Welcome to the first issue of the second year of SLIS Connecting. These are exciting times for the School of Library and Information Science. We are conducting faculty searches for two positions, a new certificate program has been approved, there are new enhancements to the undergraduate program, and there are other developments as well.

The Graduate Certificate in Youth Services and Literature has been approved and a plan of study is now available. The certificate requires 15 credit hours, 12 of which may be taken as part of the SLIS master’s degree curriculum. The Certificate can also be earned with a related master’s degree or as post-master’s certificate for those holding an MLS. The Graduate Certificate in Youth Services and Literature joins the pre-existing Graduate Certificate in Archives and Special Collections. The new certificate will also allow us to draw upon the resources of the de Grummond Collection, an archival collection of books and original source materials in children’s literature, as well as the expertise of some of our fellow departments in the College of Education and Psychology with approved electives from the Department of Curriculum, Instruction & Special Education and the Department of Child and Family Studies.

Our undergraduate program leading to a bachelor’s degree has been approved as a fully-online program. SLIS undergraduate courses were already online, but it is now possible for Southern Miss students to take online courses through the Mississippi Virtual Community College when Southern Miss courses are not offered in an online format. Another addition to our undergraduate program is the approval of an online minor in library and information science. The minor consists of 18 hours with three required courses and three electives from departmental courses.

We are in the process of searching to fill two faculty positions and hope to bring those searches to a successful conclusion by the end of March so stay tuned. In other personnel news, Dr. M. J. Norton was recently named Interim Dean of Libraries for Southern Miss. She will serve in that position until a new Dean of Libraries is appointed, and I was named as Interim Director of the School of Library and Information Science.

We are also looking forward to the Fay B. Kaigler Children’s Book Festival in April. Noted children’s author Jon Scieszka is the recipient of The University of Southern Mississippi Medallion. For more detailed information be sure to read about the festival in this issue.

The School of Library and Information Science had a big presence at Mississippi Library Association’s Annual Conference in Natchez with five presentations, a booth, and a breakfast. Other recent presentations and future presentations are highlighted in this issue.

Earlier this month (Thursday, February 7th) the announcement was made that Dr. Rodney Bennett will become the 10th president of The University of Southern Mississippi. Dr. Bennett comes to us from the University of Georgia where he was Vice President for Student Affairs. We look forward to a new era at Southern Miss under his leadership as we move further into the 21st century.

Dr. Elizabeth Haynes received her MLS and Ph.D. degrees from the University of Texas at Austin. She has been a school library media specialist and district library administrator for the El Paso (Texas) Public Schools. For three years, Dr. Haynes was a library media specialist for the Texas Education Agency. She joined the faculty of the School of Library and Information Science at the University of Southern Mississippi in Hattiesburg in 1998.

### SLIS Update

**Elizabeth Haynes, Interim Director**
Dr. Xinyu Yu joined the School of Library and Information Science in Fall 2007. She teaches several courses including cataloging, special libraries, information in society, introduction to Information Science, metadata, and digital libraries. Dr. Yu also serves as the faculty advisor to the Library and Information Science Student Association (LISSA), a student chapter of the American Library Association at The University of Southern Mississippi. She works closely with the student body of LISSA to provide a forum for students in the program and to help organize service projects on and off campus.

In 2012 Dr. Yu published the paper “Exploring Visual Perception and Children’s Interpretations of Picture books” that appears in *Library & Information Science Research*. This paper was the second publication revised from her dissertation, *Visual Perception in relation to Levels of Meaning for Children: An Exploratory Study*. The results of the study inform how images of picture books are useful visual exercises to enhance children’s visual skills and narratives.

Currently Dr. Yu is working on several publications derived from the grant, “The IMLS Minority Scholarship Initiative at the University of Southern Mississippi School of Library and Information Science.” She serves as the Principal Investigator and administrator for the grant. Her research interests are image analysis and indexing, digital preservation, bibliometrics, and consumer health information.

Dr. Yu is a member of the American Society for Information Science and Technology and the American Library Association.

**SLIS Alumni Spotlight**

Sheila Cork started her career as a librarian when she was five years old. She would visit her brother’s bedroom, pull all the books from his shelves, and put them on the floor, arranged by size, color, or shape. At elementary and high school Cork assisted in the library and her first job after school was with Northamptonshire libraries. She graduated from Leeds polytechnic with a B.A. degree in librarianship, and then in spring 2002 Cork graduated with an MLIS from USM.

Cork has many years of experience working in public libraries, including the Hancock County Library System in Bay St. Louis, MS. In June 2005 she moved to the New Orleans Museum of Art (NOMA), and entered a new library world, that of Special Librarianship, and life as a one-person librarian in an art museum.

Cork says, “One of the most enjoyable aspects of the change has been the opportunity to work with library school interns and practicum students. These students bring a wealth of new information and ideas to the library and have made great contributions towards practical problem solving.”

Students who come to NOMA’s library are trained in all aspects of the day to day running of the library. Whenever possible field trips to other libraries are
arranged, giving interns the opportunity to learn about other types of special libraries.

During their initial visit to NOMA students are encouraged to develop a project that they do under the supervision of the librarian. Previous projects have included making a digital database of the WPA files in the library, planning and implementing a major collection shift, and developing a PR program for the library. Students are encouraged to write up their projects for publication in *Mississippi Libraries* and present at the Mississippi Library Association annual conference. Please contact the librarian at scork@Noma.org or 504-658-4117 for more information about interning at NOMA.

Currently Cork is a member of the SLIS advisory board. As a member of this board she has had the opportunity to be involved in the future of SLIS, to comment on the curriculum, and meet with other SLIS alums.

**Course Spotlights:**

There are two exciting courses taking place this summer. LIS 670 Literacy and Story Time is making its first appearance and LIS 666 has undergone major changes.

**LIS 670 Service to Library Clientele: Literacy and Story Time,** (June 25-July 26, 5-6:30 pm)
Instructor: Dr. Catharine Bomhold

For: Graduate students interested in working with children in libraries and schools. This course is approved for the new [Graduate Certificate in Youth Services and Literature](#).

Who said summer school can’t be FUN?

Did you know a child’s vocabulary level upon entering kindergarten is a major predictor of overall school success? That children who aren’t read to at home face a huge language gap at school? How about this: Teaching a child to read does not necessarily make a child a reader, but reading to a child dramatically increases their chance of being one.

This class is for students interested in learning how to effectively read aloud to children in the classroom or the public or school library in a manner that enhances their overall cognitive development.

Join us this summer for a 5-week class on childhood literacy and story times in the library and school. Using *The Read Aloud Handbook* by Jim Trelease we will explore the following topics:

- Why read aloud to children: The science behind the art.
  Using a research based approach, students will learn why it is important to read to children starting at birth and continuing beyond when they become independent readers.

- How to read out loud in an effective and entertaining manner.
  Students will learn the art of inflection and tone, how to include and engage children in the reading experience and make story time a successful developmental encounter.

- How to choose age appropriate books and materials.
  Successful reading experiences start by choosing the right book for the right reader at the right time. Students will learn about childhood cognitive development and be able to apply that knowledge to their choice of reading materials and activities.

- How to develop story times that engage and interest children of particular age groups.
  Using unifying themes, students will develop and present story time programs for public and school libraries including songs, crafts, finger plays, and other activities that reinforce the reading experience.
• Strategies for increasing the print climate at home and school.
Students will learn strategies for increasing print resources in the home or classroom by making collections attractive to children and engaging parents creatively.

So dust off your puppets, grab your glue stick, some children’s books, and your web cam and join me for some enlightening summer fun this term!

Course: LIS 666: Advanced Reference, (Thursdays May 30- July 25, 5- 6:30 pm) Instructor: Dr. Catharine Bomhold

For: Graduate students who have successfully completed LIS 501

Interested in reference work? Perhaps you are pursuing a career in academic libraries? Or maybe you just feel you need more practice with reference resources? Then this class is for you!

This summer we will look beyond basic online reference sources and discover a world of reference information in print and the deep web. Using Thomas Mann’s Oxford Guide to Library Research (Oxford University Press, 2008) as a text, the class will address the following topics:

• Virtual reference
Navigating the various technologies associated with virtual reference, students will become adept at responding to online questions, ‘pushing’ information to patrons, and the delicate art of interpreting inquiries with no physical prompts.

• Effective search strategies
Using Boolean operators, students will be able to formulate and evaluate effective search strategies in the most appropriate print and electronic resources.

• The continued importance of browsing
Knowledge of what is available in the library is one of the most important data sets a librarian can have. Students will get hands-on experience browsing subject collections and evaluating available print collections.

• People sources
Students will find and participate in listservs and discussion groups relevant to a topic and discover how to tap into the vast knowledge of their colleagues.

• Discipline-specific resources
Students will demonstrate an in-depth understanding of the resources of a specific discipline. Using citation searching, they will map seminal works of an academic discipline and the subsequent chain of research.

• Becoming an information resource
As a capstone project, students will create an online wiki or web page of print and electronic resources available for a given topic. This project may be in a public space that students may use later to demonstrate their knowledge of reference resources to potential employers.

This class is an elective and is open to all students who have completed LIS 501: Reference Sources and Services. Students who enroll in LIS 666: Advanced Reference must have access to an academic library at a university or college that is classified as a Carnegie RU/H (or above) institution. To find out if schools in your area qualify, click here, or contact Dr. Bomhold (Catharine.bomhold@usm.edu) for information.

Dr. Catharine Bomhold is a tenured Assistant Professor in the School of Library and Information Science. She received her Ph.D. in Communication and Information Studies from the University of Alabama in 2003, her M.S. in Library and Information Science and M.A. in Art History from the University of Illinois at Urbana-Champaign, and her B.A. from Illinois State University. Dr. Bomhold joined the Southern Miss SLIS faculty in 2003. Her areas of interest are youth literature, information seeking through technology, and multicultural populations.
SAA President Cole Smith, LISSA President Callie Wiygul, Secretary Michelle Finerty at the College of Education & Psychology Student Group Presentations, Nov. 14th.

LIS Student Association (LISSA)
President: Callie Wiygul
Vice President/Webmaster – Michelle Finerty
Secretary – Rob Richards
Faculty Advisor: Dr. Xinyu Yu

LISSA is an American Library Association student group and assists the annual Children’s Book Festival and Miss. Library Association Annual Conference.
https://www.facebook.com/southernmisslissa

LISSA Student-to-Staff

Ginger Rogers (no, not the one who danced with Fred Astaire, but she doesn’t mind when people ask her) is from Southern Indiana. She is the mother of a grown son and two grown daughters and has three grandchildren. Ginger has a Bachelors’ degree from Harding University in Elementary Education and she worked in public schools for 14 years. She spent over five years working in early childhood education and, just for something different, worked three years at a concrete plant where she got her first real experience using computers.

Following that experience, Ginger was invited to apply for a library director position and, to her surprise, got the job! She has now been a library director for over 10 years and wonders why she didn’t go into Library Science to begin with, being a life-long bookworm who also loves music, movies, writing, studying, computers, and people - basically all things library!

Ginger is looking forward to finishing her MLIS from the University of Southern Mississippi and hopes to be finished by the time she goes to the ALA conference. According to Ginger, she is “counting the opportunity of participating in the Student-to-Staff Program as just icing on the cake as a reward for finishing my degree.”

American Library Association: http://www.ala.org/
Southern Miss Student Archivists Association (SAA)
President: Cole Smith
Vice President: Brianna Barnard
Secretary: Michelle Finerty
Faculty Advisor: Dr. Teresa Welsh

In December, SAA member Birnadette Birzer earned a Graduate Certificate in Archives and Special Collections in addition to the MLIS degree.

SAA President Cole Smith coordinated with Learning Enhancement Center videographers and de Grummond Children’s Literature Curator Ellen Ruffin and Archivist Jennifer Brannock to produce a series of videos to be used in online courses related to archives and to children’s literature. The first video on the de Grummond Collection is available at: http://youtu.be/C1tjseX9NpY

SLIS student Kate Brunelle was awarded an archive internship at the Holocaust Museum in Washington.

SLIS students Phillip Carter, Preston Salisbury, Cole Smith, and Callie Wiygul received funding from the SAA for registration and travel to the Preservation of Books and Archival Materials workshop in Jackson, MS, January 31.

If would like to join the Southern Miss Student Archivists, email teresa.welsh@usm.edu and/or “Like” Southern Miss SAA on Facebook. http://www.facebook.com/pages/Southern-Miss-Student-Archivists-Association/203760579638985

Preservation Workshop in Jackson
By Callie Wiygul

The Preservation of Books and Archival Materials workshop sponsored by the Miss. Department of Archives and History (MDAH) on January 31 in Jackson, MS, was an excellent primer about the techniques, methods, and general theories related to archival preservation. The presenters, Jennifer Brannock and Linda Overman, are enthusiastic experts and have broad, substantive experiences to share. In addition to absorbing basic techniques of book repair and conservation initiatives, such as disaster response and mold repair, we practiced these techniques hands-on as well.

Kit Pictured Included: Dry cleaning pad, Knitting needle, X-acto knife, Micro spatula, Bone folder, & Paint brush

Upcoming Events
Fay B. Kaigler Children’s Book Festival, April 10-12, USM Thad Cochran Center
Society of Mississippi Archivists Conference, April 17-19, Cleveland, MS
Southern Archivists Conference, April 25-27, Jackson
Children’s Literature Association Conference, June 13-15, Biloxi IP Resort
American Library Association Annual Conference, June 27-July 2, Chicago
Society of American Archivists Annual Meeting, August 11-17, New Orleans Hilton Riverside
British Studies, June 27 – July 28, 2013

The USM study-abroad course, LIS: 580/587, British Libraries and Information Centers, is scheduled to be taught this July in London and Edinburgh with day trips to Oxford, Stratford-upon-Avon, and Greenwich.

In the past 6 years, more than 100 students from 25 ALA-accredited programs across the country have participated in British Studies, one of the oldest and largest international programs in the U.S. British Studies Director Dr. Doug Mackaman, staff, and liaisons in Hattiesburg and London support the academic activities of faculty and students.

The class is led by SLIS faculty, Dr. Teresa Welsh, with lectures by British librarians, archivists, and curators on-site in historic libraries, archives, museums, and special collections. Sessions scheduled in mornings or early afternoons allow students time to explore other sites on their own and to gather information for the final research paper, which will be written and submitted a month after returning to the States.

Online application for British Studies summer 2013 is available online – click on the British Studies link at http://www.usm.edu/slis


Creating Futures through Technology Conference, Biloxi, MS, March 6-8, 2013

Dr. Stacy Creel and Dr. Teresa Welsh are presenting Access & Enable: Using Technology to Transform Learning—a presentation of technology and communication tools, class activities and assignments that build community in online courses.

5th International Conference on Qualitative and Quantitative Methods in Libraries, "La Sapienza" University, Rome, Italy, June 4 - 7 2013

Dr. Teresa S. Welsh is coordinating sessions on bibliometric research and LIS student research.


Dr. Teresa S. Welsh and Dr. Stacy Creel are presenting on usage data of e-journal, SLIS Connecting.


Dr. Brenton Stewart’s will host a panel discussion and present on "The Desideratum in the South: The Southern Medical & Surgical Journal and the Codification of Southern Medical Literature," based on his dissertation research.

National Archives of Scotland, Edinburgh (2011)

British Studies Blog
From the GAs:

GAs at Mississippi Library Association Conference
By Callie Wiygul

The MLA Conference in Natchez, October 23-26, 2012, marked my first foray into the imperceptible world of librarianship conferences. As a novice in this field, I relished the opportunity to attend and was eager to establish contacts with professionals and students within our field. My conference duties as an assistant to the professors and staff from the School of Library and Information Science varied, and each day was filled with bustle and conversation as I moved from one task to the next.

Along with Michelle Finerty, my fellow graduate assistant, our primary duty was to greet people and provide information to interested parties at the SLIS booth in the convention hall. This is where I met many of the excellent librarians from around the state and discussed many topics with them, from young adult literature to the British Studies program. In addition to meeting many wonderful people, I jumped at the opportunity to attend a few conference sessions, namely “Talk Dirty to Me” presented by Dr. Stacy Creel, and “Best of the Best: Free Reference Web Sites of 2012” presented by Dr. Catharine Bomhold.

During the course of that week, I met many new professionals from various parts of the state, all with quite diverse backgrounds and specialties, and engaged in conversations that were both insightful and helpful in furthering my knowledge of opportunities within our field. Certainly, I would make haste of any opportunity to attend professional conferences in the future. I look forward to the next MLA Conference this year and hope to see many of you again.

http://library.msstate.edu/mlaconf/program.php

SLIS News:
Ph.D. Student:
Andrea Moreau (MLIS 2006) is currently in the Ph.D. Instructional Technology program at USM.

GA and LIS 201 Instructor Michelle Finerty
SLIS Booth at MLA 2012

Congratulations:

MLIS student and GA Preston Salisbury is a member of the Graduate Student Senate and is a co-editor of Synergy, a graduate student journal.

At Mississippi Library Association Annual Conference in Natchez in October, Jaclyn Lewis was awarded the Peggy May Scholarship; Roberta Fotter, the Virgia Brocks-Shedd Scholarship; and Kelly Bennett, the Anna M. Roberts Award. Beta Phi Mu Chapter President Mara Villa (MLIS 2009) presented Jennifer Nabzyk with the 2012 Beta Phi Mu Award.

www.mlc.lib.ms.us/pdf/octnovdec2012online.pdf

Yellowstone Baptist College Library, Billings, Montana, under Director and MLIS student Jeannie Ferriss, is a community partner for Bridging Cultures: Muslim Journeys. Eileen Wright, Reference Librarian/Archivist at Montana State University Billings Libraries, is the director of the project, funded by an NEA/ALA grant to MSU Billings Library with programs planned for both libraries and a shared collection of books and films on Islam.
Tiffany Paige, JD (MLIS 2010) was selected as a Visiting Professor for the 2013 Black Executive Exchange Program (BEEP) Conference at MVSU and as 1 of 10 participants for the Mississippi College Service-Learning Scholars’ Program.

Jennifer Wann Walker (MLIS 2006), Director of Developmental Services Bureau at the Mississippi Library Commission will attend the Bill & Melinda Gates Foundation Global Libraries Peer-Learning Meeting in Cape Town, South Africa, in April.

Corey Vinson (MLIS 2009) is now Reference Librarian at Oxford Public Library, Oxford, MS.

Melody Pittman Dale (MLIS 11) is now Assistant Prof/Serials Cataloger at Miss. State Univ. Libraries.

Ellen Ruffin, Curator of de Grummond Children’s Literature Collection, was elected to the prestigious Laura Ingalls Wilder Committee of the Association for Library Services for Children (ALSC).

**Recent Presentations**


Shane Hand (MLIS/History 2011) was invited lecturer on Civil Rights and the history of public libraries and children’s librarianship in the South in early 1900s for a National Literacy Action Week (NLAW) Webinar sponsored by Student Coalition for Action in Literacy Education (SCALE), UNC Chapel Hill.

**Recent Articles**


**LIS Student Author Liliana DeBarbieri**

Lili DeBarbieri is a 3rd semester MLIS student and a member of Gamma Beta Phi Honor Society at USM. She earned a BA in Environmental Studies & Education from Prescott College and works as a librarian in Tucson, AZ. Lili is very active in Arizona’s library community, serving as new Chair of Arizona Library Association’s International Interest Group, incoming Co-chair of Horner Fellowship Committee, on Grand Canyon Reader Award Selection Committee, and Arizona-New Mexico Book Awards.

Lili authored *A Guide to Southern Arizona’s Historic Farms and Ranches: Rustic Southwest Retreats* (2012), a highly praised, best-selling travel narrative and guide to the area’s best in agricultural tourism. She has presented at historical societies, non-profit organizations, businesses, and libraries on topics related to travel, the heritage of the Southwest and book publishing and she has been interviewed on TV and radio.

An accomplished freelance writer, Lili’s articles and photography have been featured in print and online publications such as *Lighthouse Magazine, Alabama Living* and *Terrain*. She is currently at work on *Location Filming in Arizona: From Stagecoach to Star Wars, the Screen Legacy of the Grand Canyon State* (History Press, early next year). She hopes to use her archival training at USM to further contribute to preserving the heritage of her home state.
Other Publications

Dr. Xinyu Yu authored “Exploring Visual Perception and Children’s Picture Books” in Library & Information Science Research, 34(4), 292-299, 2012. Dr. Yu’s article discusses visual perception levels and impact of factors involved in children’s interpreting images of picture books. Thirty-one 3-to-5 year old children were briefly interviewed for images of picture books; younger children’s perception levels differed from older children.

Dr. Stacy Creel contributed a chapter, “Service Learning and Mentoring in the Preparation of LIS Students: One Method of Keeping Current,” to Continuing Education for Librarians: Essays on Career Improvement through Classes, Workshops, Conferences, and More, C. Smallwood, K. Harrod, & V. Gubnitskaia, eds. (pp. 156-63), McFarland, 2013. Acting as mentors for LIS students and partnering on service learning projects can keep practitioners abreast of issues, technology, and trends. Service learning and mentoring are great methods for bridging the gap between what is taught and skills knowledge, and competences needed in 21st century libraries and provide valuable service to the community and to libraries. In addition to traditional methods, mentoring and service learning are two free methods of staying current that are often overlooked.


Other News

Dr. Stacy Creel was selected as the winner of the Exemplary Online Course Award presented by the Learning Enhancement Center for LEC Connects 2013. She received this honor for LIS 501: Reference and Information Sources and will be presented a plaque and monetary award. Dr. Creel the advisor for the new Graduate Certificate in Youth Services and Literature: http://www.usm.edu/library-information-science/graduate-certificate-youth-services-and-literature

Dr. Teresa Welsh, who serves on the QQML Advisory Committee and International Scientific Committee, will chair sessions on bibliometric research and LIS graduate student research at QQML13, June 4-7 in Rome, Italy. She is an Associate Editor of QQML: An International Journal of Library and Information Science and a contributing member of the writing team for the 2013 Mississippi School Library Media Guide

You are invited to support USM Libraries by joining Friends of the Library. Benefits include a 10% discount at campus Starbucks and Barnes & Noble. http://www.lib.usm.edu/fol_home/

To support the Southern Miss School of Library and Information Science, donations are invited to the Library Science Fund #0134; donations may be in the form of an honorarium or memorial to someone. Tribute information is available at: http://www.usmfoundation.com

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Talk dirty to me: Why books about sex and relationships belong in libraries.
By Stacy Creel

The State of Mississippi or The Facts
“Sexual relations at one level or another are in the minds, hearts, and bodies of teens” (Chance, 2008, p. 61). A quarter of Mississippi’s population is under the age of 18. There are almost 250,000 state residents who are 10 to 19 years of age (National Center for Health Statistics, 2011). The United States is experiencing its lowest national birth rate for teens since the Centers for Disease Control (CDC) started keeping records in 1940. In 2010, the national birth rate was 31.3 per 1000 females ages 15 to 19. Even though Mississippi’s birth rate has dropped 21% in the last 3 years, it still has the highest birth rate among teens with a birth rate of 55 per 1000 (Associated Press, 2012). The counties in the state with the highest teenage pregnancy rates per 1,000 among 15-19 year olds are Tunica (125.7), Quitman (116.8), and Yazoo County (58.1) (The Mississippi State Department of Health—MSDH, 2010).

Almost 58% of Mississippi’s high school students have had sex, and almost 19% of them used drugs or alcohol prior to their last sexual experience (CDC, 2012). Over 11% of Mississippi’s youth have sex for the first time before age 13, and Mississippi’s high school freshman are more sexually active than the national average—49% versus 32.9%. The state of Mississippi ranks among the highest in the nation for chlamydia and gonorrhea infections, and teens and young adults between the ages of 15-29 years remain the leaders in new cases. From 2001-2010, HIV cases among 15-19 year olds have nearly tripled (MSDH, 2010). Teenagers make up almost 40% of those diagnosed with sexually transmitted diseases in Mississippi.

In February 2011, House Bill 999 was adopted. The bill required local school boards to adopt a sex education policy by June 30, 2012. School boards must implement either an abstinence-only or an abstinence-plus curriculum. Before this bill, there was no state law requiring Mississippi to teach sex education in public schools; however, schools that did choose to teach sex education before this bill were required to teach abstinence only until marriage curriculum with abstinence being the best way to prevent unplanned pregnancies and disease (MSDH, 2010).

While reports are mixed about the impact on whether teens benefit more from abstinence only or comprehensive sex education, one study from the University of Washington in Seattle found that “teenagers who received some type of comprehensive sex education were 60 percent less likely to get pregnant or get someone else pregnant” (Washington Post, 2008). A multi-year federally funded research project investigated the impact of abstinence only programs on sexual abstinence, pregnancy risks, and sexually transmitted diseases. This study found that teens in abstinence only programs were no more likely to abstain than teens not in a program and did not wait until they were older than other teens to become sexually active (Trenholm et al., 2007).

“Considering the high rates of teenage pregnancies and sexually transmitted diseases that remain in Mississippi, evidence suggests that abstinence only until marriage programs are ineffective and that a more comprehensive approach to sex education provides young people with medically sound information to make informed decisions related to sex” (MSDH, 2010, p.9).

Books in the Library
Realistic fiction books for teens cover a variety of topics and issues ranging from the innocuous topics like friendship, or dealing with school pressure, or summer adventures to topics considered to be edgy, or even taboo by some. These more edgy books may cover topics ranging from first sexual experiences, to bullying, to sexual identity, to parental divorce or
neglect, and much more. Many of the topics covered in teen realistic fiction make adults uncomfortable. “These novels are disturbing, sometimes shocking, but they reflect the lives of today’s teens – not the lives of every teen but of enough teens for the stories to be authentic” (Chance, 2008, p. 62). Issues like sexuality and sexual attraction are especially important to younger teens as their bodies and hormones are changing. These are also topics that they may not feel comfortable discussing with adults. “Exploring these issues through fiction is one way for young adolescents to ask questions and seek answers for a very important topic in their lives” (Anderson, 2007, p. 77).

Teen collections should contain materials covering a variety of interests, lifestyles, and beliefs. By covering the gamut of a topic, the library is better able to supply books for their entire population—while realizing that legitimately some books are perfectly acceptable to one person but not another. Having a broad collection insures a book choice for everyone. Collections should contain books that cover comprehensive sex education in non-fiction, including books that cover abstinence, and fiction books that cover teens making a variety of choices for a variety of reasons. The collection must be balanced (Nilsen & Donelson, 2008, p. 303). Since there are such differing opinions about what teens should know and when especially when it comes to the non-fiction topic of sex education, including a variety of books for a range of readers is essential (Anderson, 2007). But having a balanced collection means having books that may make some adults cringe and can lead to challenges and censorship of the library collection.

So how do libraries defend having books in their collections that depict teens having sex, getting pregnant, discovering their sexuality or sexual preference? The first step is to depend on your collection development policy. This policy should be current and inclusive. It should describe the service area and community and include all of the community. The policy should contain statements about the community’s right to read, freedom to read, anti-censorship, the Library Bill of Rights, and should have specific statements about youth and their rights and freedom. “Collection development policy statements protect the library against external pressures” and helps ensure that challenged materials are “fairly reviewed and retained” (Johnson, 2009, p. 75). The collection development policy should also make it clear that the library protects its employees who make the collection development decisions.

Along with the collection development policy, procedures for challenged materials should be established including a committee that reviews complaints and materials receiving complaints. Some examples of collection development policies can be found at AcqWeb’s site, a place of interest for librarians on acquisitions and collection development: http://www.acqweb.org/tdv_policy. Examples of possible wording to consider including are:

- The ___library recognizes that some materials are controversial and that any given item may offend some patrons. Selection of materials is not made on the basis of anticipated approval or disapproval.
- Responsibility for the reading of youth is the responsibility of their parents or guardians.
- No employee shall be disciplined or dismissed for selecting library materials in good faith and in accordance with the written policy.

Second, depend on the American Library Association’s resources. Use their expert resources like “Strategies and Tips for Dealing with Challenges to Library Materials” and the “Intellectual Freedom Manual.” Additionally, librarians should especially be versed on the following from ALA’s Policy Manual on Services and Responsibilities of Libraries:

52.5.2 Sex Education Materials in Libraries: ALA affirms the right of youth to comprehensive, sex-related education, materials, programs, and referral services of the highest quality; affirms the active role of librarians in providing such; and urges librarians and library educators to reexamine existing policies and practices and assume a leadership role in seeing that information is available for children and adolescents, parents, and youth-serving professionals. The Policy Manual’s section on Intellectual Freedom also contains the following:
53.1.4 Free Access to Libraries for Minors: Lack of access to information can be harmful to minors. Librarians and library governing bodies have a public and professional obligation to ensure that all members of the community they serve have free, equal, and equitable access to the entire range of library resources regardless of content, approach, format, or amount of detail. This principle of library service applies equally to all users, minors as well as adults. Librarians and library governing bodies must uphold this principle in order to provide adequate and effective service to minors. Adopted 1972, amended 1981, 1992, 2004, and 2008. (See “Policy Reference File”: Free Access to Libraries for Minors: An Interpretation of the Library Bill of Rights, revised, 2007-2008 ALA CD#19.7. - PDF, 3 pgs)

Third, the librarian can find and use professional reviews and public opinion to support the inclusion of materials that some might find questionable. The fourth thing that can be done is to use the statistics about “the state of the state” of residence; for those of us in Mississippi a handy resource, “Sexually Transmitted Diseases: 2011 Fact Sheet Mississippi, produced by the MSDH and found in Appendix A.

Conclusion:
It may be overwhelming to think about adding potentially controversial books to the library collection. Perhaps Appendix B can help. It is a list of just over 100 titles on sex, sexuality, love, dating, relationships, and more that can help get the collection started. Most of the titles are found on booklists and/or have received positive professional reviews. The handful of books not on lists or reviewed were added because of popular reviews and opinions. Hopefully, this article will give you the standing needed to “talk dirty…”

Stacy Creel received her Ph.D. from the University of North Texas and has over 10 years of public library experience. She has been teaching at Southern Miss since 2010.

References:


**Sexually Transmitted Diseases**

*2011 FACT SHEET*

**Mississippi**

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**Chlamydia by Age Group, 2011**

- 15-24: 76%
- 25-44: 21%
- 45-59: 1%
- 14 and under: 2%

---

*In 2010, MS ranked #2 nationally in chlamydia case rates. In 2011, Mississippi reported 21,214 cases of chlamydia. Among chlamydia cases reported in Mississippi: 74% were females, and 67% were African Americans. Although 15-24 year olds make up 15% of Mississippi’s population, they represent 76% of chlamydia cases.*

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**Gonorrhea by Age Group, 2011**

- 15-24: 69%
- 25-44: 27%
- 45-59: 3%
- 14 and under: 1%

---

*In 2010, MS ranked #3 nationally in Primary & Secondary (P&S) syphilis case rates. In 2011, Mississippi reported 195 cases of P&S syphilis. Among Primary and Secondary syphilis reported in Mississippi: 76% were males, 83% were African Americans, and 48% were between the ages of 25-44.*

---

**P&S Syphilis by Age Group, 2011**

- 25-44: 48%
- 15-24: 37%
- 45-59: 11%
- 14 and under: 0%

---

**HIV Disease by Age Group, 2011**

- 15-24: 29%
- 25-44: 47%
- 45-59: 20%
- 14 and under: 0%

---

*In 2010, MS ranked #1 nationally in gonorrhea case rates. In 2011, Mississippi reported 5,816 cases of gonorrhea. Among gonorrhea cases reported in Mississippi: 58% were females, and 75% were African Americans. Although 15-24 year olds make up 15% of Mississippi’s population, they represent 69% of gonorrhea cases.*

---

**Of the 46 states with confidential name based reporting, Mississippi had the 7th highest rate for HIV infection in 2010. The national rate for HIV infection was 16.1 compared to MS, at 19.1 per 100,000 population in 2010. In 2011, Mississippi reported 573 cases of HIV disease. Among HIV disease reported in Mississippi: 75% were males, 76% were African Americans, and 47% were between the ages of 25-44.**

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**Centers for Disease Control and Prevention. HIV Surveillance Report, 2010; vol.22.**

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<tr>
<th>Book Info</th>
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<td>Brian, Kate. The Virginity Club. Simon Pulse, 2005.</td>
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<td>Kulver, Cayla. Legacy. HarlequinTeen, 2011.</td>
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<td>Nelson, RA. Teach Me. Razorbill, 2007.</td>
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<td>Sanchez, Alex. So Hard to Say. Simon &amp; Schuster Books for Young Readers, 2006.</td>
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Codes:
BIBR: Black Issues Book Review
BL: Booklist
KR: Kirkus
LJ: Library Journal
BBYA: Best Books for Young Adults ALA YALSA
BFYA: Best Fiction for Young Adults ALA YALSA
NYPL: NYPL Books (or Stuff) for the Teen Age
PPBK: Popular Paperbacks for Young Adults ALA YALSA
QP: Quick Picks for Reluctant Young Adult Readers ALA YALSA
RBOw= ALA Rainbow Booklist
STPTOE = Corretta Scott King John Steptoe New Talent

Other Lists of Interest:
Austin Public Library African American Teen Fiction:
http://www.connectedyouth.org/books/index.cfm?booklist=afam
Austin Public Library Teen Parents:
http://www.connectedyouth.org/books/index.cfm?booklist=teenparents
Austin Public Library GLBTQ:
http://www.connectedyouth.org/books/index.cfm?booklist=glbtq
ALA GLBT Round Table:
http://glbtrt.ala.org/rainbowbooks/ Hennepin County Library Sex 101:
http://www.hclib.org/pub/bookspace/BooklistAction.cfm?list_num=124
Planning is well underway for the 46th Annual Fay B. Kaigler Children’s Book Festival, to be held April 10-12, 2013, at the Southern Miss Thad Cochran Center. It looks to be another exciting year as the highlights will include awarding of the 2013 Southern Miss Medallion to recipient Jon Scieszka and a musical performance by four-time Grammy nominated folk-rock children’s music group *Trout Fishing in America* that will be open to the public.

Sadly, Children’s Book Festival namesake Fay B. Kaigler passed away in May 2012. Miss Kaigler, a longtime supporter of the festival, taught in the public schools of California and Mississippi for 33 years. She first attended the festival at the invitation of her friend Ruth Lamont, a children's librarian from Baton Rouge.

As for the festival keynotes, 2013 Southern Miss Medallion recipient Jon Scieszka graduated from Albion College in 1976 and obtained his MFA from Columbia in 1980. His first book, *The True Story of the Three Little Pigs*, was published in 1989. This book, as well as *The Stinky Cheese Man and Other Fairly Stupid Tales*, *Math Curse*, and *Robot Zot* has won multiple awards. Mr. Scieszka is the founder of Guys Read, a literacy program designed to help boys become self-motivated, lifelong readers. He was named the first National Ambassador for Young People’s Literature by the Library of Congress in 2008. He lives in Brooklyn, NY with his wife Jeri and two children, Casey and Jake.

Other outstanding authors and illustrators scheduled to appear include:

Candace Fleming awarded herself the Newbery Medal in fifth grade after scraping the gold sticker off the class copy of *The Witch of Blackbird Pond* and pasting it onto her first novel—a 10-page, 10-chapter mystery called *Who Done It*? She’s been collecting awards (her own, not Elizabeth George Speare’s) ever since. Today, Fleming is the...
acclaimed author of numerous books for children, including Ben Franklin's Almanac, an ALA Notable Book and an ALA Best Book for Young Adults, as well as Muncha! Muncha! Muncha!, Gabriella's Song, and When Agnes Cows, all ALA Notable Books. She lives in a suburb of Chicago.

Kathleen T. Horning is the director of the Cooperative Children's Book Center of the School of Education at the University of Wisconsin–Madison. She is the author of From Cover to Cover: Evaluating and Reviewing Children's Books (revised edition: HarperCollins, 2010). With Ginny Moore Kruse, she coauthored Multicultural Literature for Children and Young Adults, 1980–1990, and with Ginny Moore Kruse and Megan Schliesman, Multicultural Literature for Children and Young Adults, 1991–1996. Horning is a past-president of the Association for Library Service to Children (ALSC) of the American Library Association (ALA), and a past president of the United States Board on Books for Young People (USBBY).

Ted & Betsy Lewin are a husband and wife team of writers and illustrators, who have collaborated on a number of books based upon their travels. The first, Gorilla Walk, was named a Smithsonian Notable Book. Since then, they have collaborated on four other books, including the award-winning Horse Song. Each is also independently the author and/or illustrator of a number of books. Betsy Lewin’s most recent books include You Can Do It! and Where Is Tippy Toes? and has illustrated a number of books for other authors, including the Click, Clack, Moo series by Darlene Cronin. Ted Lewin recently authored Look! and Stable and illustrated The World's Greatest Lion (Ralph Helfer) and The Longest Night (Marion Dane Bauer) among many others.

Grace Lin is the author and illustrator of picture books, early readers and middle grade novels. Lin's 2010 Newbery Honor book Where the Mountain Meets the Moon was chosen for Al Roker's Today Show Kid's Book Club and was a New York Times Bestseller. Ling & Ting, Grace's first early reader, was honored with the Theodor Geisel Honor in 2011. Starry River of the Sky was released in October 2012. Her newest title is its companion novel, Where the Mountain Meets the Moon. An Astrid Lindgren Memorial Award nominee for the U.S., most of Lin's books are about the Asian-American experience because she believes, "Books erase bias, they make the uncommon every day and the mundane exotic. A book makes all cultures universal."

Wendell Minor is the illustrator of many award-winning picture books for children, such as Mojave by Diane Siebert, Abe Lincoln Remembers by Ann Turner, The Seashore Book by Charlotte Zolotow, and Reaching for the Moon by Buzz Aldrin, as well as numerous books about the outdoors with his frequent collaborator, Jean Craighead George, including Luck: The Story of a Sandhill Crane. The Minors live in Connecticut, where they share their home, and studio, with their cats Sofie and Cindercat. Minor’s latest title is If You Spent a Day with Thoreau at Walden Pond.

Eric Rohmann received a Caldecott Honor in 1999 for Time Flies and the 2003 Caldecott Medal for My Friend Rabbit. Besides being an author, Rohmann is also a painter and a former teacher. When asked why he writes and illustrates children’s books, Rohmann answers, “Children are the best audience: they are curious, enthusiastic, impulsive, generous, and pleased by simple joys. They laugh easily at the ridiculous and are willing to believe the absurd.” Rohmann lives in Chicago, Illinois.

Trout Fishing in America has more than 30 years of unique musical experience, capped by their most recent release, a children’s book/CD combo entitled Chicken Joe Forgets Something Important. Over their musical career, they have been nominated for four Grammys, as well as being nominated for numerous other awards. They have been featured on The Today Show, NPR’s All Things Considered, and The Dr. Demento Show, among others.

We hope to see you at the 2013 Fay B. Kaigler Children’s Book Festival! For more information, please visit www.usm.edu/childrens-book-festival.
School of Library and Information Science presents

THE 46TH ANNUAL FAY B. KAIGLER
CHILDREN’S BOOK FESTIVAL
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Jon Scieszka!

ADDITIONAL SPEAKERS INCLUDE THE FOLLOWING:

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K.T. Horning
Ted and Betsy Lewin
Grace Lin
Wendell Minor
Eric Rohmann
Trout Fishing in America

The Fay B. Kaigler Children’s Book Festival is proud to host the Eya Jack Keats Book Awards.

The Magnolia Award winners announced at Festival.

www.usm.edu/childrens-book-festival
Highlights of a Practicum: The Hattiesburg Coca-Cola Plant Collectibles Museum
By Bernadette Birzer

During my last semester at the University of Southern Mississippi, I participated in a museum practicum at the Coca-Cola Plant located off of HWY 98 in Hattiesburg, Mississippi. This particular Coca-Cola Collectables Museum consists of a small assortment of memorabilia that the company has been collecting since the late 1800’s. There are many Coca-Cola museums including the very large and famous World of Coca-Cola in Atlanta, Georgia. Other Coca-Cola facilities may have their own personal collections as well.

Even though this collection is currently closed to the public, it is valuable to the company because it generates feelings of pride regarding workers and provides a record of their history working in the community and surrounding area for over 100 years.

The Coca-Cola Plant’s Collectibles Museum can be found on the second floor of the main building. When I was first introduced to this collection I was a little intimidated mainly because there was not a collection policy or structured maintenance plan for the collection. I had been studying how to manage special collections in school, so I tried to envision that I was the curator, and I spent the first couple of weeks devising a plan to update the collection and improve its overall appearance.

My first step was to create a list of objectives; these priorities would incorporate goals that the company had for improving the collection and also ideas I felt would exceed their expectations. These mainly focused on updating the current inventory and creating a floor plan that would allow each item to be easily located (Image 2).

The Hattiesburg Coca-Cola Bottling Company located on HWY 98 was built in 1978 to consolidate Coca-Cola production in Picayune and Columbia into the Hattiesburg facility (Image 1). The original site of production opened in May of 1906 and was first located on 2nd Street. The plant used to be a popular destination for school and company field trips, but several years ago it became a distribution center. The museum is now currently only opened for special company events and festivities, but there has been discussion of increasing availability to the museum.

Image 1: Hattiesburg Coca-Cola Bottling Co.

Image 2: Floor Plan for Organization
One important goal was to create exhibits that were visually dynamic; this attractive quality would encourage the exhibit to be educational so that viewers could experience and understand the transition of the product through the years. Another goal was to clean the exhibit without altering or damaging the objects; this was a challenge when cleaning one of the cases that had soda cans that had exploded.

The overall collection is displayed within eight wooden cases located on the floor and seven cases located against the wall. In addition to the cases, it contains vending machines, large vintage metal signs, and over 100 hanging Coca-Cola items including framed images. The framed images provide local history, especially in relationship to Coca-Cola Hattiesburg. The cases located on the museum floor were initially set up to be in chronological order.

While working with these cases it became apparent that every item needed to be more accurately dated. Using a specialized encyclopedia, Petretti’s Coca-Cola Collectibles Price Guide, I was able to determine the dates of particular items. Allan Petretti’s encyclopedia allowed me to be able to establish if an item was an original, a reproduction, or a fantasy item. Fantasy items are pieces “created with no original like it” (2008, p. 637).

Details used to describe originals compared to replicas and fantasy items may at first seem subtle, but once one understands how to identify them, they become very easily apparent.

Almost all of the floor cases over the course of three months were emptied and cleaned. A new inventory was created along with a corresponding floor plan of the museum so that items could be easily located in the future. Arrangements for each case were made more visually attractive by lining the cases with felt, dusting the items, and creating new case labels on acid free paper. Specific eras and items were made more eye-catching by incorporating advertisements of products or themes located in vintage Coca-Cola Bottler Magazines that corresponded with items found in the exhibit.

Overall, the collection display was improved upon except for two cases that remain under construction at this point. Along with improving the collection’s arrangement, a maintenance list was also created for anyone who might need to update the collection in the future. Hopefully, future LIS students needing practicum experience will utilize this small collection as a valuable learning aid and use it to benefit them as well as the Coca-Cola Plant.

Reference:
Smith Wright Mercantile Store Ledger 1841 – 1845:
Documenting the Content and History of Archival Materials
By Donna Ballard

Graduate Certificate in Archives and Special Collections Research Project, December 2012
Reader: Dr. Teresa S. Welsh

Research Questions
R1. What was the mission of the collection?
R2. What was contained in the collection and how was it organized?
R3. What was newly discovered about the background and history of the collection?
R4. What was the result of processing the collection?

Limitations and Assumptions of the Study
This study was limited to a specific collection that was assigned by the on-site practicum supervisor, Archivist Mona K. Vance. In addition, related scholarly literature was researched, based upon evidence learned from processing the collection. It was assumed that the information provided by these resources was accurate.

Importance of the Study
The importance of the research on the Smith Wright Mercantile Store Ledger 1841 – 1845 was that it focused on discovering the history and location of the store and on its connection to local history. This was central to the mission of the Billups-Garth Archives, which was to collect and preserve local history, specifically of Columbus and Lowndes County. If the collection was found to fit within the scope of the mission of the Archives, then it would be made accessible to patrons in a form of a finding aid that could be useful to researchers of local history (Brasher, 2008).

Literature Review
Triangulation is a qualitative research methodology of researching, gathering, and compiling multiple sources then cross-checking data to achieve greater accuracy. In Becoming Qualitative Researchers, Glesne and Peshkin (1992) portrayed triangulation as using multiple sources, as well as methods, of data collection, to accomplish the goal of validity in findings.

Figure 1. An example of a page from the Smith Wright Mercantile Store Ledger 1841 – 1845

Introduction
While earning a Graduate Certificate in Archives and Special Collections through The University of Southern Mississippi, a practicum at an archive or special collection was required. This obligation was fulfilled at the Billups-Garth Archives in the Local History Room of the Columbus-Lowndes Public Library in Columbus, Mississippi, during the spring of 2012. As part of the practicum requirements, archival collections were processed and research was conducted to document the context and history of a specific collection that is the focus of this study.

Purpose of the Study
The purpose of this study was to document the content and history of a previously unprocessed collection of archival materials, the Smith Wright Mercantile Store Ledger, dated 1841 – 1845. There was no background information available other than the title and approximate dates.

In an *American Archivist* article published in 1951, Charles W. Porter, III stated,

> The only safe course for those who would preserve or restore historic sites and buildings is to utilize a variety of historical source materials in pursuit of the real facts. The search leads through the source materials frequently utilized by historians to documentary sources in surprising places, not touched by the hands of historians for many decades, or perhaps never utilized by the historian before (p. 202).

Porter emphasized that researchers must be precise and educated in accurate methods, which were unbiased, while using primary sources and even artifacts from the site as documents. Studying the history of transportation in an area was also mentioned as a way to discover facts about a particular place. The beginning of a new approach of “techniques” to accurately proceed with historical research for sites or buildings was noted as the Williamsburg project at Yorktown, in the early 1930s. At that time, the National Park Service initiated policies to ensure sound analyses of historical facts about sites, buildings, or events (Porter, 1951).

Another writer also referred to buildings as historical documents and subscribed to combining multiple areas of research methods for maximum contributions to the knowledge of history, in regard to a building’s architecture. In “Old Buildings Tell Tales,” Peter Coutts (1977) discusses how he examined an 1839 – 1850 settlement in New Zealand, which had little historical information available. He explored the ways various types of information about the area helped answer questions and lead to new interpretations. These data included primary source documents, such as diaries, history, oral traditions, photography, architecture, archaeology, structures, and science. Through cross-referencing the data from various disciplines of research, Coutts (1977) was able to arrive at significant conclusions and ensure validity of the findings.

In 1985, Suzanne B. Schell discussed the beginnings of interpretation of historic sites as developing slowly for American history. She noted that as early as 1850, New York obtained a house that was a headquarters for George Washington, and opened it to the public. Also, in 1859, a group formed the “Mount Vernon Ladies’ Association.” By 1910, the “Society for the Preservation of New England Antiquities” was begun. At first these endeavors were for patriotic and virtuous ideals, but began to evolve into more interpretation of American life in the late 1800s and early 1900s. By the 1870s, guides in period-dress and guidebooks became available. The numbers of open historical houses ranged from 20 in 1895, to 100 in 1910, and 400 by 1933. Research was given as the most important technique in creating validity of historical interpretation (Schell, 1985).

Harvard Business School established the first graduate school for business in 1908 and the first library for business education, with the Baker Library. Collections have ranged from the 1400’s Medici family business manuscripts to those of more contemporary times. The most widely-used collection overall (over one-third), were the credit ledgers of R.G. Dun & Company, which contained data on early communities in America during 1841 – 1888. A new trend was documented in 1997, which pointed to usage of the Baker Library resources by disciplines other than business. These included “…a broad range of disciplines, such as cultural anthropology, ethnic and gender studies, industrial archaeology, sociology, fine and decorative arts, maritime history, and engineering” (Linard & Sverdloff, 1997, p. 88).

Archival research graduate education was discussed in an article by Anne J. Gilliland-Swetland, in which she examined the different levels of research experience that students could obtain. In addition to the master’s and doctorate, she suggested a graduate
certificate of advanced study, where students could enhance their research skills and concentrate in certain areas. In order to experience applied research, students could participate and complete a project in the archival field. Among competencies thought necessary for archival research were the following: designing a research methodology, research theory and related literature, analyses of data, and the dissemination of the research conclusions. A new emphasis in archival education seemed to be research skills and the need for those within the profession to collaborate with each other on standards for graduate archival education (Gilliland-Swateland, 2000).

According to a document from the Institute of Food and Agricultural Sciences (IFAS), at the University of Florida, authors stated: “Triangulation is a method used by qualitative researchers to check and establish validity in their studies by analyzing a research question from multiple perspectives” (2002, p. 1). The idea of validity in research is paramount in results that are considered to be correct and sustainable by the data discovered during the study. Several triangulation types were discussed in this article. Among the types useful for the study of documentation of content and history were data triangulation and theory triangulation. In data triangulation, validity was enhanced through the study of multiple resources. In a similar fashion, theory triangulation used various “perspectives” from different areas of expertise to increase validity by observing if the data were construed as comparable to each other (Guion, Diehl, & McDonald, 2002).

The literature study revealed that potential problems with triangulation included time factors, pre-conceived ideas, or a lack of resources. The advantages of triangulation included the ability to understand the questions that needed to be answered and the increased validity of the study’s findings. The Florida State University article concluded with a quote attributed to an article by Veronica Thurmond (2001, p. 254), which stated: “The benefits of triangulation include ‘increasing confidence in research data, creating innovative ways of understanding a phenomenon, revealing unique findings, challenging or integrating theories, and providing a clearer understanding of the problem” (Guion, et al., 2002).

While discussing validity or credibility, Sharan B. Merriam notes in Qualitative Research (2009) that triangulation uses different types of processes, including multiple methods, data sources, investigators, or theories. An example of using multiple methods was given as checking an interview against what was seen elsewhere in the study, or what had been read about the subject being studied. This was incorporating data triangulation with multiple sources of data. Using multiple types of triangulation further increased the “trustworthiness” of data.

Additionally, Merriam notes that there is another “postmodern perspective” in which one actually uses more than three sources of data referred to in the triangulation research method. The term for this more faceted approach is “crystallize”, instead of “triangulate.” This is in contrast to the “interpretive-constructivist” point of view evident in the triangulation method discussed by Merriam. The crystallization of data sources is represented through reflection and refraction, and thus the way research about something is approached (2009, p. 215 – 216).

**Methodology**

Data source triangulation was the methodology used in the study of the Smith Wright Mercantile Store Ledger 1841 – 1845. Increasing validity and building trust in the results of research was the goal of triangulation. This was evidenced by the convergence of multiple sources, which documented the context and history of the findings.

Commonalities in the results increased the verification of data and credibility, as well as helped identify answers to research questions. A series of steps were used in the data analyses of this study. These steps were noted in Leedy and Ormrod’s Qualitative Research (2005), and attributed to J. W. Creswell, as follows:
1. Organization of details about the case
2. Categorization of data
3. Interpretation of single instances
4. Identification of patterns

While discussing research frameworks for archaeology, Timothy Darvill provided insight into “curiosity-driven research”. Instead of compiling a list of questions prior to a study, the questions surfaced during the process. Darvill asserts the following about this type of research:

Such work is essentially opportunistic, and is typically linked to the recognition of significance in newly revealed evidence or the fresh observation of existing evidence. Discovery, engagement, intuition and capturing the ‘eureka moment’ lie at the heart of the approach.…. (2007, p. 439).

In addition, he said there were two motivations that drive this type of research. Coincidences were involved in the first one, with a mixture of newly-discovered information and understanding connections that were revealed in the process. The second stimulus in “curiosity-driven research” was the possibilities that were opened in disciplines other than archaeology (Darvill, 2007, p. 439).

**Methodology: Organization of details about the case**

There were few details initially available about the Smith Wright Mercantile Store Ledger 1841–1845. The descriptive title was given by the name of the ledger, which was derived from the text within the ledger pages. Both the location of the store and the donor of the pages were unknown. The collection was found during an inventory at the Billups-Garth Archives at the Columbus-Lowndes Public Library, in Columbus, Mississippi. The compilation consisted of at least 457 legal-sized pages, which were photocopies from the Smith Wright Mercantile Store Ledger, with inclusive dates of 1841 – 1845.

The archival collection content was documented one page at a time, by starting at the first page and handwriting each entry of a significant word or name found on the page into a notebook. This process was continued in the notebook for the first fourteen pages of the Ledger, while noting when a page number changed. The purpose of handwriting the first few pages was to become accustomed to the style of lettering and to practice some of the letters for assistance in recognizing the forms more easily. A magnifying glass was used for the majority of the work, due to the smallness and lightness of the print, and the unfamiliar types of lettering used in early American handwriting.

A helpful resource by Kip Sperry, titled *Reading Early American Handwriting*, was found to verify some of the letter forms (1998). Alphabets, letter forms, term definitions, and abbreviations used in 19th century handwriting were illustrated in Sperry’s book. An example of the difference in letter forms was noted in the surname “Holderness”, which written in the Ledger, looked like it was spelled “Holdernefs.” The letter that looked like a cursive “f” was actually indicating that the name ended in a double “s”, as shown in figure 2 (Ballard, 2012).

![Figure 2. An example of early American handwriting of the surname “Holderness”](image)
Some pages were mis-numbered, missing, or duplicated. These were noted in brackets and renumbered with a numeral and the letter a, b, or c. If an entry was illegible, a note with a question mark (?) was added in brackets after the letter or word in the Excel file. Additional writing next to entries was indicated with a note added in brackets. Differing forms of names or entries found on additional pages were added in brackets in the file for additional reference. Most abbreviations were spelled out in brackets following the entries in the Excel file. The pages were divided and placed into six archival folders, which were then placed within one archival folder box (Ballard, 2012).

Following the initial handwritten entries into the notebook, a laptop computer was then used to start an Excel file to enter the words or names found on each page. Two columns were used, with the words and names on the left side and the associated page numbers on the right side. Proper names were written as Last Name, First Name, Middle Initial, and Prefix. Other words or notations were added beside the name, and within brackets. Subsequent to entering all readable names and corresponding page numbers into an Excel file, the names were sorted into alphabetical order. These names were combined, along with the associated page numbers, and entered into Excel (Ballard, 2012).

An important lesson learned was the necessity to have the original Excel file saved, as well as a working version saved under a different name. When mistakes were made, the original file was consulted for accuracy in corrections. The most common mistakes were Excel file cells not being deleted across both columns, which lead to incorrect page numbers associated with names. The Ledger was frequently checked against the Excel file for precision in names and page numbers. Likewise, the folders containing the ledger pages were referred to, for comparison of data exactness (Ballard, 2012).

Once the names and page numbers were combined, the Excel file was printed. The new printing was used to write cross-references, and then to transfer the data to the computer file. For example: “Aiken & Brown” was also indicated as having a cross-reference of “see also Brown, Aiken &,” which was then entered again as “Brown, Aiken &.” At this point, other archival indexes used as finding aids were consulted for consistent ways to index names. In addition to observing the treatment of names in other indexes, several books were consulted, which included: *Indexing Names*, edited by Noeline Bridge; *Indexing Specialties: History*, edited by Margie Towery; *Inside Indexing: The Decision-Making Process*, by Sherry L Smith and Kari Kells; and *Genealogy and Indexing*, edited by Kathleen Spaltro (Ballard, 2012).

**Methodology: Categorization of Data**

During the process of extracting the data from the copies of the Mercantile Ledger pages and entering it into the Excel file, obvious areas of categories were evident. The retrievable information from the Ledger was gathered and sorted alphabetically, with accompanying page numbers in the Excel file. Next, the file was printed for further inspection and accuracy-checking. General subjects for the categories were searched and marked for grouping. These were labeled as category designations and added to lists for inclusion into the finding aid that would be produced by the processing, indexing, and researching of the Smith Wright Mercantile Store Ledger. The category names included the following: Account, Company, Doctor, Location, Military, Miscellaneous, and Security or Agent, as shown in Appendix A.

**Methodology: Interpretation of Single Instances**

The most important single instance of data discovered in relation to the Smith Wright Mercantile Store Ledger 1841 – 1845 was finding a library card holding the identity of the location of the Smith Wright Mercantile Store and the name of the donor of the collection. On March 22, 2012, while inserting the six Ledger folders into the box, an old card from a library card catalog was discovered laying face-down between the folds of the box. When the card was picked up and turned over, there was information, hand-written on the other side, which gave the
location of the Store (Plymouth, Mississippi) and the name (William E. Prout) of the donor of the collection. This information was immensely valuable in leading to multiple discoveries of resources that were used to triangulate and verify the data extracted from the Ledger.

There was also a historical marker near the former town of Plymouth, as shown in Figure 3. According to *Hometown Mississippi*, the following was written concerning Plymouth, Mississippi:

> Once a rival to Columbus and Cotton Gin Port, the long extinct town of Plymouth was located seven miles northeast [sic. northwest] of Columbus at the junction of the Tombigbee River with Tibbee Creek. It is said to have been a camp for DeSoto on his passages through Mississippi, with many scraps of armor and Spanish military equipment having been found here. It is also said to have been the scene of Bienville’s operations against the Choctaw nation, though Cotton Gin Port is usually given that credit. Evidence from Plymouth’s claims came from the first white settlers who found a two-story fort of cedar logs about 500 yards from the river and surrounded by a circular ditch and embankment. The fort was torn down by the settlers to obtain building materials for their cabins.

The site of Plymouth was well known as an Indian trading post even during the French Rule in this section and was the home of John Pitchlyn. Pitchlyn, born on St. Thomas Island in 1765, was left among the Choctaws when his father, an English officer, died on his way from South Carolina to the Natchez District. John Pitchlyn’s life with the Indians gave him a great influence which he exerted in favor of the United States.

Tradition also makes the fort a base of operations for General Andrew Jackson in his campaign against the Creek Indians.

After the Indian land Cession opened the west bank of the Tombigbee River to settlement Plymouth became an important cotton storage and shipping center, chiefly because of a shallow ford in the river nearby. The town was incorporated in 1836 but the low ground at the mouth of Tibbee Creek proved so unhealthful that the planters moved back to their plantations and Plymouth became extinct (Brieger, 1980, p. 317).

![Historical Marker for Plymouth, Mississippi](image)

**Figure 3.** The historical marker for Plymouth, Mississippi, which was determined to be the location of the Smith Wright Mercantile Store

On April 4, 2012, Gary Lancaster, a local historian, entered the Billups-Garth Archives; he was shown the card with the location the Smith Wright Mercantile Store and the donor of the collection. He immediately remarked, “Bill Prout!” Mr. Lancaster then went to a nearby bookshelf in the Local History Department of the Library and returned with an outstanding resource for further enlightenment. He held a bound manuscript titled, *A Historical Documentation of Plymouth, Mississippi*, by W.E. Prout, Mississippi State College for Women, Columbus, Mississippi, October 19, 1973. Resources from this manuscript were typed into a Word document for insertion into the finding aid for the Smith Wright Mercantile Store Ledger (See Appendix A).
**Methodology: Identification of Patterns**

As the data from the Ledger were compiled, patterns emerged as a result of information gained from related sources. These themes were closely related to the categories developed from the data, which included the following, as shown in Appendix A: “Account, Company, Doctor, Location, Military, Miscellaneous, and Security or Agent.” The Mercantile Store Ledger naturally had a theme of early American bookkeeping and accounting, which required additional research to understand. This became evident when compiling categories of subjects found within the Ledger. The list of names of “Doctors” was surprisingly long. When researching early accounting methods, which were handwritten, it was noticed that the terms “Debit” and “Credit” were sometimes written as “Dr.” and “Cr.” Verification required going to each page number in the Ledger that the “Dr.” designations had been recorded, until all were identified as Doctor (Dr.) or Debit (Dr.).

While researching other sources related to Mr. Prout, the donor of the Ledger copy, another local historian, Rufus Ward, was frequently cited. Mr. Ward knew of Mr. Prout’s death and of his surviving son. Mr. Ward also had recently published a book about steamboats on the Tombigbee River—*The Tombigbee River Steamboats: Rollodoes, Dead Heads, and Side-Wheelers*. This publication noted that Plymouth Bluff was an important landing for steamboats on the Little Tombigbee River. A photograph of Plymouth was also in the book. While looking through this resource, a name was noticed that was very similar to one in the Ledger that made no logical sense. The name in the Ledger was written as “Lallahrookh” (see Figure 4), whereas the same name was written as “Lallah Roohk” in Rufus Ward’s book, which was described as a “156-ton stern-wheeler built in 1838; 900-bale capacity or higher; Upper Tombigbee trade, 1839-42; abandoned 1847” (2010, p. 173). This correlation implied that all of the military designations in the Ledger were not necessarily related to the Civil War, but some were names of steamboat captains or admirals (Ward, 2010, p. 173).

**Methodology: Synthesis and Generalizations**

Although this study began with the simple creation of a finding aid for an eighteenth-century Mercantile Store Ledger from an unknown location and donor, it developed to incorporate multiple related resources of data. The purpose of this study was to document the content and history of a previously unprocessed collection of archival materials. This mission was successful due to the qualitative research construction that was followed. The research strategy of triangulation as the primary method of gathering data for this case study was very productive. In addition, triangulation and crystallization of the research results proved capable of supporting the reliability of the findings.

**Results**

**Research Questions: R1. What was the mission of the collection?**

The study of the Smith Wright Mercantile Store Ledger 1841 – 1845 was focused on discovering where the store was located and its connection to the history of the local area. The plan to index the contents of the collection was the impetus for the discovery of new information, which led to the breakthrough of learning the location of the Mercantile Store and the donor of the Ledger. The original location of the Mercantile Store was within a few miles of Columbus, Mississippi.
The Plymouth location has been researched extensively by experts representing many disciplines, although it had not been in existence for more than 150 years. This established the Smith Wright Mercantile Store Ledger as fundamental to the mission of the Billups-Garth Archives: to collect and preserve local history, specifically of Columbus and Lowndes County. Since the collection was found to fit within the scope of the mission of the Archives, it proved to be a valuable addition to the study of the local area and the body of knowledge that currently exists about Plymouth and its place in history.

Research Questions: R2. What was contained in the collection and how was it organized?
The collection of this study consisted of at least 457 legal-sized pages, which were photo-copies from the Smith Wright Mercantile Store Ledger, with inclusive dates of 1841 – 1845. It was organized into six sections with consecutively numbered pages, which were placed into archival folders labeled with the name of the collection and the page numbers within each folder. The six folders were stored in an archival folder box.

Research Questions: R3. What was newly discovered about the background and history of the collection?
The specific collection that was studied, the Smith Wright Mercantile Store Ledger, dated 1841 – 1845, contained no background information other than the title and approximate dates that had originally been given to the collection. Newly discovered information, the original location of the Mercantile Store and the name of the donor of the collection, led to numerous resources and previous research on the history and geographic location of Plymouth, Mississippi. Most notable among these were the following publications:

- Cotton Gin Port: A Frontier Settlement on the Upper Tombigbee, by J.D. Elliott and M.A. Wells
- By the Flow of the Inland River: The Settlement of Columbus, Mississippi to 1825, by S.H. Kaye, R. Ward and C.B. Neault
- A History of Columbus, Mississippi during the 19th Century, by W.L. Lipscomb and G.P. Young
- Directory of River Packets in the Mobile-Alabama-Warrior-Tombigbee Trades 1818-1932, by B. Neville
- A Historical Documentation of Plymouth, Mississippi, by W.E. Prout
- Steamboats on the Upper Tombigbee, by J. Rodabough and H.M. Crawford
- "A Very Remarkable Bluff": Bernard Romans, 1771, edited by H.L. Sherman under the auspices of the Plymouth Bluff Center and Museum and the Mississippi University of Women

Research Questions: R4. What was the result of processing the collection?
All of the research questions were answered as a result of processing the collection. Discovering the location of the Smith Wright Mercantile Store and the name of the collection donor were the high points of processing the collection. If the one card in the bottom of the folder box had not been found, or if had been discarded, the outcome would have been less successful. This information was the key to unlocking many of the unknown elements in the collection of Ledger pages. The information provided multiple cross-references to resources, which validated the data.

Discussion
The study of the Mercantile Store Ledger was successful, with the application of the research method of triangulation that was discussed in the Literature Review. Validity of findings was a goal that was accomplished through observation, personal communication, and the discovery of related documents (Glesne and Peshkin). The resource from Porter emphasized the study of transportation in an area. The transportation that took place in Plymouth, which was located on the Tombigbee River, was an integral part of finding information related to the Mercantile Store, such as publications about steamboats on the river. The study of the Ledger demonstrated that knowledge about a locale could help to answer questions and lead to more reliable interpretations.
Archaeology was frequently involved in the Literature Review, as it was in resources related to the Mercantile Store and its location at an important geographical site in the early 1800’s. Darvill’s “frameworks for archaeology” revealed what he termed “curiosity-driven research” (2007, p. 439), which seems closely related to the path of the Ledger study. Inquisitiveness about new discoveries and the connections that are formed as a result lead to findings that were fascinating.

It was remarkable that credit ledgers in the article about the Baker Library at Harvard were the most used of the entire collection. Also, a trend was seen there which indicated that multiple disciplines used the ledgers from the 1800s for research. Another interesting observation was Gilliland-Swateland’s suggestion of a graduate certificate, with an applied research project, for a new emphasis in research education for archival students.

In conclusion, as a result of the study of the Smith Wright Mercantile Store Ledger 1841 – 1845, a previously unknown archive collection which concerned the local history of an area was made available for further research. Considerable gains about the body of knowledge surrounding the Ledger were made. The content and history of the collection were adequately documented and validated with the research method of triangulation. The process and importance of indexing in archives was learned and could be shared with others.

References


Appendix A  
Category/Subject/Theme Designations

ACCOUNT NAME designations:
1. Adventures in Corn Account
2. Building Account
3. Cotton Account
4. Hauling Account
5. Interest Account
6. School Account
7. Wagon & Horse Account

COMPANY NAME designations:
1. A. B. Marvin & Company
2. Aiken & Brown
3. Albert & Church
4. Albert & Kirkland
5. Alfred Edwards & Company
7. Barron, Mead & Company
8. Beach Ela. & Company
10. Bolling & R.
11. Bolling & Ramsen
12. Brown & Sterenof
13. Burrow Mead & Company
14. Charles Davis [New York]
15. Coldfire Pickens Coy.—David Smith [Company or County? Possibly—Coldfire Creek, Pickens County, Alabama?]
16. Colgate & Abbey
17. Cozent & Shelton
18. D. C. Lowber [Mobile]
19. DeForest, Morris & Company [Mobile]
20. E. Benedict & Son
21. E. S. John Bonner & Company
22. Eggleston & Brother
23. Eslara & Murrill [Mobile]
24. Ewing & Calhoun
25. F. Shaw & Company
26. Franklin & Brothers
27. Fry & Stringer
28. G. Lane & C. P. Tippett
29. Gaston Lumber Company—Benjamin Mason
30. Granger & Schench
31. Hale & Murdock Taylor [H. & M. Taylor]
32. Heinz [milliner]
33. Hodgson & Whitney [Mobile]
34. Holbert & Carrington
35. J. & A. Lowery [New York]
36. J. & C. B. Sanford [Mobile]
37. J. & C. Gascoigon [New York, Also written as Gasgoyne, C.]
38. J. D. Dissossway & Brothers [New York]
39. J. Eggleston & Company [Also written as J. N. Eggleston & Company]
40. J. M. S. & Company
41. J. M. Sumrall & Company
42. J. Petit & Company
43. James Baker & T. Carroll
45. Lyman & Howland
46. McGee Titles
47. Merchants Insurance Company
48. Parsonage Company
49. Phillips & North
50. Pierce & Mullen
51. R. L. Watkins & Company
52. Richards Kingslands & Company
53. Rolling & Blackwood
54. Swift & Hurlburt
55. T. P. Miller & Company
56. T. Smith & Company
57. Tillotson & Company
58. Toomer Gay & Company
59. Toomer Hayden & Company [Hadin]
60. Toomerly & Company
62. Tuscaloosa Manufacturing Company
63. Varnum Graham & Bibb [New York]
64. W. W. Pinneo & Company
65. Winston’s Manual
66. Wolfe & Gillespie
67. Wood & Swanzy

DOCTOR designations: [Look up each one to verify Dr.--these are sometimes Debit and Credit, written as Dr. and Cr. ALL VERIFIED April 10, 2012]

1. Dr. R. Owen [Ledger, p. 18+]
2. Dr. F. W. Irby Ledger, p. 134]
3. Dr. James Younger [Ledger, p. 422]
4. Dr. John Booth [Ledger, p. 159, possibly John F. Booth, p. 435 of Ledger]
5. Dr. Kilgrove [Ledger, p. 217]
6. Dr. Sykes [Ledger, p. 313]
7. Dr. Valentine [Ledger, p. 29a]
8. Dr. W. W. Humphries [Ledger, p. 166]
9. Dr. William Spillman [Ledger, p. 96+, and also p. 4 of “A Very Remarkable Bluff” by MUW Plymouth Bluff Center, states “Plymouth Bluff fossils first became well-known (to paleontologists) through the collections of Dr. William Spillman (1806-1886), Columbus physician and ordained Methodist minister.”

LOCATION designations:

1. Coldfire Creek, Pickens County, [Coldfire Creek, Pickens Co. Alabama?]
2. Columbus Democrat [Columbus, Mississippi]
3. County of Lowndes [Lowndes County, Mississippi]
4. Fayette County [Fayette County, Alabama]
5. Fayette County—A. J. Jourdan [Fayette County, Alabama]
6. Houston—L. Phillips [Houston, Mississippi]
7. Louisville—W. Phillips [Louisville, Mississippi]
8. Lowndes County—David Hardin [Lowndes County, Mississippi]
9. Marion County—Alex Thompson [Marion County, Alabama]
10. Mobile—Burrow Mead & Company [Mobile, Alabama]
11. Mobile—Chidsey & Baldwin [Mobile, Alabama]
13. Mobile—David Tillotson [Mobile, Alabama]
15. Mobile—Eslara & Murrill [Mobile, Alabama]
17. Mobile—J. & C. B. Sanford [Mobile, Alabama]
18. Mobile—Tillotson & Company [Mobile, Alabama]
19. Mobile—W. L. Truwitt [Mobile, Alabama]
22. New York—Charles Davis [New York]
29. Smith Wright & Company [New York]
30. Tuscaloosa—Tuscaloosa Manufacturing Company [Tuscaloosa, Alabama]
31. West Point—S. Powell [West Point, Mississippi]

MILITARY-TYPE designations:

1. Admiral Warren [Benoni Gray]
2. Captain Childs [Toomer & Gay]
3. Captain Dupre’
4. Captain J. M. Childs
5. Colonel Crute
6. Colonel Nimrod Davis
7. Colonel Samuel McGowen [Reverend S. McGowen]
8. Colonel Strong
10. Lieutenant Bt. (?) Lallarookh
    [Written as Lt. Bt. Lallorookh on p. 423 of Ledger; Found name of “Lalla Rookh” that was a steamboat
    “156 –ton stern-wheeler built in 1838; 900-bale capacity or higher; Upper Tombigbee trade, 1839-42;
    abandoned 1847”, p. 173 of The Tombigbee River Steamboats: Rollohores, Dead Heads, and Side-
11. Major William Dowsing, Sr.
12. Major William H. Craven

MISCELLANEOUS designations:
1. “a negro”         [“Jourdon” is written beside entry on p. 307]
2. “Bankhead boy”    [Written as entry on p. 320a]
3. “Barnett”         [“Shepherds' School” written beside entry on pp. 203, 232]
4. “Estate of Thomas L. Foster”    [Also written as “Est. of T. L. F.” on pp. 187, 257, 266, 276, 319]
5. “Harry at Jones’ Tavern”   [“Harry” written beside entry on p. 200]
6. “Horse & waggon 100”    [“George L. Burns” written beside entry on Credit side of ledger, on p. 262]
7. “Hughes’ boy”        [“Dick” written beside entry on p. 407]
8. “in the prairie”     [“William Bell” written beside entry on p. 9]
9. “military road”      [“Brown” written beside entry on p. 332]
10. “Murrah’s boy”      [“Jesse” written beside entry on p. 288]
11. “negro boy 1845”    [“Isaac” is written beside entry on p. 326]
12. “Sallie Smith s.”   [Sallie Smith sister?—Written beside Isaac R. Mordecai]
13. “Shepherds’ School” [“Moore” written beside entry on p. 216]
14. “ward of Lemk W. Ward”  [“Joshua O. Wood” written next to entry on p. 206]
15. “ward of Wiley Buck”  [“Caroline Wood” written next to entry on p. 252, 294, 344]

CHURCH or REVEREND designations:
1. M. E. Church [Methodist Episcopal]
2. M. E. Sunday School [Methodist Episcopal]
3. Reverend S. McGowan [Colonel Samuel McGowan]
4. Reverend W. Murrah
5. Reverend William Murrah
6. Reverend J. B. Spencer

SECURITY or AGENT designations:
1. Agent—William Baker
3. John Tucker Security—Charles Causby
4. Moses Foster Security—Hugh M. White

OTHER NAME designations: [Identified through entries in other archives resources]

1. Brown, Ovid P.  [“...served as treasurer of Lowndes County before 1835.”
   Book 1, Police Court Records, in W. E. Prout, 1973, p. 53;
   Also found on p. 195 of Ward, Rufus. Appendix 4. A Directory  of the
   Steamboats: Rolladores, Dead Heads, and Side-wheelers. Charleston, SC:

2. Dowsing, William [“...the Deputy surveyor whose surveys constitute the basis
   for the Gideon Fitz Maps and survey of Choctaw lands....”
   (Prout, W.E. 1973, p. 44)]
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<tr>
<th>Abbreviation</th>
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### Appendix C

**Example of entries in the Ledger Index**

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<td>A. B. Marvin &amp; Co. [see also Marvin &amp; Co., A. B.; also written as A. B. Marvin &amp; f. (family) on p. 177]</td>
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<td>Abbot, Eli</td>
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<td>Abbott, Jno. [John]</td>
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<td>Aiken</td>
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<td>Aiken &amp; Brown [see also Brown, Aiken &amp;]</td>
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<td>Albert &amp; Church [see also Church, Albert &amp;]</td>
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<td>Albert &amp; Kirkland [see also Kirkland, Albert &amp;]</td>
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<td>Alexander, L. F.</td>
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<tr>
<td>Alfred Edwards &amp; Co. [see also Edwards &amp; Co., Alfred]</td>
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<td>Allen, Wm. W. [William]</td>
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<td>Appling, R. A.</td>
<td>223a, 223c</td>
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<td>Arrington, N. O.</td>
<td>9, 12, 13, 46, 60, 72, 82</td>
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<td>Austin</td>
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</table>
A Collection Analysis of the African-American Poetry Holdings in the de Grummond Collection

By Sarah J. Heidelberg

Master’s Research Project, November 2010
Readers: Dr. M.J. Norton
Dr. Teresa S. Welsh

Introduction
Poetry is beneficial for both children and adults; however, many believe it offers more benefit to children (Vardell, 2006, 36). The reading of poetry correlates with literacy attainment (Maynard, 2005; Hall, 1989; Bryant & Bradley, 1985). It “introduces them to unfamiliar language, repetition, rhyming words, language patterns and words from an oral tradition” and consists of an “emotional, imaginative, and spiritual dimension” (Maynard, 2005, 35). According to Vardell, “sharing poetry can reduce stress, increase laughter, provide comfort, offer inspiration, give relief, mirror emotions, and reinforce identification—even for adults” (2006, 36). Poetry empowers children to make choices and express their thoughts and ideals (Maynard, 2005, 41).

Teachers have students use structured models to write poems and force memorization of “classic” poems. This act in itself can make poetry meaningless to children (Boudreau, 2009, 1). Many dislike poetry, calling it difficult and demanding, even irrelevant (Maynard, 2005; Phinn, 1992). Others call it “elitist or exclusive” (Maynard, 2005, 36). In an educational setting, poetry may be “not a challenge but a threat and a barrier to further exploration” (Maynard, 2005, 36; Phinn, 1992, 55). However, enduring an initial phase of dislike can lead to development of concentration and a realization that the words were selected for a certain effect they have upon the reader (Maynard, 2005, 37).

Children are attracted to poems with an “identifiable subject (like football) and recognizable characters” (Maynard, 2005, 40). This goes with the fact that in correlation to our Mississippi demographic, black children should be seeing more of themselves reflected in the collection.

Performance poetry is part of the new black poetry. This includes spoken word and slam. It has been said that the introduction of slam poetry to children can “salvage” an almost broken “relationship with poetry” (Boudreau, 2009, 1). This is because slam poetry makes a poets’ art more palatable for the senses and draws people to poetry (Jones, 2003, 17). Even if the poetry that is spoken at these slams is sometimes not as developed or polished as it would be hoped (Jones, 2003, 23).

It has been said that spoken word is more native to black cultural tradition than poetry in print (Jones, 2011; Major, 1969). However, in the last 10 years, the spoken word or slam poetry has been put into print. Each current artist’s work is chosen for its honesty, intensity, and beauty as opposed to some previously published black power poets whose poems may be mediocre and unsightly on the page (Jones, 2003, 18). The introduction of the Cave Canem Foundation and the Dark Room Collective contributed to the cleaning up of modern black poetry (poets.org). Some consider the founding of Cave Canem to be a major event in the history of African-American Literature. Workshops and support for new writers from such organizations shapes the development of black poets into becoming better crafters of poetry (Jones, 2003, 28).

Typically slam poetry anthologies “contain strong, gut-wrenching images and words. Cursing, sexual, racially strong, misogynist language prevails in many of the poems” (Boudreau, 2009, 6). “A thread of social justice, activism and counter authority runs through slam content” (Boudreau, 2009, 7). Slam teaches about culture and uses testimonial language (Boudreau, 2009; Sparks & Grochowski, 2002).

African-American poetry in general deals with certain themes such as, “family (including step-parents), history, Africa, slavery/freedom, urban life, skin color (shade), jargon/dialect, song rhythm, church/call and response, jazz, and blues” (Boudreau, 2009, 8). Some African-American poetry is particularly suitable for children, such as the poetry of Davida Adedjouma,
Eloise Greenfield, Walter Dean Myers, Nikki Grimes, Nikki Giovanni, and Joyce Carol Thomas. “Providing access to these collections can help children find a performance poem that reflects their own feelings -- even though they did not write the poem, there are shared values in the poetry to which they can relate” (Boudreau, 2009, 8). Boudreau states that children can “use other poet’s work as a scaffold to full-fledged poetry writing” (Boudreau, 2009, 9). “There is strong structure and word play in the best slam models ... Rules of substantial poetry writing apply, but the slammer can twist the rules to create a transformational poem” (Boudreau, 2009, 11).

Slam has evolved from African-American spirituals, the Harlem Renaissance, the beat poets and the black arts movement - even rappers (Boudreau, 2009, 4). A quicker bond is formed with the listener of slam poetry, than the reader of text on a page. Boudreau states that “oral poetry is more sophisticated than print poetry in that gesture, expressive tones, pacing can add color and meaning to the words” (Boudreau, 2009, 3).

There are various types of poetry apart from slam that are typically defined by eras. The 1991 article by Patton lists different historical eras of African-American Poetry. It is important to have a collection representative of each of these eras to fully document the art form as it has evolved through the years and relating to its history. The eras are listed as follows: (1700-1800) The Eighteenth Century Beginnings, which include slavery; (1800-1860) The Struggle against Slavery and Racism; (1861-1865) The Black Man in the Civil War - from which no new poets emerged; (1865-1915) Reconstruction and Reaction; (1915-1945) Renaissance and Radicalism- which also includes the Jazz Age (Patton, 1991, 1). The Poets.org “Poetic Schools & Movements” Web page lists some more current movements in African-American Poetry such as: (1945-1959) The Civil Rights Movement; (1960-1969/70) Black Arts Movement; (1986) Introduction of Slam Poetry; (1988) The Dark Room Collective.

Both the Patton article (1991) and Poets.org mention the Present Generation and have a list of poets from each era. Some of the poets from the Black Arts Movement and the Present Generation overlap. For example, though Patton lists LeRoi Jones and Nikki Giovanni as Present Generation poets; Poets.org lists LeRoi Jones and Nikki Giovanni as Black Arts Movement poets as well. This leads to the conclusion that such poets as LeRoi Jones (Amiri Baraka) and Nikki Giovanni have both continued their work and sphere of influence from their initial era to The Present Generation.

Statement of Problem

In “Does Your Library Reflect the Hispanic Culture? A Mapping Analysis,” Bailey maintains that, “the diverse needs, multicultural community, and learning differences should be considered in the development of the collection” and that “other ethnicities could be targeted in the same manner” (2009, 20). As stated, mapping analysis could be used to determine how well the de Grummond Collection reflects the African-American community. One of the diverse needs of a cultural minority is to preserve its roots and history; therefore, it is important for the African-American community to have the formative years of its poetry in the collection as well as poetry that is being explored by African-American children in the present day such as Slam Poetry.

A heavy historical influence on the Present Generation is the Harlem Renaissance (poets.org). Patton (1991) lists the era from 1915-1945 as Renaissance and Radicalism. During the Harlem Renaissance, African-Americans migrated from the South to Northern cities following World War I; they began to celebrate their heritage through an increase in economic and artistic opportunities (poets.org, “Poetic Schools & Movements”).

The period following Renaissance and Radicalism is The Black Arts Movement, from 1960-1970. It has its “roots in the Civil Rights Movement, Malcolm X and the Nation of Islam, and the Black Power Movement” (poets.org, “Poetic Schools & Movements”). Blacks sought to develop politically engaging works that explored African-American culture and history. The Black Arts Movement helped motivate The Present Generation of African-American poets as well as
Native American, Latino, and gay and lesbian poets (poets.org).

This study is a collection analysis of African-American Poetry for children and young adults found in the de Grummond Collection at The University of Southern Mississippi. This study examines the number of books of African-American Poetry the de Grummond Collection holds from The Harlem Renaissance and The Black Arts Movement and compares the holdings to a checklist of the names and works of the most well-known poets from both eras. This study includes an analysis of the total number of items in the collection from the selected time periods, publication date, whether illustrated or non-illustrated, whether for children or young adults, number of winners of Cave Canem Award or Coretta Scott King Award, a checklist comparison to Patten’s 1991 list of African-American Poets Past and Present, what portion of the works are in anthologies, and what terms are used to index the works examined in this study.

Research Questions

R1. How many African-American (AA) poetry books from The Harlem Renaissance and The Black Arts Movement are in the de Grummond Collection?

R2. What is the publishing date of the AA works of poetry in the de Grummond Collection?

a) How many AA poetry books released from 1915-1945 are available?

b) How many AA poetry books released from 1960-1970 are available?

R3. How many of the books are illustrated?

R4. How many books are for children and how many are for young adults?

R5. How many winners of the Cave Canem Award in poetry and the Coretta Scott King Award are available in the collection?

R6. What portion of AA poets found in de Grummond is on Patten’s 1991 list of AA poets past and present? What portion of AA poets found in de Grummond is on the poets.org list?

R7. What portion of AA poets are found in collections or anthologies of poetry most frequently?

R8. Which search terms are used to index African-American poetry in the collection?

R9. How many biographies of black poets are available in de Grummond?

Definitions

African-American (AA) – An American of African descent (Encarta, 2007)

Anthology – A collection of literary pieces, such as poems, short stories, or plays (Encarta, 2007).

Black – peoples relating to a U.S. ethnic group descended from dark-skinned African peoples (Encarta, 2007).

Cave Canem Foundation – meaning “Beware of the Dog” a protection for poets and a catalyst for unleashing vital, new voices into the literary world (http://www.cavecanempoets.org/mission).

Coretta Scott King Award – presented annually by the American Library Association to honor African-American authors and illustrators who create outstanding books for children and young adults (AALBC.com/books/related.htm, 2013).

Era – time period with its own chronological system: a time period within which years are consecutively numbered from a particular significant event that provides its starting point (Encarta, 2009).

LCSH – Library of Congress Subject Headings

Poetry – literary works written in verse, in particular verse writing of high quality, great beauty, emotional sincerity or intensity, or profound insight (Encarta, 2007).

Special collections – some collections are special in so far as they are acquired, processed, and shelved in a manner distinct from the majority of resources in the library (Mount Saint Vincent University Library, 2012).
Limitation of the Study

This study is limited to African-American poetry held in the de Grummond Collection at The University of Southern Mississippi.

Assumption

It is assumed that the works in Cook Library online public-access catalog (OPAC) are indexed accurately so that African-American poetry in the de Grummond Collection can be identified.

Importance of the Study

This study is important because it is beneficial to know where and how to access historical and rare materials relating to African-Americans. To have a collection that contains the essential poets from each era is an accomplishment. The de Grummond Collection is a special unit of the McCain Library Archives and many of the older or rarer books in the collection are obtained by donation. Knowing the location of such valuable materials can aid students and professionals in their research efforts.

Literature Review

Preserving Black Cultural Collections

African-Americans are trying to preserve their culture by having various cultural collections in historically black colleges, universities, and large African-American urban areas (Davis, 2008, 695). Across the U.S. these collections can now be found in museums and libraries; more than fifteen African-American academic library collections are mentioned by Davis.

There is a push to keep black poetry alive— not only by preserving it— but also by allowing opportunities for new poets to emerge (Mehta, 2006, 40). African-American Awards and organizations are intended to help grow the art of black poetry. For example, there is the African-American Review, Callaloo, Cave Canem Foundation, and Gwendolyn Brooks Writers’ Conference for Black Literature and Creative Writing (Mehta, 43).

Some question if a collection is for children and young adults, will they actually ever get to see the collection, or will only adults be allowed to peruse the collection? Visser did a study to find out whether outreach was being done to ensure that the young can encounter rare books. She sent a survey to 115 ARL special collection libraries asking for information on their outreach to children, K-12 (2006, 314): if their special collection was available to patrons under the age of eighteen, whether it hosts class visits by K-12 and if so, the number of K-12 classes they have hosted in the past year, which grade levels in the past year, which grade levels in the past five years (Visser, 2006, 314-15).

Seventy percent of the 115 institutions responded (Visser, 2006, 314). Ninety-nine percent of the institutions allow children under the age of 18, “with only one institution disallowing it” (314) and a quarter requiring adult accompaniment. Seventy-six percent of the institutions hosted K-12 visits. “The overall number of visits was … low with 61 percent hosting five or fewer classes in the past year” and “older students hosted more frequently” (315) as most institutions preferred not to work with grades K-6. The author gives advice on how to coordinate a special collections visit. It would be interesting to find out how many of the books have been used in-house or how many K-12 visits the de Grummond Collection has hosted.

Collection Analysis

Rajput wrote a helpful article entitled, “Questioning Your Collection” (2009). He offers 10 quick ways to analyze children’s books for racism and sexism based on question from “10 Quick Ways to Analyze Children’s Books for Racism and Sexism” (1974). He says that most books with stereotypes are written many years ago so the copyright date can give clues as to whether or not the book will be appropriate (Rajput, 2009, 68).

Bailey’s article, “Does Your Library Reflect the Hispanic Culture? A Mapping Analysis,” provides a checklist of information that a librarian can use to see if they have a properly growing Hispanic collection (2009, 20-23). Bailey used a mapping tool found at: www.irvingisd.net/bailey to assess the collection’s holdings (2009, 20). The tool begins with a checklist...
of Hispanic Authors/Illustrators, with a place for the number of books found and specific titles. Next, there is a checklist for Hispanic Topics/Keywords, which includes Spanish words and holidays as well as descriptors. Finally, there is a checklist of Biography Books of Hispanics that lists the names of the people, the number of books, and what they represent in Hispanic culture. Bailey also discusses the importance of having award-winning books in the collection.

It was not difficult to follow the same format as Bailey, but to substitute African-American Cultural aspects to the mapping tool. In this way, the methodology is similar: using a checklist to assess the completeness of a collection for a particular minority group.

Bolton did a study on Women’s Studies Collections. Similar to the Hispanic Culture study, she uses checklists. She addresses the issue of the lack of appropriate LCSH for women’s studies (Bolton, 2009, 221). The study employs a list from the Women’s Studies section of the Association of College and Research Libraries named “Essential Titles” for every Women’s Studies collection; the author chose 100 random titles from the 565 titles on the list (Bolton, 2009, 222). The OPACs of thirty-seven institutions’ libraries were checked. If the exact match existed it was recorded in a Microsoft Access database. The author used SQL queries to analyze the data (222).

The results were that ten institutions (27%) had between 80 - 89 percent of books on the checklist. Eight institutions had 90 - 100 percent of books (Bolton, 2009, 223). Twenty-three of the institutions held 70 percent or more of the books on the checklist (Bolton, 2009, 223). Ph.D. programs had the most holdings. The lowest holdings were institutions that only offered bachelor’s degrees.

**Methodology**

A mapping tool found at [www.irvingisd.net/bailey](http://www.irvingisd.net/bailey) was utilized as a checklist to assess the content of the de Grummond Collection. The African-American poets on the checklist are from Patton’s list of African-American Poets Past and Present: A Historical View. The poets’ names that are from the Black Arts Movement and contemporary eras have come from poets.org. A search was performed for each of these poets in USM’s OPAC.

A listing of the title, author, and date was recorded in a spreadsheet using Microsoft Excel. Names of books that are anthologies or collections of poets were included if the poet appears in such a work. It was noted whether or not the book has illustrations and whether the book is for children or young adults.

The number of books representing each era was recorded along with how many books released from 1915 to 1945 are available. The number of books released from 1960 to 1970 was recorded. The total number of times each poet is included in an anthology or collection was noted to determine which poets appear in anthologies or collections most frequently.

Search terms used to index African-American poets in the collection were examined and compiled. These may include LCSH, themes, as well as movements and were recorded in the mapping tool for topics/keywords from the Mapping Analysis. Books of biography on black poets were searched using the terms ‘biography’ and ‘poetry’ and found poets were cataloged on a spreadsheet using Microsoft Excel. The winners of the Cave Canem Award in poetry and the Coretta Scott King Award were noted.

**Results**

R1. How many AA poetry books from The Harlem Renaissance and The Black Arts Movement are in the de Grummond Collection?

The total number of African-American poetry books available from the Harlem Renaissance and the Black Arts Movement, was determined from a search of the USM OPAC. Only two books containing poetry from the Harlem Renaissance Era were found in the de Grummond Collection, *The Dream Keeper and Other Poems* (Hughes, 1932) and *Little Brown Baby* (Dunbar, 1940). Three books from the Black Arts Movement are in the de Grummond Collection: *I am the Darker Brother: An Anthology of Modern Poems by Negro Americans* (Adoff & Andrews, 1968), *I am a Black Woman* (Evans, 1970), and *Black Out Loud: An

R2. What is the publishing date of the AA works of poetry in the de Grummond Collection?

a) How many AA poetry books released from 1915-1945 are available?

b) How many AA poetry books released from 1960-1970 are available?

One book was published in 1932 and one in 1940 (the two books from Harlem Renaissance Era). One book was published in 1968 and two in 1970 (the three books from the Black Arts Movement).

R3. How many of the books are illustrated?

Of the 45 unique book titles in this study, 38 books (84%) are illustrated and seven (15%) are not illustrated. The large number of illustrated books is a reflection of the large number of children/juvenile books in the de Grummond Collection.

R4. How many books are for children and how many are for young adults?

Thirty-one books in this study (69%) are classified as children or juvenile and 14 (31%) are classified as young adult.

R5. How many winners of the Cave Canem Award in poetry and the Coretta Scott King Award are available in the collection?

Although none of the Cave Canem Award-winning books were in the de Grummond Collection, one, Narrative of the Live of the Brown Boy and the White Man (Wilson, 2008), was available at USM Cook Library and one, Domestic Work: Poems (Trethewey, 2000), was available in USM McCain Special Collections: Mississippiana (Natasha Trethewey is a native Mississippian, Poet Laureate of Mississippi, and U.S. Poet Laureate).

Soul Looks Back in Wonder (Feelings & Tehon, 1993) was the sole Coretta Scott King Award recipient in the de Grummond Collection.

R6. What portion of AA poets found in de Grummond are on Patton’s list of AA poets past and present?
What portion of AA poets found in de Grummond are on the poets.org list?

Each of the poets’ names on the combined checklist was checked searched in the USM OPAC. One fourth of the poets on the combined Patton list and poets.org list (25%) are in the de Grummond Collection. Three of the seven poets on the Patton List for the time period 1915-1945 (43%) have books in the de Grummond Collection. Four of the twenty-one poets on the poets.org list for the time period 1960-1970 (19%) have books in the de Grummond Collection.

R7. What portion of AA poets are found in collections or anthologies of poetry most frequently?

The poet’s name and title of work were noted for anthologies representing poets from the Harlem Renaissance and Black Arts Movement. Though there were anthologies containing works from the Harlem Renaissance and Black Arts Movement, the anthologies were, with the exception of one, written after 1970. Though the works were not published between the time frames of 1915-1945 and 1960-1970, the poets from these two eras are represented in the collection. All of the poets from Patton’s List for the time period 1915-1945 are represented in the collection through anthology. Only eight of the twenty-one poets on the poets.org list for the time period 1960-1970 are represented through anthology. Gwendolyn Brooks is represented in 15 anthologies. Nikki Giovanni is represented in 24 anthologies. Larry Neal, Sonia Sanchez, Ntozake Shange, Quincy Troupe, and Amiri Baraka are each represented once in anthologies in the de Grummond Collection. Perhaps the poets not mentioned are the lesser known poets from this era.

From the Harlem Renaissance, Langston Hughes was the most represented, with 43 anthology mentions. Forty-two percent of the anthologies are devoted to Langston Hughes. Twenty-three percent of the anthologies are devoted to Nikki Giovanni. Fourteen percent of the anthologies are devoted to Gwendolyn Brooks. Claude McKay and Countee Cullen were each
represented in four anthologies. Sterling Brown and James Weldon Johnson were both represented in two anthologies. Angelina Grimke and Arna Bontemps each had a mention in one anthology (Appendix, Table 1).

R8. Which search terms are used to index African-American poetry in the collection?

Search terms used to index African-American poets in the collection were examined and compiled into a list of twenty-two terms. The top search terms were: African American, Black, African American Women, Africa, Slavery, Freedom, Church, and Blues (Appendix, Table 2).

R9. How many biographies of black poets are available in de Grummond?

A checklist of poets using a combination of Patton’s List and the list at poets.org was consulted. From the Harlem Renaissance, four out of seven poets are represented in biography in the de Grummond Collection: Langston Hughes (14 biographical books), Claude McKay (5), James Weldon Johnson (4), and Arna Bontemps (1). From the Black Arts Movement, Lorraine Hansberry (5 biographical books), Gwendolyn Brooks (4), Hoyt Fuller (1), Nikki Giovanni (1), and are represented in the de Grummond Collection (Appendix, Table 3).

Conclusion

The de Grummond Collection at the University of Southern Mississippi currently holds one hundred percent of the poets from the Harlem Renaissance listed on Patton’s List in anthologies. The collection holds only eight out of twenty-one poets from the Black Arts Movement on the poets.org list. For a more complete collection, de Grummond could acquire anthologies or other works by the poets on the poets.org list.

The Black Arts Movement helped motivate The Present Generation of African-American poets as well as Native American, Latino, and gay and lesbian poets (poets.org, 2010, 11), so, it is important to have the poets of that time period adequately represented in the collection. Since the collection is available to those under the age of eighteen, it is appropriate to have the influence of the poets of that time period. As mentioned before, “Providing access to these collections can help children find a performance poem that reflects their own feelings— even though they did not write the poem, there are shared values in the poetry to which they can relate” (Boudreau, 2009, 8). Boudreau states that children can use other poet’s written work as “a scaffold to full-fledged poetry writing” (9).

One of the goals of the African-American community is to preserve its roots and promote the art of poetry writing (Mehta, 2006, 40). The best way to do this is to have poetic influences available for children (Boudreau, 2009, 8). At the time of this study, some poets are underrepresented in the collection; however, adding them to the collection can easily be done by adding anthologies that include them, although it would be desirable to have books by individual poets available as well.

To improve the study, more eras could be examined than just the two examined here. The biographies were combined from the Patton’s List of Poets Past and Present and poets.org. This checklist would be used to determine how many books from each of the poets there are and the number and names of anthologies from the various eras.

The mapping tool used would be helpful for other studies dealing with how much (and what percentage) of a collection is devoted to a particular culture. More specifically, if dealing with African-American culture, it would help assess the current state of a collection and its room for growth, and could help identify gaps in the collection (Bailey, 2009, 20).
References


Coretta Scott King Book Awards (2013). [AALBC.com/books/related.htm](http://www.aalbc.com/books/related.htm)


A Centennial Tribute to Langston Hughes
Paul Laurence Dunbar Web Site
**Table 1. African American Poets in the de Grummond Collection**

<table>
<thead>
<tr>
<th>POET</th>
<th># BOOKS</th>
<th># of Anthology mentions</th>
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<td><strong>Patton’s List (Harlem Renaissance)</strong></td>
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<tr>
<td>Langston Hughes</td>
<td>27</td>
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<tr>
<td>James Weldon Johnson</td>
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<td>Connee Cullen</td>
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<td>4</td>
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<td>Claude McKay</td>
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<td>Sterling Brown</td>
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<td>Angelina Grimke</td>
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<td>Arna Bontemps</td>
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<td><strong>Poets.org (Black Arts Movement)</strong></td>
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<tr>
<td>Nikki Giovanni</td>
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<td>Ntozake Shange</td>
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<tr>
<td>Mari Evans</td>
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<tr>
<td>Quincy Troupe</td>
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<td>1</td>
</tr>
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<td>Gwendolyn Brooks</td>
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</tr>
<tr>
<td>Sonia Sanchez</td>
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<td>1</td>
</tr>
<tr>
<td>Amiri Baraka</td>
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<td>1</td>
</tr>
<tr>
<td>Larry Neal</td>
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<td>1</td>
</tr>
<tr>
<td>Ed Bullins</td>
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</tr>
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<td>Jayne Cortez</td>
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<tr>
<td>Harold Cruse</td>
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</tr>
<tr>
<td>Hoyt Fuller</td>
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<td>Lorraine Hansberry</td>
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<td>Gil-Scott Heron</td>
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<td>Maulana Ron Karenga</td>
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<td>Etheridge Knight</td>
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<td>Adrienne Kennedy</td>
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<td>Haki R. Madhubuti</td>
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<td>Ishmael Reed</td>
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<td>John Alfred Williams</td>
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**Table 2. African-American Topics/Keywords**

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<th>TOPIC/KEYWORD</th>
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<td>Black</td>
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<td>African American</td>
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<tr>
<td>Africa</td>
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<td>African-American</td>
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<td>Freedom</td>
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<td>Church</td>
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<tr>
<td>Slavery</td>
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<td>African-American Women</td>
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<td>African American Women</td>
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<td>Blues</td>
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<td>Civil Rights Movement</td>
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<td>Rhythm</td>
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<tr>
<td>Dialect</td>
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<td>Urban Life</td>
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<td>Skin Color</td>
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<td>Harlem Renaissance</td>
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<td>Jazz Poetry</td>
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<tr>
<td>Slam Poetry</td>
<td>4</td>
</tr>
<tr>
<td>Topic/Keyword</td>
<td># Books</td>
</tr>
<tr>
<td>------------------------------------------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>Black History Month</td>
<td>3</td>
</tr>
<tr>
<td>Dark Room Collective</td>
<td>3</td>
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<tr>
<td>Negritude</td>
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**Table 3. Biographical Books on African-American Poets in the de Grummond Collection**

<table>
<thead>
<tr>
<th>Topic/Keyword</th>
<th># Books</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Patton’s List (Eighteenth Century Beginnings 1700-1800)</strong></td>
<td></td>
</tr>
<tr>
<td>Phillis Wheatley</td>
<td>7</td>
</tr>
<tr>
<td>Jupiter Hammon</td>
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<tr>
<td>Lucy Terry</td>
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<tr>
<td><strong>Patton’s List (Struggle Against Slavery &amp; Racism 1800-1860)</strong></td>
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<tr>
<td>George Moses Horton</td>
<td>1</td>
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<tr>
<td>Frances Watkins Harper</td>
<td>0</td>
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<tr>
<td><strong>Patton’s List (Reconstruction &amp; Reaction 1865-1915)</strong></td>
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</tr>
<tr>
<td>WEB DuBois</td>
<td>6</td>
</tr>
<tr>
<td>William Stanley Braithwaite</td>
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<tr>
<td>Paul Lawrence Dunbar</td>
<td>1</td>
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<td>Fenton Johnson</td>
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<tr>
<td><strong>Patton’s List (Harlem Renaissance 1915-1945)</strong></td>
<td></td>
</tr>
<tr>
<td>Langston Hughes</td>
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<tr>
<td>Claude McKay</td>
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<tr>
<td>Lorraine Hansberry</td>
<td>5</td>
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<tr>
<td>James Weldon Johnson</td>
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<tr>
<td>Arna Bontemps</td>
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</tr>
<tr>
<td>Contee Cullen</td>
<td>0</td>
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<tr>
<td>Angelina Grimke</td>
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<tr>
<td>Poets.org (Black Arts Movement 1960-1970)</td>
<td></td>
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<tr>
<td>Sterling Brown</td>
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<tr>
<td>Gwendolyn Brooks</td>
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<tr>
<td>Hoyt Fuller</td>
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<tr>
<td>Nikki Giovanni</td>
<td>1</td>
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<tr>
<td>Amiri Baraka</td>
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<tr>
<td>Ed Bullins</td>
<td>0</td>
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<td>Jayne Cortez</td>
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<td>Mari Evans</td>
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<td>Maulana Ron Kareenga</td>
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<td>Quincy Troupe</td>
<td>0</td>
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<tr>
<td>John Alfred Williams</td>
<td>0</td>
</tr>
<tr>
<td>Patton’s List (The Present Generation 1970-2010)</td>
<td></td>
</tr>
<tr>
<td>Gwendolyn Brooks</td>
<td>4</td>
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<tr>
<td>Robert Hayden</td>
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<td>Amiri Baraka</td>
<td>0</td>
</tr>
<tr>
<td>Owen Dodson</td>
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</tr>
<tr>
<td>Name</td>
<td>Quantity</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>----------</td>
</tr>
<tr>
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<td>Mari E. Evans</td>
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<td>Etheridge Knight</td>
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<td>Don L. Lee</td>
<td>0</td>
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<tr>
<td>Sonia Sanchez</td>
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<tr>
<td>Nikki Giovanni</td>
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</table>
Introduction
Evaluation and measurement of science emerged in the world, because it has always been assumed that science could help the health and welfare of the inhabitants of the earth. Identifying the most important individuals, institutions, universities and academic activities related to scientific production promotes collaboration and the exchange of information in various fields of science. The scientific community consists of producers, consumers, and scientific sources. Scientific cooperation plays an important role in promoting quality and quantity of scientific productions. The new results of research will be an accumulation of previous research and outcomes of the new research; the new research is then put into the body of scholarly knowledge.

Researchers use formal and informal scholarly communication. Formal communication includes or consists of published materials that have been reviewed by peers such as scholarly journals. Informal scholarly communication can be meetings, calls between researchers, and pre- and post-prints. Garvey (1979) states, “communication is the essence of science.” Abelson as cited in Lacy and Busch believes that, “without communication there would be no science” (1983, p.193).

Besides the publication of scholarly articles, collaboration is very important in the scientific community, and one of the forms of collaborations is co-authorship in which two or more authors collaborate to create scientific work. In recent years, factors such as specialization and the growth of interdisciplinary research have prompted researchers to cooperate with each other. Because of the nature of fields and the differences among them, scientific collaboration and cooperation in various fields of science are different. In some fields, the need to have access to laboratory facilities, materials, and manpower in a research project is so great that some people travel to other countries or regions to use their facilities and work with other scientists. In these cases, co-authorship is a natural result of collaboration.

Some research studies visualize the co-authorship network by using software. Co-authorship creates a link between two or more authors, and these links form networks. These networks contain very important information about authors, and the authors' collaborative patterns, as well as the authors' status in the structure of networks.

There are four kinds of networks: social networks, information networks, technology networks, and biological networks (Newman, 2003). Co-authorship networks are a type of social network. Scientometric studies analyze the ranking of the people in a social network, looking for the importance of the people or the centrality of them (Chakrabarti & Faloutsos, 2006; Getoor & Diehl, 2005).

There are studies that have examined co-authorship in various methods, for instance, investigating writing patterns and producing qualitative papers (Durden & Perry, 1995; Vimala & Reddy, 1996; Maske et al., 2003; Englebrecht et al., 2008; Cho et al, 2010), surveying the relationship between co-authorship and international collaboration (Frenken et al., 2005; Kim, 2006), and visualizing co-authorship networks by using scientometric software (Braun et al., 2001; Acedo et al, 2006; Chakrabarti & Faloutsos, 2006; La Rowe et al, 2007; Qi et al, 2008; Gossart & Özman, 2009; Lu & Feng, 2009; Velden et al., 2010). These authorship networks include important information about the authors and can indicate patterns of collaboration and the situation or placement of authors in the structure of the network. The main objective in the analysis of social networks is the ranking of people in the social network.
Studies of co-authorship in Iran have been published. For example, Hassanazadeh et al., (2009) and Hayati and Didgah (2010) studies focused on clarifying scientific collaboration in all fields of science and explored the relationship of collaboration to citation. Additional studies focused on the relationship of collaboration with the geographical location (Velayati, 2008; Didgah & Erfanmanesh, 2009). Rahimi and Fattahi (2008) used a questionnaire to examine co-authorship among faculties of a university. Osareh & Wilson (2002) studied Iranian articles in SCI for periods of 1995-1999 and 1975-2002. Their study indicated that Iranian authors collaborated most frequently with authors in the United States.

Some studies have explored the reasons and motivation behind collaborating in scientific fields. For example, Harirchi et al. (2007), in an exploratory study, investigated the patterns of collaboration among Iranian researchers in Biology, Chemistry, and Physics. The main collaborative motives behind co-authorship were identified and described. Among those mentioned were sharing laboratory devices, accessing knowledge, and increased efficiency of the study at hand. It is clear that emigrated Iranian scientists play an important role as collaborators and probably also as links to the international scientific communities as a whole. Cultural factors mix scientific and work-related ones. Other results showed that international collaborations are very low among Iranian researchers.

In analysis of co-authorship networks of the Iranian researches, Hassanazadeh and his colleagues looked at 625 documents from Iran Medical University in the Web of Science database up to 2007. Their results indicated that in five different fields, just three authors wrote their papers individually, which reflects the high willingness of authors to collaborate with others (Hassanazadeh et al., 2009). Pashootanizadeh and Osareh (2009) analyzed citations from 2000 to 2008 and visualized scientific maps of agricultural. They tried to determine core institutes and authors, contributions, core journals, growth rate of scientific productions, the format, and language of the documents.

Hariri and Nikzad (2011) surveyed co-authorship networks of Iranian articles about or regarding library and information science, psychology, management, and economics in ISI in 2000-2009. The results indicated that most contributions had two or three authors. Also researchers in psychology have the highest coefficient of collaboration, and library and information science had the lowest. Management had the greatest degree of consistent collaboration, and psychology had the least degree of consistent collaboration in the co-authorship network.

The purpose of this research was to conduct scientometric analysis of scientific products, as well as to visualize and analyze co-authorship networks in scientific works of the Sharif University of Technology (SUT) in 2005-2010. The results of this study provide enlightenment on collaboration, provides a tool for strategic planning of research in this particular university, and provides insight into tools to develop in the future.

In particular, the research focused on:

R1. What is the number of scientific publications per year from 2005 to 2010 in SUT and what is the trend of growth of the scientific products during that time?

R2. What types of documents and in what language are the scientific products from SUT?

R3. What countries most frequently collaborated with SUT?

R4. What are the core journals in which SUT’s products have been published?

R5. What universities and institutes have collaborated with SUT?

R6. Who are the most productive and effective researchers in SUT?
R7. What is the distribution of citations per papers?

R8. What is the level of productivity of published papers by one author, two authors, or three or more authors at SUT?

R9. What is the proportion of single and co-authored publications of researchers of SUT?

R10. What is the nature and the structure of co-authorship networks of SUT’s scientific products?

Sharif University of Technology (SUT) is a university of higher education in technology, engineering, and physical sciences in Tehran (Iran) that was established in 1966. It is one of the most prestigious universities in Iran, and is considered Iran’s MIT. Currently, Sharif University has 12 science and engineering departments—Materials Science and Engineering, Chemical Engineering, Petroleum Engineering, Chemistry, Civil Engineering, Computer Engineering, Electrical Engineering, Industrial Engineering, Mathematical Science, Mechanical Engineering, Physics, and Aerospace Engineering. There are only two non-engineering departments, which are the Philosophy of Science department and Management and Economics department, which offer exclusively PhD and M.Sc. graduate degrees.

**Methodology**

This study is a descriptive approach with scientometric method. The population of this research comprises documents produced by SUT authors and indexed in Web of Science (WOS) during 2005-2010. Data were gathered from ISI Web of Science (WOS) database on July 17, 2011 based on the following query: “AD=Sharif Univ Technol AND PY=2005-2010.” There were 4378 items (including articles, papers from proceedings, abstracts, etc.) retrieved. Each of the items was categorized according to Web of Science (WOS) subject categories. Following the work of Batagelj & Mrvar (2009), HistCite and Pajek software were used to identify the most cited and affective work and to visualize the co-authorship networks. Two indexes, Local Citation Score (LCS) and Global Citation Score (GCS), were calculated. LCS index consists of citations in the collection to the author, and GCS index is citations in Web of Science to papers by author in the collection.

The proportion of co-authored publications to the single-authored publications was calculated using the following formula:

\[
\text{Co-authorship ratio} = \frac{\text{No. of Coauthored Publications}}{\text{No. of Single-authored publications} + \text{No. of Coauthored Publications}}
\]

According to Sutter & Kocher (2004), a ratio greater than 0.5 indicates more co-authored than single-authored publications, and a ratio of less than 0.5 indicates more single-authored than co-authored publications. The density (the ratio of the number of actual edges to all possible edges in graph with the same number of nodes) of each network was calculated to find which networks are dense and which are sparse.

Density is between \( \frac{m}{n(n-1)} \)

where \( m \) is the number of links or lines and \( n \) is the number of nodes or vertices in each network (Hariri and Nikzad, 2011).

**Results**

*R1. What is the number of scientific publications per year from 2005 to 2010 in SUT and what is the trend of growth of the scientific products during that time?*

The total number of papers in the Web of Science (WOS) database by researchers of Sharif University of Technology (SUT) was 4378. As indicated in Figure 1A, there was growth in the number of scientific publications from 403 works in 2005 to 1048 works in 2010.
In order to calculate trend of growth of the scientific products in SUT, the following formula was used:

$$PR = \left(\frac{V_{\text{Present}} - V_{\text{Past}}}{V_{\text{Past}}}\right) \times 100$$

Where PR = percent rate, $V_{\text{Present}}$ = present or future value and $V_{\text{Past}}$ = past value.

Fig.1B shows the pattern of growth of the scientific publications in SUT including a considerable surge that occurred in 2005-2007, whereas growth slumped in 2008 and peaked in 2009. There is then a drastic plunge in publication from SUT in 2010 with a dramatic fall from 31.92 to 1.84.

The geometric mean is used to calculate the average annual growth rate of works in this period. Results showed that this rate was 32 percent; as previously mentioned, there are breaks in the growth of publications in some years.

R2. What types of documents and in what language are the scientific products from SUT?

The results of the analysis of the type of documents showed that the documents were in seven different formats. As expected, articles were the most frequent type of format with 4085 titles; proceeding papers were the next highest in frequency with 183 titles, and also had the most citations according to LCS and GCS indices (Table 1).

<table>
<thead>
<tr>
<th>Document Type</th>
<th>Recs</th>
<th>LCS</th>
<th>GCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Article</td>
<td>4085</td>
<td>46</td>
<td>16487</td>
</tr>
<tr>
<td>Article; Proceedings Paper</td>
<td>183</td>
<td>3</td>
<td>519</td>
</tr>
<tr>
<td>Meeting Abstract</td>
<td>27</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Editorial Material</td>
<td>25</td>
<td>0</td>
<td>29</td>
</tr>
<tr>
<td>Correction</td>
<td>18</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Review</td>
<td>17</td>
<td>0</td>
<td>213</td>
</tr>
<tr>
<td>Letter</td>
<td>9</td>
<td>0</td>
<td>14</td>
</tr>
</tbody>
</table>

Table 1. Document Type of Scientific Publications in 2005-2010 (N.4378)

As shown in table 2, the documents were published in three languages. English accounted for 4361 documents and was the highest rank in terms of numbers and GCS and LCS indices. It shows that English is the dominant language in science and in the ISI databases. Only three documents were not written in English.
R3. What countries most frequently collaborated with SUT?

The analysis of documents indexed in ISI showed that SUT’s researchers collaborated with 59 countries. Table 3 shows the five most frequent countries participating in the scientific production with SUT.

<table>
<thead>
<tr>
<th>Country</th>
<th>Recs</th>
<th>LCS</th>
<th>GCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>244</td>
<td>2</td>
<td>957</td>
</tr>
<tr>
<td>Canada</td>
<td>198</td>
<td>4</td>
<td>919</td>
</tr>
<tr>
<td>UK</td>
<td>153</td>
<td>1</td>
<td>780</td>
</tr>
<tr>
<td>Germany</td>
<td>96</td>
<td>0</td>
<td>410</td>
</tr>
<tr>
<td>France</td>
<td>90</td>
<td>0</td>
<td>594</td>
</tr>
</tbody>
</table>

Table 3. The top countries participating in the production of Scientific Publications with SUT in 2005-2010 (N.4378)

R4. What are the core journals in which SUT’s products have been published?

One of the most important channels of exchange of scientific information is scientific journals. Table 4 shows the core journals publishing SUT’s scientific publications from 2005 to 2010 based on the number of papers and LCS and GCS indices. *Materials Science and Engineering* contained 77 titles, *Materials and Design* had 70 titles, *Scientia Iranica* holds 68 titles, *Journal of Materials Processing Technology* included 49 titles, and *Journal of Alloys and Compounds* had 46 titles. These journals were the most frequent publishers of scientific articles from SUT faculty and are found in Table 4A. Table 4B and 4C detail the five core journals that had the highest rank based on LCS and GCS respectively.

<table>
<thead>
<tr>
<th>Journals (A)</th>
<th>Recs</th>
<th>LCS</th>
<th>GCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATERIALS SCIENCE AND ENGINEERING A-STRUCTURAL MATERIALS PROPERTIES MICROSTRUCTURE AND PROCESSING</td>
<td>77</td>
<td>0</td>
<td>475</td>
</tr>
<tr>
<td>MATERIALS &amp; DESIGN</td>
<td>70</td>
<td>3</td>
<td>301</td>
</tr>
<tr>
<td>SCIENTIA IRANICA</td>
<td>68</td>
<td>0</td>
<td>29</td>
</tr>
<tr>
<td>JOURNAL OF MATERIALS PROCESSING TECHNOLOGY</td>
<td>49</td>
<td>0</td>
<td>236</td>
</tr>
<tr>
<td>JOURNAL OF ALLOYS AND COMPOUNDS</td>
<td>46</td>
<td>0</td>
<td>238</td>
</tr>
<tr>
<td>Journals (B)</td>
<td>Recs</td>
<td>LCS</td>
<td>GCS</td>
</tr>
<tr>
<td>PROCEEDINGS OF THE INSTITUTION OF MECHANICAL ENGINEERS PART I-JOURNAL OF SYSTEMS AND CONTROL ENGINEERING</td>
<td>7</td>
<td>5</td>
<td>11</td>
</tr>
<tr>
<td>MATERIALS &amp; DESIGN</td>
<td>70</td>
<td>3</td>
<td>301</td>
</tr>
<tr>
<td>CHAOS SOLITONS &amp; FRACTALS</td>
<td>25</td>
<td>2</td>
<td>262</td>
</tr>
</tbody>
</table>
Table 4. Core journals in which SUT’s products have been published in 2005-2010 (top 5).

Notes: (A) Core Journals publishing SUT’s scientific products based on a number of papers; (B) Core Journals publishing SUT’s scientific products based on a LCS index; (C) Core Journals publishing SUT’s scientific products based on GCS index.

R5. What universities and institutes have collaborated with SUT?

The data indicated that 1017 institutes and universities were contributors to the items retrieved. The five most active contributors after analysis based on LCS and GCS are found in Table 5. Islamic Azad University is the highest ranked.

R6. Who are the most productive and effective researchers in SUT?

Results suggested that from 2005 to 2010, 5562 works from researchers in Sharif University were indexed in Web of Science. The five researchers ranking the highest in records and according to the two indices found in Table 6. Haeri (69 titles), Simchi (69 titles), Pourjavadi (65 titles), Zad (56 titles), and Akhavan (53 titles) were the most productive authors. The most effective authors according to LCS index were Haeri, Tavazoei, Jafari, Alasty, and Ahmadian and GCS index were Saidi, Azizi, Simchi, Akhavan, and Shahokhian, respectively.

Table 5. The top five Institutions participating in the production of Scientific Publications in 2005-2010.

Notes: (A) The top institution participating in the production of scientific publications based on a number of papers; (B) The top institution participating in the production of scientific publications based on a LCS index; (C) The top institution participating in the production of scientific publications based on GCS index.
Table 6. The most productive and effective authors in SUT (top 5).

Notes: (A) Core Journals publishing SUT’s scientific products based on a number of papers; (B) Core Journals publishing SUT’s scientific products based on a LCS index; (C) Core Journals publishing SUT’s scientific products based on GCS index.

R7. What is the distribution of citations per paper?

An analysis of the citations used by the researchers allows us to determine the dissemination of their scientific ideas and influence on other researchers that used them as a source of knowledge and new ideas (Osca-Lluch et al, 2009). The number of citations of a publication shows the impact of the work in the field of science. The citation analysis section in Web of Science (WOS) database was used to analyze distribution of citations per paper. Results suggested that there are 13488 citations to 4378 works produced by SUT. The average citation per 4378 papers produced by SUT’s researchers has been 3.07 citations (Figure 2).

R8. What is the publication pattern from 2005 to 2010 of single authors, two authors, or three or more authors at SUT?

For the purpose of determination of writing patterns, author field in Web of Science (WOS) database was searched and data were classified into three groups—one author, two authors, and three or more authors. Figure 3 shows writing patterns among SUT’s authors during 2005-2010. Results indicated that the level of productivity for single-author or one author products is stagnating and the number of publications with two and three or more authors is increasing sharply. It showed authorship by three or more is the dominant type of authorship; this could indicate that cooperation (co-authorship) is of an acceptable level among SUT’s researchers.
Figure 2. Average Citation per paper in 2005-2010

Figure 3. Publication pattern of SUT’s authors in 2005-2010
R9. What is the proportion of single and co-authored publications of researchers of SUT?

Papers with at least two authors or more are considered as collaborative. Results showed 96.2 percent of productions were co-authored and only 3.8 percent of them were single authored publications (Figure 4). Using the co-authorship ratio formula, the proportion of coauthored productions to single authored publications was determined to be 0.96 percent, which indicates that the number of co-authored productions is more than single authored productions in these periods in SUT.

R10. What is the nature and the structure of co-authorship networks of SUT’s scientific products?

A network is called “sparse” if the number of lines in the corresponding graph is of the same order as number of vertices. Networks are called “dense” if the number of lines is much higher than the number of vertices (De Nooy et al., 2005). It should be noted that drawing the network for subjects including chemistry, physics, mathematics, electrical engineering, and computer engineering were not provided, because of the high number of data and software limitation in data analysis. Therefore, these subjects were divided into sub-categories. In total, according to the subject categories of Web of Science (WOS), 25 subjects were determined, and each of them was illustrated co-authorship networks.

Co-authorship networks of 25 subjects were visualized but only the five networks with high density are shown. The co-authorship networks of five disciplines are illustrated in Figures 5-9. In these networks, vertices (nodes) represent authors, the size of vertices (nodes) are the number of productions they have authored. Lines or links showed the links of the author, and the thickness of links represents the number of coauthor events. Figure 5 shows one large authorship component and five smaller but still significant authorship components, in which Jalali, Parastar, Shahrokhiyan, and Gholikhani have the most co-authorship connections with others. In Figure 6, there is one large component and Soltanie and Pourjavadi have the most co-authorship connections with others. Figure 7 has one larger component and three rather large components, in which Saidi, Azizi, Moghadam, Taheri, MirJafari, and Hashemi have the most co-authorship connections with others.

There are two large components in Figure 8 in addition to six other rather large components, in which Tabar, Sadeghi, Ejtehadi, Darbandi, Jafari, and Zobdeh have the most co-authorship connections with others. Figure 9 shows has one large component and three additional large components and Akbari, Ghorbani, and Hatami have the most co-authorship connections with others.

Figures 4-9 are found on the following pages.
**Figure 4.** Proportion of single and coauthored publications

**Figure 5.** Co-authorship network in Chemistry Analytical
Figure 6. Co-authorship network in Polymer Science

Figure 7. Co-authorship network in Chemistry Organic
Figure 8. Co-authorship network in Physics Fluids Plasmas

Figure 9. Co-authorship network in Mathematics
Table 7 shows the results of the analysis (number of vertices, lines, density, and degree of vertex) in 25 subjects. It should be noted that the degree of a vertex is the number of lines incident with it. Vertices with high degree are more likely to be found in dense sections of a network (De Nooy et al., 2005). As shown in Table 7, civil engineering has the largest number of nodes (237) and physics applied has the highest number of links (870) to other subjects. Analytical chemistry (0.08890), polymer science (0.07510), and organic chemistry (0.07050) have the highest density, and manufacturing engineering (0.01440), material science (0.1590), and industrial engineering (0.01670) are the most discrete among authors. The results also suggested that the average number of links connected to a vertex (degree of vertex) in networks of organic chemistry (8.8819), physical chemistry (8.3799), and physics fluids plasma (8.3125) were the maximum, which indicated that, for example, each author in organic chemistry connected with 8 authors.

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Number of Vertices (Notes)</th>
<th>Number of Lines</th>
<th>Density</th>
<th>Degree of Vertex</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEMISTRY ANALYTICAL</td>
<td>89</td>
<td>348</td>
<td>0.08890</td>
<td>7.8202</td>
</tr>
<tr>
<td>POLYMER SCIENCE</td>
<td>37</td>
<td>100</td>
<td>0.07510</td>
<td>5.4054</td>
</tr>
<tr>
<td>CHEMISTRY ORGANIC</td>
<td>127</td>
<td>564</td>
<td>0.07050</td>
<td>8.8193</td>
</tr>
<tr>
<td>PHYSICS FLUIDS PLASMAS</td>
<td>128</td>
<td>532</td>
<td>0.06490</td>
<td>8.3125</td>
</tr>
<tr>
<td>MATHEMATICS</td>
<td>91</td>
<td>252</td>
<td>0.06150</td>
<td>5.5385</td>
</tr>
<tr>
<td>ENGINEERING PETROLEUM</td>
<td>64</td>
<td>234</td>
<td>0.05710</td>
<td>7.3125</td>
</tr>
<tr>
<td>NANO SCIENCE NANO TECHNOLOGY</td>
<td>70</td>
<td>274</td>
<td>0.05670</td>
<td>7.8286</td>
</tr>
<tr>
<td>OPTICS</td>
<td>134</td>
<td>428</td>
<td>0.04800</td>
<td>6.3881</td>
</tr>
<tr>
<td>CHEMISTRY PHYSICAL</td>
<td>179</td>
<td>750</td>
<td>0.04710</td>
<td>8.3799</td>
</tr>
<tr>
<td>MECHANICS</td>
<td>115</td>
<td>288</td>
<td>0.04390</td>
<td>5.0087</td>
</tr>
<tr>
<td>ENGINEERING AEROSPACE</td>
<td>63</td>
<td>168</td>
<td>0.04300</td>
<td>5.3333</td>
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Discussion and Conclusion:
The results of the present study indicate that there was growth in the number of scientific productions of Sharif University in 2005-2010, but there were fluctuations in the rate of growth. Overall the rate of growth of the scientific products in SUT was 32 percent in this period. Price (1963), in his book Little Science, Big Science, noted that the number of scientific articles doubles every 15 years. Such growth cannot be attributed to only one factor and it can be concluded that this growth is part of the nature of science (Price, 1963).

The results indicated that there are more articles and documents in English and that they have the highest citations according to the LCS and GCS. This coincides with Pashootani and Osareh’s research (2009). Of the 59 countries collaborating with Sharif University, the USA, Canada, UK, Germany, and France are top collaborators in producing scientific works.

Of the 1017 universities and institutes that collaborated with Sharif University, there were five that were most active. Azad Islamic University ranks the highest. It is speculated that the following types of collaborative activities between the faculties of Sharif University and Islamic Azad University are reasons for their ranking: teaching, guiding theses, and research projects. In addition, one could infer that the collaboration among faculty of one institute (the writers of articles are in one institute, organization, or university) and multi-institutional collaboration (at least one of the writers are from another organization, institute or university) have a higher rank and international collaboration has the lower rank. It seems that using the experiments and guidance of international institutes and making contracts can develop and promote international researches in Sharif University.

Harirchi et al.’s research (2007) confirmed that Iranian researchers had the lowest international collaboration in all fields of science. Benefits of scientific international collaboration have always been discussed by scientists and policy makers, and it also has been an important research topic in the field of scientometric and quantitative researches of science and technology. Policy makers should pay more attention to collaboration and should provide further areas of cooperation. Haeri, Simchi, Pour Javadi, Zad, Akhavan wrote most articles, and Haeri, Tavazoei, Jafari, Alasti, Ahmadian according to LCS index and Saeedi, Azizi, Sim Chi, Akhavan, Shahrokhian according to GCS are the most effective ones in production of Sharif University. There are 13488 citations to 4378 works of Sharif University from 2005-2010 and in average; every work is cited 3.07 times which is deemed an acceptable level of collaboration. The results indicated that publications by single authors are declining and that co-authorship is rising steadily. The results showed that collaboration is at an acceptable level in Sharif University with coefficient 0.96. Durden and Perri (1995), Vimala and Reddy (1996), Englebrecht et al. (2008), Maske et al. (2004), and Durden and Gaynor (2003) confirmed that co-authorship has led to increased production of articles and cooperation is growing dramatically. The following are factors that the literature reports as leading to co-authorship: reducing the costs of technology and communication, using the knowledge and facilities of others, increasing productivity, increasing the probability of acceptance of articles in journals, and increasing visibility.

Civil engineering had the largest number of nodes and applied physics had the highest number of links among the 25 subjects. The results indicated that analytical chemistry, polymer science, and organic chemistry had the highest density. Organic chemistry, physical chemistry, and physics fluids plasma had the highest average number of links connected to a vertex (degree of vertex) of links according to vertex index.

It is expected that this paper will provide the financial authorities at Sharif University with reason to give research committees appropriate facilities and budget for more faculty projects. It is proposed that the university provide possibilities for the exchange of knowledge between universities, both inside and outside of the country. Additionally, faculty would benefit from training practices that focus on writing scientific papers, increasing
familiarity with databases, and increasing their familiarity with foreign languages; this should be done in order to increase the production of scientific projects.

References


