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Enriching the Academic Experience: The Library and Experiential Learning

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Abstract

This article will describe how academic libraries can (and should) be involved in experiential learning. The authors detail the impact experiential learning can have on the relevance of academic libraries to their universities. They discuss the benefits to libraries as well as students. In particular, the authors describe experiential learning at the James E. Walker Library and the partnerships formed, projects completed, lessons learned, and the benefits realized.

Introduction

Experiential Learning in Higher Education

Experiential learning, understood generally as education that emphasizes personal experience rather than learning from books or other secondary sources, broadens the classroom experience by providing concrete opportunities to observe, conceptualize, apply knowledge and experiment. According to Katula and Threnhauser, it is one of the most significant trends in higher education in the past thirty years and serves to form students' knowledge into practical "knowhow" which can propel them to success.¹ Internships, study abroad programs, field experiences, and service work are all examples of experiential learning and are in place in many higher education institutions. After years of observing students, philosopher and pre-eminent educational theorist of the twentieth century John Dewey became concerned that students were not engaged by droning lectures in the classroom setting. This spurred him to seek challenges that could make meaning out of raw (and relevant) experience. Dewey also stressed that the quality of the educational experience was just as important as the experience itself and urged educators to provide students with enjoyable and creative opportunities. In 1938, when he wrote Experience and Educa*tion*, he stated, "In what I have said I have taken for granted the soundness of the principle that education in order to accomplish its ends both for the individual learner and for society must be based upon experience."²

In the late 20th century, experiential learning became a derivative of experiential education. In 1984, David Kolb argued that "learning is the process whereby knowledge is created through the transformation of experience."³ He believed that learning has four modes: concrete experience, reflective observation, abstract conceptualization, and active experimentation. While Dewey stressed that learning was reinforced by experience (students did receive the classroom lecture and then went out to experience the lecture first-hand), Kolb stated that learning actually begins with the experience. Kolb believed that the best way to learn something was to dig in and do it.

Today, many colleges and universities have an array of programs that can be categorized under the heading of experiential learning. To ensure student success in an experiential learning situation, Kolb stated that:

1. The learner must be willing to be actively involved in the experience;



2. The learner must be able to reflect on the experience;

3. The learner must possess and use analytical skills to conceptualize the experience; and

4. The learner must possess decision making and problem solving skills in order to use the new ideas gained from the experience.⁴

These principles have been promoted and realized in the most successful experiential education programs in higher education, built into the design of their curricula, and continue to be the hallmarks of a successful program.

The Experiential Learning Framework at Middle Tennessee State University

In Spring 2004, Middle Tennessee State University (MTSU) selected experiential learning as the primary focus of its Quality Enhancement Plan. Based on information gained from a series of meetings with faculty and staff, online discussions, and web survey results, it was determined that this focus would best promote the quality academic experience and student centered focus that was prominent in the University's strategic plan.

In the spirit of experiential learning, students from three MTSU marketing classes developed a campaign to promote the initiative on campus. This was the birth of the University's slogan: "EXL ... MAKE IT HAP-PEN!" Additional planning and preparation was undertaken in Fall 2004 and Spring 2005 with official adoption of the MTSU experiential learning program in 2006.

MTSU's goals for the experiential learning (EXL) program are similar to Kolb's theory. Students involved in the EXL coursework develop an experience-based knowledge and cultivate good citizenship through contributions to the local community. Students develop as individuals and are expected to acquire a sound understanding of the needs of others, a sense of cultural awareness, and an appreciation of individuality. Successful completion of the EXL program expects that students are able to demonstrate managerial and leadership skills in their area of study through the connection between experience and discipline.

The MTSU EXL program requires 18 hours of EXL classes and at least one external activity, which is often a research project requiring interaction with an agency or organization that is external to the University. The program also requires an internal service component. This can be a leadership role in a campus-sponsored charitable activity, a volunteer opportunity with a campus office, or some other leadership service activity on campus. Students are required to complete an e-portfolio, essentially a website created by the student showing learning outcomes during the EXL Program experience. Lastly, each student must actively participate in assessment activities.5

Not only is experiential learning beneficial to students, it is also beneficial to educators. At MTSU, faculty participating in the EXL program has valuable opportunities to keep abreast of changing needs in their professions or industries. The EXL program also provides a way for faculty to interact with others in the field and become familiar with local businesses and employers. Faculty can use the EXL program to better evaluate classroom instruction in relation to students' preparation for employment as well as explore new possibilities for working relationships and opportunities for public service.

As part of EXL at MTSU, the James E. Walker Library has taken a proactive approach through the creation of partnerships with instructional faculty and student groups. Through these partnerships, members of the Library at MTSU have been engaged in a number of unique activities to enhance student education and involve the library more directly in the University's mission to develop educated students.

The Academic Library and Experiential Learning



Review of the Literature

In 2006, Lynn C. Westney summed up academic librarians' involvement in experiential learning (or service learning, as she calls it) as "conspicuous by their absence."⁶ Since then, a search of the library literature reveals a handful of recent examples of experiential learning collaborations. The majority of these partnerships involve business students performing marketing or advertising functions for the library.

At Texas A&M, students in the undergraduate chapter of the American Advertising Federation developed a marketing campaign to promote the use of netLibrary ebooks. The campaign, which consisted of promotional posters, newspaper ads, targeted emails, table toppers, and giveaway items, resulted in the creation of 200 new user accounts and 3,800 e-book circulations. While the student advertisers did not receive class credit for their project, they did gain real-world experience that they could note on their resumes.⁷

At Illinois Wesleyan University, librarians worked with Business Administration students in two marketing classes to increase student awareness of reference services in the library. Over the course of two semesters, marketing students designed and administered surveys, made recommendations based on survey results, and helped develop promotional campaigns to highlight reference services. Since the campaign, reference librarians at IWU have noticed an uptick in reference interactions.⁸

At California State University, San Marcos, librarians participated in a year-long senior business course to develop a comprehensive marketing plan to coincide with the opening of a new library building. Students developed and administered a survey gauging student and faculty interests and awareness of library services. They then used the survey results to recommend a marketing plan for the library.⁹ Two other examples of experiential learning involved students taking on instructional projects for their libraries. English students in an Applied Communications course at Hampton University wrote advanced user guides for library databases and Internet search engines. While the resulting documents were not perfect, many of them were good enough to be used as handouts in library instruction classes and placed in literature racks throughout the library. Increased usage of highlighted databases in the weeks following the project may have partially resulted from the guides.¹⁰

At Eastern Washington University, students in a technical communication program marketed and presented workshops to students on RefWorks, which allows students to manage their research more effectively. The student-run workshops reached nearly 300 students, and numbers of registered users of the service increased dramatically.¹¹

The large and multi-faceted environment of a library building itself also serves as fodder for experiential learning, as evidenced by the research undertaken by the Department of Design and Environmental Analysis at Cornell University. Students and faculty in the Human Factors and Ergonomics Research Group studied library signage and workstation design in two libraries on the campus. The authors of the published study identified numerous problems with library signage legibility and some problems with ADA accessibility. The group offered suggestions for fixing the signage problems.¹² In another example of real-world learning opportunities at Cornell University Libraries, a student writing a master's thesis on workstation design analyzed the suitability of library workstations for the tasks performed and designed alternative work spaces for employee testing.¹³

What's in it for the library?

Libraries benefit from experiential learning partnerships in a variety of ways. First, libraries get free work from their students on projects that library staff may not have the



time or talent to develop. The results may not be ideal or may require a great deal of input from supervising librarians, but in most cases, the work is worthwhile. Second, partnerships allow libraries to see their services through the students' eyes. When students develop a marketing campaign or instructive materials, librarians get a glimpse of what students think is important, overlooked, or confusing about the library. Finally and most importantly, participating in classroom projects with students gives the library a more central role in the academic process on campus. The library staff become active participants, not just suppliers of texts and technologies.

What's in it for the students?

In many cases, students receive class credit for service-learning activities performed in the library. Beyond that, students also gain real-world experiences in their chosen professions, potentially making them more employable in the future. Authors of education and business literature in some instances have bemoaned the fact that students often have plenty of theoretical knowledge but very little understanding of the complexities of real-life organizations when they enter the job market.¹⁴ Experiential learning opportunities allow students to put theories into action, testing them under a set of unique variables. In the library examples cited above, students discovered that their ideas and plans were not always realistic given time and budget constraints. For instance, Texas A&M students who were working to promote the netLibrary collection were forced to cut their advertising budget by two-thirds. These types of lessons are useful experiences in budget restraint, and can be referred to in future job interviews.

Experiential Learning in the James E. Walker Library at MTSU

Several student-led experiential learning projects have been conducted in the James E. Walker Library at Middle Tennessee State University, most of which have directly benefitted the library as well as the students involved. In the following examples, the library either played a leadership role, a partnership role, or a physical hosting role.

Library as Partner

The first forays into the MTSU experiential learning curriculum came through partnerships with academic departments and student groups on campus. In these examples, each party had an equal stake in the outcomes of the projects: students were interested in making a good grade and seeing their visions fulfilled, while the library was interested in the results of the projects for internal planning. Some of the courses were designated as EXL-enhanced, while others were not officially part of the University EXL program.

Art Students and Paper Waste Reduction

Because MTSU students pay a technology access fee each semester, the University does not allow additional charges for printing in the computer labs, including the library. Although the ability to print at no additional cost is very popular with students, the amount of paper left unclaimed at the printers is distressing to students and to library staff. In addition, the technology access fee does not adequately cover the yearly printing cost in the library and thousands of dollars must be spent from the library budget each year to cover the shortfall.

In Spring 2007, the library External Relations Committee decided to mount a public awareness campaign about printer waste. For one week, paper remaining in the building recycle bins was collected. At the end of the collection period, three 95-gallon recycle bins filled with the collected paper were displayed in the library atrium, along with facts about library printing and waste.

The display caught the eye of an art group on campus who decided to join in the campaign. The Student Art Alliance began collecting abandoned printer paper in the library during the Fall 2007 semester. By No-





Figure 1. In the exhibit called *Paper Rewind*, art students placed paper animals and other figures around the MTSU Walker Library.



Figure 2. The display called *Reduce* was installed by art students in the MTSU Walker Library during the Fall 2007 semester in an attempt to raise consciousness about printer paper waste.

vember, they had enough paper to string it across the 60 x 60 x 72 foot library atrium several times on thick wire cables (see fig. 2). The visually striking display, entitled *Reduce*, was exhibited for a month and sparked much conversation, if not a major behavioral change.

In Spring 2008, one of the library External Relations Committee members contacted a faculty member in the Art department about having his 3-D art class complete another installation using waste paper. During the semester, students gathered the waste paper and created a few dozen life-size paper animals, trees, and other figures which were exhibited in locations around the library during April (see fig. 1). The students called the effort *Paper Rewind* [http://www.paperrewind.com/] and placed explanatory posters near the installation.

Anthropology Students and Focus Groups

In the Spring of 2008, library faculty partnered with six student researchers from the



MTSU Anthropology course, ANTH 4120, for a class research project. These students, under Anthropology faculty member Ida Fadzillah, conducted a focus group study on how MTSU students use the library and its resources to complete research assignments. Each of Dr. Fadzillah's six students identified and assembled focus groups, conducted and led group meetings, and provided detailed transcripts. The students' summary document served as their final class project report.

This project was modeled after the wellknown 2007 University of Rochester library usage study.¹⁵ Similar to the Rochester study, the MTSU Anthropology students conducted their project at the end of the semester when many students were feverishly working on research papers. The timing of the project provided a generous supply of relevant data and ensured that research habits and the availability of the Library's services and collections were prominent in users' minds.

In the MTSU study, the anthropology students created six focus groups: nontraditional students, Student Government Association members, Geology majors, Anthropology majors, Honors students, and graduate students. Each focus group met one to three times and each meeting lasted approximately 45 minutes. The focus group leaders encouraged their groups to describe their research habits, library materials and services utilized, and their overall experience at Walker Library.

The Library faculty was very interested in using this opportunity to learn more about MTSU Library usage. In addition to the open discussions, the Library faculty suggested targeted topics for each of the focus group meetings. These topics, refined by Dr. Fadzillah and her students, included how students conduct research; who students consult about research; if and how students use the MTSU Library, student awareness of library resources and services, and student satisfaction with library resources and service. Additionally, the groups were asked their opinions about library hours, food and drink in the facility, customer service, and library research/instruction.

Like the other experiential learning initiatives at the MTSU Library, both the student researchers and the Library faculty benefitted from the Anthropology focus group project. The students learned a great deal about library materials and services and discovered how to form and lead focus groups and interact with their peers. The Anthropology students were quite passionate about the Library's function as a central research hub to the MTSU community. The Library learned about issues important to users: hours, availability of food and drink in the facility, access to group study rooms, customer service, and quiet study. In their report, the Anthropology students also made suggestions and recommendations to ensure the Library's continued relevance to the campus. These suggestions were well received by Library personnel and many of the recommendations have been adopted successfully.

Marketing Students and Surveys

In Spring 2008, the Library faculty partnered with an MTSU Marketing class, MKT 3930, on a research project under the direction of faculty members Drs. Tim Graeff and Michelle Beauchamp. The project entailed an extensive student survey to determine why MTSU students use the Library and what changes would impact their continued and sustained usage of the facility and collections. The paper and pencil survey was developed from focus groups and administered to a representative sample of students in all MTSU majors and class levels. Results from the surveys were entered into an Excel spreadsheet by the MKT 3930 students. A total of 869 respondents participated, representing 3.3% of the MTSU student population.

The survey data was presented at the conclusion of the project and helped the Library faculty identify top reasons for Library



usage. It also helped to determine possible additions or alterations to the facility and its existing services and collections that would bring more students to the library and increase student use of the facility and services.

Both the Library and the Marketing students benefitted from this experiential learning opportunity. The Marketing students learned about the Library facility, services, and collections, as well as how to create, conduct, and tabulate surveys. The Library had the opportunity to learn directly from its users about factors impacting interest in the Library as a destination for research and studying.

Library as Leader

Positive experiences from partnering with experiential learning courses on campus led to the creation of a library-designed project in the Fall of 2008. This project provided an opportunity to put a group of students to work for an entire semester. The previously mentioned partnership involving marketing and anthropology students grew out of a "re-visioning project" begun by the Library in 2007. The purpose of the revisioning was to examine current practices and locate areas in need of improvement. The marketing survey and focus groups were attempts to gather student feedback, and the establishment of an EXL course in the library was a continuation of those efforts.

EXL 2010: Re-visioning the Walker Library

In order to support the library re-visioning project, the Walker Library External Relations Committee recommended the formation of a student advisory board in the library. The Committee gathered information about student advisory boards formed at other university libraries and discovered that retention of members was often a problem, especially when there was no tangible incentive for continued participation. To curb dropout rates, the Committee decided to investigate the possibility of forming a

for-credit class through the EXL department. Students who had an interest in being on the advisory board would sign up for an independent study class, and in exchange for satisfactory service, they would receive one hour of academic credit. In late Fall 2008, a course announcement was posted on the library website and in several high traffic spots on campus. Instructors in various academic departments were also contacted and asked to mention the opportunity in their classes. The course description promised students the opportunity to help improve library services by reflecting on current practices, engaging in research projects, and reviewing other libraries' services.

When it became clear that enrollment was only going to be four students, the class was quickly restructured. Rather than functioning as a traditional student advisory board, the students would work together on one research project that would inform the Library re-visioning process. One focus of the re-visioning process concerned the repurposing of study spaces in the library. Borrowing from a project completed at the University of Arizona,16 we decided to have our EXL students conduct a space utilization study of the Library. For this project, the Library was divided into zones and the furniture types (soft chair, tables, carrels) were coded. Students observed and recorded furniture occupancy, as well as group study room and computer occupancy, at four different times per day over two weeks. The study had several aims: to determine if certain areas of the library were more popular than others, to discover what types of furniture were most preferred, and to assess computer and group study usage. This information could be valuable if the Library moved forward with any of the changes suggested during the re-visioning process.

In addition to carrying out the research project, the EXL students were required to participate in weekly discussion boards in the online course shell on a variety of library-related topics such as preferred study spaces, noise in the library, food and drink policies, and technology access in the li-



brary. Students were asked to describe their own experiences, and for policy questions, to locate and critique the policies of other universities. The students also used discussion boards to plan the research project. Because the course was listed as an independent study, students were not required to meet in person at any particular time. Individual schedules did not allow for everyone to meet together, so the discussion boards were vital for building class rapport and planning the project.

The outcomes of the project were mixed. While the students did engage in the discussion boards and they did reliably gather the data, substantial time and effort was required by the instructor-librarian during the study design process to see that it met all of the parameters of the program. Also, because of the students' scheduling conflicts, they were not able to work with each other or the instructor to adequately analyze and present the data. This meant that students submitted some redundant and half-formed conclusions from the data. The semester drew to a close before these issues could be corrected. Still, the raw data that was gathered has been useful for further analysis by librarians. For example, it has greatly contributed to plans for repurposing independent study spaces for collaborative student use, and we are currently in the process of turning our little-used microtext viewing area into a digital media lab. Several Library faculty members are planning to use independent study students for future library research projects.

Library as Lab

While the Library has been directly involved in a number of scholarly activities performed by students in the library, there is evidence that some students are utilizing the library environment for their own independent projects. These types of activities differ from the normal research activities that students usually undertake in the library, which involve the use of scholarly materials and technological equipment provided by the library. Instead, some students are actually using the library as a laboratory for experiments. There is no way to tell how often this happens, since most activities are so unobtrusive as to fly under the radar, but we fully support the idea since it highlights a perception of the library as a vibrant and living space.

Anthropology Students and the Garbology Project

We found out about this project only after it was presented at a student research symposium on campus. The term "garbology" is used in academic circles to refer to the study of modern refuse and trash. In Fall 2008, two student researchers from the Anthropology department conducted a longitudinal survey of the trash in the public and staff library garbage cans.¹⁷ The researchers compared the trash in the student worker lounge with the trash in the staff spaces and found that while student workers were more likely to buy food on campus (as evidenced by discarded wrappers), faculty and staff usually brought in food from off campus.

When reviewing the garbage left in public spaces, the researchers were not surprised to find food wrappers despite Library rules forbidding it. Of special interest to the researchers was the fact that many of the trash cans in the group study rooms contained similar trash on certain days (such as snickers bar wrappings on Wednesdays or mail addressed to the same person on Fridays). The researchers concluded that some users have staked out makeshift office spaces for themselves, which they repeatedly use.

Mystery Pillow

In the Spring of 2009, there was another intriguing example of students using the library for their own purposes. While the responsible parties remain unknown, we assumed it was a part of a class project when we found library branded pillows imprinted with the words "Reserved for Naps" on the balconies of the upper floors (see fig. 3). Students were observed napping on the pil-





Figure 3. Several of these "mystery pillows" appeared on the upper floors of the library in the Spring of 2009. Their origin was never discovered, but it is assumed that they were a part of a class project.

lows, and it wasn't long before all but one -which was taken by administration as a souvenir – disappeared. We have speculated on the curricular origins of the pillows --Sociology, Interior Design, or Marketing – but no one has claimed responsibility. We hope that whoever constructed them and placed them in the library garnered the type of feedback that they needed for the presumed assignment. This student-led activity signaled that the library is seen as a place where people feel comfortable and where they live significant parts of their student lives, and that it is also a dynamic enough place to conduct an experiment.

Cultivating Partnerships

We recommend that libraries actively seek out experiential learning partnerships on campus. Not only are there quantifiable benefits for both parties the library gets free help on projects and students get real-life experience and often grades — but it also strengthens the library's role as a holistic learning place. The paths to partnerships are many-pronged. First, it is essential to create a list of library needs. Once you know what your needs are, you will know which departments on campus to contact. If there is an EXL department on campus, it is helpful to register your interest with them. Instructors who teach classes enhanced by experiential learning often have to scramble to locate opportunities for students, so having your library on a list of eager partners is helpful for everyone. Also, many libraries already have a group of power users among their teaching faculty. These are the faculty members who repeatedly schedule library instruction classes, know the course reserves staff on a personal basis, and spend their departmental library budgets in the first few months of the fiscal year. These are your allies and they are great prospects for EXL partnerships.

Knowing what sorts of scholarly activities are already going on across campus, and seeking to involve the library, are equally important. Is there a senior capstone project for certain majors? How can the library be involved? Are there faculty research showcases or student exhibits? The library should have a presence at these events or even host exhibits or receptions. The goal is to present the library as a beginning and ending point for research and learning, not simply as an easily discarded tool (unlike the options available on the web) along the way.

Lastly, in order to encourage both partnerships and creative independent use of the library by students, it is important to display a little radical trust. At MTSU we do this by having a blog that is open for anonymous comments, as well as Twitter, Facebook and Flickr accounts. These Web 2.0 technologies allow our users to talk back to us. We often get constructive criticisms through these media, and we respond back when appropriate.

Another example of radical trust is letting users have some control over the physical environment. Many libraries have created learning commons in which the furniture is movable. Many times libraries will also give students a voice in the selection of furnishings or services. We recently held a "chair fair" in which students got to sample six different chairs being considered to replace the current, battered ones in one of the library's



computer labs. We received overwhelming feedback, and are ordering the type of chair selected by the students.¹⁸

The learning commons phenomenon is in itself an example of the growth of libraries as "doing" places rather than just reading rooms. Learning commons often include spaces for multimedia creation and presentation, and it is in our short term plans to increase these collaborative spaces. While we still have a long way to go in creating the perfect learning environment, it is our goal to be a welcoming, collaborative, creative place for all of our users.

Conclusion

Experiential learning helps students enhance their personal and intellectual growth by encouraging them to apply theories to practical problems, develop critical thinking skills, build cultural awareness, contribute to the larger community, and develop long lasting leadership, teamwork and research skills. The library can serve as an important partner and effective "learning lab" because it is truly an interdisciplinary academic unit. The library provides the resources and the environment for independent study and collaborative learning to flourish. Both library staff and EXL programs benefit from the experiences that are created and the outcomes that can be achieved, chief among these being an affirmation of the central role the library has in the academic learning experience on campus. EXL partnerships often require significant planning and work by library staff, but they are worth it – both for the products and knowledge that libraries receive and for the goodwill and visibility that they create all across campus.

Endnotes

1. Katula, R. A. and Threnhauser, E., "Experiential education in the undergraduate curriculum" *Communication Education*, 48 (1999): 238-255. Also, for a definition of "experiential education" and "experiential learning", see the *A Lexicon of Learning*, http://www.ascd.org/Publications/Le xicon-of-Learning/Lexicon-of-Learning.aspx

- Dewey, John, *Experience and Education*. (New York: The Macmillan Company, 1938), p. 113.
- 3. Kolb, David A, *Experiential Learning: Experience as the Source of Learning and Development.* (Englewood Cliffs, New Jersey: Prentice-Hall, 1984), p. 38.
- 4. *Ibid.*, p. 40.
- EXL Scholars Program, "EXL Program Requirements," Middle Tennessee State University, <u>http://frank.mtsu.edu/~exl/requireme</u> <u>nts.shtml</u>.
- Westney, Lynn C., "Conspicuous by Their Absence: Academic Librarians in the Engaged University" *Reference and User Services Quarterly*, 45 (2006): 200-203.
- McGeachin, Robert B. and Diana Ramirez, "Collaborating with Students to Develop an Advertising Campaign" *College & Undergraduate Libraries* 12 (2005): 139-152.
- 8. Duke, Lynda M., Jean B. MacDonald, and Carrie S. Trimble, "Collaboration between Marketing Students and the Library: an Experiential Learning Project to Promote Reference Services" *College and Research Libraries* 70 (2009): 110-121.
- 9. Meulemans, Yvonne Nalani and Ann Manning Fiegen, "Using Business Student Consultants to Benchmark and Develop a Library Marketing Plan" *Journal of Business and Finance Librarianship* 11 (2006): 19-31.
- 10. Rhodes, Naomi J. and Judith M. Davis. "Using Service Learning to Get Positive Reactions in the Library" *Computers in Libraries.* 21/1 (2001): 32-35.
- Meyer, Nadean J. and Ielleen R. Miller. "The Library as a Service-Learning Partner: a Win-Win Collaboration with Students and Faculty" College & Undergraduate Libraries. 15/4 (2008): 399-413.
- 12. Agarwal, Anshu, et al., "Cornell University Library Signage" Cornell University Ergonomics Web (2004),



http://ergo.human.cornell.edu/AHProj ects/Library/librarysigns.pdf.

- Tepper, Dena, "Ergonomic Interventions in a Library: An Evaluation Study," Cornell University Ergonomics Web, <u>http://ergo.human.cornell.edu/ErgoPR</u> OJECTS/Library/library.html.
- Harmer, Brian M. "Teaching in a Contextual Vacuum: Lack of Prior Workplace Knowledge as a Barrier to Sensemaking in the Learning and Teaching of Business Courses" *Innovations in Education and Teaching International*. 46/1: 41-50.
- 15. Foster, Nancy Fried, and Susan Gibbons. *Studying Students: the Undergraduate Research Project at the University of Rochester*. (Chicago: Association of College and Research Libraries, 2007).
- Xia, Jingfeng. "Visualizing Occupancy of Library Study Space with GIS Maps" *New Library World* 106: 5/6 (2005): 219-233.
- 17. Owenby, Kendra and Nemanja Cavlovic. A Material Culture Investigation of the James E. Walker Library, Middle Tennessee State University, Murfreesboro, Tennessee. Unpublished (2008).
- 18. "Chair Fair Results," Walker Library News,

http://mtsulibrary.blogspot.com/2010/ 04/chair-fair-results.html (accessed June 10, 2010).

