in the treatment and evaluation. It is important that the researcher gives every consideration to ensure validity without observer bias or observer effect (Fitzpatrick et al., 2004; Merriam & Simpson, 2000; Gillham, 2000; Gay, 1996) by maintaining a low profile during observation. With the use of data triangulation, the possibility of bias will be minimized (Richey & Klein, 2007). The observer participant asserts minimal involvement and provides neither encouraging nor discouraging prompts to ensure a *natural* behavior by the participants is maintained (Fitzpatrick et al., 2004; Gillham, 2000; Merriam & Simpson, 2000; Gay, 1996; Fraenkel & Wallen, 2000).

The participants were given the specifics of the goals and objectives to promote trust but not the anticipated results. When trust is built between members, they are more likely to be free and honest in what they do (Gillham, 2000), both in the OSC participation as well as in answering survey questions. The researcher has been a formal software trainer (2002-03) for the university's office support staff and an informal technology support person for the past few years. Because of this, it was anticipated that

a basis of trust and rapport between the researcher and the participants would quickly evolve.

Finally, participants were informed that a member of the IT staff, the Help Desk Director, would participate in the OSC to provide answers to technical issues, software questions, and dialog about work issues related to technology not answered by others. The participants were introduced to the LeAnn McElrath, the IT staff participant, in the face-to-face meeting. It was affirmed that guests would not be permitted unless agreed upon by all. They were also told that at the conclusion, participants could be asked to participate in interviews to aid in filling-in-the-blanks that might arise as the results are tabulated and analyzed. Data collected during the delivery process were used to determine the effectiveness of the OSC.

Initial OSC Evaluation and Improvement

At the end of the initial treatment period, the participants were asked to take the *Online Support Community Study - Final Survey*. Using these data and the data collected through the electronic reporting process of ANGEL, it was determined that clarification was needed. Several of the office support staff participants were contacted. These participants were interviewed to substantiate gathered data, validate results, and clarify issues.

The interview data along with all other collected data were analyzed and compiled. These results revealed what design modifications were needed and recommendations for improvement and ease of use were identified.

Second OSC Planning and Design

Using the data from the *Final Survey* and interviews gathered in the initial treatment, a list of recommended redesign improvements were compiled. IT personnel at Lee University (Lee) were consulted about a different OSC medium. With their recommendation, the OSC was redesigned using SharePoint, software for Website creation that allows for community interaction and sharing (PCMag.com, 2009). This software, thought not new to Lee, has not been widely used. Using existing software designed for community participation allowed for more time to be spent on the content planning and the design flow for participant's ease of use and understanding. SharePoint, as a Microsoft product, integrated with existing software used at Lee so participants were able to use their usernames and passwords used for logging in to the computer system. The initial design of the OSC was minimal (Appendix H) with input from two participant leaders and Lee's WebMaster.

Second OSC Launch and Delivery

When the SharePoint Support Site was ready to launch, participants were emailed an explanation of the redesigned OSC (Appendix I), given the site URL with username and password information, and provided attachments with instructions on using the OSC. They were also advised that the researcher would be setting up appointments with each participant to install and set up Instant Messenger (IM), set up user alerts for the SharePoint OSC, and answer any questions at that time about the redesigned OSC. This process took approximately two weeks while participants examined the OSC, began using it and IM. Participants were emailed a reminder by the participant leader once a week to contribute and were encouraged several times a week via IM to post to the OSC.

During the eight weeks of the observation period, the SharePoint OSC was a work-in-progress. Content areas were added, and as participants contributed and the home page expanded, the viewing area was improved so content areas were maximized on linked pages. Participant leaders and the Webmaster were consulted several times on design and continuous modifications.

Second OSC Study Evaluation and Improvement

At the end of the eight weeks, the participants were asked to complete the *SharePoint Support Site Survey* and *SharePoint Support Site Questionnaire* (Appendix D). LeAnn McElrath was interviewed. Postings and contributions were examined and calculated. The results from these data were examined, analyzed and evaluated and used to write the final report and recommendations.

Data Collection Strategies

Developmental studies use multiple methods of collecting data necessary to substantiate the conclusions and to corroborate the facts (Richey et al., 2004; Richey & Klein, 2007). The researcher investigated technology support needs by asking what has been happening, what is happening, what was needed, what is needed in the future, what is perceived as needed (could be different), and what is being provided. This was accomplished by several methods of data collection and from many sources. These sources of evidence came from the following:

- needs assessment
- historical records
- surveys
- electronic document recording
- researcher as observer participant

These multiple sources of data described and defined in other sections provided a true picture of what actually happened. Triangulation (Richey & Klein, 2007; Yin, 2003; Gillham, 2000; Stufflebeam, 2001; Maxwell, 1998) suggests that if data converge (agree) the researcher can be assured that the data collection process has been true and the results and findings are validated.

Resources

In addition to resources already described, the following human and material resources and necessary approvals were used:

People

An IT person, the Help Desk Manager at Lee, LeAnn McElrath, was used in four different areas: first, as a member of the focus group; second, as the person who helped obtain data from the historical documents; third, as a member of the OSC who provided answers to technical issues, software questions, and dialog about work issues related to technology; and, fourth, as a technology expert in the redesigned OSC in SharePoint.

McElrath was well qualified in this position as she deals with daily technology issues from every sector of the university. She also oversees the Help Desk student workers, keeps track of incident reports and determines policies, procedures and

processes. A new responsibility she accepted in the Spring of 2009 was the setting up of support and training for new and current users for new software and systems and for improvement support and training.

The WebMaster at Lee, Breanna Gray, was consulted in the redesign of the OSC. She aided in setting up SharePoint and in providing guidance for several design issues at the beginning and throughout the second treatment.

The Secretary to the Assistant Vice-President of Institutional Research, Erin Looney, was added to the second treatment as a content matter expert in the administrative systems software, Colleague. Looney was involved from the beginning of the implementation of the administrative software and in many of the processes and procedures used daily. She also trained many of the employees including the study participants.

Approval to conduct the study at the researchers institute was provided by the Vice-President of Academic Affairs (Appendix J) at Lee University. Institutional Research Board approval from Nova Southeastern University was granted (Appendix K).

Technology

ANGEL, was used for the initial OSC framework. SharePoint was used for the redesigned OSC framework.

Program Evaluation and Data Analysis for Presenting Results

One of the most important steps in the research process is analyzing and sharing the results. Richey and Klein (2007) say that the goal of research is not to just gather data but to extract meaning from the interpreted results. The results will add value to the

office support staff support and training knowledge base and increase awareness of the support and training needs for this sector of employees.

All data collected were examined including postings, comments, and usage amounts. The data were examined for patterns and evidence of the request for help and successful support provided. Calculations were used to determine the increase or decrease of participation throughout the timeframe. The data were compiled and analyzed for conclusions. These conclusions were written in narrative form with examples to illustrate the success or failure of the participation.

In the initial study, the *Technology Support Needs Assessment Pre-Survey* and *Technology Support Pre-Inventory* data along with the *Online Support Community Final Survey* were examined in relation to the other sources of evidence to determine the congruence and convergence of all the collected data.

The electronic data collected through ANGEL were examined and compared to the final survey. The participant's post-interviews aided in filling-in-the-blanks that arose as the results are tabulated and analyzed.

At this point – all the data were compiled by participant coding and were tabulated, compared where needed, and analyzed extensively. The data were examined in the light of Kirkpatrick's (1998) four levels of evaluation to determine the effectiveness and success of the OSC:

1. reaction – how participants reacted to the program
2. learning – skills increased and improved knowledge because of participation in the program
3. behavior – change of behavior because of participation in the program
4. results – final results that occurred because of participation in the program

It was determined that the recommendations and improvements that were highlighted from the initial data results, required another observation period using the recommendations to design the second treatment.

After the second study concluded, data from the *SharePoint Support Site Survey* and *SharePoint Support Site Questionnaire* were compiled. Data from the interview with LeAnn McElrath were also analyzed. The OSC site was examined for usage and postings. Kirkpatrick's (1998) four levels of evaluation were again applied to these data. This process was used with Yin's (2003) convergence of multiple data theory to determine if the results of the different methods of collected data agreed. Reasons were explored and explained in the written results. As an observer participant, personal impressions and reflections was part of the reporting process; however, an attempt was made to limit the influence on the results. Using these methods as guides, it is hoped that it was a true reporting of the process and was written honestly and fluently without bias (Richey & Klein, 2007).

All of the data results were written about and reported in narrative format with supporting documentation examples from the data collected. The data collected were used to reinforce the strengths and weaknesses of the OSC with all results being reported

anonymously to assure confidentially of the participants (Kirkpatrick, 1998; Gay, 1996; Fraenkel & Wallen, 2000).

Summary

Various methods of collecting data were used to ensure the triangulation or convergence of the data to corroborate the facts or phenomenon. Focus groups, historical documents, surveys, electronic document collection, and the researcher as observer participant were the main methods of data collection. The initial OSC was developed by conducting a needs assessment, designed using ANGEL, delivered to a selected group of office support staff, and evaluated. The initial OSC was observed for twelve weeks. The data collected were analyzed and recommendations for improvement were detailed. Using these data, the OSC was redesigned using SharePoint and recommendations were implemented. The second OSC was observed for eight weeks. Data collected at the end of the treatment were used to write the final report. The study was limited to the office support staff to the educational department chairs at Lee University.

Chapter 4

Results

Introduction

The goal was to develop an Online Support Community (OSC) to provide a central location for office support staff to find and contribute support for computer technology issues that affect productivity. Love's (2004) four stage implementation analysis method was used as a guide to develop and implement the process; (1) criteria development and needs assessment, (2) program planning and designing, (3) program delivery, and (4) program evaluation and improvement.

At Lee, there are four schools or colleges divided into undergraduate departments and graduate programs. There are 17 secretaries or assistants to the department chairs and program heads who perform similar tasks, have similar deadlines, and use the same software and hardware systems. Of the 17, half have worked at the institution from 0-4 years; two over 20 years; and the others from 5-20 years. There is very little interaction between the office support staff across schools. New office support staff are not assigned a coach or mentor (Stevens & Frazer, 2005) and look to their dean's assistant and others in their school for guidance. With new staff, new software and hardware, or new administrative support systems, job tasks and work responsibilities can be difficult and time consuming to complete. The 17 office support staff were the target population.

Two other Lee employees were involved. A member of the information technology (IT) staff participated in the focus group; helped obtain data from the historical documents; was a member of the initial OSC who provided answers to technical issues, software questions, and work issues related to technology beyond the expertise of the office support staff and was a technology expert for the redesigned OSC. A member of the Institutional Research staff was added to the second treatment as a content expert in the new administrative support software.

The initial treatment commenced on October 31, 2008 and concluded on February 6, 2008. This encompassed 14 calendar weeks and 12 workweeks with employees off for two weeks during December, 2008. The second treatment commenced on May 6, 2009 and concluded on June 30, 2009; it encompassed eight weeks.

Needs Assessment

The needs assessment process began by determining the technology content areas for support and training. Triangulation established data convergence and validated the data collection process, the results and the findings (Richey & Klein, 2007; Yin, 2003; Gillham, 2000; Stufflebeam, 2001; Maxwell, 1998). Literature reports and focus group feedback were used with historical documents to ensure triangulation.

Literature revealed current technology support needs and deficiencies (Burke & Hutchings, 2008; IAAP, 2008c; IAAP, 2005; BLS, 2008). The content areas, integrated software applications, organization and scheduling, computer communications and research, and document preparation, storage, and retrieval were used to create an initial

list of specific software and hardware used at Lee. The focus group examined, added to, and confirmed the list:

- Microsoft Office (Word, Excel, Access and PowerPoint)
- Outlook (Email and Calendar)
- Administrative Software Systems (Champlain, Colleague, Datatel)
- Other Software and Reports
- Internet and Network
- Hardware

The pre-survey needs assessment and pre-inventory were created using the list and confirmed and validated with focus group feedback.

Historical Documents

With the aid of the IT person, the help desk records were queried for 2007, the year before the initial implementation. All requests for assistance from the office support staff were examined with 333 records extracted in 18 categories (Appendix L). After eliminating those not directly relating to the office support staff, there were 240 requests for help for an average of 20 a month. After examining and eliminating issues that could only be handled by the helpdesk administrators, Table 1 lists the resulting categories and requests for help:

Table 1. 2007 Help Desk Request after Purging

Category	Requests for Help
Email	12
Champlain	15
Datatel	14
General Questions	22
PC Software	39
Printing/Copiers	22
Report Request	4

The data in the table indicate that 128 requests for help at an average of about 11 questions per month were sent to the help desk. The historical document categories completed the triangulation process and confirmed the data collected in the literature reports and feedback received from the focus group. The data were used to confirm the list of specific software and hardware used at Lee and categorized to define discussion forum content areas for the program design of the OSC.

Initial Program Design

An LMS licensed to the university, ANGEL, was used as the medium for the initial treatment. Using a LMS allowed the community to be created with minimal time spent on design and the majority of time on content planning. Based upon the results from the triangulated literature reports, focus group feedback, and historical documents, the following technology areas included in the initial design were:

- Software issues: Word, Excel, Access, PP, Adobe Acrobat, Reports using Office Software
- Email and Calendar Issues: Outlook – on campus and off campus access
- Datatel and Colleague Issues (Administrative Software System)
- Internet/Network/Hardware: Connectivity, WebAdvisor, SharePoint, Computer Problems
- Other Technology Issues

Each content area was given a discussion forum to be used for questions, answers, and sharing data. A generic discussion forum, Community Affairs, was included for non-technology related communication. A link was also provided to email the researcher or the IT person for direct questions.

The main page (Appendix E) contained the discussion forums and links to the pre-surveys; the tab was labeled *Online Support Community (OSC).* The second page contained the links to subscribe to all discussion forums ensuring each participant would receive an email whenever a posting was submitted to a discussion forum. Subscribing was also used as a prompting communication tool to keep everyone involved in the community; the tab was labeled *Subscribe to Discussions*.

With the aid of the ANGEL administrator, the office support staff were issued usernames and passwords and added to the OSC. During this process, it was discovered that over half had used ANGEL at some point in time and several were active users for various reasons. Accordingly, username format within the OSC was deferred to the introductory face-to-face meeting.

Initial Program Delivery

The 17 office support staff were emailed invitations to participate in the OSC (Appendix M). One person declined and 16 were invited to a face-to-face lunch meeting and sent calendar appointments to accept or not. Twelve attended the lunch meeting and four, who were unable to meet at that time, scheduled one-on-one meetings to be introduced to the process. The lunch meeting was held on a Friday, the one-on-one

meetings the following Monday. The IT person accepted an invitation to attend the lunch meeting.

At the meeting, the attendees were given a short overview and a folder with information. The folder included the consent form (Appendix F), Instructions for Study Participants (Appendix G), usernames and passwords, a Task List with *what to do next* and basic contact information (Appendix N).

A discussion about usernames ensued. It was decided that username format was not an issue; no one cared whether full names or first names only were used in the discussion forums and for other communication. It was agreed that existing ANGEL users would keep existing usernames as is, and the others would have their usernames with first name and last initial.

One question about required participation was asked and assurance was provided that the study was intended to examine the way an OSC would evolve as a part of the normal work process. Another asked, "Would lack of participation invalidate the study?" and again they were assured that the researcher was investigating the way an OSC would evolve without bias. After the questions were answered, all attendees and the IT person signed and dated the consent form, kept their copies and returned the originals. The consent form included a confidentiality statement (Appendix F).

Task List for Study Participants

The *Task List* (Appendix N) detailed what the participants were to do the first time they signed in to the OSC. They were to:

- Change their password (new users)
- Forward their ANGEL email to work email address

- Subscribe to the discussion forums – subscribing ensured an automatic email for every message posted in the forums
- Complete the *Technology Support Needs Assessment – Pre-Survey*
- Complete the *Technology Support Pre-Inventory*

The task list also indicated what to do during and at the end. It took several days for the participants to complete the initial tasks. Fifteen people completed the pre-survey needs assessment and inventory.

Technology Support Needs Assessment Pre-Survey

The survey questions were divided into specific software and technology categories with one or more about each area. Each question included a *skill level* and a *need for additional support* question. The process of defining, validating, and creating the survey is detailed in the previous chapter and can be seen in Appendix A. Table 2 summarizes each category results.

Table 2. Technology Support Needs Assessment Summary

	Novice or Familiar	**Some or Great Need**
Word	47%	53%
Excel	67%	67%
Integrating Word & Excel	67%	47%
Access	67%	53%
PowerPoint	67%	80%
Outlook	80%	80%
Datatel	60%	40%
Reports (one did not answer)	57%	50%
Printing	20%	20%
Adobe Acrobat	40%	27%
Internet/Network	67%	47%
WebAdvisor	53%	40%
SharePoint	60%	67%
Hardware	40%	40%

With scale ratings of Novice, Familiar, Very Good, Expert, and Do Not Use for the *skill level* and No Need, Little Need, Some Need, Great Need, and N/A for the *need for additional support*, the data revealed that in all categories except printing at least 40% or more of the participants felt they were novices or familiar with areas of the technology and had some or great need for additional support. The data also revealed that in all categories but four (Word, Printing, Adobe Acrobat, and Hardware) over 50% felt they were novices or familiar with areas of the technology. And in half of the categories (all but Integrating Word and Excel, Datatel, Printing, Adobe Acrobat, Internet/Network, WebAdvisor, and Hardware) 50% felt there was some or great need for additional support.

In four of the areas (Integrating Word and Excel, Datatel, Internet/Network, and WebAdvisor) over 50% felt they were a novice or familiar with the technology but less than 50% felt little or no need for additional support. Several reasons accounted for the difference:

- Integrating Word and Excel was for specific routine tasks. A routine job task needs little support.
- Datatel and WebAdvisor were new. The administrative software system was still being phased in at the institution. Participants were novices or familiar because of the newness. Several specific questions in these categories were answered with an N/A indicating a feature not used. Of those not selecting N/A, over 50% felt some or great need for additional support.
- The Internet/Network is used whenever the computer is turned on. One person indicated Do Not Use and N/A for this question. This indicates either a

misunderstanding of the question or no knowledge of the technology. Without this choice, over 50% felt some or great need for additional support.

The data revealed that in one category, Outlook, 80% felt they were novices or familiar with areas of the technology. And in two categories, PowerPoint and Outlook, 80% felt there is some or great need for additional support.

The data from the pre-survey needs assessment validated the results obtained in the triangulated literature reports, focus group feedback and historical documents. The initial discussion forums defined in the OSC were confirmed and no additional content forums were added.

Technology Support Pre-Inventory

The pre-inventory survey included demographic data questions. The process of defining, validating and creating the pre-inventory was described in Chapter 3 and may be seen in Appendix B. In addition to demographics, there were general technology use and support questions. The pre-inventory results enumerating which answer each of the 15 participants selected is summarized in Appendix O.

The data revealed that 14, 93%, of the office support staff spend 20 or more hours, more than 50% of their work week, using technology in job responsibilities, including email, memos, letters, reports, budgets, class schedules, etc.. Nine of the 15, 60%, look to another secretary for help on general software and administrative software issues. Fourteen, 93%, have some of the departmental faculty come to them for technology assistance before exploring other methods of support. One office support staff provides technology assistance to all departmental faculty.

Observer Participant

The researcher monitored the OSC throughout as an observer participant. Within the first two weeks, email reminders were sent to encourage completing the surveys and to direct questions and comments to the discussion forums. Phone questions were also answered about what should and should not be included in the OSC. There were two emails at the end, one two weeks before the last day and one the last week as a reminder as to when the study would officially be over.

At the mid-point of the initial treatment, the participants were asked via email to take a short informal survey (Appendix P). The email prompted three automatic responses that the recipient had left for Christmas break. Eight people responded within three days, one person responded after returning from break. The data indicated that six participants had one-to-two technology issues that were answered and five of them used the OSC. However, of those five, two of them also indicated they received help from another secretary because it was easier to phone someone else. One question from the discussion forum had not been answered in several days which prompted a question about adding an expert in the Datatel and Colleague content area. Four of the nine did not want an expert to be added. With the guidelines that required unanimous approval for inviting a guest to participate, this issue was dropped. Except for the above, effort was made to maintain a hands-off approach and to allow the OSC to carry on without outside interference or influence so that a true reporting of the process would occur (Fitzpatrick et al., 2004; Gillham, 2000; Merriam & Simpson; Gay, 1996; Faenkel & Wallen, 2000).

Data Analysis

Discussion Forums

After examining each forum, it was determined that there was little participation. Table 3 discloses that one content area, Internet/ Network/ Hardware, had no participation and the other content areas only had two to three questions or comments. One question within the Datatel and Colleague Issues content area had a question that was never answered even though participants were prompted with an email when the question was posted in the forum.

Table 3. Discussion Forum Participation Summary

	Questions or Comments	Response by Participants	Response by Observer or IT Person
Software issues: Word, Excel, Access, PP, Adobe Acrobat, Reports using Office Software	2	2	4
Email and Calendar Issues: Outlook – on campus and off campus access	2	2	2
Datatel and Colleague Issues	3	4	0
Internet/Network/Hardware: Connectivity, WebAdvisor, Sharepoint, Computer Problems	0	0	0
Other Technology Issues	2	4	0
Community Affairs	2	8	0

With nine questions or comments in the technology areas over the 12 workweeks, there were fewer than one per week. Looking at discussion participation by the calendar, the majority of participation was during the first four weeks, and no participation at the end, the last four weeks.

At the end of the initial treatment timeframe, the OSC discussion forums were disabled. Electronic reports were run to examine usage and to find patterns and other data to aid in evaluation. Using the report data, a *Final Survey* was designed and validated, as described in the previous chapter, and administered to the participants. It was also determined that several interviews would be needed to provide additional data for the final evaluation process.

Electronic Usage Reports

ANGEL kept track of all usage. This included logins, surveys, posting to discussion forums, emails, and any other type of participation. After running reports, compiling and evaluating usage, patterns emerged (Appendix Q).

Four people (27%) logged in, took the survey and inventory and did not login again to the OSC. Two (13%) logged in, took the survey and inventory, logged in several other times but never participated. Two participants (13%) logged in, took the survey and inventory, participated twice, and logged in other times without participating. And seven (47%) logged in to take the survey and inventory and also logged in at other times to participate; none ever logged in without doing something within the OSC.

In addition to the patterns noted above, each category contained users across the different schools. Category 1 contained participants from two schools. Categories 2 and 3, with two individuals each, contained participants from different schools. Category 4 contained individuals from three schools as well as all the graduate office support staff also from different schools.

Based on the patterns, interviews appointments were made for each category. Participants were asked to complete the *Final Survey* before the interview to provide a full picture of the data and as a basis for asking clarifying questions.

Final-Survey Results

Several things were discovered in the data results of the *Final Survey* (Appendix R). First, 14 of the 15 participants, 93%, felt an *ongoing* online support community would be a *good idea*. Eleven of the 14, 73%, felt it is a *place for training materials*; ten (67%) felt it is a *place to refer new hires*; seven (47%) felt it is a *place for documentation*; and, 6 (40%) felt it is a *place for long-time referral*.

During the 12 workweeks, 11 (73%) reported they had *three or more* technology issues where they needed assistance. Seven (47%) did not use the OSC for the technology problems and only three (20%) used it for all their technology issues. The data indicate that some received help from another secretary, the dean's assistant, and/or the help desk. Of those who did not use the OSC for help, a variety of reasons were given including the following:

- Did not think of it
- Would take too long for an answer
- Easier to phone someone
- Too busy with work tasks
- Have face-to-face network

Thirteen (87%) of the participants felt it was *important* or *very important* for the university to provide ongoing support for technology issues. And 14 (93%) felt it was *important* or *very important* for the university to provide an expert for all technology

issues, someone that can be contacted whenever needed. Five (33%) said they would *very probably* or *definitely* use an ongoing OSC. Only one felt she would *probably not* use it. Five (33%) also said they would *very probably* or *definitely* recommend the OSC to a co-worker. All others said they would *possibly* or *probably* recommend the OSC to a co-worker.

The office support staff also discussed their need for training and their preference for training methods. Of the seven methods of training options,

- Face-to-face group
- Face-to-face one-on-one
- Phone one-on-one
- Online tutorials (self-paced)
- Online support community
- Off-campus conference
- Manual documentation

none received a very high first choice rating. *Face-to-face one-on-one* training received the most first choices but that was only five (33%) The other ten chose various other options except for the *off-campus conference* method. In fact, *off-campus conference* was listed as last by 12 (90%) of the participants. The participants ranked the *online support community* with the following choices: 1-1st, 1-2nd, 2-3rd, 2-4th, 5-5th, and 4-6th. No one choose the OSC as their last choice, however only four chose it as a top three option.

Interviews

Nine people were asked to participate in a one-on-one interview. Interviewing over 50% assured selection across all schools and in every category established from the

results of the electronic data reports. This ensured data that yielded the most understanding and results that were valid and unbiased across the educational institution (Savenye & Robinson, 2005). Two participants from each of the three small schools and three from the largest school were selected. This also ensured a uniform selection from each category. Two were scheduled from Categories 1, 2, and 3 and three from Category 4. Category 4 was the last group interviewed. It was determined that after all data were compiled others from this category could be interviewed if more clarification was needed.

In addition to the above, the interviewees selected were people with whom the investigator had little contact beyond the scope of the study. Care was taken to elicit true responses and not answers that sounded good or were polite, or answers just to please the investigator (Fitzpatrick et al., 2004; Gillham, 2000; Merriam & Simpson, 2000; Gay, 1996; Fraenkel & Wallen, 2000).

The interviewees were asked open-ended questions (Appendix S) to elicit more than just one-word answers. As the interviews were conducted, similar themes became apparent within all categories, from the ones who did not participate at all to the ones who logged in and participated every time:

- When a technology issue came up, it was always something that needed to be solved immediately because of a deadline looming. There was *no time* to post a question and wait for an answer.
- It was easier and quicker to phone someone.
- An “instant” feature might help in the use of an OSC.

- Being able to login to an OSC medium and stay logged in all day (as in email and other software) would be very helpful.
- Ongoing OSC is great idea. A place:
  - Not for instant questions
  - For long-time documentation
  - For new hires referral
  - For once-a-semester / one-a-year procedurals
  - For procedurals on how-to tasks
- Need an expert included in the OSC for all technology issues especially new administrative software being phased in to the workplace.

Other data that came from the interviews:

- OSC is good for a secretary who is in an office by herself, without a face-to-face network.
- OSC is great for non-standard questions
- Training or support is minimal or non-existent for new hires. OSC would be a great referral place for process and procedures along with a mentor to aid in discovering job responsibilities.
- Training for new software implementations is needed that is useful and applicable. Not classroom, lecture, demonstration type training but hands-on with materials to practice.
- Shortcuts and tips-and-tricks have not been made available for new software implementations. Office support staff have to find them on their own. OSC is a place to share across schools and departments.

- Deadline submission dates for work documents are posted by Administration; however, when to start the data collection and report process is not posted. The OSC offers a useful area accessible by all for deadlines and start dates.
- Need to know there is someone who can answer the question.

The data collected in the interviews validated and reinforced the data collected in the final survey.

Initial Treatment Discussion

Kirkpatrick's (1998; 2005; 2007) four levels of evaluation were used to determine the effectiveness and success of the initial OSC:

1. reaction – how participants reacted to the program
2. learning – skills increased and improved knowledge because of participation in the program
3. behavior – change of behavior because of participation in the program
4. results – final results that occurred because of participation in the program

Reaction

Sixteen participants initially agreed to participate in the OSC and signed consent forms; however, one did not do anything. During the twelve weeks, 11 (73%) logged in multiple times to either participate or just to look. Fifteen participants completed the surveys at the beginning and the end. There were four categories of participation ranging from only taking the surveys to participating every time they logged in. Bishop (2007) indicates that motivating participation in an online community can be a challenge with a variety of reasons being offered as to why not to participate. Some participants feel they

don't need to, some feel they don't have anything to offer, and others participate only when they have something positive to contribute.

Participation in an online community is usually needs driven and participants want to see a return on their time and effort in the community (Bishop, 2007; Rashid, Ling, Tassone, Resnick, Kraut & Riedl, 2006; Koh, Kim, Butler & Bock, 2007). When they don't see the benefit, they are slow to adapt to the new technology. Perceived usefulness is one of the key factors in using technology support and training (Davis, 1986; Burton-Jones & Hubona, 2005; Zhang & Li, 2005; Sun & Zhang, 2006; Zhang, Li & Sun, 2006; Saade, Nebebe & Tan, 2007) and without it participation will be minimal.

Learning

There was little evidence that learning had occurred through the discussion forums. However, during the final interviews, several indicated they found the data posted in the forums useful.

Behavior

During the limited participation in the OSC, there was little observable change to behavior. Rosenburg (2007) says that just providing the technology is not enough. It will not build a learning culture. To create a community of performance support across the organization requires change (Kirkpatrick & Kirkpatrick, 2005). Participants need to perceive the benefit to participate. They need to understand the value of the shared area and recognize what they can get out of it as well as what they have to contribute. This may not happen by itself but time and a leader or leaders who perceive the benefit and share useful, time-saving, ideas will foster active involvement in the OSC (Koh et al., 2007; Rashid et al., 2006; Bishop, 2007).

Results

The results indicate that the initial OSC did not work as anticipated, as a place for immediate answers and assistance. The technology was provided but a learning community with ongoing participation did not emerge (Rosenberg, 2007; Bishop, 2007; Koh et al., 2007; Rashid et al., 2006). In the final survey, 5 (33%) participants indicated they would *very probably* or *definitely* use an ongoing OSC with a different structure. Only one said she would *probably* not use an ongoing OSC. In the interviews, most said that as office support staff experienced the usefulness of the data and information being shared, the OSC would become an avenue of support (Davis, 1986; Burton-Jones & Hubona, 2005; Zhang & Li, 2005; Sun & Zhang, 2006; Zhang et al., 2006; Saade et al., 2007). And all indicated there was a use for the OSC in the workplace as an area for support across schools and departments that cross workplace boundaries (Mittendorff et al., 2006; Allan & Lewis, 2006a). The OSC should be an area that is accessible by colleagues doing the same job tasks and having to meet the same deadlines. The OSC should be an area to share tips, tricks, and shortcuts to help make repeated tasks less time consuming and tedious (Rosenberg, 2007).

Recommendations and Redesign

Based on the survey data of the initial OSC, the reaction of the participants, and the minimal learning, behavior change, and results, it was determined that the treatment should be expanded with the recommendations implemented and observed in a redesigned OSC. After the second treatment observation was completed, the redesigned

OSC was evaluated as before using Kirkpatrick's (1998; 2005; 2007) four levels of evaluation.

Recommendations

Kirkpatrick and Kirkpatrick (2007) say that a program should be based on the needs of the participants. The needs assessment and other data collected revealed that there was a need for technology support. However, it also revealed that only four of the fifteen participants preferred an OSC as one of their top three training methods. For the OSC to be used on an ongoing basis, participant suggestions for redesign needed to be acknowledged and acted on with their involvement in the leadership process. The recommendations for the redesign included (1) long-term documentation area; (2) experts for technology issues; (3) open-ended login; and, (4) evidence of knowledgeable participants sharing useful data.

The Redesigned OSC

To encourage participation, Koh et al. (2007, p. 71) suggest that "leader involvement is needed for fostering members' active involvement in posting and viewing community content." Rosenberg (2007) suggests that a sponsor who is the right person will aid in the community building. The first modification needed to ensure the continued use of the OSC was to select office support staff leaders from across the institution (different schools) to aid in the redesign and facilitating of the OSC. The leaders needed to be someone perceived as knowledgeable or an expert in procedures and processes to promote trust in the validity of the OSC design and sharing (Koh et al. 2007; Allan & Lewis, 2006). The data revealed several office support staff who were

supportive of the OSC as well as perceived as being the "know-how-to" staff by others across the institution. Enlisting two for champions of the redesigned OSC provided the right leadership.

With the participant leaders and Lee's Webmaster's help, the OSC was redesigned for long-term documentation. The initial redesign (Appendix H) included the following areas:

- Shortcuts for software – especially the administrative software still in the implementation phase
- Dates and times to start processes and procedures in order to complete by deadlines – for example, the yearly catalog updates or the fall class schedule.
- Help Documents for long-term documentation. This area is for "how-to" processes and procedures that can be printed and or accessed whenever a work task is required.
- Discussion areas for different software.

Keeping the redesign simple to focus on basic but practical assistance demonstrated the OSC usefulness for time-saving support for job tasks and work responsibilities (Sun & Zhang, 2006).

A necessary modification or addition to the OSC design was to extend the participant membership. Subject matter experts in certain technology areas were needed to help with issues like new administrative software systems and other new software being phased into use. Poell et al. (2006) suggest that employees recognized as experts who are open and willing to share their expertise with others can be considered coaches and can provide direction on applying formal training concepts to the workplace. With

approval from administration two content area experts were included as members. The Help Desk Manager, LeAnn McElrath, continued participating as the basic software, troubleshooting, hardware, network, internet, and printing expert. And, the Secretary to the Assistant Vice-President of Institutional Research, Erin Looney, was added as a content expert in Colleague, the new administrative software system. Looney was involved in the implementation of the administrative software from the beginning and she set up many of the processes and procedures used daily. She was also involved in training many of the employees including the study participants.

Another modification recommended was a method of staying logged in to the OSC in a manner comparable to logging in to other systems (email, Internet). The process of having to login every time to post is a small thing but with time constraints can be the reason to seek other, quicker methods of support. With the help of Lee's IT department, other software systems were investigated and a new OSC medium was recommended by the IT department. SharePoint, Microsoft software that enables a Website to provide document and information sharing with templates to create areas where communities can share documents, calendars, announcements and postings (PCMag.com, 2009b) was selected as the new medium. SharePoint is not new to Lee however it has been used infrequently by most employees. With the IT department and Webmaster's help the OSC was redesigned, participants were added, and the redesigned OSC was launched.

The last suggestion participants had was the need to know there was someone that could actually provide answers. This category was hardest to implement and was considered an ongoing process requiring time and demonstration of useful content

sharing (Davis, 1985; Burton-Jones & Hubona, 2005; Zhang & Li, 2005; Sun & Zhang, 2006; Zhang et al., 2006; Rashid et al, 2006; Saade et al., 2007; Bishop, 2007; Koh et al., 2007).

A final modification to the OSC was discovered in the SharePoint discussion with the LEEs IT department. It was revealed that Instant Messenger (IM) was a tool that was being used by IT staff and could be a useful tool for the office support staff. It could be a supporting tool, integrating with SharePoint and other software used by the office support staff. Upon their recommendation, IM became part of the redesigned OSC.

Redesigned OSC Launch

The participants were emailed an explanation of the redesigned OSC and were provided the URL, username and password information, and attachments with instructions on using the OSC (Appendix I). They were informed that the newly designed OSC was being implemented and observed for eight weeks. They were also told that Lee would continue to support the OSC after the observation period was completed. Appointments were made with each participant and the researcher visited each office and installed Instant Messenger (Appendix T) and provided minimal documentation on its use (Appendix U). Alerts were set up so each participant received a daily email message when postings were made to the OSC. Questions were also answered for several participants with shortcuts for the OSC created on the Desktop or in Favorites.

An email was sent out by a participant leader at the beginning of each week to remind participants to contribute. After IM was set up and participants were IMing, the leaders used this medium to remind participants that a technology question just answered

in IM would be useful as permanent documentation in the OSC. IM became the "instant answer" medium and even though not considered in the initial design or recommended for the final redesign was requested by all participants. In the middle of the treatment, one office staff member left and her replacement was introduced, added to the OSC, and set up with IM. She was included for the duration.

Conclusion of the Second Treatment

At the end of the eight weeks of the treatment, data were collected to determine the effectiveness and success of the redesigned OSC. Participants completed two documents, the *SharePoint Support Site Survey* and the *SharePoint Support Site Questionnaire.* LeAnn McElrath, the IT staff member who participated in both the initial and redesigned OSC was interviewed. Last, the OSC was examined for usage and participation. These data were compiled, examined, and analyzed to determine congruence. They were also examined in light of the initial treatment responses to determine the final results.

SharePoint Support Site Survey Results

The process of defining, validating, and creating the survey is detailed in the previous chapter and results can be seen in Appendix V. Fourteen participants completed the survey. One office support staff changed jobs and did not answer the questions before leaving the university. One participant was a new hire and participated for four weeks. Of the 14 who responded, one had *5 or more* technology issues during the eight weeks; five had *2 to 4* technology issues; and, eight had *1 to 2* technology issues. All but two (86%) used IM for help with technology issues. All but one stated they used IM

during the eight weeks. Four responded they used it *daily*; five, *weekly*; and, four, *several times*. All but one said they found IM *very useful.*

Six participants indicate that they *posted to the support site*. Twelve participants (86%) responded they *accessed the Support Site and "learned" something they didn't know*. The areas they accessed and "learned" something were from all content areas.

Of the fourteen, eight (57%) said they would *definitely continue to use the support site*. Only two (14%) indicated they would *possibly continue to use the support site* but no one said *probably not* to the question. Seven indicate they would *definitely* and two would *very probably recommend the support site to a co-worker* (64%). Only two (14%) indicated they would *possibly recommend the support site* and no one said they would *probably not* recommend the support site.

During the eight weeks of the treatment, technology issues were encountered by all participants. Some had more problems than others and most used IM to get help and indicated that IM became a "very useful" tool. Although, IM was not a recommended addition for the redesigned OSC, the results indicate that it became an extremely valuable supporting tool.

Several people posted content to the OSC and all but two accessed the OSC and learned something they did not know. Over half of the participants said they would definitely continue to use and would recommend the OSC to co-workers.

SharePoint Support Site Questionnaire Results

The open-ended questions were written to collect opinions and feelings about the redesigned OSC in an unstructured format and to solicit data without a selected set of

responses. The process of defining, validating, and creating the questions is detailed in the previous chapter.

Below are the synthesized answers of the 13 participants who completed the questionnaire successfully. All data may be seen in Appendix W:

1. *What do you think of the Support Site?*
    - Helpful
    - great/good idea
    - connecting/supporting area
    - place for answers from people who do same job

Participants indicated the OSC was helpful and a good idea for connecting and supporting others that have the same job responsibilities and position.

2. *Experts (E. Looney & L McElrath) are part of the redesigned Support Site. How has this influenced your view and participation in the Support Site?*
    - Helpful and easier to get answers
    - Validates usefulness, better sense of confidence in answers
    - Trust these professionals

Participants felt having experts as part of the OSC was helpful, provided confidence and validated the OSC usefulness. With trust in the professionals the OSC design and sharing was validated (Koh et al. 2007; Allan & Lewis, 2006).

3. *In your opinion, what can be done to make the Support Site more useful?*
    - More experts
    - More information for new hires
    - Set timeframe for communication in IM

- "us" secretaries use it more
- Keep it going

The participants seemed to agree that the design was on the right track and that "more" is what is needed: additional experts in other content areas, more long-term documentation, and set communication timeframes via IM for checking on issues and to encourage more use.

4. *If this were the beginning of the OSC (Online Support Community) / SharePoint Support Site study, what should be done differently?*
    - Group meeting, concepts meeting, then one-on-one meeting
    - IM from the beginning – This brought everyone together quickly and helped us think of topics that should be added to the Support Site.

The participants would have liked another group meeting for the launch of the second OSC before the one-on-one meetings to install IM. They also felt that if IM had been available from the initial treatment it could have added more to the OSC.

5. *What would you recommend to encourage the "building" (posting / accessing / using) of the Support Site?*
    - Weekly daily reminders (IM) help to remind
    - Continue email reminders – have secretaries (volunteers) send out for a month at a time to encourage "fresh" ideas
    - IM communication - then best questions and answers posted

Leaders are necessary (Koh et al, 2007; Rosenberg, 2007; Allan & Lewis, 2006) to encourage, remind, and promote an OSC. The participants recognized this and indicated they would like a more structured method of ensuring this would continue.

6. *The Support Site has been going for eight weeks. Do you think it will continue to be a useful place for the office support staff (assistants to department chairs)? Why or why not?*
    - Absolutely, because it has helped me on several occasions and I wouldn't want it to go back to the way it was. This has been great because it not only helps everyone with problems it also brings us closer together as a community.
    - because it's a useful and helpful site and will develop working relationships
    - great for new hires and answers come quicker from peers

All participants indicated that it will continue. Even those that answered they did not learn from it recognized its value in the workplace and in building community relationships.

7. *Instant Messenger: How do feel about using it in the workplace?*
    - Great, very convenient
    - LOVE it…
    - Didn't think I would like it, but I did
    - Wonderful addition to the Support Site
    - Some bosses may think IM is used for more than just work processes

A participant who did not think she would like it did. Participants loved it, found it convenient and useful, appreciated it as an option, but also recognized it could be misused.

8. *Do you think using Instant Messenger builds "social community" in the office support staff group (assistants to department chairs)? Why or why not?*

- Absolutely. I have had more conversations with people in xxxxx and xxxxx then I have ever since my years at Lee
- Builds unity and allows us to converse with each other where before, that was never an option
- opportunity to communicate with those that you might not ever discuss topics or ask questions
- It connected me to people I had not spoken to or met before
- The university is growing every year with new secretaries. IM allows us to communicate in a very informal manner
- Yes, again because you realize that you are not the only "dummie" out there with problems that seem to be simple when answered.

All but one person felt “social community” was built. Communication happened in this mode with employees not known personally but worked in the same job position. They also felt it assured them that others had the same work issues – even the questions that seemed simple when answered.

9. *Do you think using Instant Messenger builds a workplace “support community” in the office support staff group (assistants to department chairs)? Why or why not?*
    - It's been great support to know that I wasn't the only one having the same problem
    - Able to quickly ask questions and receive quick and sometimes instant responses.

- The site is non-threatening so whether you have worked here for 10 years or 10 days you can get and post the information needed to accomplish a job/task
- Yes again! It really helps us feel like we are connected as a support to each other. If I am having trouble logging into Datatel, I can quickly check with others to see if they are having issues as well.

All participants but one felt "support community" was built as it became apparent that others had the same problems and issues. They indicated it was a good place for all employees, new and old, to participate in a non-threatening environment.

10. *The University is committed to continue the Support Site after this study is done. Will you continue to use the site as well as refer others to the Support Site? Why or Why not?*
    - Absolutely, I look forward to using the support site as well as IM in the future. I would hate for it to go back to the way it was before
    - I know that I will always need an answer to something - I will use this as long as it is available because I found it very useful
    - I will continue to use this site for detailed information and help update information that can answer questions for others
    - it is helpful information that allows us to do our job more effectively and efficiently and complete tasks quicker and with more accuracy
    - I will definitely continue to use the Support Site. It is like having lots of "personal" assistants 8 hours of the day

- I will most definitely continue to use this valuable resource and also refer others to it. It is a great way to connect with others on campus and get quick information - we need the support of others

All but one of the participants felt they will continue to use some portion of the OSC. Some were very enthused and definite and said they would continue sharing useful information and accessing data to aide in job tasks. Others indicated that they would use IM for instant answers.

Interview with IT Staff Member

The interview with the IT staff member, LeAnn McElrath, was an informal session for her impressions. She discussed two things, the OSC and IMing. First, the OSC was a well-organized, central location for the office support staff to find support instead of having to access many different locations to find the same material. She felt that the second design of the OSC is one that will continue to be used with encouragement from office support staff leaders. She affirmed that Lee's IT department will provide ongoing support. Second, she witnessed IM being used for quick answers to problems and technology issues. She felt IM was a great tool to provide the office support staff , that it was used quite a bit, and that it will continue to be used.

In addition to her participation in both the initial and the second OSC study, she participated in the focus group and in providing historical documents. McElrath has also recently added a new responsibility to her job description of Help Desk Manager – that of setting up support and training for new and old users in current software and new software and systems.

Electronic Records from Second OSC

The *Support Site for Department Level Assistants* OSC site had minimal reporting capabilities. Site usage could be examined based on the site access each day but not by individual page access. The following is a compilation of the access numbers for the eight weeks.

Table 4. Site Usage for May and June 2009

Days Logged In	# of Participants	Weekly
> 25	1	3 + times a week
16 – 24	1	2 + times a week
8 – 15	4	1 + times a week
1 – 7	9	< 1 times a week

The site was accessed 128 times during the eight weeks for a total of 3.3 times a day (39 days excluding Memorial Day). There were 11 postings by participants and 27 total postings including the ones by the content experts. The postings were all content postings.

IM (Appendix T) was installed and set up on all participants' computers over a period of two weeks. The set up included an *All Secretaries Group* in addition to a group for each School and other contacts: A&S, Education, Music, Religion, Graduate Secretaries, Tech Help, and Other Contacts. During the remaining six weeks, one participant reported she used the *All Secretaries Group* two to three times a week. The *All Secretaries Group* included the two content experts and the researcher. This meant eighteen people (or all who were at work with IM available) had non-intrusive conversations within a few short minutes to determine the status of a networking, software, or other technology problem. In each conversation, someone had the answer or had already reported the problem and was able to update all at the same time instead of

multiple emails going back-and-forth or office staff members being in the dark not knowing the status of the problem. It helped the office support staff know if it was an individual office problem or an issue across campus.

Two schools asked to have their Dean's Assistant set up with IM so that she could be added to their school IM group for conversations dealing with school issues. One school reported a minimum of seven conversations and their office support staff work in the same building. The largest school at Lee, College of Arts and Sciences, with seven office support staff in five different buildings across campus and the dean's secretary in the sixth building, said they used IM frequently.

Discussion

At the end of the second treatment, Kirkpatrick's (1998; 2005; 2007) four levels of evaluation were used to examine and evaluate both treatments and to determine the effectiveness and success of the redesigned OSC. Reaction, learning, behavior, and results are discussed.

Reaction

Office support staff readily joined the redesigned OSC. Two agreed immediately to act as leaders for the eight week observation period and helped with design issues, provided response and suggestions to OSC modifications, sent out email notifications, and sent out encouraging IM messages.

Participants were receptive to having IM set up on their work computers and after using it expressed how much they liked the convenience of getting quick answers to

technology problems and issues. Only one participant did not seem to need IM and she is in an office situation working close with others.

At the end of the second treatment, there were 14 responses to the requested survey and 13 to the questionnaire. As in the initial treatment, one person did not participate through the second study, and another left her position and did not complete the second feedback request. In addition, there was one personnel change in the middle of the second treatment timeframe and the second feedback was from the new hire who had participated only four weeks of the second treatment.

Learning

Twelve participants reported in the *SharePoint Support Site Survey* that they learned something new through the redesigned OSC from the following areas:

- FYI (Questions & Answers)
- Links
- Shortcuts
- Help Documents
- Deadlines
- Colleague Help
- Office ’07 Help

All but two indicated they received help for technology issues using IM. Through the questionnaire responses, many indicated technology problems and issues that were discussed during IM conversations with problems and solutions discovered or notifications of current technology issues being addressed by Lee’s IT staff.

Behavior

During the initial treatment, participants logged in 66 times over the course of 12 weeks to access the Angel OSC. In the second treatment, participants logged in 128 times in eight weeks, and this only accounts for days and not multiple times the site was accessed in one day. The second treatment in the SharePoint Support Site was logged into twice as many times in two-thirds the number of weeks. Six participants logged in more than once a week (see table 4) which is an increase from the initial treatment where no one logged in once a week (Appendix Q). In the initial treatment, only one person logged in eight times; two – seven times; two – six times; three – five times; and the others four or less times.

In the initial treatment, the majority of participation postings were responses or casual conversation (see Table 3). In the second treatment, there were eleven postings of content sharing and there were 17 additional postings from content experts. Postings were in all areas and during the study timeframe, participant's recommended new content areas for inclusion (Appendix X).

In the initial treatment, only one participant said she would *definitely* use an ongoing OSC and four said they would *very probably* use an ongoing OSC. In the second treatment, eight participants said they would *definitely* continue to use the OSC. In the initial treatment, two participants said they would *definitely* and three *very probably* recommend the OSC to a co-worker. In the second treatment, seven stated they *definitely* and two *very probably* would recommend the OSC to a co-worker. In the initial treatment one person said they would *probably not* use an ongoing OSC. In the second treatment, no one selected *probably not* as their choice in the survey; however,

one person indicated *not much continued use as she had their own support system in place*.

Results

The second treatment with the recommended changes resulted in many additions and modifications to the OSC. First, IM was added as a supporting element and was very successful in providing instant answers to technology questions and as a method to inform about problems and issues that affect all of the office support staff. Participants indicated that they were communicating with peers they did not know personally but were colleagues doing the same job and work tasks.

Next, the second treatment had three times plus as much participation as the initial one. There were 28 content postings to the OSC and several users indicted in the questionnaire that they wanted more content postings. Twelve participants said they learned something from the OSC they did not know before the second treatment.

In the survey, there were varied responses as to continued use of the OSC. However, in the open-ended final question about the *university continuing the support of the OSC and would they use it*, 12 of the participants said that *yes* they would continue to use the OSC in some manner, including IM. Only one person indicated she would probably not use it as she felt she already has her own support system.

Recommendations from the initial treatment were implemented in the second treatment.

1. *Long-term documentation:* There were 28 content postings. Without the deadlines category, there are at least 25 long-term items that were posted in the eight weeks.

2. *Experts for technology issues:* Two content experts were added as part of the second treatment and included in the IM *All Secretaries Group.* They have added content to the OSC and answered questions in IM. In the questionnaire, participants indicated that their presence validated the OSC design and sharing and provided confidence in its usefulness.
3. *Open-ended login:* SharePoint was the medium used for the second treatment. SharePoint is a Microsoft product which integrates with existing software systems on participant's computers and allowed IM to be integrated as well. SharePoint requires logging in but users use the same username and password they use to login to their computer system. They logged in in the morning and SharePoint was available until the computer was logged out of at night.
4. *Evidence of knowledgeable participants sharing useful data:* Participants said they learned from the OSC content and trusted the content experts. This was a beginning in the ongoing demonstration of useful data being shared by participants.

And finally, participant leaders were used to remind and prompt the office support staff to post content to the OSC. The leadership was effective and the results indicated a need for set times of communication and a continued use of participant leaders.

Summary

Love's (2004) four stage implementation analysis method was used to plan, implement, and evaluate the OSC: criteria development and needs assessment, program planning and design, program delivery, and program evaluation and improvement. The

needs assessment data were compiled and validated using triangulation: literature reports, focus group feedback, and historical documents. The Technology Needs Assessment Pre-Survey also validated the findings of the initial needs assessment. Using these data, technology content areas were grouped together to create the discussion forums to include in the initial design. During the delivery, 15 participants contributed to the OSC by taking a pre-survey and inventory, posting to discussion forums, taking a final survey, and sharing in post-interviews. At the conclusion of the initial 12 week treatment period, data were collected, collated, analyzed, and examined in light of Kirkpatrick's (1998; 2005; 2007) levels of evaluation: reaction, learning, behavior, and results.

Based upon inadequate participation, recommendations were compiled for an OSC redesign. Using these recommendations, the OSC was designed for long-term documentation, content experts for technology issues, an open-ended login, and as a place for knowledgeable participants to share useful data. In addition, participant leaders were selected and IM was integrated and set up as part of the OSC. At the end of the second treatment period of eight weeks, data were collected, collated, examined, evaluated and compared to the initial treatment conclusions once more using Kirkpatrick's (1998; 2005; 2007) levels of evaluation.

Chapter 5

Conclusions, Implications, Recommendations, and Summary

Conclusions

The goal was to develop an OSC to provide a central location for office support staff to find and contribute support for the computer technology issues that affect their day-to-day work tasks. Office support staff have a primary role in the success of the institutional mission and with computer technology changing frequently at Lee University, support and training are essential. The OSC was designed as a protected location to find answers and a safe arena to pose questions and concerns that would encourage dialog, elicit solutions, and increase productivity within the workplace. Conclusions, implications, and recommendations are detailed along with a summary of the overall study.

The three research questions that guided the study and a discussion of the answers and conclusions drawn from the results follow.

1. *What did the needs assessment reveal were the necessary technology content areas for support?*

The needs assessment process began with defining technology content areas. Three research methods were used primarily to ensure triangulation. A literature review yielded an initial list which was examined, added to and confirmed by focus group feedback. Historical documents pulled from the helpdesk records for the calendar year,

2007, validated the list and confirmed triangulation. The list included Microsoft Office (Word, Excel, Access and PowerPoint); Outlook (Email and Calendar); administrative software systems (Champlain, Colleague, and Datatel); software and reports; internet and network; and, hardware. These categories were used to create the pre-survey needs assessment, pre-inventory survey, and initial OSC discussion forums.

After the launch of the OSC, participants completed the pre-survey needs assessment. The data revealed that in all categories except one, at least 40% or more of the participants felt they were novices or familiar with areas of the technology and had some or great need for additional technology support. In all but four categories, at least 50% or more indicated they were novices or familiar. And in over half of the categories 50% or more felt there was some or great need for additional support.

The data results from the pre-inventory confirmed technology support needs. Office support staff had requested and received help in the targeted content areas in the past year. Using these technology content areas, the initial discussion forums were confirmed and created (Appendix E).

The needs assessment was completed when data were collected at the end of the initial treatment period and recommendations were concluded. Interviews with several participants yielded the following:

- Most technology issues required an immediate answer
- Phoning someone was quicker and elicited a fast response
- The OSC should be a place for
    - Long-term documentation
    - Shortcuts, tips, and tricks

  - New hire referral
  - Content experts who can share how-to and procedure documentation
  - Dates and deadlines
- The OSC medium should be easy to login and participants should have the ability to stay logged in
- An instant chat feature would be useful
- Support and Training has been minimal or not easy to apply to work tasks
- New hires receive little training

The recommendations drawn were to redesign the OSC as a place for long-term documentation, content experts, an open-ended login process, and knowledgeable participants sharing useful data.

2. *Was the OSC effective and what were the measures of effectiveness?*

The initial treatment ran for 12 weeks. At the end, data were collected, analyzed, and evaluated using Kirkpatrick's (1998; 2005; 2007) evaluation levels of reaction, learning, behavior, and result. Based on these results, assumptions were drawn and recommendations to modify the initial OSC were made.

The OSC was redesigned, launched, and observed for eight weeks. At the conclusion, data were collected, analyzed and evaluated. Based on the data results of the second treatment, conclusions were drawn.

The OSC was effective. Participants reported they were dialoging across schools and departments with employees that worked in the same job position. They received answers to technology issues immediately and responded accordingly. They also reported they felt support and social communities were being built during the course of

their IM conversations and sharing in the OSC. They were getting to know colleagues whom they had never met and were communicating with other schools' office support staff something that had never happened in the years they worked at Lee. The OSC also provided a feeling of "not-being-alone" in the world of technology and work responsibilities. The measures of effectiveness are as follows.

First, IM is a tool that was used effectively in the workplace. It provided a medium of communication that was simple, unobtrusive, and immediate. It was used between two employees or a group of 18. It could be ignored if an employee was involved in a priority project, and was the method to notify everyone about a university-wide software failure or other technical problem that affected multiple people. Office support staff received immediate answers to many technology problems.

Second, participant leaders were necessary to the building of the community. They prompted, reminded, and encouraged the use of the tools. They were a pivotal part of the OSC and aided in its success. Participant leaders need to be enthused about the OSC and perceived as knowledgeable in processes and procedures to build trust in the OSC and to validate the design and sharing (Koh et al., 2007; Allan & Lewis, 2006).

Third, the sharing in the OSC was for long-term documentation. IM was good for quick answers but the OSC was the central location for shortcuts, tips & tricks, processes and procedures, how-to documentation, dates & deadlines, and other documentation necessary for office support staff to complete daily work tasks smoothly and productively.

Fourth, content matter experts were necessary to the successful building of the OSC. As new software, hardware, and administrative systems are implemented, it is vital

to have a person who can answer questions, provide shortcuts, how-to guides, and be willing to share the knowledge. Poell et al. (2006) suggests this person can provide directions on applying training concepts to work tasks to increase productivity.

Fifth, the online medium was important to the continued use of the OSC. A LMS may work great for classroom learning management or frequent training sessions; however, as a support site accessed on a daily basis to be used throughout the day-to-day work processes, a different medium was necessary. SharePoint is a Microsoft product designed for workplace community building. It is software to build a Website to provide document and information sharing with templates to create areas where documents, calendars, announcements and postings can be shared (PCMag.com, 2009b). It integrates with other Microsoft software and created a well designed workplace community area.

Last, for continued OSC use, participants needed to know there was someone who could provide answers and was willing to share the knowledge. This process is ongoing and has no definite solution but the continued use of the OSC and demonstration of useful content sharing (Davis, 1985; Burton-Jones & Hubona, 2005; Zhang & Li, 2005; Sun & Zhang, 2006; Zhang et al., 2006; Rashid et al, 2006; Saade et al., 2007; Bishop, 2007; Koh et al., 2007).

3. *In view of the results of the evaluation, what modifications are necessary to ensure continued utilization of the OSC?*

The OSC was implemented on a long-term basis when the second treatment was launched. Lee's IT department agreed that the OSC would be part of their technology support arena. With this assurance, office support staff felt they would continue using the OSC and made the following requests.

First, they felt that participant leaders should continue sending weekly email reminders and IM prompting messages. Second, volunteers from the office support staff group should take rotating turns in being the participant leader. Third, more documentation on basic how-to's should be posted to the OSC as a resource for new hires. And finally, adding other content matter experts would enhance the membership sharing capability.

Implications

Office support staff need a protected location to find answers to technology issues that affect productivity within the workplace. An OSC was designed, developed, implemented, and evaluated to serve office support staff with massive job responsibilities that are extremely diverse and critical to the institutional mission and who have to create, compile, and dispense data and information to sustain and ensure a smooth running department and institution. Computer technology is ever changing and office support staff are employees who are expected to meet deadlines productively, regardless of new software, new administrative systems, or new hardware in their office and do so with minimal support and training.

Two treatments were conducted. Data results indicated that the second OSC was designed effectively as an arena for long-term documentation and with the addition of IM as a supporting tool, as a place for instant answers to technology questions. The office support staff at Lee had a location to post long-term documentation for deadlines, shortcuts, tips-and-tricks on new software and how-to's on processes and procedures. A community support system across schools and departments was created to provide

needed answers, encouragement, and assistance for necessary work tasks with deadlines looming. With IM in place, updates on issues that affected all of the office support was provided instantly without multiple emails or phone calls. Content matter experts and the IT staff will continue supporting the ongoing OSC as part of Lee's technology support system. With a support community of peers, IM for instant answers, and the OSC for long-term documentation, office support staff had avenues of technology support that previously were not available. With administrators and supervisors recognizing the value of the ongoing OSC and providing support for its continuance it will continue being a useful tool for technology support and training for the office support staff.

The outcomes were shared with administrators. Lee's Associate Director of IT, Nate Tucker, said that the results will be used as a guide and example for what worked and what didn't with support communities. Lee's goal in the future is to have something similar for other sectors in the University (Appendix Y). Lee's Help Desk Manager, LeAnn McElrath, who recently assumed a new responsibility of setting up support and training for new and current users for new software and systems and for improvement support and training, will use the results as she plans support and training events.

The study may be used as a model for other colleges and universities. Office support staff need ongoing technology support and training and with impending deadlines require immediate answers and solutions. Their job responsibilities and work tasks are vital to the smooth running and success of the institutional mission. Support communities can be built across schools and departments that will provide necessary technology support as well as a community of peers willing to share their expertise. Communities can be built with leaders from within the office support staff group using

existing workplace software. Including employees in the membership that are content matter experts will facilitate answers and ensure necessary documentation can be provided on shortcuts, tips-and-tricks, and how-to's for processes and procedures. And, finally, IM is the medium for instant technology assistance. It is a practical tool that can be extremely effective if properly used.

Recommendations

Based on findings and conclusions, recommendations are as follows. The OSC in SharePoint should be continued and steps should be taken to ensure the final recommendations are implemented. Participant volunteer leaders need to be selected and scheduled email and IM reminders planned. Additional content matter experts should be solicited to add to the OSC membership. And finally, documentation on basic how-to processes and procedures for work tasks that all office support staff are responsible to complete should be compiled and posted to the OSC as a resource for new hires.

Lee University should develop and observe an OSC with another employee group before implementing multiple OSC's across the university. The initial design should include the six recommendations that were implemented in the second treatment as well as the additional improvement and continued utilization recommendations. Employee groups with varied levels of technology use, work responsibilities and need for immediate support may yield results and recommendations that are different.

Future researchers might consider extending the study to other universities or organizational environments. A population with wide-ranging technology abilities and needs, little or no online community experience, using various software and hardware, or

having varied support expectations may produce results that are different. Researchers could also consider replicating the study with other workplace software and a larger population to validate the outcome.

Summary

Continuous change in computer technology requires ongoing support and training for work responsibilities to be completed productively, efficiently and by required deadlines. Office support staff use technology every day and with the changes in software and hardware, require new methods to complete routine tasks. Training, if available, does not include techniques in transferring learned skills to office tasks and individual responsibilities. Nor is there a place for sharing with colleagues the "how-to's" that affect productivity. Help is not readily available to solve problems encountered pertaining to technology and the method to accomplish a given task to meet deadlines and accomplish job processes with minimal delays.

The goal was to develop an Online Support Community (OSC) for office support staff who are secretaries or assistants to the chairs of a department or program at Lee University. The intent was to provide a central location for the office support staff to find and contribute support for computer technology issues that affect productivity. The OSC was designed as a protected location for posing questions and finding answers and to encourage dialog, elicit solutions, and increase the completions of work tasks efficiently and productively.

The developmental study used an implementation analysis method. A needs assessment was conducted and technology content areas were defined and validated with

triangulation: a literature review, focus group feedback, and historical documents. The instrument development process was accomplished using data results from the needs assessment and the instruments were defined, created, and validated with the aid of a focus group. The initial OSC was planned and designed using the data from the technology content areas and needs assessment to develop the discussion forums. The OSC was delivered to 15 participants who completed the pre-survey needs assessment and pre-inventory, participated in discussion forums, completed a final-survey, and shared in post-interviews.

The initial OSC treatment was observed for 12 weeks. Data results were collected, collated, analyzed and evaluated and recommendations for an improved and redesigned OSC were proposed. The recommendations, an OSC for long-term documentation, experts for technology issues, open-ended login, and a place for recognizing knowledgeable participants sharing useful data were implemented as well as selected participant included as leaders and IM set up as a supporting tool. The second OSC was observed for eight weeks and at its conclusion, data were collected, analyzed, evaluated and compared to the initial treatment results using Kirkland's model.

The redesigned OSC in SharePoint proved to be effective. Using IM, it became a place for quick answers to technology issues. With content areas included in the OSC and extending the membership to include content matter experts in Colleague (administrative support software) and computer technology (software, hardware, internet, networking, and printing), it developed into a place for long-term documentation. Participant leaders encouraged participation and content was validated with the postings by trusted members. Support and social community was built as communication

occurred across schools and departments and the support system was enforced as office support staff discovered others with similar issues and problems.

Participants indicated they would continue to use the *SharePoint Support Site for Department Level Assistants* and made the following recommendations. Participant leaders should send out scheduled email and IM reminders for using and posting to the OSC. The leaders should be selected on a rotating volunteer basis. Basic how-to's on routine work tasks should be placed on the OSC as a resource for new hires. And finally, additional content matter experts for support would enhance the membership list.

Office support staff job and work tasks are vital to the running of educational departments and to the success of the institutional mission. The need for support and training for office support staff is ongoing and necessary for the productive and efficient completion of their responsibilities. The results will be useful in designing online support communities and for planning support and training events.

Appendix A

Technology Support Needs Assessment
Pre-Survey

In order to determine which technology areas will be of the greatest help to you in improving your job performance, in the following areas please indicate (1) your skill level; and, (2) your need for additional support.

I. WORD

A. Creating reports

1. Skill Level

○ Novice ○ Familiar ○ Very Good ○ Expert ○ Do not Use

2. Need for Additional Support

○ No Need ○ Little Need ○ Some Need ○ Great Need ○ N/A

B. Using advanced features (e.g. Mail merge, macros, headers & footers)

3. Skill Level

○ Novice ○ Familiar ○ Very Good ○ Expert ○ Do not Use

4. Need for Additional Support

○ No Need ○ Little Need ○ Some Need ○ Great Need ○ N/A

II. EXCEL

A. Formatting spreadsheets

5. Skill Level

○ Novice ○ Familiar ○ Very Good ○ Expert ○ Do not Use

6. Need for Additional Support

○ No Need ○ Little Need ○ Some Need ○ Great Need ○ N/A

B. Developing new spreadsheets

7. Skill Level

○ Novice ○ Familiar ○ Very Good ○ Expert ○ Do not Use

8. Need for Additional Support

○ No Need ○ Little Need ○ Some Need ○ Great Need ○ N/A

C. Using advanced features (e.g. macros, formulas & functions, frame freeze, headers & footers)

9. Skill Level

○ Novice ○ Familiar ○ Very Good ○ Expert ○ Do not Use

10. Need for Additional Support

○ No Need ○ Little Need ○ Some Need ○ Great Need ○ N/A

D. Integrating Word and Excel

11. Skill Level

○ Novice ○ Familiar ○ Very Good ○ Expert ○ Do not Use

12. Need for Additional Support

○ No Need ○ Little Need ○ Some Need ○ Great Need ○ N/A

III. ACCESS

A. Using databases

13. Skill Level

○ Novice ○ Familiar ○ Very Good ○ Expert ○ Do not Use

14. Need for Additional Support

○ No Need ○ Little Need ○ Some Need ○ Great Need ○ N/A

B. Developing new databases

15. Skill Level

○ Novice ○ Familiar ○ Very Good ○ Expert ○ Do not Use

16. Need for Additional Support

○ No Need ○ Little Need ○ Some Need ○ Great Need ○ N/A

IV. POWERPOINT

A. Developing new presentations

17. Skill Level

○ Novice ○ Familiar ○ Very Good ○ Expert ○ Do not Use

18. Need for Additional Support

○ No Need ○ Little Need ○ Some Need ○ Great Need ○ N/A

B. Using advanced Features (animation, transition, timings)

19. Skill Level

○ Novice ○ Familiar ○ Very Good ○ Expert ○ Do not Use

20. Need for Additional Support

○ No Need ○ Little Need ○ Some Need ○ Great Need ○ N/A

V. OUTLOOK

A. Using email features

21. Skill Level

○ Novice ○ Familiar ○ Very Good ○ Expert ○ Do not Use

22. Need for Additional Support

○ No Need ○ Little Need ○ Some Need ○ Great Need ○ N/A

B. Using calendar features

23. Skill Level

○ Novice ○ Familiar ○ Very Good ○ Expert ○ Do not Use

24. Need for Additional Support

○ No Need ○ Little Need ○ Some Need ○ Great Need ○ N/A

C. Using advanced Features (e.g. proxy, rules, organization wizards)

25. Skill Level

○ Novice ○ Familiar ○ Very Good ○ Expert ○ Do not Use

26. Need for Additional Support

○ No Need ○ Little Need ○ Some Need ○ Great Need ○ N/A

D. Using collaborative scheduling

27. Skill Level

○ Novice ○ Familiar ○ Very Good ○ Expert ○ Do not Use

28. Need for Additional Support

○ No Need ○ Little Need ○ Some Need ○ Great Need ○ N/A

E. Using web interface (email from home)

29. Skill Level

○ Novice ○ Familiar ○ Very Good ○ Expert ○ Do not Use

30. Need for Additional Support

○ No Need ○ Little Need ○ Some Need ○ Great Need ○ N/A

VI. DATATEL

A. Retrieving information

31. Skill Level

○ Novice ○ Familiar ○ Very Good ○ Expert ○ Do not Use

32. Need for Additional Support

○ No Need ○ Little Need ○ Some Need ○ Great Need ○ N/A

B. Inputting information

33. Skill Level

○ Novice ○ Familiar ○ Very Good ○ Expert ○ Do not Use

34. Need for Additional Support

○ No Need ○ Little Need ○ Some Need ○ Great Need ○ N/A

C. Navigating through Student Records

35. Skill Level

○ Novice ○ Familiar ○ Very Good ○ Expert ○ Do not Use

36. Need for Additional Support

○ No Need ○ Little Need ○ Some Need ○ Great Need ○ N/A

D. Navigating through Course Master

37. Skill Level

○ Novice ○ Familiar ○ Very Good ○ Expert ○ Do not Use

38. Need for Additional Support

○ No Need ○ Little Need ○ Some Need ○ Great Need ○ N/A

E. Navigating through Requisitions and Purchasing

39. Skill Level

○ Novice ○ Familiar ○ Very Good ○ Expert ○ Do not Use

40. Need for Additional Support

○ No Need ○ Little Need ○ Some Need ○ Great Need ○ N/A

F. Navigating through Budget Entry

41. Skill Level

○ Novice ○ Familiar ○ Very Good ○ Expert ○ Do not Use

42. Need for Additional Support

○ No Need ○ Little Need ○ Some Need ○ Great Need ○ N/A

G. Creating class schedules

43. Skill Level

○ Novice ○ Familiar ○ Very Good ○ Expert ○ Do not Use

44. Need for Additional Support

○ No Need ○ Little Need ○ Some Need ○ Great Need ○ N/A

H. Preparing Payroll reports

45. Skill Level

○ Novice ○ Familiar ○ Very Good ○ Expert ○ Do not Use

46. Need for Additional Support

○ No Need ○ Little Need ○ Some Need ○ Great Need ○ N/A

I. Proposed Workload Profiles

47. Skill Level

○ Novice ○ Familiar ○ Very Good ○ Expert ○ Do not Use

48. Need for Additional Support

○ No Need ○ Little Need ○ Some Need ○ Great Need ○ N/A

J. Connectivity

49. Skill Level

○ Novice ○ Familiar ○ Very Good ○ Expert ○ Do not Use

50. Need for Additional Support

○ No Need ○ Little Need ○ Some Need ○ Great Need ○ N/A

K. Printing

51. Skill Level

○ Novice ○ Familiar ○ Very Good ○ Expert ○ Do not Use

52. Need for Additional Support

○ No Need ○ Little Need ○ Some Need ○ Great Need ○ N/A

VII. REPORTS

A. Assessment Reports

53. Skill Level

○ Novice ○ Familiar ○ Very Good ○ Expert ○ Do not Use

54. Need for Additional Support

○ No Need ○ Little Need ○ Some Need ○ Great Need ○ N/A

VIII. PRINTING

A. Labels, letterheads, forms

55. Skill Level

○ Novice ○ Familiar ○ Very Good ○ Expert ○ Do not Use

56. Need for Additional Support

○ No Need ○ Little Need ○ Some Need ○ Great Need ○ N/A

IX. Adobe Acrobat

A. Saving

57. Skill Level

○ Novice ○ Familiar ○ Very Good ○ Expert ○ Do not Use

58. Need for Additional Support

○ No Need ○ Little Need ○ Some Need ○ Great Need ○ N/A

B. Printing

59. Skill Level

○ Novice ○ Familiar ○ Very Good ○ Expert ○ Do not Use

60. Need for Additional Support

○ No Need ○ Little Need ○ Some Need ○ Great Need ○ N/A

X. Internet/Network

A. Connectivity (drives, mapping)

61. Skill Level

○ Novice ○ Familiar ○ Very Good ○ Expert ○ Do not Use

62. Need for Additional Support

○ No Need ○ Little Need ○ Some Need ○ Great Need ○ N/A

B. WebAdvisor

63. Skill Level

○ Novice ○ Familiar ○ Very Good ○ Expert ○ Do not Use

64. Need for Additional Support

○ No Need ○ Little Need ○ Some Need ○ Great Need ○ N/A

C. SharePoint

65. Skill Level

○ Novice ○ Familiar ○ Very Good ○ Expert ○ Do not Use

66. Need for Additional Support

○ No Need ○ Little Need ○ Some Need ○ Great Need ○ N/A

XI. HARDWARE

A. Computer (keyboard, mouse, monitor, CPU, CD, DVD)

67. Skill Level

○ Novice ○ Familiar ○ Very Good ○ Expert ○ Do not Use

68. Need for Additional Support

○ No Need ○ Little Need ○ Some Need ○ Great Need ○ N/A

B. Printer/Copier

69. Skill Level

○ Novice ○ Familiar ○ Very Good ○ Expert ○ Do not Use

70. Need for Additional Support

○ No Need ○ Little Need ○ Some Need ○ Great Need ○ N/A

XII. OTHER

71. Software/Technology Not Listed Above

Done

Appendix B

Technology Support Pre-Inventory

Answer the following demographic questions and other technology support questions to provide general information for the study.

1. Age:

○ 18-21 ○ 22-44 ○ 45-56 ○ 57 or over

2. Number of years as Secretary to the Department Chair:

○ 0 to 4 ○ 5 to 10 ○ 11 to 20 ○ 21 or more

3. Number of years previous experience:

○ 0 to 4 ○ 5 to 10 ○ 11 to 20 ○ 21 or more

4. Please indicate your **highest level of education**:

- ○ High School
- ○ Associate Degree
- ○ College, no degree
- ○ B.A. or B.S. degree
- ○ B.A. or B.S. degree +grad hours
- ○ Master's or equivalent
- ○ Master's +grad hours

Indicate the **major area of study** in which your degree(s) were earned:

5. Associate:

6. B.A./B.S.

7. Masters:

8. How many **hours per week** would you estimate you spend on technology related tasks (email, memos, letters, reports, budgets, class schedules, etc.)?

○ 1 to 5 ○ 6 to 10 ○ 11 to 15 ○ 16 to 20 ○ 20 or more

9. Check **each category** within which you have received technology assistance in the past YEAR:

- ☐ Word
- ☐ Excel
- ☐ Access
- ☐ PowerPoint
- ☐ Outlook
- ☐ Datatel
- ☐ Printing
- ☐ Reports
- ☐ Adobe Acrobat
- ☐ Internet / Network
- ☐ Hardware
- ☐ Other not listed

10. When I **need assistance**, the Help Desk is the place I call:

○ 1st (first) ○ 2nd (second) ○ 3rd (third) ○ 4th (fourth) ○ Do not call them

11. When I **call the Help Desk**, I get the assistance I need:

○ Immediately ○ Within 1-2 hours ○ Same day ○ Same week ○ Never ○ Do not call them

12. For **help on software issues**, the first place I look for assistance is:

○ Another Secretary
○ Dean's Assistant
○ Friend
○ Help Desk
○ Other

13. For **help on administrative systems (Datatel)**, the first place I look for assistance is:

○ Another Secretary
○ Dean's Assistant
○ Friend
○ Help Desk
○ Other

14. When I need assistance, **I can tell** whether the problem is a local machine or a network problem:

○ Always ○ Sometimes ○ Never

15. Departmental faculty **come to me** for technology assistance before seeking help elsewhere:

○ All of them ○ Some of them ○ None of them ○ Part-time only ○ Chair only

Done

Appendix C

Online Support Community Study - Final Survey

Online Support Community (OSC) Study (October 31, 2008 through February 6, 2009).

The purpose of this study was to develop an online support community to provide a central location for office support staff to find and contribute support for computer technology issues that affect productivity in the workplace.

Please answer the questions below. The data will be used in the final evaluation and for writing the final report for the study.

1. How many technology issues have you needed help with since October 31?

○ 0 ○ 1 to 2 ○ 3 to 4 ○ 5 or more

2. In question #1, if your answer was "more than 0", did you use the Online Support Community for help?

○ No ○ Yes ○ Some

3. In question #2, if your answer was "No", why did you *not use the OSC*? Please check all that apply:

- ☐ Did not think of it
- ☐ Would take too long for an answer
- ☐ Easier to phone someone
- ☐ Too much work to submit question or comment
- ☐ Too busy with work tasks
- ☐ Have face-to-face network for answers
- ☐ Not interested
- ☐ Have nothing to contribute
- ☐ Others may think my inquiry too simplistic
- ☐ Uncomfortable in revealing lack of knowledge
- ☐ Did not have technology questions

4. In question #2, if your answer was "Some", where else did you go to find help? Please check all that apply:

- ☐ Another Secretary
- ☐ Dean's Assistant
- ☐ Friend
- ☐ Help Desk
- ☐ Other

5. In question #4, if you answered "Other", please note your source:

For your work responsibilities, how important is it:

6. For the university to provide ongoing support for technology issues.

○ Unimportant ○ Of Little Importance ○ Moderately Important ○ Important ○ Very Important

7. For the university to provide an *expert* for all technology issues. An expert that can be contacted whenever needed.

○ Unimportant ○ Of Little Importance ○ Moderately Important ○ Important ○ Very Important

The following questions refer to an "ongoing" online support community (OSC) at Lee University – not the study that was conducted in ANGEL. *This OSC would include an expert in all technology areas.*

8. How do you feel about an "ongoing" OSC? Please select all that apply:

☐ Good idea
☐ Place for training materials for anytime/anywhere access
☐ Place for documentation
☐ Area for longtime referral
☐ Place to refer new hires
☐ Would look at responses but would not pose questions
☐ Don't have use for it

9. Would you use the OSC?

○ Probably Not ○ Possibly ○ Probably ○ Very Probably ○ Definitely

10. Would you recommend the OSC to a co-worker?

○ Probably Not ○ Possibly ○ Probably ○ Very Probably ○ Definitely

11. If an "instant chat" feature was included in the OSC, would it be:

○ Not at All Helpful ○ Very Little Helpful ○ Somewhat Helpful ○ Very Helpful ○ No Opinion

12. Would the "instant chat" feature encourage you to participate?

○ Never ○ Rarely ○ Occasionally ○ Frequently ○ Very Frequently

13. If the online medium was something other than ANGEL would this encourage you to use the OSC?

○ No ○ Yes

14. If yes, what online medium would you recommend?

What *method* of technology support or training do you prefer? Rank the following choices from 1 to 7 (1 being "most preferred") - please use a number only once.

15. Face-to-face group

16. Face-to-face one-on-one

17. Phone one-on-one

18. Online tutorials (self-paced)

19. Online support community

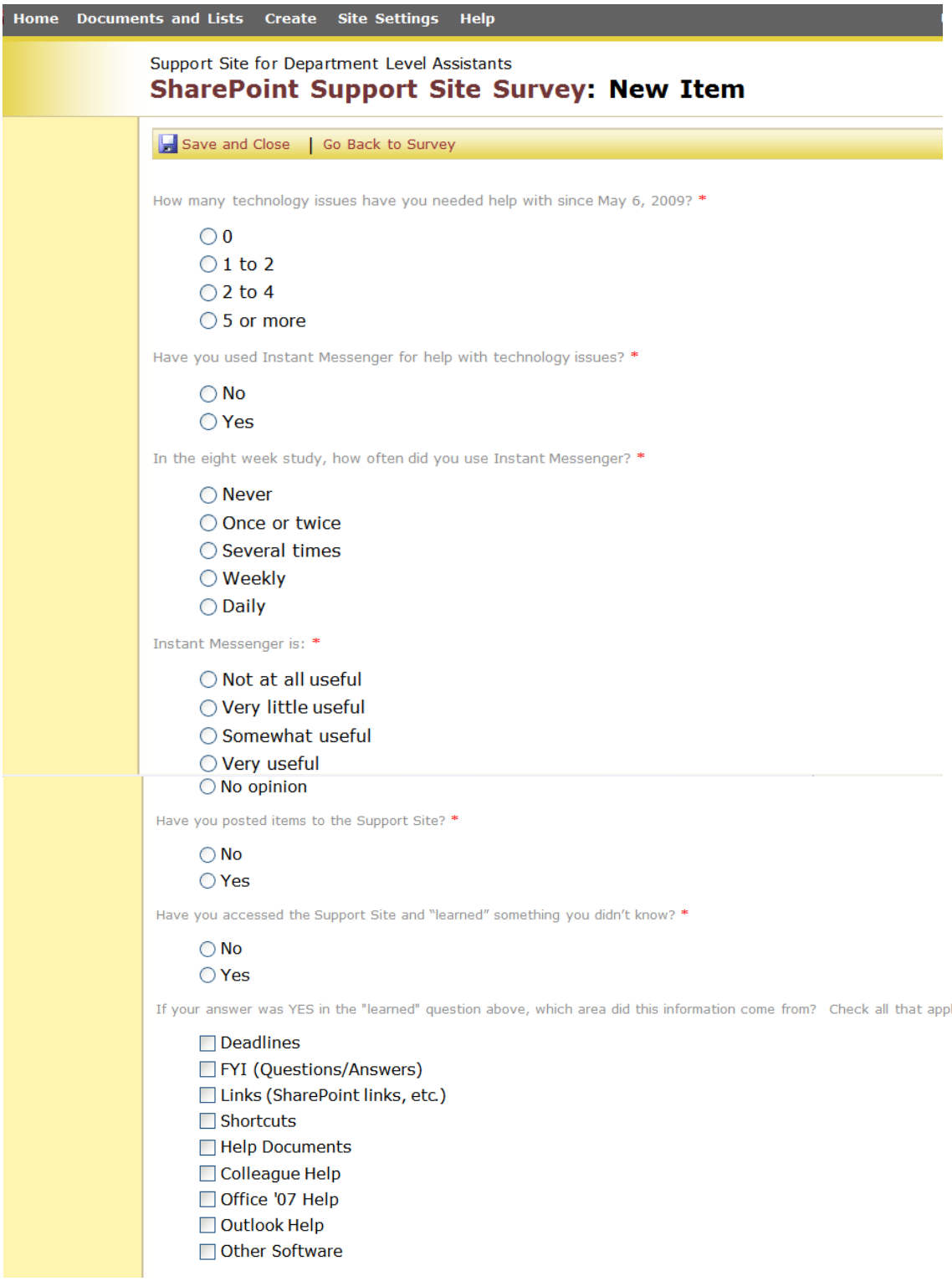
20. Off-campus conference

21. Manual documentation

Thank you for completing the survey!

Done

Appendix D



Home Documents and Lists Create Site Settings Help

Support Site for Department Level Assistants

SharePoint Support Site Survey: New Item

Save and Close | Go Back to Survey

How many technology issues have you needed help with since May 6, 2009? *

- ◯ 0
- ◯ 1 to 2
- ◯ 2 to 4
- ◯ 5 or more

Have you used Instant Messenger for help with technology issues? *

- ◯ No
- ◯ Yes

In the eight week study, how often did you use Instant Messenger? *

- ◯ Never
- ◯ Once or twice
- ◯ Several times
- ◯ Weekly
- ◯ Daily

Instant Messenger is: *

- ◯ Not at all useful
- ◯ Very little useful
- ◯ Somewhat useful
- ◯ Very useful
- ◯ No opinion

Have you posted items to the Support Site? *

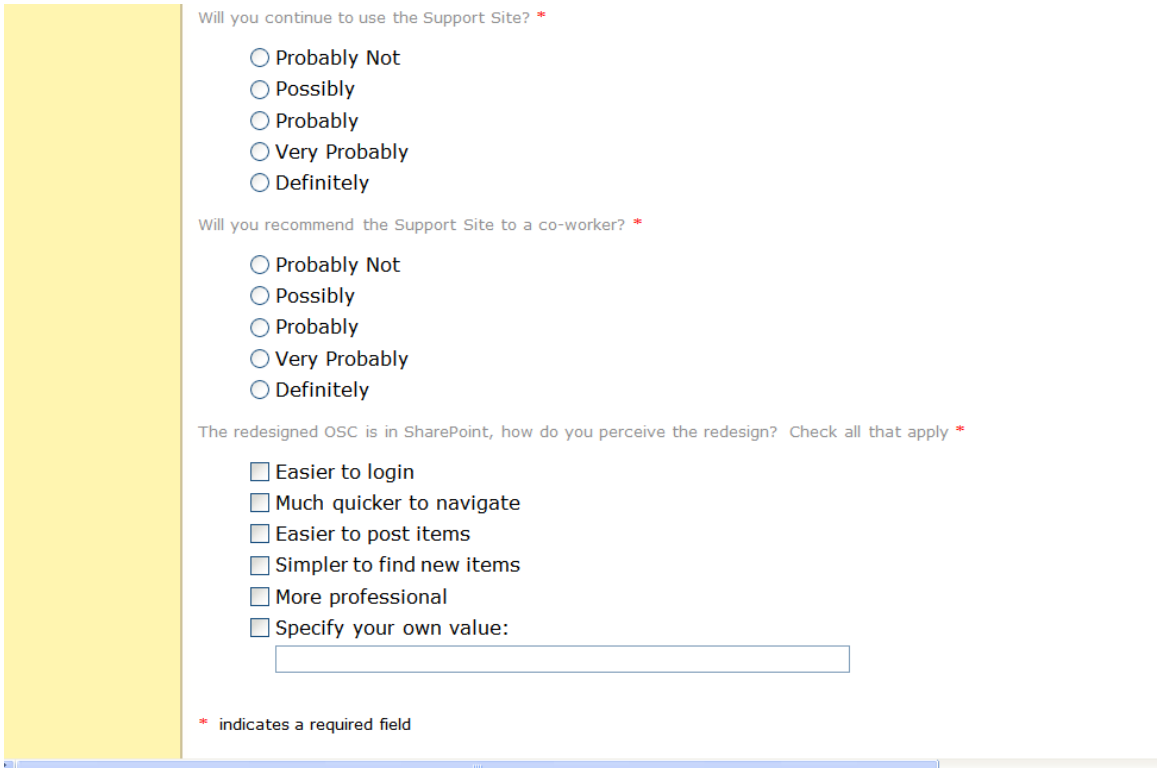
- ◯ No
- ◯ Yes

Have you accessed the Support Site and "learned" something you didn't know? *

- ◯ No
- ◯ Yes

If your answer was YES in the "learned" question above, which area did this information come from? Check all that apply

- ☐ Deadlines
- ☐ FYI (Questions/Answers)
- ☐ Links (SharePoint links, etc.)
- ☐ Shortcuts
- ☐ Help Documents
- ☐ Colleague Help
- ☐ Office '07 Help
- ☐ Outlook Help
- ☐ Other Software



Will you continue to use the Support Site? *

- ○ Probably Not
- ○ Possibly
- ○ Probably
- ○ Very Probably
- ○ Definitely

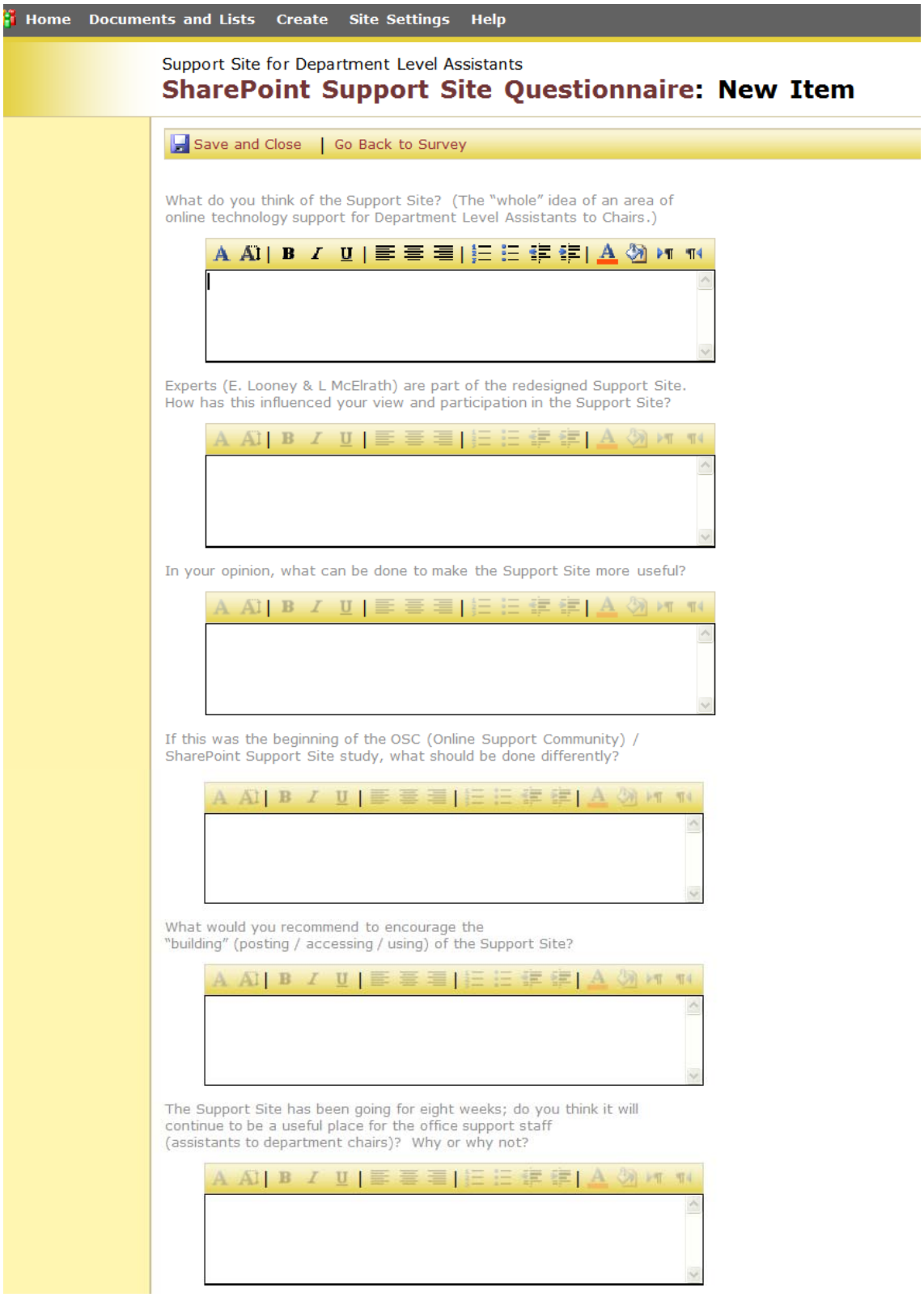
Will you recommend the Support Site to a co-worker? *

- ○ Probably Not
- ○ Possibly
- ○ Probably
- ○ Very Probably
- ○ Definitely

The redesigned OSC is in SharePoint, how do you perceive the redesign? Check all that apply *

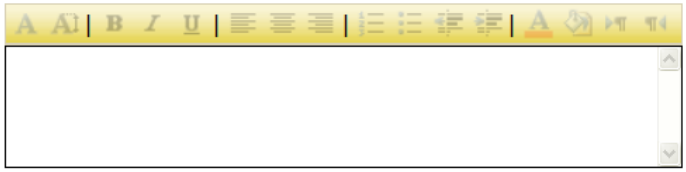
- ☐ Easier to login
- ☐ Much quicker to navigate
- ☐ Easier to post items
- ☐ Simpler to find new items
- ☐ More professional
- ☐ Specify your own value:

* indicates a required field

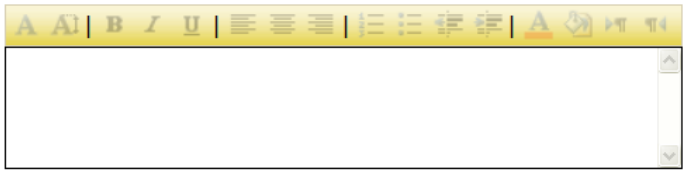

Home
Documents and Lists
Create
Site Settings
Help
Support Site for Department Level Assistants
SharePoint Support Site Questionnaire: New Item
Save and Close
Go Back to Survey
What do you think of the Support Site? (The "whole" idea of an area of online technology support for Department Level Assistants to Chairs.)
Experts (E. Looney & L McElrath) are part of the redesigned Support Site. How has this influenced your view and participation in the Support Site?
In your opinion, what can be done to make the Support Site more useful?
If this was the beginning of the OSC (Online Support Community) / SharePoint Support Site study, what should be done differently?
What would you recommend to encourage the "building" (posting / accessing / using) of the Support Site?
The Support Site has been going for eight weeks; do you think it will continue to be a useful place for the office support staff (assistants to department chairs)? Why or why not?

Instant Messenger – how do feel about using it in the workplace?

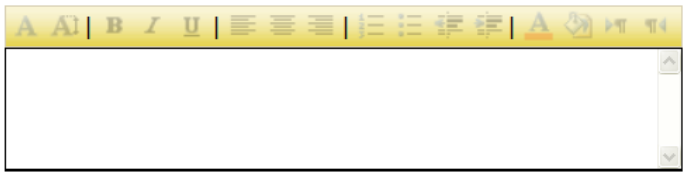
Do you think using Instant Messenger builds "social community"
in the office support staff group (assistants to department chairs)?
Why or why not?



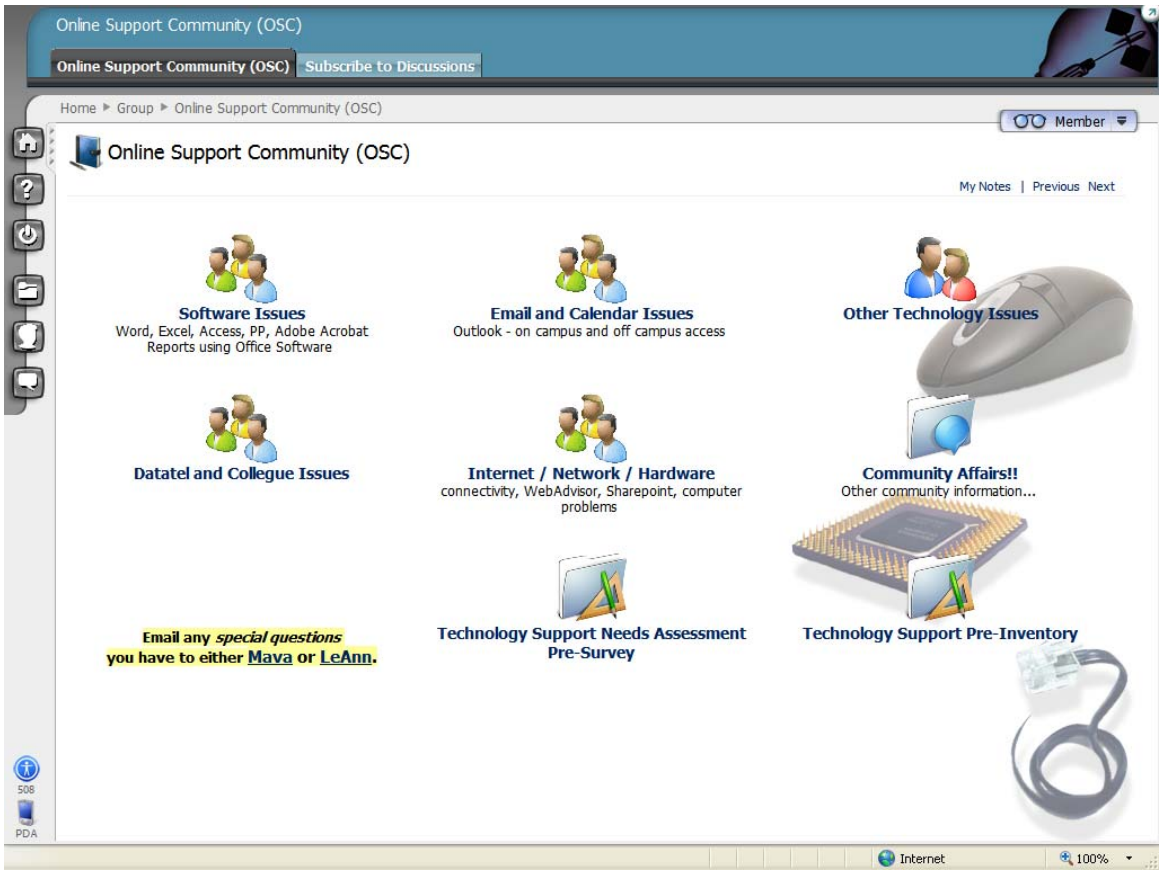
Do you think using Instant Messenger builds a workplace "support community"
in the office support staff group (assistants to department chairs)?
Why or why not?



The University is committed to continue the Support Site after this study is done.
Will you continue to use the site as well as refer others to the Support Site?
Why or Why not?



Appendix E


Online Support Community (OSC)
Online Support Community (OSC)
Subscribe to Discussions
Home ▸ Group ▸ Online Support Community (OSC)
Member
Online Support Community (OSC)
My Notes | Previous Next
Software Issues
Word, Excel, Access, PP, Adobe Acrobat Reports using Office Software
Email and Calendar Issues
Outlook - on campus and off campus access
Other Technology Issues
Datatel and Collegue Issues
Internet / Network / Hardware
connectivity, WebAdvisor, Sharepoint, computer problems
Community Affairs!!
Other community information...
Email any special questions you have to either Mava or LeAnn.
Technology Support Needs Assessment Pre-Survey
Technology Support Pre-Inventory
508
PDA
Internet
100%

Appendix F

Institutional Review Board for Research with Human Subjects (IRB)

Adult/General Informed Consent form for Participation in
An Online Community for Computer Technology Support and Training for Office-Support Staff

Funding Source: None.

IRB approval # (Generated by IRB)

Mava F. Wilson
ABD, PhD in
Computer Technology in Education
1120 North Ocoee St.
Cleveland, TN 37311
423.614.8196

Dr. Trudy Abramson
Nova Southeastern University
3301 College Avenue
DeSantis Building Room 4071
Ft. Lauderdale, FL 33314
954.262.2070

Institutional Review Board

Nova Southeastern University

Office of Grants and Contracts
(954) 262-5369/IRB@nsu.nova.edu

Lee University
1120 North Ocoee St.
Cleveland, TN 37311

Description of the Study:

This study involves research with the office-support staff at the university. The purpose of the study is to develop an online support community. This community will provide a central location for the office support staff to find and contribute support for computer technology issues that affect productivity in the workplace. The study will investigate the components of an online community that offers performance-based technology support. It will also determine the effectiveness of the community and the measures of effectiveness.

The results of this study will contribute to the office support staff support and training knowledge base and will increase the awareness of the importance of continuous support and training programs for office support staff in educational institutions. It will also promote and stimulate office support staff and educational administration to create communication and support communities for performance-based support. This study will develop a protected online community for performance-based support for office support staff.

You, the office-support staff participants selected, are the assistants to the department chairs in the undergrad and graduate programs and are selected because of the importance of your job in the university. You are in a small segment of the population that may not receive consistent on-going support and training dealing with technology issues related to your job. This study is going to address these issues.

You were emailed an explanation of the study and asked to participate in the online support community. Administration, the VP, deans, and chairs, have approved the study in hopes of providing needed technology support for you. Today, in this face-to-face meeting, I will explain the procedures and provide some initial training on using the online support community interface, ANGEL. Today you will be provided a login and will sign this form giving consent to participating in the study. When you login the first time to ANGEL, you will have an online survey to complete and also will be given a survey at the end of the study to complete. These will be coded for comparison purposes only. A small group (randomly selected) will be asked to participate in a focus group interview at the end of the study to provide additional qualitative data.

I will be monitoring the online community. In addition, one help-desk person will also be monitoring the community. We will participate to offer advice and to answer questions that are not addressed by other members of the community. At any time, you may address specific questions and concerns to either one of us. You will also be given the contact information to a person who can provide help with the online interface, ANGEL.

At the end of the study, your chair will be sent an email survey. This survey will have questions as to their impression of the effectiveness of the online support community and the benefits, if any, to your productivity.

The study will not take a lot of time. However, it is anticipated that you will began to use it as a resource every day when you have questions and to provide support (answer questions, give advice, offer techniques) to others in the community. The study will be conducted for 10-12 weeks.

Audio Recording
None

Initials: _____ **Date:** _____

Video Recording
None

Initials: _____ **Date:** _____

Risks /Benefits to the Participant:

Potential risk is minimal, given the nature of the study, which seeks to develop and evaluate the effectiveness of an online support community. First names only will be used to protect your identity while participating in the support community.

If you choose to use your full name in the support community, please know you are doing so at your own discretion. Any data collected from or about you will be held in confidence and at no time will real identities be used in any publications that describe the research.

It is anticipated that as a result of this study, administration will be aware of the benefits of providing ongoing technology support and training which can be done without a tremendous overhead. It is also anticipated that you will have created a community of support for technology issues and problems you encounter in your job responsibilities.

If you have any concerns about the risks or benefits of participating in this study, you can contact Mava Wilson or the IRB office at the numbers indicated above.

Costs and Payments to the Participant:

You are being provided lunch/refreshments today at this face-to-face meeting. There is no cost to participate in this study. There is no payment provided to participate in this study.

Initials: _____ Date: _____

Confidentiality and Privacy:

The investigator (Mava Wilson) has the responsibility to ensure that your confidentiality is maintained. Data collected from the study will be reported in the aggregate. Survey results and data collected from the study will be matched and coded using your first name for comparison purposes only. I am the only one who will have access to this data. Any data collected from or about you will be held in confidence and at no time will real identities be used in any publications that describe the research. All information obtained in this study is strictly confidential unless disclosure is required by law. If needed, the IRB and regulatory agencies may review research records.

Use of Protected Health Information (PHI): na

Participant's Right to Withdraw from the Study:

You have the right to decline to participate in the study or to withdraw from participation at any time. If you do withdraw, it will in no way affect this study or your job position. If you choose to withdraw, you may request that any data which has been collected will be destroyed unless prohibited by law.

Initials: _____ Date: _____

Other Considerations:

If significant new information relating to the study becomes available which may relate to your willingness to continue to participate, this information will be provided to you by the investigator.

Voluntary Consent by Participant:

This paragraph must be included exactly as written in bold face type:

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. 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 Mava Wilson. A copy of this form has been given to me. This consent ends at the conclusion of this study.

Participant's Signature:_____ Date:_____

Witness's Signature:_____ Date: _____

Appendix G
Instructions for Study Participants

Forwarding Email:

- Login to Angel using username and password provided
- On the first screen, to the left, point to the *Preferences* icon (sixth one down)
- Click on *System Settings*
- At bottom of the screen, under *Forwarding Address*, type in (confirm) your work email address – all email sent through the Angel system will be forwarded to this address
- Change the *Forwarding Mode* to "Forward my mail and mark as read"
- Note that under *Preferences* your Angel account can be personalized in other ways.

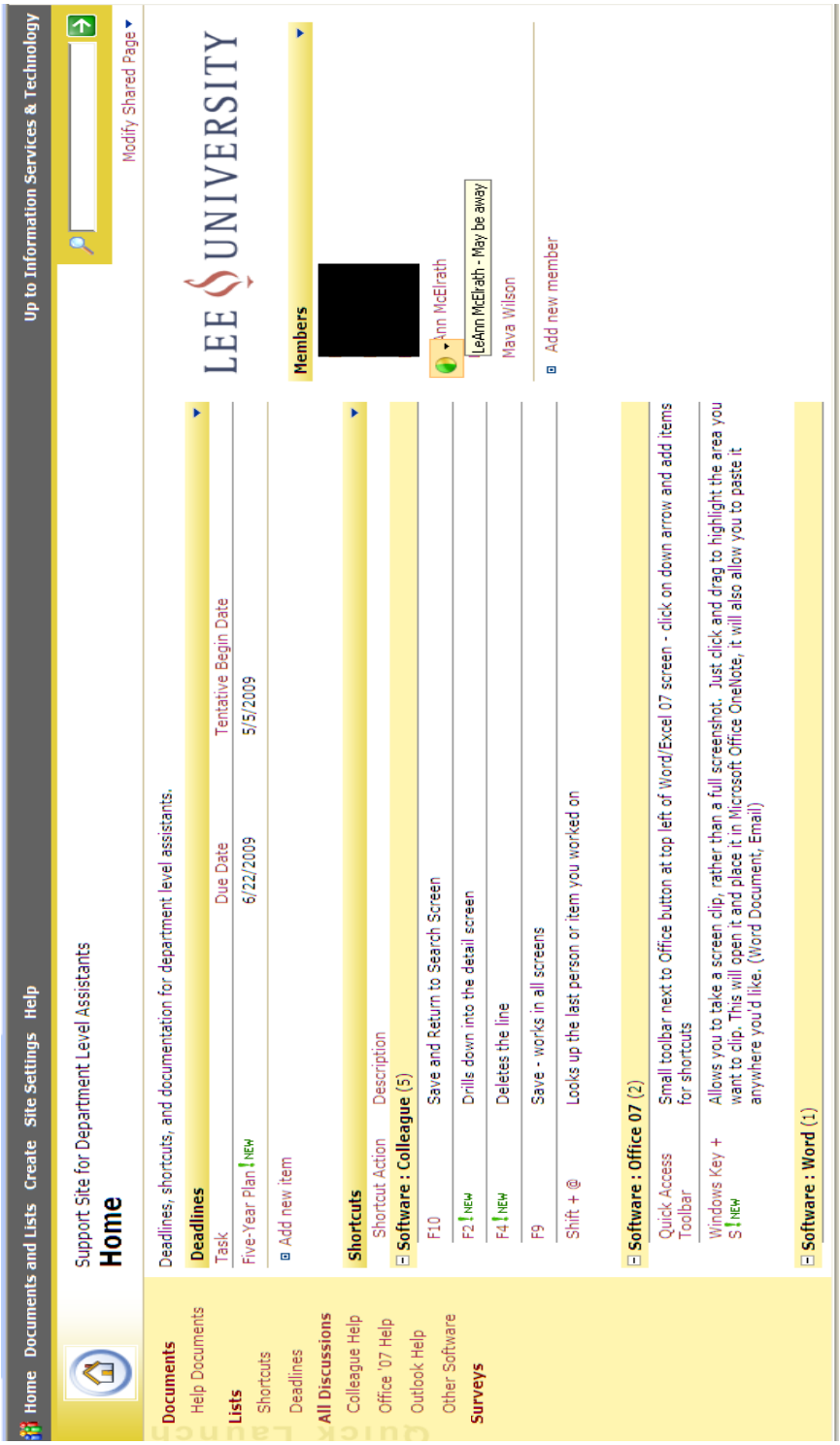
Subscribing to discussions forums - (so that whenever someone posts a question or replies to a posting, it will be forwarded to Outlook)

- After login, click on the OSC
- On the tabs across the top, click on *Subscribe to Discussions*
- Under each Discussion Topic is a [subscribe] link
- Click on [subscribe]
- Please *note* that to reply to a posting *you must be in Angel in the discussion forum* – replying to the email will not send a message to the individual who posted – and replying personally will mean others will not see your response.

Posting to Discussion Forums

- Login to Angel using username and password provided
- After login, click on the OSC
- Click on the topic where you would like to "post" a question or comment
- In the top-left of the window – click New Post
- Posting is similar to doing an email – title, message, save
- To Reply – click on the message you want to answer – then click the Reply link at bottom left of window
- Notice all the options…

Appendix H


Home
Documents and Lists
Create
Site Settings
Help
Up to Information Services & Technology
Support Site for Department Level Assistants
Home
Modify Shared Page
Documents
Help Documents
Lists
Shortcuts
Deadlines
All Discussions
Colleague Help
Office '07 Help
Outlook Help
Other Software
Surveys
Deadlines, shortcuts, and documentation for department level assistants.
Deadlines
Task
Due Date
Tentative Begin Date
Five-Year Plan NEW
6/22/2009
5/5/2009
Add new item
Shortcuts
Shortcut Action
Description
Software : Colleague (5)
F10
Save and Return to Search Screen
F2 NEW
Drills down into the detail screen
F4 NEW
Deletes the line
F9
Save - works in all screens
Shift + @
Looks up the last person or item you worked on
Software : Office 07 (2)
Quick Access Toolbar
Small toolbar next to Office button at top left of Word/Excel 07 screen - click on down arrow and add items for shortcuts
Windows Key + S NEW
Allows you to take a screen clip, rather than a full screenshot. Just click and drag to highlight the area you want to clip. This will open it and place it in Microsoft Office OneNote, it will also allow you to paste it anywhere you'd like. (Word Document, Email)
Software : Word (1)
LEE UNIVERSITY
Members
[redacted]
Ann McElrath
LeAnn McElrath - May be away
Mava Wilson
Add new member

Appendix I

Sent: Wed 5/6/2009 11:32 AM
To:
Cc: LeAnn McElrath; Erin Looney; [redacted]; Mava Wilson
Subject: OSC - Support Site for Department Level Assistants IMPLEMENTATION

The *Online Support Community* (OSC) study that Mava conducted from October 31-February 6 resulted in recommendations for the ongoing implementation. When she submitted the final report to her dissertation chair, the chair decided that the study needed to be implemented with the recommendations with her observing.

The OSC has been re-designed in Sharepoint and the recommendations applied. Attached is a document with everything spelled out. Also attached is a document screen shot of the support site with explanatory references.

The Support Site implementation will be ongoing - Mava will observe/participate for the first eight (8) weeks collecting data for her final dissertation report. She will then continue in the site as subject expert / facilitator / trainer.

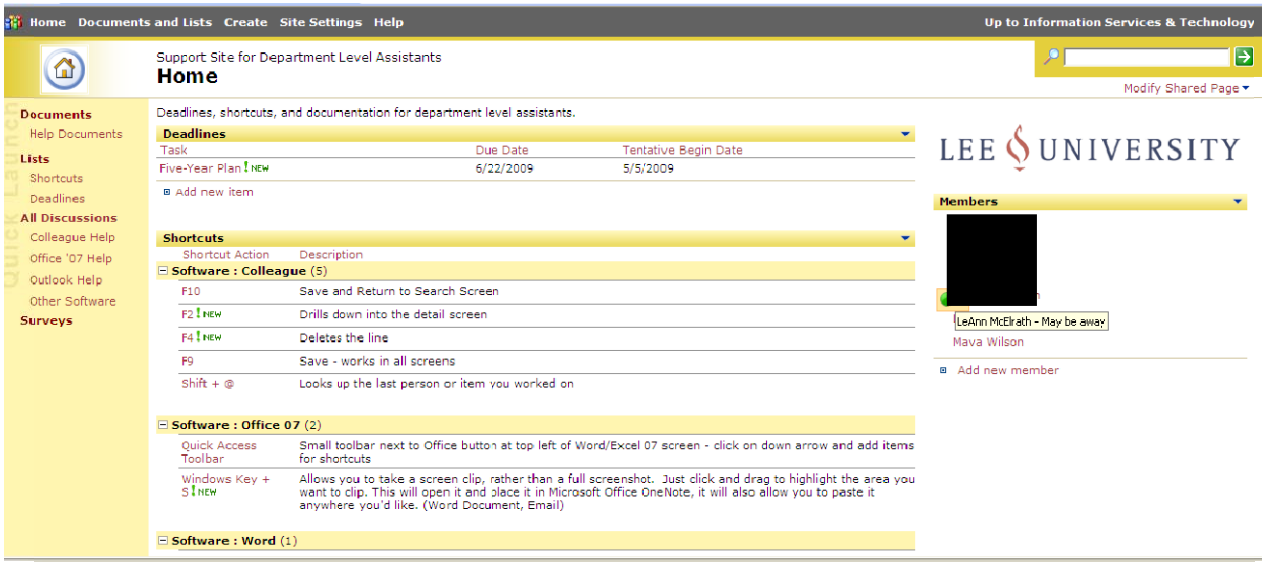
A couple of things:

- Erin Looney is now a member as the Colleague expert. Erin has already added Colleague S*hortcuts* - in addition to three that were collected by Mava from interviewees.
- Erin has uploaded several documents into the "process & procedure Help Documents" area - eg. Cross-listing a Section & Entering a faculty member's Degeee Information plus others.
- LeAnn McElrath will continue as a technology expert.
- Calendar *deadline dates & recomended date to start process* is available (to be posted by members)
- FYI is for general - heads-up information.
- NEW ITEM COMING SOON = Instant Messenger can be used as part of the Support Site - Mava will be contacting each of you for a time to install/set up Instant Messenger. In addition to using this with the office sipport staff members, groups can be creared for each *college* or *school* with the dean's secretary as part of the group (*only as a part of the IM group - NOT part of the support site).* Click here https://sharepoint.leeuniversity.edu/support (We can talk about this after the rush is over!)

login with *same username & password as network/email*
username: leeflames\email-username
password: email-password

Let me or Mava know if you have questions.

Support Site for Department Level Assistants
https://sharepoint.leeuniversity.edu/support
login with *same username & password as network/email*
username: leeflames\username
password: password
(Will stay logged in until browser is closed)



Support Site for Department Level Assistants
https://sharepoint.leeuniversity.edu/support
login with *same username & password as network/email*
username: leeflames\username
password: password
(Will stay logged in until browser is closed)

Support Site for Department Level Assistants *Implementation*

https://sharepoint.leeuniversity.edu/support
username: leeflames\email-username
password: email-password

Recommendations from *Pilot Study* for OSC
Support Site for Department Level Assistants

1. Office Staff Leaders: [redacted] & [redacted]
2. Place for long-term documentation: shortcuts; deadlines & start date to complete by due date; processes & procedures – steps to do tasks
3. Subject experts in technology areas: Erin Looney & LeAnn McElrarh
4. New medium to stay logged in: Sharepoint
5. Users/members who will share and answer questions: office support staff

Did not recommend BUT was part of data results

6. Instant Messenger (did not know we could do this – *will need to install/set up on each individual computer*.)

Researcher (Mava Wilson) will continue to observe/collect data for eight weeks (May 6, 2009 through June 30, 2009). She will continue in the Support Site as subject expert/facilitator/trainer after observation period is concluded.
ALL study parameters continue to exist during the observation period:

- Confidentiality of data collected – reported only in the aggregate
- Confidentiality of identities – real names will not be used in study reports
- In addition to LeAnn McElrath participating as a technology subject matter expert, Erin Looney has been invited to participate as the Colleague subject matter expert. Breanna Gray may also be part of the site at *in-frequent times* as the web-designer subject matter expert.

The Support Site for Department Level Assistants will be a part of the Lee University technology support system.

Appendix J


From: Carolyn Dirksen
To: Mava Norton-Wilson
Cc:
Subject: Dissertation Research
Sent: Wed 11/21/2007 12:35 PM

LEE UNIVERSITY
Vice President for Academic Affairs

Dear Mrs. Wilson,
You have my enthusiastic support for your dissertation research involving the clerical staff of Lee's academic sector. As I understand your research, you will create an online community to provide technology support and training for our office support staff, and we believe this will be a significant addition to our staff orientation and on-going attempts at technology training. Please proceed with this project with the approval of my office.
Carolyn Dirksen

Carolyn Dirksen, Ph.D.
Vice President for Academic Affairs
(423) 614-8118
cdirksen@leeuniversity.edu

From: Carolyn Dirksen
Sent: Mon 2/14/2005 3:45 PM
To: Andrea Dismukes; Ben Perez; Bill Estes; Carolyn Dirksen; Debbie Murray; Dewayne Thompson; Donald Smeeton; Emerson Powery; Jean Eledge; Jerome Boone; Michael Laney; Murl Dirksen; Pamela Browning; Penny Mauldin; Phillip Thomas; Robert Graham; Sherri Hartgraves; Stephen Plate; Terry Cross
Cc: Mava Norton
Subject: Mava Norton's Wonderful Dissertation

Dear Deans and Chairs,
Mava Norton's dissertation topic is *An Online Community for Computer Technology Support and Training for Office-Support Staff. Fortunately for all of us, she is going to use the academic sector clerical staff as her experimental group. That is, she is going to work them on creating the "on-line community" she will discuss in her dissertation. This email is to let you know that I have approved (pretty enthusiastically) the participation of our staff in this project. I believe Mava's attention to the training of the academic clerical staff will help all of us, and I am so glad she has chosen us to work with.*
Carolyn
PS If you have any questions, please let me know. I've told you most of what I know, but maybe here is something else I can say.

Appendix K

NOVA SOUTHEASTERN UNIVERSITY
Office of Grants and Contracts
Institutional Review Board

MEMORANDUM

To: Mava Wilson
From: James Cannady, Ph.D.
Institutional Review
Date: March 15, 2008
Re: *An Online Community for Computer Technology Support and Training for Office-Support Staff*
IRB Approval Number: cannady03150803

Signature

I have reviewed the above-referenced research protocol at the center level. Based on the information provided, I have determined that this study is exempt from further IRB review. You may proceed with your study as described to the IRB. As principal investigator, you must adhere to the following requirements:

1) CONSENT: If recruitment procedures include consent forms these must be obtained in such a manner that they are clearly understood by the subjects and the process affords subjects the opportunity to ask questions, obtain detailed answers from those directly involved in the research, and have sufficient time to consider their participation after they have been provided this information. The subjects must be given a copy of the signed consent document, and a copy must be placed in a secure file separate from de-identified participant information. Record of informed consent must be retained for a minimum of three years from the conclusion of the study.

2) ADVERSE REACTIONS: The principal investigator is required to notify the IRB chair and me (954-262-5369 and 954-262-2085 respectively) of any adverse reactions or unanticipated events that may develop as a result of this study. Reactions or events may include, but are not limited to, injury, depression as a result of participation in the study, life-threatening situation, death, or loss of confidentiality/anonymity of subject. Approval may be withdrawn if the problem is serious.

3) AMENDMENTS: Any changes in the study (e.g., procedures, number or types of subjects, consent forms, investigators, etc.) must be approved by the IRB prior to implementation. Please be advised that changes in a study may require further review depending on the nature of the change. Please contact me with any questions regarding amendments or changes to your study.

The NSU IRB is in compliance with the requirements for the protection of human subjects prescribed in Part 46 of Title 45 of the Code of Federal Regulations (45 CFR 46) revised June 18, 1991.

Cc: Protocol File
Office of Grants and Contracts (if study is funded)

Appendix L

2007 Help Desk Requests by Office Support Staff

Category	No of Requests for Help
Account Maintenance	41
Delivery	3
Email	15
ERP-Champlain	16
ERP-Datatel	14
Faculty Toolbox	2
General Questions	25
Lab Issues	5
Network Issues	18
Password Changes	20
PC Hardware	24
PC Set up	11
PC Software	44
Printing/Copiers	40
Report Request	4
TEC	29
University Website	1
WebAdvisor/LeeU	21

Appendix M

Cc: Mava Wilson
Subject: Online Support Community (for Office Support Staff - Secretaries to the Chairs) - Dissertation Study
Attachments:

Hello ladies,

This is an email to the secretaries to the chairs of every department. I have met most of you in person – but in case you do not know me – let me tell you who I am.

I teach Computer Information Systems (CIS) in the Department of Business. Because of my interest in computer training and support – I choose that topic for my dissertation study. If you have been here for several years, you will remember that for a couple of summers (2001-2002-2003) I did some computer training for the secretaries. This helped fuel my interest in the subject I choose to study.

When I received the OK on the idea of the study, Dr. Dirksen gave her approval for me to do the study here at Lee as she knew that computer support for everyone in the technology area can be slow or lacking especially when technology changes so very quickly as it has in the past few semesters.

The study I am doing is specifically aimed at providing technology support for you – the secretary (assistant, office support staff) to the Department Chair. Your job responsibilities are so vast and are so vital to the smooth running of the institution that I wanted to find a way to provide support as you learn/use/are given new technology and have to immediately apply it to your job tasks. Support to help make your job easier and more productive.

Based on this – I am inviting you to participate in my study. To introduce it, I am inviting you to a luncheon this Friday, October 31, at 12:30 in the PCSU – Room 302. We should be through around 1:45. I will be sending an appointment to you to accept.

Thank you so much for helping me with my study. If you have questions, just let me know,
~Mava

Mava F. Wilson
Assistant Professor of CIS

Appendix N

Task List for Study Participants

Today-Beginning of Study

- Sign Consent Form

First Time you Login to Angel

- Change your Password (new users only)
- Forward your Email
- Subscribe to Discussion Forums
- Complete *Technology Support Needs Assessment – **Pre**-Survey*
- Complete *Technology Support **Pre**-Inventory*

During Study (+-10 work weeks)

- Participate in Technology Support Discussions as needed/wanted

End of Study

- Complete *Final Survey – **Post**-Survey*
- Participate (if requested) in Interviews (to clarify questions)

Angel: http://angel.leeuniversity.edu

Contacts:

LeAnn McElrath, IS&T - participant
Technology Support Consultant

Mitch Baker, Angel (mbaker@leeuniversity.edu)
Available for Angel questions

Mava Wilson, observer/participant
Researcher

Appendix O

Technology Support Inventory Summary			
Use Technology in Job No. of Hours Per Week			
20 or more hours	14	11 - 15 hours	1
Request for Technology Assistance (past year)			
Datatel	15	Internet/Network	3
Adobe Acrobat	9	Reports	3
Outlook	9	Hardware	2
Printing	8	PowerPoint	2
Word	7	Access	1
Excel	6		
First Place I Ask for Software Help			
Another Secretary	9	Dean's Assistant	2
Help Desk	4		
First Place I Ask for Admin Software (Datatel) Help			
Another Secretary	9	Help Desk	1
Dean's Assistant	4	Other	1
Faculty Come to Me for Technology Help First			
Some of Them	14	All of Them	1

Appendix P

Mid-Study Survey

Please take 5 minutes and answer the following questions...

1. During this first half of the study – have you had technology questions answered?

○ 0 ○ 1 to 2 ○ 3 to 4 ○ 5 or more

2. If you did, did you use the Online Support Community for help?

○ No ○ Yes

3. If you **did not use the OSC**, where did you get your help|?

○ Another Secretary ○ Dean's Assistant ○ Friend ○ Help Desk ○ Other

4. If you answered *Other* above, please note your source:

5. If you **did not use the OSC**, what was the reason? (check any or all that apply)

☐ Did not think of it
☐ Would take too long for an answer
☐ Too much work
☐ Easier to phone someone
☐ Don't know

6. Datatel and Collegue seem to be the areas of needed help, with some questions not being answered. Does the OLC need to **invite an expert** to participate in the community? (*Please note that to invite someone outside, 100% approval by all has to be obtained. And that person would also sign the consent to the study, confidentiality statement everyone signed.*)

○ No ○ Yes

7. If you think we need to invite an expert in Datatel and Collegue, whom would you recommend inviting?

Done

Appendix Q

Participant Usage Categorized

Category 1 Surveys Only	
#1	login 1x
#2	login 2x
#3	login 1x
#4	login 2x
Category 2 Surveys, logged in, No Participation	
#5	login 5x
#6	login 8x
Category 3 Surveys, Participation & Looking	
#7	login 7x
#8	login 7x
Category 4 Participation Every Time Logged In	
#9	login 6x
#10	login 3x
#11	login 4x
#12	login 5x
#13	login 5x
#14	login 4x
#15	login 6x

Appendix R

Online Support Community Final Survey Results

	0	1 to 2	3 to 4	5 or more	
How many technology issues have you needed help with since October 31?	1	3	9	2	
	No	Yes	Some		
In question #1, if your answer was "more than 0", did you use the Online Support Community for help?	7	3	5		
	Did not think of it	Would take too long for an answer	Easier to phone someone	Too busy with work tasks	Have face-to-face network
In question #2, if your answer was "No", why did you not use the OSC? Please check all that apply:	3	2	5	3	3
	Another Secretary	Dean's Assistant	Help Desk		
In question #2, if your answer was "Some", where else did you go to find help? Please check all that apply:	7	4	4		
For your work responsibilities, how important is it:	Moderately Important	Important	Very Important		
For the university to provide ongoing support for technology issues.	2	9	4		
For the university to provide an expert for all technology issues. An expert that can be contacted whenever needed.	1	4	10		
The following questions refer to an "ongoing" online support community (OSC) at Lee University – not the study that was conducted in ANGEL. This OSC would include an expert in all technology areas.	Good idea	Place for training materials for anytime /anywhere access	Place for documen-tation	Area for longtime referral	Place to refer new hires
How do you feel about an "ongoing" OSC? Please select all that apply:	14	11	7	6	10
	Probably Not	Possibly	Probably	Very Probably	Definitely
Would you use the OSC?	1	3	6	4	1
Would you recommend the OSC to a co-worker?		4	6	3	2
	Somewhat Helpful	Very Helpful	No Opinion		
If an "instant chat" feature was included in the OSC, would it be:	1	12	1		
	Rarely	Occasionally	Frequently	Very Frequently	
Would the "instant chat" feature encourage you to participate?	2	4	7	2	
	No	Yes			
If the online medium was something other than ANGEL would this encourage you to use the OSC?	5	9			

What method or technology support or training do you prefer? Rank the following choices from 1 to 7 (1 being "most preferred"). Please use a number only once.																Ranked By Preference						
																1st	2nd	3rd	4th	5th	6th	7th
Face-to-face group	6	2	2	6	5	6	1	1	3	1	4	2	3	4	3	3	3	3	2	1	3	0
Face-to-face one-on-one	3	1	1	5	2	5	2	5	1	4	1	3	2	1	2	5	4	2	1	3	0	0
Phone one-on-one	2	4	3	4	3	1	3	6	2	2	2	6	4	2	1	2	5	3	3	0	2	0
Online tutorials (self-paced)	1	5	4	3	6	7	4	2	6	5	6	4	5	5	6	1	1	1	3	4	4	1
Online support community	5	6	6	1	4	2	5	3	5	3	5	5	6	6	4	1	1	2	2	5	4	0
Off-campus conference	7	3	5	7	7	4	7	7	7	7	7	7	7	7	7	0	0	1	1	1	0	12
Manual documentation	4	7	7	2	1	3	6	4	4	6	3	1	1	3	5	3	1	3	3	1	2	2

Appendix S

General Interview Questions

You indicated you would use an online community. For what?

What do you think of the online community? (The "whole" idea of the community?)

So for you, the immediate response is most important because…?

- So an instant chat feature would…?

Do you see a use for ongoing online community? For what?

- Long-term documentation as in what…?
- Shortcuts such as…?
- Another tool that would…?
- For new hires to…?

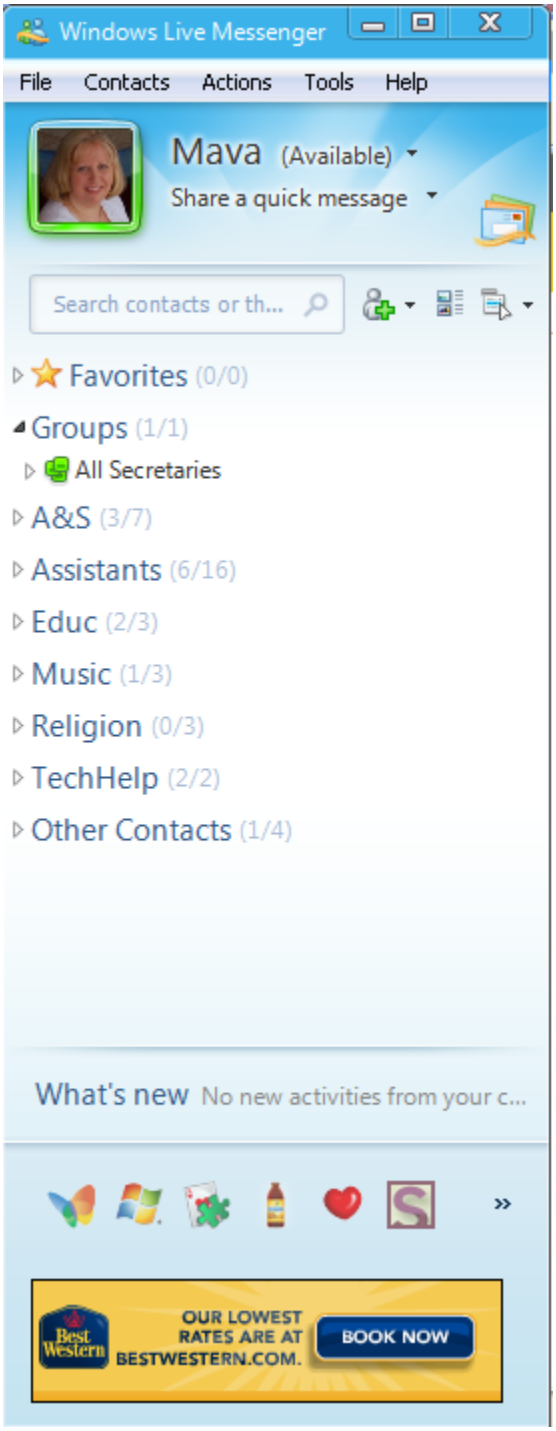
What kind of medium, something besides Angel, would be helpful?

- Medium to login in the morning…?

Why would we want an expert as part of the community?

What training did you get when you were hired?

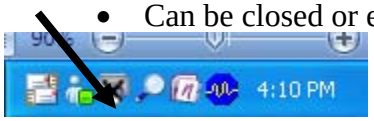
Appendix T


Windows Live Messenger
File
Contacts
Actions
Tools
Help
Mava (Available)
Share a quick message
Search contacts or th...
Favorites (0/0)
Groups (1/1)
All Secretaries
A&S (3/7)
Assistants (6/16)
Educ (2/3)
Music (1/3)
Religion (0/3)
TechHelp (2/2)
Other Contacts (1/4)
What's new
No new activities from your c...
OUR LOWEST RATES ARE AT BESTWESTERN.COM.
BOOK NOW

Appendix U

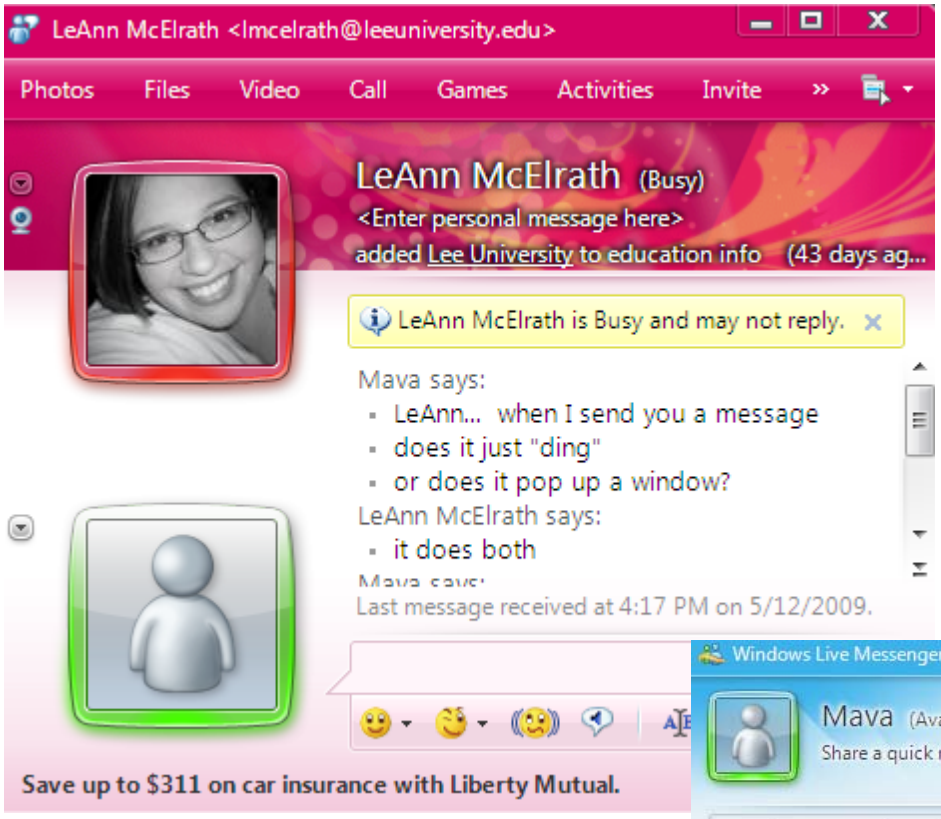
Messenger

- Will login when you login to the computer
- Will close when you logoff
- Can be closed or exited if you want

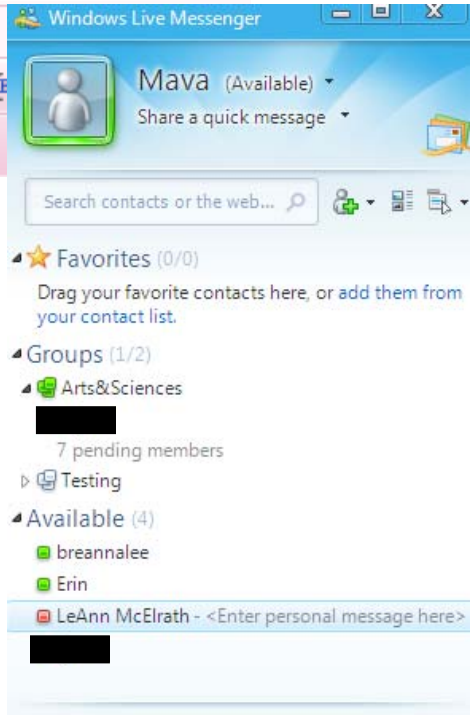


Will ***ding*** when you receive a message

-



- Will ***popup*** a window when you receive a message
- Type your answer here and press <enter>

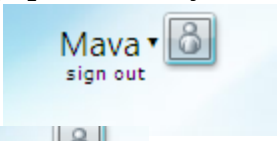


To send new message

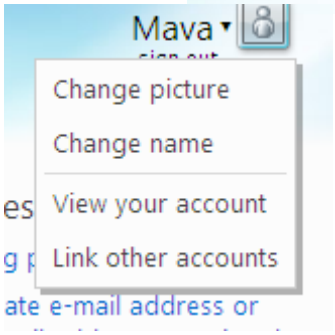
- Double click -- will bring up screen
- Double click on person or group you want to IM -- get the screen above and start typing…

Messenger – FYI – to change info
Change Password, birth year *(registered information)*, personalize your account

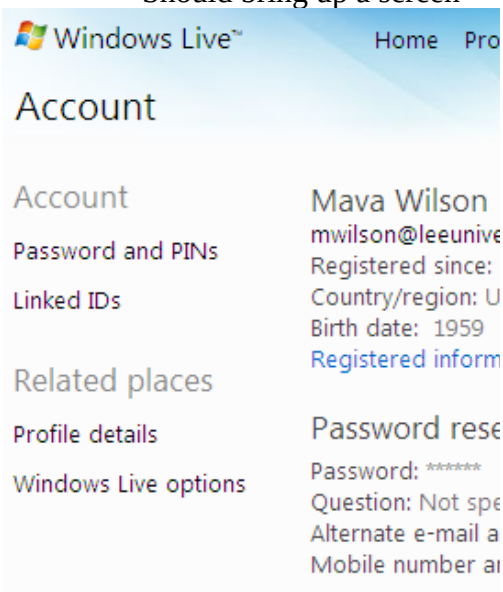
- Go to http://messenger.live.com
- Top right of screen click on the button:



- Click on *view your account*



- Should bring up a screen

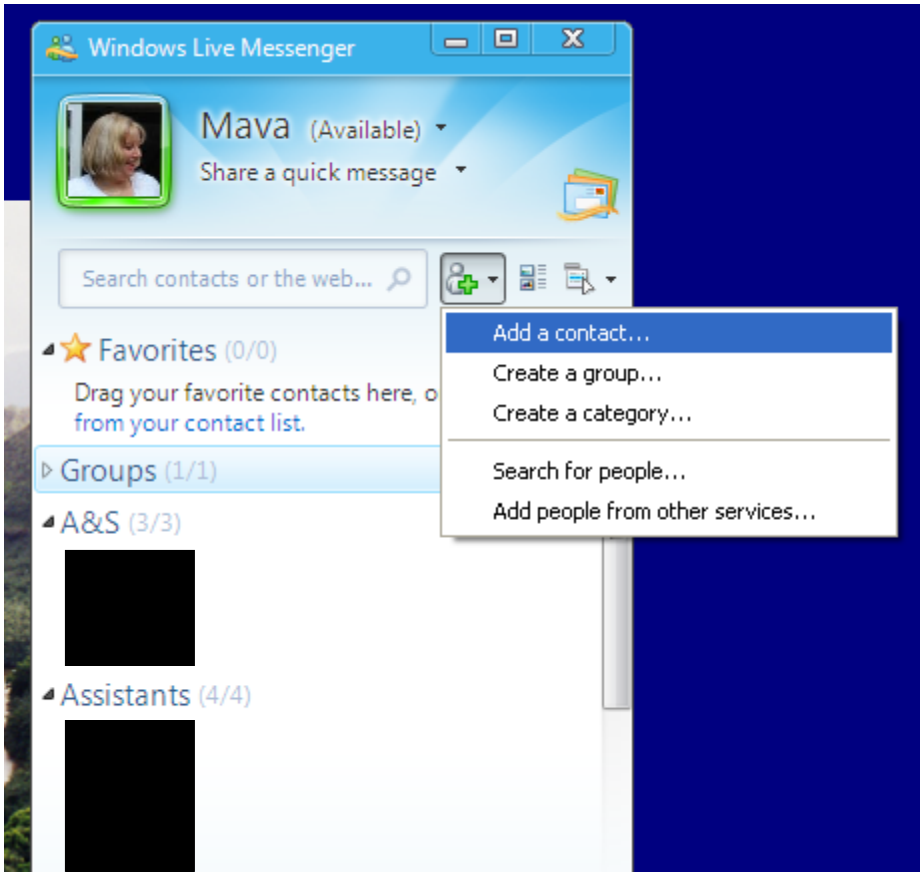


Other Information
Integrates with Sharepoint AND Outlook

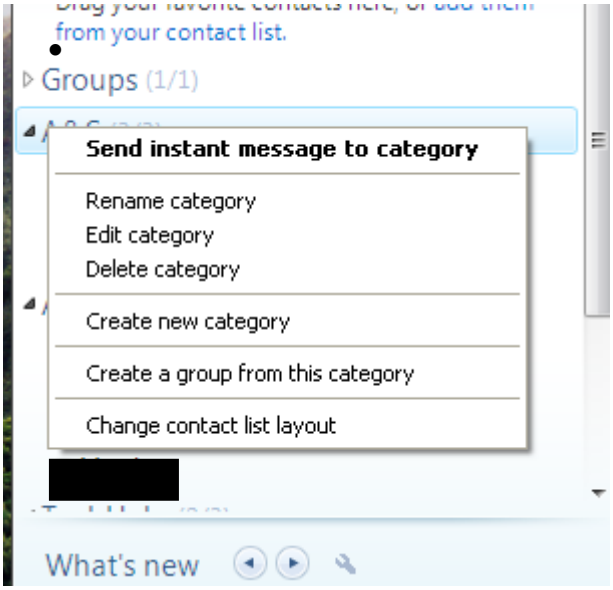
- These are color coded and they mean:

Green
Red
Orange
Clear

Creating a Contact & Category



- Use email addresses for contact
- For category – give it a name
    - Select users to be in category
- Send a message to category to talk to all at one time
- Edit category to add new contacts



Appendix V

SharePoint Support Site Survey Results

Questions	Participant and their responses	
How many technology issues have you needed help with since May 6, 2009?	• 8 • 5 • 2	1 to 2 2 to 4 5 or more
Have you used Instant Messenger for help with technology issues?	• 12 • 2	Yes No
In the eight week study, how often did you use Instant Messenger?	• 4 • 4 • 5 • 1	Daily Weekly Several times Never
Instant Messenger is:	• 13 • 1	Very useful No opinion
Have you posted items to the Support Site?	• 6 • 8	Yes No
Have you accessed the Support Site and "learned" something you didn't know?	• 12 • 2	Yes No
If your answer was YES in the "learned" question above, which area did this information come from? Check all that apply	• Deadlines • Deadlines;#FYI (Questions/Answers);#Shortcuts • Deadlines;#FYI (Questions/Answers) • Deadlines;#FYI (Questions/Answers);#Shortcuts • FYI (Questions/Answers) • Deadlines;#FYI (Questions/Answers);#Colleague Help • Deadlines;#Shortcuts;#Help Documents • FYI (Questions/Answers) • FYI (Questions/Answers);#Links (SharePoint links, etc.);#Shortcuts;#Colleague Help;#Office '07 Help • FYI (Questions/Answers);#Links (SharePoint links, etc.);#Shortcuts • FYI (Questions/Answers);#Other Software • Deadlines;#Shortcuts;#Colleague Help;#Office '07 Help	
Will you continue to use the Support Site?	• 8 • 4 • 2	Definitely Probably Possibly
Will you recommend the Support Site to a co-worker?	• 7 • 2 • 3 • 2	Definitely Very probably Probably Possibly

The redesigned OSC is in SharePoint, how do you perceive the redesign? Check all that apply	• Simpler to find new items • Much quicker to navigate;#Easier to post items;#Simpler to find new items;#More professional • Easier to login;#Much quicker to navigate;#Easier to post items; #Simpler to find new items;#More professional • Easier to login;#Much quicker to navigate;#Easier to post items; #Simpler to find new items;#More professional • Easier to login;#Much quicker to navigate;#Easier to post items; #Simpler to find new items;#More professional • Much quicker to navigate • Easier to post items • Easier to login • Easier to login;#Simpler to find new items • Easier to post items • Easier to login;#Much quicker to navigate • Easier to login;#Easier to post items;#Simpler to find new items • Easier to post items;#Simpler to find new items • Easier to post items;#Simpler to find new items

Appendix W

SharePoint Support Site Questionnaire Results

What do you think of the Support Site? (The "whole" idea of an area of online technology support for Department Level Assistants to Chairs.)

- I love it, it has been extremely helpful.
- Great helpful site.
- It has been a helpful tool in answering my questions
- I think the support site is a great idea!
- I think this is an excellent way to communicate and resolve issues much quicker. Sending emails often takes time to get a reponse and you may have an immediate need to know.
- I think this site helps the assistants to connect.
- It is a helpful idea.
- I think it is a great idea and tool for all of us with the same tasks or similar jobs to be able to share ideas.
- very good idea
- I believe this idea allows for information and networking between the departmental assistants to be so much more accessible. It has truly given us a place to work together in order to accomplish common goals as it relates to our job. It is my opinion that all large workplaces should provide this type of opportunity and support to their employees.
- I really love the online technology support site. At a click of a button, I can find many helpful answers to subjects I am not clear about.
- Great idea! It brings all the secretaries together in a supportive environment where we can share knowledge. Since our offices are spread across campus, this helps to make the gap smaller.
- I think it was very helpful. Although our help desk is helpful, it is great to get help from your peers that may experience the same problems and situations you deal with daily.

Experts (E. Looney & L McElrath) are part of the redesigned Support Site. How has this influenced your view and participation in the Support Site?

- It has been wonderful having these experts involved. I have had a couple of problems that L. McElrath has helped out with, she has been fabulous.
- It's easier.
- It has helped - they are right there available when you need them
- I feel it greatly validates it uselfulness. It assures that answers given are more accurate and gives you a better sense of confidence regarding the answers you have received.
- I think having these 2 here made it easier to resolve conflicts on hand.
- This has been very helpful, because I trust these indivuals.
- I'm glad to have "professionals" available.

- Well, the expertise from these two ladies is something we all have great confidence in. We know that any help from these two benefits us all. So, i can say that it has influenced me into taking part in something that i know is correct information.
- i like it very much but have had little opportunity to use it. Off work.
- The categories has helped with the organization. The benefits of this feature is that we are able to log on and see those items that dirrectly affect what we are working on at the moment. It prevents wasting a lot of time searching for the subject we are needing help with.
- They have done a great job of jumping in to answer questions and also posting helpful bits of information concerning Datatel.
- This has made the Support Site much more helpful. Sometimes we feel like we are running around in circles trying to get an answer and it helps to have someone with "real knowledge" about an issue weigh in with their information.
- I feel they know what we need.

In your opinion, what can be done to make the Support Site more useful?

- Have other experts on campus contribute. It would be nice if other major items like "how to" from the VP's office and Dean's office where posted. Such as dates and forms.
- Can't think of a thing.
- I like it as is
- Adding more basic knowledge that is already out there for new employees so that they do not have to ask as many questions.
- Actually I cannot think of anything--other than include more people in the different fileds.
- Maybe Monthly/Quarterly communicate through Messenger, asking the simple questions: any concerns, how are things going, etc. This would allow those who could share to share without having to schedule a meeting.
- n/a
- I really can't think of anything to make this site more useful.
- I do not have any suggestions for the "useful" part of it. The graphic design could have more options but that is just esthetics.
- At this point, I think it is a matter of us secretaries utilizing the site more frequently. As with any new program, it takes time to begin to rely on another area/source of information. Also, the this new feature came at a time when things were winding down for the school year, and the need was not quite as essential as it will be in the fall and spring.
- I can't think of anything right now. It was very useful as it was.
- Just keep it going.

If this was the beginning of the OSC (Online Support Community) / SharePoint Support Site study, what should be done differently?

- Maybe a group meeting in the computer lab to practice using the system.
- Wasn't here during that time, unable to give sufficient answer.
- Not sure
- n/a
- Blank
- An overall concept meeting with the departmental assistant's, then a one on one meeting to address more detail and to address any questions or concerns.
- NA
- I would definitely initiate the IM capability at the very beginning. This brought everyone together quickly and helped us think of topics that should be added to the Support Site.
- Not sure

What would you recommend to encourage the "building" (posting / accessing / using) of the Support Site?

- Well other assistants are good about encouraging those that have received answers to post. That happened to me. I just have to communicate with one another.
- Weekly reminders?
- Once it's used to answer a question, you will use it again and again
- I feel that someone needs to go ahead and place basic information regarding administrative duties for new staff members. For example...how to's for Pay Roll, Adding New Faculty, etc.
- Weekly/Daily communication (IM) - helps to remind the help is there.
- n/a
- My mind doesn't think about the "building" aspect of this support site to really know what i would recommend.
- The thing that is helpful to me are e-mail reminders.
- I think that it will be inportant to maybe "assign" a secretary the job of prompting/encouraging the secretaries to use the site. (volunteers of course). Maybe a new person every month and that way we would have freshideas/fun ways, coming at us. Keeps it from getting monotonous.
- I really think the IM capability brought about the best questions and answers that led to posting things on the Support Site. Also, the little reminders that XXXX sent out were helpful.
- Yes, and maybe opening it up to other secretaries on campus

The Support Site has been going for eight weeks; do you think it will continue to be a useful place for the office support staff (assistants to department chairs)? Why or why not?

- Absolutely, because it has helped me on several occasions and I wouldn't want it to go back to the way it was. See before we were always bombarding one or two people such as our dean's assistant now I talk to other departments that I wouldn't normally talk to about issues that I am having. This has been great because it not only helps everyone with problems it also brings us closer together as a community.
- Yes, because it's a useful and helpful site.
- Yes - as more questions arise and we hit our "busy" time in building schedules and workload profiles, I'm sure it will be used more.
- I believe that it well. I feel that it has helped answer questions as well as develop working relationships.
- I intend to use this site, if it is avaialble. Contacting some people is a lot easier this way. Sometimes with emails you never know if the other person got it or read it. Or you never know for sure if the person is actually at work or just away from their desk. Using Im you can see if a person is logged on or not.
- Yes, It has helped me to know others that are doing the same jobs I am doing. I like the communication and would like to see it continue.
- Yes, people seem to like the connectivity.
- Yes, I do think it will be a very helpful site. Because one can get instant answers for questions that come up about different projects we have all worked on and sometimes have a question/questions about.
- yes, if it is kept current
- Yes! It will continue to provide a place where we can share learned information.
- I think that this site will be very useful for all of us and especially for new employees.
- Yes! I think the usefulness will just continue as more and more helpful information is added to the site and more people are made aware of it.
- Yes, if nothing else but the IM. Our questions are answered much faster by our peers.

Instant Messenger – how do feel about using it in the workplace?

- I think it's great. I do feel that we need to be conscious of our status though. There have been times that I have sent an IM to someone that was available only to find out 30 mins later they really weren't.
- I didn't think I'd like it, but I did.

- I LOVE IT! It's very helpful in getting answers and knowing that others might me having the same "issues" you have. It has been almost more useful than the sharepoint in answering my questions immediately, then the answer has also been posted for future reference.
- I find it convenient.
- good and bad. I think access to other departments is better. However, not all bosses agree with it. They may feel the secretaries spend too much time using the im and wonder if it is all work related.
- I think it is quick, useful and somedays really made me laugh. It seems so nonthreating and an easy quick way to communicate without having to clean up another email.
- I don't mind it.
- I love instant messenger- because the conversation becomes instant!
- i like it.
- I LOVE it!! It has been such a great way for us all to communicate without flooding our e-mail account with responses. We are able to instantly work through a problem, issue or question and then post the helpful information on to Sharepoint for future reference. Some times finding an answer to something is a messy process. Instant messaging allows everyone to work through that process and gather a more consice answer.
- I really, really, like the option of having instant messenger. It gives everyone a chance to share an idea or question at one time. This also prevents us from being bombarded with so many individual emails.
- This has been a wonderful addition to the Support Site! It allows us to really "connect" with other offices across campus and allow us to share our knowledge. So often a question can be answered quickly this way, because multiple people are alerted to the question at the same time. I don't have to wonder who I should call..then get voice mail. It is much less frustrating than before! I can ask my question and get an immediate response!
- Great, Keep it up

Do you think using Instant Messenger builds "social community" in the office support staff group (assistants to department chairs)? Why or why not?

- Absolutely, it goes back to what I said about never talking to the other colleges. I have had more conversations with people in XXXX and XXX then I have ever since my XX years at Lee.
- Yes
- Absolutely. You are able to talk with others that have the same responsibilities that you have and discuss the "how to" of things as everyone is working on them. I think it builds unity and allows us to converse with each other where before, that was never an option.
- Yes - it gives you the opportunity to communicate with those that you might not ever discuss topics or ask questions.
- I think so. It connected me to people I had not spoken to before.

- Absolutely, because we are developing relationship even though we haven't met.
- n/a
- I think it can, if everyone is willing to participate.
- yes.
- Yes! It has already made such a difference in the connection we all feel with one another just through the instant messenger. Personalites shine through :)
- I definitely think it builds "social community". The university is growing every year with new secretaries. Normally I never get to see most of them but the IM allows us to communicate in a very informal manner. It becomes "fun" to get to know the ones we normally do not get to work with.
- Definitely! I don't feel like I am in my little office all by myself. I feel very connected to the other office staff. Also, I don't know some of the other secretaries very well, so this allows me to get to know them a bit better and often with some humor involved!
- Yes, again because you realize that you are not the only "dummie" out there with problems that seem to be simple when answered.

Do you think using Instant Messenger builds a workplace "support community" in the office support staff group (assistants to department chairs)? Why or why not?

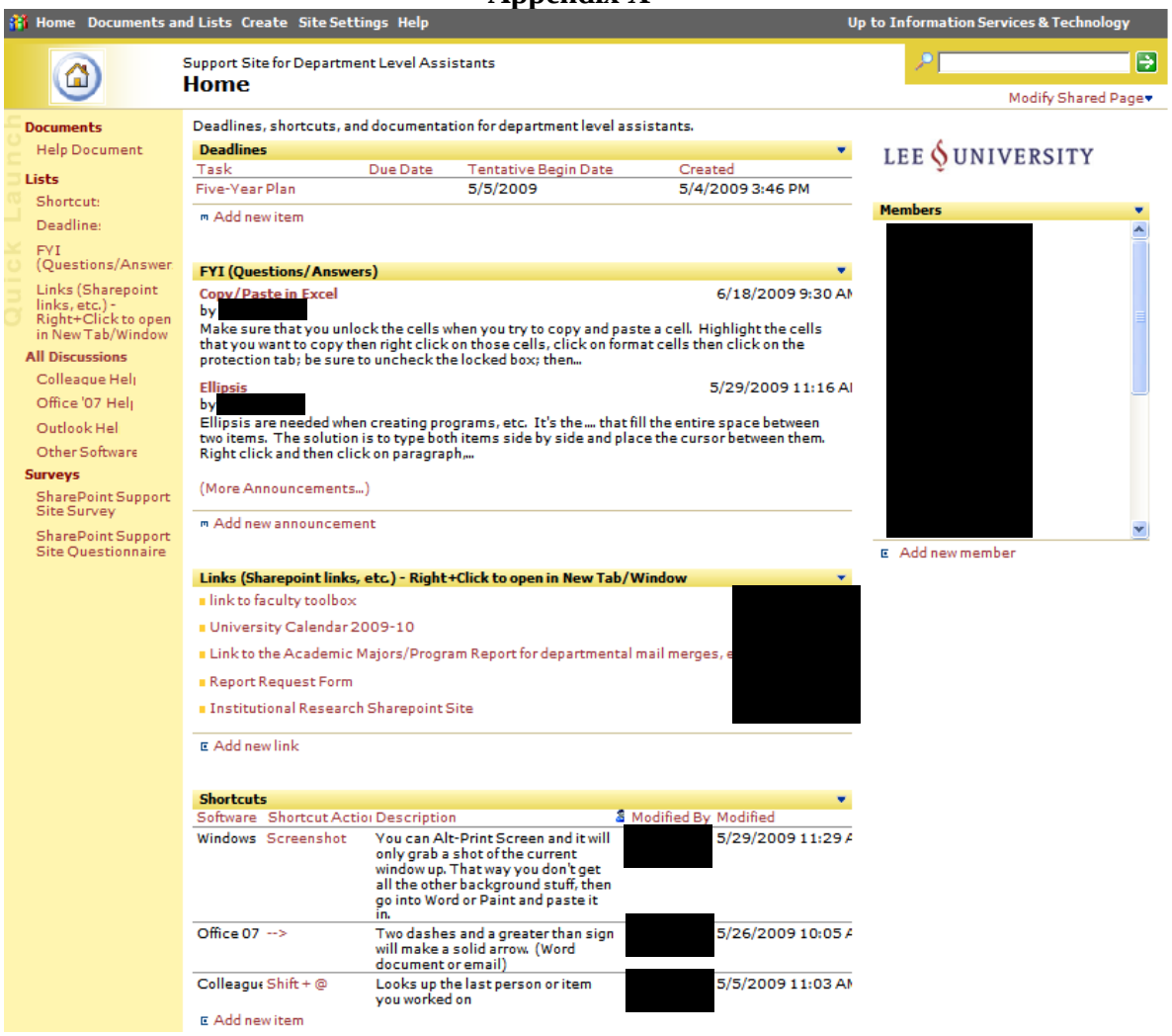
- Sure, I had had great success from other assistants when I have been stuck and couldn't figure something out for myself. It's been great support to know that I wasn't the only one having the same problem.
- Yes.
- Yes - I've used it to answer most of my questions.
- Yes - you are able to quickly ask questions and receive quick and sometimes instant responses. I actually found these more useful than any other area of the site.
- Same as above
- Yes, we tend not to feel alone but realize outside our four walls is someone else dealing with the same office situations.
- n/a
- Yes, because it keeps you in touch with the same work details from those you work with on a daily bases.
- yes. i am sure i would use it a lot more if i didn't share an office
- Yes. The site is non-threatning so whether you have worked here for 10 years or 10 days you can get and post the information needed to accomplish a job/task.
- Same as above.

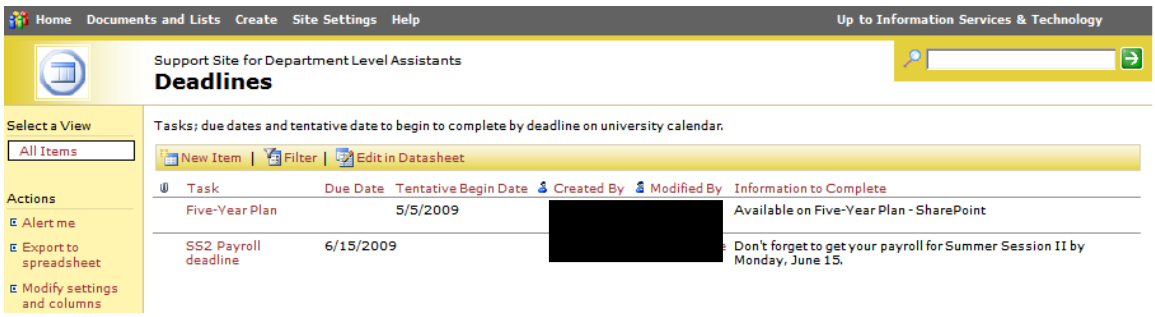
- Yes again! It really helps us feel like we are connected as a support to each other. If I am having trouble logging into Datatel, I can quickly check with others to see if they are having issues as well. Or, if I can't remember where some particular information is found, this is a quick way to find it.
- Yes, it is great knowing that others can help you and others when needed.

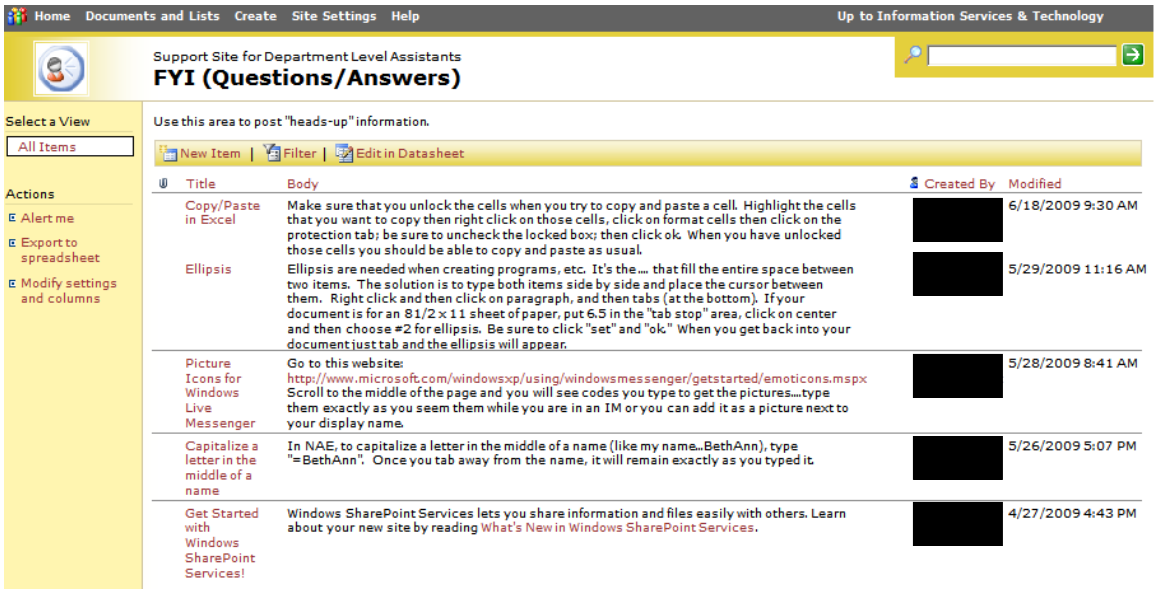
The University is committed to continue the Support Site after this study is done. Will you continue to use the site as well as refer others to the Support Site? Why or Why not?

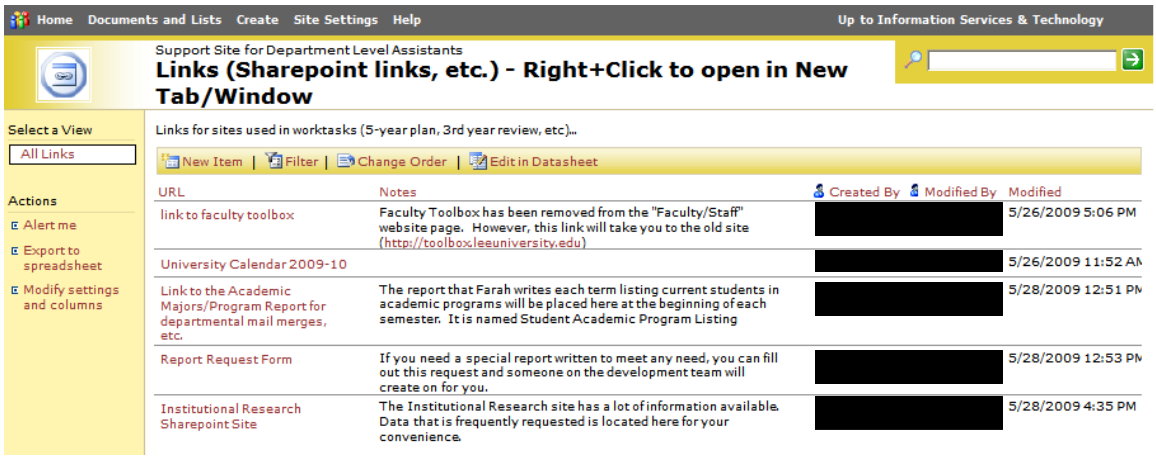
- Absolutely, I look forward to using the support site as well as IM in the future. I would hate for it to go back to the way it was before we felt like we where getting answers. Thanks for doing this, it has been very helpful for me even if I'm the only one....which I debt.
- Yes, because I finally got the hang of it.
- Yes - I know that I will always need an answer to something!! :)
- Yes. Again, able to ask a quick question and receive a quick answer.
- Yes i will use this as long as it is avaialble.
- Yes, because I found it very useful.
- Not much. I have not needed the social or support community. The constant pop-ups from the same 2-3 people are not attractive.
- Yes, i will continue to use this site for detailed information and help update information that can answer questions for others.
- yes, i think so.
- Yes. Again, it is helpful information that allows us to do our job more effectively and efficiently. We can quickly access helpful information which allow us to complete tasks quicker and with more accuracy.
- I will definitely continue to use the Support Site. It is like having lots of "personal" assistants 8 hours of the day. Help at the click of a button. I love it!
- I will most definitely continue to use this valuable resource and also refer others to it. It is a great way to connect with others on campus and get quick information!
- yes, we need the support of others.

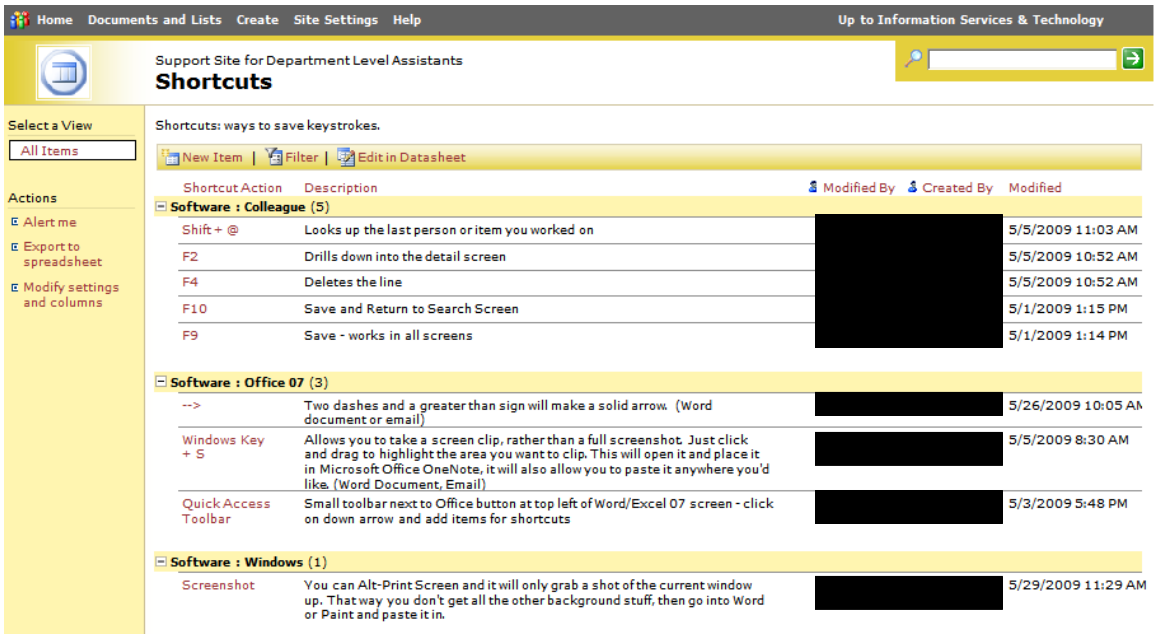
Appendix X

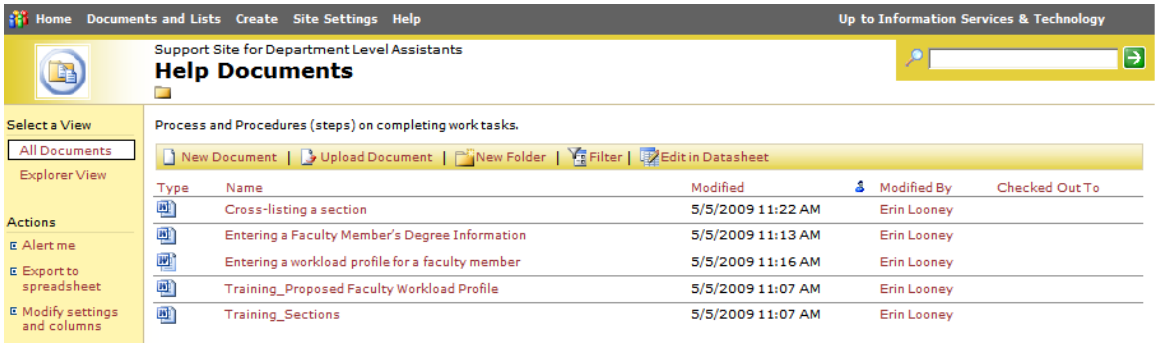

Home Documents and Lists Create Site Settings Help
Up to Information Services & Technology
Support Site for Department Level Assistants
Home
Modify Shared Page
Documents
Help Document
Lists
Shortcut:
Deadline:
FYI (Questions/Answer
Links (Sharepoint links, etc.) - Right+Click to open in New Tab/Window
All Discussions
Colleague Hel
Office '07 Hel
Outlook Hel
Other Software
Surveys
SharePoint Support Site Survey
SharePoint Support Site Questionnaire
Deadlines, shortcuts, and documentation for department level assistants.
Deadlines
Task Due Date Tentative Begin Date Created
Five-Year Plan 5/5/2009 5/4/2009 3:46 PM
Add new item
FYI (Questions/Answers)
Copy/Paste in Excel 6/18/2009 9:30 AM
by [redacted]
Make sure that you unlock the cells when you try to copy and paste a cell. Highlight the cells that you want to copy then right click on those cells, click on format cells then click on the protection tab; be sure to uncheck the locked box; then...
Ellipsis 5/29/2009 11:16 AM
by [redacted]
Ellipsis are needed when creating programs, etc. It's the.... that fill the entire space between two items. The solution is to type both items side by side and place the cursor between them. Right click and then click on paragraph,...
(More Announcements...)
Add new announcement
Links (Sharepoint links, etc.) - Right+Click to open in New Tab/Window
link to faculty toolbox
University Calendar 2009-10
Link to the Academic Majors/Program Report for departmental mail merges, e
Report Request Form
Institutional Research Sharepoint Site
Add new link
Shortcuts
Software Shortcut Actio Description Modified By Modified
Windows Screenshot You can Alt-Print Screen and it will only grab a shot of the current window up. That way you don't get all the other background stuff, then go into Word or Paint and paste it in. [redacted] 5/29/2009 11:29 A
Office 07 --> Two dashes and a greater than sign will make a solid arrow. (Word document or email) [redacted] 5/26/2009 10:05 A
Colleague Shift + @ Looks up the last person or item you worked on [redacted] 5/5/2009 11:03 AM
Add new item
LEE UNIVERSITY
Members
[redacted]
Add new member

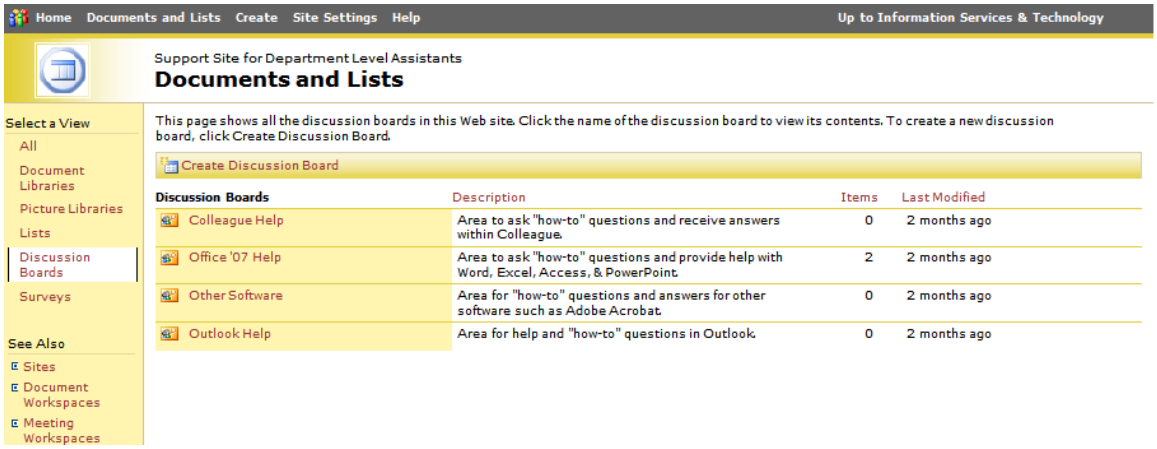

Home Documents and Lists Create Site Settings Help
Up to Information Services & Technology
Support Site for Department Level Assistants
Deadlines
Select a View
All Items
Actions
Alert me
Export to spreadsheet
Modify settings and columns
Tasks; due dates and tentative date to begin to complete by deadline on university calendar.
New Item | Filter | Edit in Datasheet
Task Due Date Tentative Begin Date Created By Modified By Information to Complete
Five-Year Plan 5/5/2009 [redacted] Available on Five-Year Plan - SharePoint
SS2 Payroll deadline 6/15/2009 Don't forget to get your payroll for Summer Session II by Monday, June 15.


Home Documents and Lists Create Site Settings Help
Up to Information Services & Technology
Support Site for Department Level Assistants
FYI (Questions/Answers)
Select a View
All Items
Actions
Alert me
Export to spreadsheet
Modify settings and columns
Use this area to post "heads-up" information.
New Item | Filter | Edit in Datasheet
Title
Body
Created By
Modified
Copy/Paste in Excel
Make sure that you unlock the cells when you try to copy and paste a cell. Highlight the cells that you want to copy then right click on those cells, click on format cells then click on the protection tab; be sure to uncheck the locked box; then click ok. When you have unlocked those cells you should be able to copy and paste as usual.
[redacted] 6/18/2009 9:30 AM
Ellipsis
Ellipsis are needed when creating programs, etc. It's the.... that fill the entire space between two items. The solution is to type both items side by side and place the cursor between them. Right click and then click on paragraph, and then tabs (at the bottom). If your document is for an 81/2 x 11 sheet of paper, put 6.5 in the "tab stop" area, click on center and then choose #2 for ellipsis. Be sure to click "set" and "ok." When you get back into your document just tab and the ellipsis will appear.
[redacted] 5/29/2009 11:16 AM
Picture Icons for Windows Live Messenger
Go to this website: http://www.microsoft.com/windowsxp/using/windowsmessenger/getstarted/emoticons.mspx Scroll to the middle of the page and you will see codes you type to get the pictures....type them exactly as you seem them while you are in an IM or you can add it as a picture next to your display name.
[redacted] 5/28/2009 8:41 AM
Capitalize a letter in the middle of a name
In NAE, to capitalize a letter in the middle of a name (like my name...BethAnn), type "=BethAnn". Once you tab away from the name, it will remain exactly as you typed it.
[redacted] 5/26/2009 5:07 PM
Get Started with Windows SharePoint Services!
Windows SharePoint Services lets you share information and files easily with others. Learn about your new site by reading What's New in Windows SharePoint Services.
[redacted] 4/27/2009 4:43 PM


Home Documents and Lists Create Site Settings Help
Up to Information Services & Technology
Support Site for Department Level Assistants
Links (Sharepoint links, etc.) - Right+Click to open in New Tab/Window
Select a View
All Links
Actions
Alert me
Export to spreadsheet
Modify settings and columns
Links for sites used in worktasks (5-year plan, 3rd year review, etc)...
New Item | Filter | Change Order | Edit in Datasheet
URL
Notes
Created By
Modified By
Modified
link to faculty toolbox
Faculty Toolbox has been removed from the "Faculty/Staff" website page. However, this link will take you to the old site (http://toolbox.leeuniversity.edu)
[redacted] 5/26/2009 5:06 PM
University Calendar 2009-10
[redacted] 5/26/2009 11:52 AM
Link to the Academic Majors/Program Report for departmental mail merges, etc.
The report that Farah writes each term listing current students in academic programs will be placed here at the beginning of each semester. It is named Student Academic Program Listing
[redacted] 5/28/2009 12:51 PM
Report Request Form
If you need a special report written to meet any need, you can fill out this request and someone on the development team will create on for you.
[redacted] 5/28/2009 12:53 PM
Institutional Research Sharepoint Site
The Institutional Research site has a lot of information available. Data that is frequently requested is located here for your convenience.
[redacted] 5/28/2009 4:35 PM


Home Documents and Lists Create Site Settings Help
Up to Information Services & Technology
Support Site for Department Level Assistants
Shortcuts
Select a View
All Items
Actions
Alert me
Export to spreadsheet
Modify settings and columns
Shortcuts: ways to save keystrokes.
New Item | Filter | Edit in Datasheet
Shortcut Action
Description
Modified By
Created By
Modified
Software : Colleague (5)
Shift + @
Looks up the last person or item you worked on
[redacted] 5/5/2009 11:03 AM
F2
Drills down into the detail screen
5/5/2009 10:52 AM
F4
Deletes the line
5/5/2009 10:52 AM
F10
Save and Return to Search Screen
5/1/2009 1:15 PM
F9
Save - works in all screens
5/1/2009 1:14 PM
Software : Office 07 (3)
-->
Two dashes and a greater than sign will make a solid arrow. (Word document or email)
[redacted] 5/26/2009 10:05 AM
Windows Key + S
Allows you to take a screen clip, rather than a full screenshot. Just click and drag to highlight the area you want to clip. This will open it and place it in Microsoft Office OneNote, it will also allow you to paste it anywhere you'd like. (Word Document, Email)
[redacted] 5/5/2009 8:30 AM
Quick Access Toolbar
Small toolbar next to Office button at top left of Word/Excel 07 screen - click on down arrow and add items for shortcuts
[redacted] 5/3/2009 5:48 PM
Software : Windows (1)
Screenshot
You can Alt-Print Screen and it will only grab a shot of the current window up. That way you don't get all the other background stuff, then go into Word or Paint and paste it in.
[redacted] 5/29/2009 11:29 AM


Home
Documents and Lists
Create
Site Settings
Help
Up to Information Services & Technology
Support Site for Department Level Assistants
Help Documents
Select a View
All Documents
Explorer View
Actions
Alert me
Export to spreadsheet
Modify settings and columns
Process and Procedures (steps) on completing work tasks.
New Document | Upload Document | New Folder | Filter | Edit in Datasheet
Type
Name
Modified
Modified By
Checked Out To
Cross-listing a section
5/5/2009 11:22 AM
Erin Looney
Entering a Faculty Member's Degree Information
5/5/2009 11:13 AM
Erin Looney
Entering a workload profile for a faculty member
5/5/2009 11:16 AM
Erin Looney
Training_Proposed Faculty Workload Profile
5/5/2009 11:07 AM
Erin Looney
Training_Sections
5/5/2009 11:07 AM
Erin Looney


Home
Documents and Lists
Create
Site Settings
Help
Up to Information Services & Technology
Support Site for Department Level Assistants
Documents and Lists
Select a View
All
Document Libraries
Picture Libraries
Lists
Discussion Boards
Surveys
See Also
Sites
Document Workspaces
Meeting Workspaces
This page shows all the discussion boards in this Web site. Click the name of the discussion board to view its contents. To create a new discussion board, click Create Discussion Board.
Create Discussion Board
Discussion Boards
Description
Items
Last Modified
Colleague Help
Area to ask "how-to" questions and receive answers within Colleague.
0
2 months ago
Office '07 Help
Area to ask "how-to" questions and provide help with Word, Excel, Access, & PowerPoint.
2
2 months ago
Other Software
Area for "how-to" questions and answers for other software such as Adobe Acrobat.
0
2 months ago
Outlook Help
Area for help and "how-to" questions in Outlook.
0
2 months ago

Appendix Y

From: Nate Tucker
Sent: Fri 7/17/2009 2:56 PM
To: Mava Wilson
Subject: RE: Support Site

LEE UNIVERSITY
INFORMATION SERVICES & TECHNOLOGY

Mava,

That's fine as long as the wording doesn't create an expectation to have it now...:-)
nt

Nathaniel Tucker, M.B.A.
Associate Director of Information Services & Technology
(423) 614-8024
ntucker@leeuniversity.edu

From: Mava Wilson
Sent: Friday, July 17, 2009 12:15 PM
To: Nate Tucker
Subject: Support Site

Nate,

At the end of April - when we discussed doing the Support Site in SharePoint - you indicated that the goal was to have something similar for other sectors in the University. And that this one could be used as a guide/example for what worked and what didn't...

Is that still a goal? and if so, can I use this in the report with your name? If that's fine - is there something in particular or a certain way it should be stated?

thanks so much for your help.
~Mava
~~~~~~
Mava F. Wilson
Assistant Professor of CIS
Lee University
http://faculty.leeu.edu/~mwilson
o - 423.614.8196
~~~~~~

Reference List

Alexander, M.W., Zhao, J.J, Truell, A.D. & Wiggins, J.Y. (2007-2008, Winter). Changes in administrative professionals' communication and management tasks and interests in training. *Wisconsin Business Education Journal, 56*(1), 6-13.

Allan, B. & Lewis, D. (2006a). The impact of membership of a virtual learning community on individual learning careers and professional identity. *British Journal of Educational Technology*, *37*(6), 841-852.

Allan, B. & Lewis, D. (2006b). Virtual learning communities as a vehicle for workforce development: a case study. *The Journal of Workplace Learnng, 18*(6), 367-383.

Allen, S., Evans, S. & Ure, D. (2005). Virtual communities of practice: vehicles for organizational learning and improved job performance. *International Journal of Learning Technology, 1*(3), 252-272.

Allison, D.H., DuBlois, P.B, Scrivener Agee, A., Ardalan, S., Buehler, J., David, E., Doyle, M.M., Dutcher, J.M., Estrada, J., Gonzales, G.R., Ingerman, B.L., Pitter, K. & Stack, D. (2008a, April-June). Current issues survey report, 2008: Security and ERP systems are numbers 1 and 2; infrastructure rises; change management, e-learning, and staffing move into top ten. *EDUCAUSE Quarterly, 31*(2), 36-61.

Allison, D.H., DuBlois, P.B., Scrivener Agee, A., Ardalan, S., Buehler, J., David, E., Doyle, M.M., Dutcher, J.M., Estrada, J., Gonzales, G.R., Ingerman, B.L., Pitter, K. & Stack, D. (2008b, May/June). Top-ten IT issues, 2008. *EDUCAUSE Review, 43*(3), 36-61.

ANGEL (2008). Angel Learning. Retrieved July 21, 2008 from Angel Learning Web site http://www.angellearning.com. Revisited July 21, 2009.

Baldwin-Evans, K. (2006). Key steps in implementing a successful blended learning strategy. *Industrial and commercial training, 38*(3), 156-163.

Bartlett, K. R. (2003, Summer). Accidental trainers versus HRD professionals. *Human Resource Development Quarterly*, 14 (2).

Bernardez, M. (2003, January-February). From e-training to e-performance: Putting online learning to work. *Educational Technology, 43* (1), 6-11.

Bickman, L, Rog, D.J. & Hedrick, T.E. (1998). Applied Research Design: A Practical Approach. In L. Bickman & D.J. Rog (eds), *Handbook of Applied Social Research Methods*. Thousand Oaks, CA: Sage Publications, Inc.

Bishop, J. (2007). Increasing participation in online communities: A framework for human-computer interaction. *Computers in Human Behavior, 23*, 1881-1893.

Boud, D. & Middleton, H. (2003). Learning from others at work: communities of practice and informal learning. *Journal of Workplace Learning, 15*(5). Retrieved January 15, 2008 from http://tppp.janison.com/plc/archive/DB35BoudMiddletonJWL03.pdf. Revisited July 21, 2009.

Brown, K.G. (2005, Winter). A field study of employee e-learning activity and outcomes. *Human Resource Development Quarterly, 16*(4), 465-480.

Bureau of Labor Statistics (2008). *Occupational Outlook Handbook, 2008-09 Edition. Secretaries and Administrative Assistants*. Retrieved January 15, 2008 from U. S. Department of Labor's Web site: http://www.bls.gov/oco/ocos151.htm. Revisited July 21, 2009.

Burke, L.A. & Hutchins, H.M. (2008, Summer). A study of best practices in training transfer and proposed model of transfer. *Human Resource Development Quarterly, 19*(2), 107-128.

Burton-Jones, A. & Hubona, G.S. (2005, Spring). Individual differences and usage behavior: Revisiting a technology acceptance model. *The DATA BASE for Advances in Information Systems, 36*(2), 58-77.

Campbell, D. T., & Stanley, J. C. (1963). *Experimental and Quasi-Experimental Designs for Research*. Chicago: Rand McNally

Chan, C. H., & Robbins, L. I. (2006, November-December). E-Learning systems: Promises and pitfalls. *Academic Psychiatry, 30*(6). Retrieved June 10, 2008 from Psychiatry Online Web site http://ap.psychiatryonline.org/cgi/reprint/30/6/491. Revisited July 21, 2009.

Charran, E., Dato-on, D., & Lang, G. (2007, December). *Managing social networking with Microsoft Office SharePoint Server 2007*. Microsoft. Retrieved June 16, 2009 from http://technet.microsoft.com/en-us/library/cc262436.aspx. Revisited July 29, 2009.

Chen, R.S. & Hsiang, C.H. (2007). A study on the critical success factors for corporations embarking on knowledge community-based e-learning. *Information Sciences, 77*, 570-586.

Chua, A.Y.K. (2006). The rise and fall of a community of practice: A descriptive case study. *Knowledge and Process Management, 13*(2), 120-128.

Collin K. (2006). Connecting work and learning: Design engineers' learning at work. *Journal of Workplace Learning, 18*(7/8), 403-413.

Conner, M.L. (2008). Informal learning. *Ageless Learner*. Retrieved July 16, 2008 from http://agelesslearner.com/intros/informal.html, Revisited July 21, 2009.

Davis, F.D. (1985). A technology acceptance model for empirically testing new end-user information systems: Theory and results. (Doctoral dissertation, Massachusetts Institute of Technology, 1985). MIT Sloan School of Management, Cambridge, MA.

Dobbs, R.L. (2006, November). Development phase of systematic training: new technology lends assistance. *Advances in Developing Human Resources, 8*(4), 500-513.

Ehrmann, S. C. (2002, January/February). Improving the outcomes of education: Learning from past mistakes. *EDUCAUSE Review*, 37(1).

Ellinger, A.D. (2005, Fall). Contextual factors influencing informal learning in a workplace setting: the case of "reinventing itself company". *Human Resource Development Quarterly, 16*(3), 389-415.

Eveleth, D.M. & Baker-Eveleth, L.J, (2003, March-April). Developing dialogue skill – a qualitative investigation of an on-line collaboration exercises in a team management course. *Journal of Education for Business, 78*(4), 228-233.

Fitzpatrick, J.L., Sanders, J.R. & Worthen, B.R. (2004). *Program Evaluation. Alternative Approaches and Practical Guidelines* (3rd ed.). Boston: Pearson Education, Inc.

Fraenkel, J. R. & Wallen, N. E. (2000). *How to Design and Evaluate Research in Education* (4th ed.). Boston: McGraw Hill.

Garavan, T.N., Carbery, R. & Murphy, E. (2007). Managing intentionally created communities of practice for knowledge sourcing across organizational boundaries: Insights on the role of the CoP manager. *The International Journal of Knowledge and Organizational Learning Management, 24*(1), 34-49.

Garrett, R. K., & Danziger, J. N. (2007). IM=interruption management? Instant messaging and disruption in the workplace. *Journal of Computer-Mediated Communication*, *13*(1). Retrieved June 7, 2009 from http://jcmc.indiana.edu/vol13/issue1/garrett.html. Revisited July 29, 2009.

Gay, L. R. (1996). Educational *Research: Competencies for Analysis and Application* (5th ed.). Upper Saddle River, N. J.: Prentice Hall.

Gill, S. J. (2003, January-February). Myths and reality of e-learning. *Educational Technology, 43* (1), 20-23.

Gill, S.J. (2006, December). *The 5As of performance improvement.* Retrieved July 21, 2008 from http://www.stephenjgill.com/pubs.html. Revisited July 29, 2009.

Gillham, B. (2000). *Case Study Research Methods*. London: Continuum.

Goldenkoff, R. (2004). Using Focus Groups. In J.S. Wholey, H.P. Hatry & K.E. Newcomer (eds), *Handbook of Practical Program Evaluation* (2nd ed). San Francisco: Jossey-Bass.

Green, K. (2003). *The 2003 National Survey of Information Technology in US Higher Education.* Retrieved November 14, 2007, from http://www.campuscomputing.net/survey Revisited July 21, 2009.

Green, K. (2004). Trust but verify. *Campus Technology*, *1*(1), 8-10.

Green, K. (2007). IT security and crisis management pose continuing challenges. *The 2007 National Survey of Information Technology in US Higher Education.* Retrieved November 14, 2007, from http://www.campuscomputing.net/survey Revisited July 21, 2009.

Hamilton, M. (2006, October). Creating value through a high-performance learning network. *Chief Learning Officer*, *5*(10).

Hartman, D. B., Bentley, J., Richards, K. & Krebs, C. (2005, July/August). Administrative tasks and skills needed for today's office: The employees' perspective. *Journal of Education for Business*, *80*(6), 347-357.

Hossler, D. (2006, Winter). The impact of implementing new information systems on the priorities, management, and allocation of resources at colleges and universities. *New Directions for Higher Education*, (136), 69-76.

Hummel, P.A. (2003, January-February). Human performance improvement: Lessons to be learned from quality improvement. *Educational Technology*, *43*(1), 59-63.

Hung, D, Chen, D.V. & Koh, T.S. (2006, December). *The reverse LPP process for nurturing a community of practice*, *43*(4), 299-314.

IAAP (2008). Advanced skills admins need to excel in today's workplace. *International Association of Administrative Professionals.* Retrieved July 21, 2008 from International Association of Administrative Professionals Web site http://www.iaap-hq.org/researchtrends/advanced_skills_admins_need_to_excel.htm. Revisited July 21, 2009.

IAAP (2008b). Employers investing in training for administrative office staff. *International Association of Administrative Professionals.* Retrieved July 21, 2008 from International Association of Administrative Professionals Web site http://www.iaap-hq.org/researchtrends/employers_investing_in_training.htm Revisited July 21, 2009.

IAAP (2008c). The 21st century administrative professional. *International Association of Administrative Professionals.* Retrieved July 21, 2008 from International Association of Administrative Professionals Web site http://www.iaap-hq.org/researchtrends/21centuryadmin.htm. Revisited July 21, 2009.

IAAP (2005). Profile of administrative professionals. *International Association of Administrative Professionals.* Retrieved July 21, 2008 from International Association of Administrative Professionals Web site http://www.iaap-hq.org/researchtrends/2005_IAAP_profile_of_administrative_professionals_survey_RESULTS-2.htm Revisited July 21, 2009.

IAAP (2008d). Qualities of a true administrative professional. *International Association of Administrative Professionals.* Retrieved July 21, 2008 from International Association of Administrative Professionals Web site http://www.iaap-hq.org/researchtrends/Qualities_of_True_Administrative_Professional.htm Revisited July 21, 2009.

Johnson D. W., Bartholomew, K. W. & Miller, D. (2006). Improving computer literacy of business management majors: A case study. *Journal of Information Technology Education, 5*.

Kaplan, D.M. & Lerouge, C. (2007, Fall). Managing on the edge of change: Human resource management of information technology employees. *Human Resource Management, 46*(3), 325-330.

Kearns, P. (2003, January-February). Prioritizing training to maximize results: The 3 box system. *Educational Technology, 43* (1), 45-49

Ketter, P. (2006). Investing in learning; looking for performance. *T+D, 60*(12), 30-33.

Kirkpatrick, D. L. (1998). *Evaluating training programs. The four levels* (2nd ed.) San Francisco: Berrett-Koehler Publishers, Inc.

Kirkpatrick, D.L. & Kirkpatrick, J.D. (2007). *Implementing the four levels. A practical guide for effective evaluation of training programs.* San Francisco: Berrett-Koehler Publishers, Inc.

Kirkpatrick, D.L. & Kirkpatrick, J.D. (2005). *Transferring learning to behavior. Using the four levels to improve performance.* San Francisco: Berrett-Koehler Publishers, Inc.

Koh, J, Kim, Y., Butler, B. & Bock, G. (2007, February). Encouraging participation in virtual communities. *Communications of the ACM, 50*(2), 69-73.

Lave, J. & Wegner, E. (1991). *Situated Learning: Legitimate Peripheral Participation.* Cambridge: Cambridge University Press.

Lee, S. (2008, February). A look ahead: the training industry in 2008. *Chief Learning Officer, 7*(2), 52-53.

Ley, T., Lindstaedt, S.N., & Albert, D. (2005). Supporting Ompetency Development in Informal Workplace Learning. In K. Alhoff, A. Dengel, R. Bergmann, M. Nick & T. Roth-Berghofer (eds.), *Lecture Notes in Artificial Intelligence-Professional Knowledge Management: Third Biennial Conference, WM 2005.* Berlin Heidelberg, Germany: Springer-Verlag.

Li, Q. (2004, July/August). Knowledge building community: keys for using online forums. *TechTrends,* 48 (4).

Lohman, M.C. (2005, Winter). A survey of factors influencing the engagement of two professional groups in informal workplace learning activities. *Human Resource Development Quarterly, 16*(4), 501-527.

Long, P.D. & Ehrmann, S.G. (2005, July/August). Future of the learning space: breaking out of the box. *EDUCAUSE Review, 40*(4), 42-58.

Love, A. (2004). Implementation Evaluation. In J.S. Wholey, H.P. Hatry & K.E. Newcomer (eds), *Handbook of Practical Program Evaluation* (2nd ed). San Francisco: Jossey-Bass.

Loyarte, E. & Rivera, O. (2007). Communities of practice: A model for their cultivation. *Journal of Knowledge Management, 11*(3), 67-77.

Maxwell, J.A. (1998). Designing a Qualitative Study. In L. Bickman & D.J. Rog (eds), *Handbook of Applied Social Research Methods.* Thousand Oaks, CA: Sage Publications, Inc.

Merriam, S.B. & Simpson, E.L. (2000). *A Guide to Research for Educators and Trainers of Adults* (2nd ed.). Malabar, FL: Krieger Publishing Company.

Minielli, M.C. & Ferris, S.P. (2005, September). Electronic courseware in higher education. *First Monday, 10*(9). Retrieved July 21, 2008 from the FirstMonday website http://firstmonday.org/htbin/cgiwrap/bin/ojs/index.php/fm/article/view/1279/1199 Revisited July 21, 2009.

Mittendorff, K., Geijsel, F., Hoeve, A. de Laat, M. & Nieuwenhuis, L. (2006). Communities of practice as stimulating forces for collective learning. *Journal of Workplace Learning, 18*(5), 298-312.

Mosher, B. (2004, July). The power of informal learning. *CLO Magazine.*

Newcomer, K.E. & Triplett, T. (2004). Using Surveys. In J.S. Wholey, H.P. Hatry & K.E. Newcomer (eds), *Handbook of Practical Program Evaluation* (2nd ed). San Francisco: Jossey-Bass.

Nguyen, F. & Hanzel, M. (2007, November/December). Linking versus searching: A case study of performance support use. *Performance Improvement, 46*(10), 40-44.

O'Driscoll, T. (2003, January-February). Proposing an optimal learning architecture for the digital enterprise. *Educational Technology, 43* (1), 12-19.

Palan, R. (2007, April). Does employee training lead to attrition. *Performance Improvement, 46* (4), 5-8,

Paloniemi, S. (2006). Experience, competence and workplace learning. *Journal of Workplace Learning, 18*(7/8), 439-450.

PCMag.com (2009a). Instant messaging. *PCMAG.COM Encyclopedia.* Retrieved July 18, 2009 from http://www.pcmag.com/encyclopedia_term/0,2542,t=instant+messaging&i=45045,00.asp

PCMag.com (2009b). LMS. *PCMAG.COM Encyclopedia.* Retrieved July 18, 2009 from http://www.pcmag.com/encyclopedia_term/0,2542,t=LMS&i=46205,00.asp

PCMag.com (2009c). SharePoint. *PCMAG.COM Encyclopedia*. Retrieved July 18, 2009 from http://www.pcmag.com/encyclopedia_term/0,2542,t=SharePoint&i=51250,00.asp

PCMag.com (2009d). IT. *PCMAG.COM Encyclopedia*. Retrieved August 10, 2009 from http://www.pcmag.com/encyclopedia_term/0%2C2542%2Ct%3DIT&i%3D45491%2C00.asp

Pi, S.M., Chen, T.Y., Liu, Y.C., & Li, S.H. (2008). *Proceedings of the 41st Hawaii International Conference on System Sciences: The influence of instant messaging usage behavior on organizational communication satisfaction.* Hawaii.

Poell, R.F., Van Der Krogt, F.J., Vermulst, A.A., Harris, R. & Simons, M. (2006, Summer). Roles of informal workplace trainers in different organizational contexts: empirical evidence from Australian companies. *Human Resource Development Quarterly, 17*(2), 175-198.

Preece, J. (2004). Etiquette, empathy and trust in communities of practice: stepping-stones to social capital. *Journal of Universal Computer Science, 10*(3).

Rashid, A.M, Ling, K., Rassone, R.D., Resnick, P., Kraut, R. & Riedl, J. (2006). *Proceedings of CHI 2006 Online Communities: Motivating Participation by Displaying the Value of Contribution.* Montreal, Quebec, Canada.

Richey, R. C, Klein, J. D. & Nelson, W. A. (2004). Developmental Research: Studies of Instructional Design and Development. In D.H. Jonassen (ed.), *Handbook of Research of Educational Communications and Technology, 2nd Edition*. Mahway, New Jersey: Lawrence Erlbaum Associates.

Richey, R. C. & Klein, J. D. (2007). *Design and Development Research*. Mahway, New Jersey: Lawrence Erlbaum Associates.

Riley, T., Davani, H., Chason, P., Findley, K., & Druyor, D. (2003, January-February). Innovative evaluation: Creating speed and efficiency in your level 3 evaluation processes. *Educational Technology, 43* (1), 38-44.

Roberts, J. (2006, May). Limits to communities of practice. *Journal of Management Studies, 43*(3), 623-639.

Rosenberg, M. J. (2007, June). *Proceedings of ASTD International Conference '07: Beyond E-Learning.* Atlanta, GA.

Saade, R.G., Nebebe, F. & Tan, W. (2007). Viability of the technology acceptance model in multimedia learning environments: A comparative study. *Interdisciplinary Journal of Knowledge and Learning Objects, 3,* 175-184.

Saks, A.M. & Belcourt, M. (2006, Winter). An investigation of training activities and transfer of training in organizations. *Human Resource Management, 45*(4), 629-648.

Savenye, W.C. & Robinson, R.S. (2005, Spring). Using qualitative research methods in higher education. *Journal of Computing in Higher Education, 16*(2), 65-95.

Schmidt, S.W. (2007, Winter). The relationship between satisfaction with workplace training and overall job satisfaction. *Human Resource Development Quarterly, 18*(4).

Schultz, J.R. (2007, August). Performance improvement: The means to process improvement. *Performance Improvement, 46*(7), 27-32.

Stevens, G.H, & Frazer, G.W. (2005, September). Coaching: The missing ingredient in blended learning strategy. *Performance Improvement, 44* (8), 8-13).

Stinson, L., Pearson, D., & Lucas, B. (2006, June). Developing a learning culture: twelve tips for individuals, teams and organizations. *Medical Teacher, 28*(4), 309-312.

Stufflebeam, D.L. (2001). Evaluation Models. In *New Directions for Evaluation.* San Francisco: Jossey-Bass.

Stunden, A. (2006, January/February). Building IT community on campus. *EDUCAUSE Review, 41*(1), 72-73.

Sun, H. & Zhang, P. (2006). The role of moderating factors in user technology acceptance. *International Journal of Human-Computer Studies, 64*, 53-78.

Swinney, J. M. (2007, May/June). One more time: what training is – and isn't. *Performance Improvement, 46*(5), 6-9.

Terry, C. (2007). Enabling staff to access the knowledge they need, when they need it. *Industrial and Commercial Training, 38*(7), 368-371.

Tsai, H.Y., Compeau, D. & Haggerty, N. (2007, Fall). Of races to run and battles to be won: Technical skill updating, stress, and coping of IT professionals. *Human Resource Management, 46*(3), 395-409.

Tynjaia, P. & Hakkinen, P. (2005). E-learning at work: theoretical underpinnings and pedagogical challenges. *The Journal of Workplace Learning, 17*(5/6), 318-336.

Ullman, C. & Rabinowitz, M. (2004, October). Course management systems and the reinvention of instruction. *T.H.E. Journal Online*. Retrieved November 13, 2004 from http://thejournal.com/Articles/2004/10/01/Course-Management-Systems-and-the-Reinvention-of-Instruction.aspx Revisited July 21, 2009.

Yin, R. K. (2003). Case Study Research Design and Methods (3rd ed). In *Applied Social Research Methods Series, Vol 5.* Thousand Oaks, CA: Sage Publications, Inc.

Walstrom, K.A. & Duffy, T.J. (2003, Spring). Implications regarding computer technology attitudes of new employees. *Information Systems Management*, 20 (2).

Wang, G. (2003, January-February). Valuing learning: The measurement journey. *Educational Technology, 43* (1), 32-37.

Watkins, R. (2007a, January). Designing for performance, Part 1: Aligning your HPT decisions from top to bottom. *Performance Improvement, 46*(1), 7-13.

Watkins, R. (2007b, February). Designing for performance, Part 2: Selecting your performance technologies. *Performance Improvement, 46*(2), 9-15.

Wenger, E. (2000). Communities of Practice: The Structure of Knowledge Stewarding. In C. Despres & D. Chauvel (eds). *Knowledge Horizons. The Present and the Promise of Knowledge Mangement*. Boston, MA: Butterworth-Heinemann.

Wilson, W. (2003). Faculty perceptions and uses of instructional technology. *Educause Quarterly*, 2, 60-62.

Zhang, P., Li, N. & Sun, H. (2006, January). *Proceedings of Hawaii International Conference on System Sciences, Affective Quality and Cognitive Absorption: Extending technology acceptance research*. Hawaii.

Zhang, P. & Li, N. (2005, September). The importance of affective quality. *Communications of the ACM, 48*(9), 105-108.