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# Library Instruction and Themed Composition Courses: An Investigation of Factors that Impact Student Learning

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## **Keywords**

Information literacy instruction Value of libraries English Composition First –year college students

#### **Abstract**

Many academic libraries partner with English composition in order to teach first year students skills related to academic research and writing. Due to the partnership between information literacy and first-year writing programs, it is important to evaluate how these programs can best support one another. The purpose of this study was to examine the impact of two factors on student information literacy skill development: library instruction and section theme—defined here as class sections of the English 102 (ENG 102) program developed around a central topic selected by the instructor. A random sample of annotated bibliographies from 95 sections of ENG 102 were scored with two information literacy rubrics in order to find out if scores differed between sections based on the variables of library instruction and theme. The results of this study indicate that sections of the ENG 102 program that attended an information literacy instruction session scored significantly higher on the annotated bibliography assignment than sections that did not attend. We also found that themed sections of ENG 102 scored marginally higher on the annotated bibliography than non-themed sections of ENG 102. Implications for further research are discussed, including the potential impact of theme-based writing on information literacy learning.

## Introduction

On many college and university campuses, English composition holds the dual distinction of being both a gateway course for academic writing and research as well as a requirement for graduation. The high impact nature of these courses makes them a focus for many academic library instruction programs, and the information literacy literature is filled with case studies of collaborations between the library and English composition. Due to the natural partnership between information literacy and first-year writing programs, it is important to continue to evaluate how these programs work in tandem and can best support one another.

At the University of Nevada, Las Vegas, the library has developed a robust relationship with English 102 (ENG 102) and participates in ongoing assessment of the information literacy instruction component of the course. In ENG 102, the culminating assignment is an 8-10 page research paper; in

preparation of this final assignment, students complete an annotated bibliography and research paper proposal. An evaluation of these annotated bibliographies and accompanying proposals has been the cornerstone of our assessment of first-year students' information literacy skills in terms of identifying areas where students need more support. However, the authors realized that these bibliographies can also be used to shed light on how students best learn skills related to developing a research topic, finding quality sources, and evaluating information. We were especially interested in examining the impact of two factors on information literacy skill development: library instruction and section theme—defined here as class sections of the ENG 102 program developed around a central topic selected by the instructor.

The purpose of this study is to explore the variables of library session attendance and enrollment in a themed section of ENG 102 to see if either variable correlates with how well students scored on the annotated bibliography assignment. Our central research questions were "Do sections of ENG 102 that attend an information literacy instruction session at the library perform better on the annotated bibliography than sections without library instruction?" And "Do sections of ENG 102 that have a theme perform better on the annotated bibliography than non-themed sections?" The authors aim to contribute to the scholarship on the impact of library instruction as well as offer additional data on factors that can lead to improved information literacy learning. By examining variables related to both the library and the composition program, we hope to provide recommendations that enable librarians and their campus partners to maximize opportunities for student academic success.

#### **Literature Review**

Since this study examines two potential factors that influence student learning, theme-based course sections and library instruction, the literature review is comprised of two parts. The review of information literacy literature explores varying viewpoints regarding the efficacy of the single course period instruction, commonly called "one-shot" library instruction. The composition literature uncovers differing ideas on the benefits of theme-based composition courses, namely the importance of authenticity and self-direction in student learning. In both cases, it is clear that more exploration needs to be done on how these factors relate to student learning in the context of first-year, novice researchers.

Information Literacy Literature: Impact of Library Instruction on Student Learning

A review of the literature shows that many instruction librarians are deeply invested in understanding the factors that correlate with student success, and many studies examine the impact of one-shot instruction on student learning. One pattern that emerges from the literature is a conflict regarding the efficacy of one-shot library instruction. Instruction librarians are still working to understand how to make the most of their time with students and which instruction program models are most beneficial to student learning.

There are a number of studies that give credence to the impact of the one-shot session on student learning. In many of these cases, researchers examined a student work product to see how the skills taught in the instruction session were developed in the context of a course assignment. King and Ory (1981), Hovde (2000), and Webster and Rielly (2003) all evaluated student research paper bibliographies to examine the types of sources selected and how students evaluated those sources. All three studies found that library instruction improved the quality of the bibliographies. Likewise, Emmons and Martin (2002) compared research papers from before and after a new inquiry-based instruction program took effect and found that one-shot sessions that focused on the process of inquiry led to an increased use of academic journal articles and library databases (Emmons & Martin, 2002).

It is also interesting to note that two studies that assessed the benefits of information literacy instruction, but did not directly examine student work, also found that one-shot library instruction had a positive impact on student learning. Spievak and Hayes-Bohanan (2013) asked students not currently enrolled in a course with a library instruction component to evaluate websites and search results and then complete a survey that asked about students' previous experiences with library instruction. Those students that had previously had a library instruction session made better judgments about the information and also were more efficient at completing the task. The authors suggest that this may point to information literacy as a "latent skill"—that learning is most apparent when "the environment is conducive and usefulness is self-sufficient" (Spievak & Hayes-Bohanan, 2013, p. 495). This notion is echoed in a study by Saunders (2003), in which instruction was found to have a positive effect on reference services—students who had attended an information literacy instruction session were more likely to ask for reference assistance, which Saunders attributed to them becoming more sophisticated library users.

However, there is compelling evidence that one-shot instruction sessions simply are not conducive to deep, lasting student learning, though they may have other benefits, including increased feelings of confidence with using the library. Ursin, Lindsay, and Johnson (2004) conducted a citation analysis of final projects from a freshmen seminar course and found that while only 8% of the students used resources recommended by the librarian, students anecdotally reported feeling "more comfortable" with library research after the instruction session. Portmann and Rousch (2004) used a pre- and post-test methodology to test their hypothesis that library instruction has a significant impact on both the development of student research skills as well as increased student use of the library, but found that only use of the library increased as a result of instruction, not research skills.

Other studies have a decidedly more bleak outlook for one-shot library instruction; after comparing average course grades from students in sections of a course that had information literacy instruction to sections with no instruction, Coulter, Clarke, and Scamman (2007) found that there was "no clear benefit of information literacy instruction to students' performance" (159). The authors point out that there are so many variables involved with the final grade assigned in a course, that "isolated visits cannot hope to overcome" all of them (Coulter, Clarke, & Scamman, 2007, 159). Similarly, Martin (2008) investigated whether or not library instruction had any impact on the types of sources used by undergraduate education majors. It was found that scores were not statistically significantly related to attending a library session; with minimal association between library instruction and student use of quality academic sources, Martin argues that "it is time for librarians to seriously consider alternative practices" to one shot instruction (Martin, 2008, p. 12).

Martin's urge to consider alternatives to the one-shot is well-worth considering, and librarians have begun to examine the value of other instruction program models, including strategically placing information literacy instruction throughout different levels of the curriculum (Bowles-Terry, 2012), advocating for full-semester information literacy courses (Cook, 2012; Wang, 2006), increased collaboration between librarians and teaching faculty, including co-teaching (Hearn, 2005) and training-the trainer approaches (Samson & Granath, 2004), and programs that allow for multiple library sessions over the course of the semester (Gilbert, 2009; Booth, Lowe, Tagge, & Stone, in press). It is heartening to see the discussion expanding beyond one-shot instruction, but many instruction librarians are still only afforded a small amount of class time with students. It is therefore important to continue to develop our knowledge about best practices for these one-shot sessions, and to investigate elements that have impact on student learning.

Composition Literature: Impact of Theme-Based Courses on Student Learning

In an academic program as important and complex as composition, it is unsurprising that there are varying ideas on how best to go about the crucial task of teaching first year college students how to

write. Some scholars and instructors discuss the basic function of composition programs as exposing students to and teaching them to write within various "genres"—that is, how to write for varying academic disciplines, audiences, purposes, and what different formats of writing, such as newsletters, memos, essays, poems, or reports, necessitate (Bawarshi, 2003; Beaufort, 2012). Even more specifically, Lovitt and Young (1997) describe the purpose of composition as teaching transactional writing—the writing students will use as professionals, citizens, and as they go about their daily lives. A basic tenet, therefore, of many composition programs is an emphasis on the *process* of writing, not the subjects about which students write.

This focus has shifted slightly with the introduction of cultural studies into some composition courses. Fitts (2005), Friedman (2013), and George and Trimbur (1995) all discuss the use of popular culture as a means to draw students in and increase engagement. This may take the form of popular culture materials appearing as readings in standard composition course texts, but these can still cover a wide array of subjects and may not be focused around a cogent theme. Some composition scholars are therefore engaged in an exploration of the benefits or detriments to pursuing such a themed course—a composition class centered around a subject selected by the composition instructor. Students may respond to texts, focus their class discussions, or develop their research topics around this theme.

Developing a themed course can have some problematic aspects. For example, researching materials for these classes is time consuming, and since many composition courses are taught by already over-taxed graduate students or adjunct instructors, it is not often feasible for them to thoughtfully choose readings, prepare lectures, or design activities and discussions around a theme (Friedman, 2013). In addition, some caution against themed courses in fear of the subject matter eclipsing the actual teaching of writing—it is easy for the theme to "steal" the focus of the class away from the process piece of the curriculum (Heiman, 2013; Adler-Kassner, 2012). It is also difficult to determine what is an appropriate or feasible theme for a first-year writing class—the field has not yet come to a consensus of what these classes should look like or what kinds of reading and writing assignments they should contain (Beaufort, 2012).

There are however, proponents of themed first year writing courses and many composition programs that embrace theme-based courses. Beaufort (2012) argues that without a sound understanding of subject matter, student writing is vague and unclear; students who only read the standard course text, with its varied topical readings, are "not as equipped to write with as much subject matter expertise as they would if a single theme is pursued, from different angles, over the span of the course" (Beaufort, 2012). Likewise, Foley (2001), Friedman (2013), and Heiman (2013) argue that theme can be used to inspire and engage students, which leads to deeper learning and the development of critical thinking skills. This is echoed in the work of Sommers and Saltz (2004), in which 400 students from Harvard's class of 2001 were followed in a longitudinal study of undergraduate writing. When students were surveyed about their best writing experiences, students cited opportunities to write about a topic that mattered to them.

In order to create these dual student experiences—engagement in a topic as well as guided development of expertise in that topic, best practices from composition literature suggest that themes should be focused, but still broad enough to enable many different avenues of intellectual inquiry; themes should be developmentally appropriate, intellectually challenging, and not be politically charged or contentious, which students may have a hard time grappling with (Beaufort, 2012; Friedman, 2013;

<sup>&</sup>lt;sup>1</sup> Examples of composition programs that are using theme-based writing classes: Harvard (<a href="http://writingprogram.fas.harvard.edu">http://writingprogram.fas.harvard.edu</a>); Princeton (<a href="http://www.princeton.edu/writing/">http://www.princeton.edu/writing/</a>); Stanford (<a href="http://www.temple.edu/english/fywp/">http://www.temple.edu/english/fywp/</a>); Duke (<a href="http://www.temple.edu/english/fywp/">http://www.temple.edu/english/fywp/</a>); University of Pennsylvania (<a href="http://writing.upenn.edu/critical/">http://writing.upenn.edu/critical/</a>)

Sponenberg, 2012). It is still on the onus of individual composition programs and instructors, however, to develop themes that meet these criteria. Ultimately, the literature recommends choosing themes that are flexible enough to capture the interest of an entire class of students and simplistic enough that little class time needs to be devoted to teaching the subject matter of the theme. Due to the time-consuming nature of creating and sustaining themes that meet these requirements, it is important to find out if theme is a factor that does indeed impact student learning, especially in the context of the research process.

The mixed results and theories on the effectiveness of both library instruction and theme-based course sections demonstrate that there is a need for additional research in these areas. This study hopes to provide insight and recommendations on how information literacy instruction and themed courses can positively contribute to student learning, as evidenced by student performance on the ENG 102 annotated bibliography project.

#### Methods

#### Instrument

The annotated bibliography assignment is comprised of two parts: a paper proposal, in which students identify their research topic, articulate an argument, and provide an overview of their research process; and the actual annotated bibliography, in which students summarize and critically evaluate at least five of their selected resources. We therefore developed two rubrics: the Proposal rubric and the Annotated Bibliography rubric. The literature on authentic assessment provides a great deal of information on best practices for creating and applying rubrics (Mertler, 2001; Arter and McTighe, 2001; Moskal, 2003; Stevens & Levi, 2005; Maki, 2010), including studies specifically on the development of rubrics in an information literacy context (Oakleaf, 2009; Fagerheim & Shrode, 2009; Hoffman & LaBonte, 2012). The two rubrics were created using these best practices, including selection of outcomes, articulation of what characterizes student work as exemplary, average, or poor for each outcome, and revising the rubrics based on test applications of student work (Rinto, 2013).

For the Proposal rubric, three criteria were selected for evaluation based on the assignment description: topic selection, use of sources to focus topic, and development of a thesis statement. Performance indicators were assigned as "level 0—not evidenced," "level 1—developing," and "level 2—competent." The purpose of this rubric was to capture information about how students were approaching their research—how they selected topics and developed arguments. Because each student would only produce one proposal, the Proposal rubric was applied once to each student's work.

The Annotated Bibliography rubric addressed three areas: use of evaluative criteria currency, use of evaluative criteria relevance, and use of evaluative criteria authority. These evaluative criteria were drawn from the Annotated Bibliography assignment sheet, which states that students should address these elements when critically evaluating their sources. As with the Proposal rubric, there were three performance indicators to represent the range of student work: "level 0—not evidenced," "level 1—developing (using evaluation criteria at face value)," and "level 2—competent (using evaluation criteria critically)". The goal of this rubric was to identify to what extent, if at all, students evaluated their information sources (Rinto, 2013). The Annotated Bibliography rubric was designed to evaluate the individual annotations in each bibliography, and was applied to each student's work five times, since students were to complete at least five annotations. These five annotations were scored individually on the 2 point scale and then aggregated for a total of 10 possible points for each of the three criteria (currency, relevance, and authority).

#### **Participants**

In 2012-2013, ENG 102 sections varied based on two important factors: whether or not they were a themed section, and whether or not they attended a library instruction session to support the annotated bibliography assignment. ENG 102 instructors decided at the beginning of the semester if they wanted to develop a theme for their sections. This entailed selecting an overarching theme and centering all course readings and writing assignments around that theme, including the students' choice of topic for their own annotated bibliography and research paper. If a section was non-themed, course readings could be on a variety of topics, and student writing and research projects could be on any topic of their choosing. Since instructors do not receive their teaching assignments until near the start of the semester, after that semester's course registration, students do not register for a course based on theme. That is, students do not self-select into a themed course based on interest. In this study, there were 55 themed sections and 37 non-themed sections scored by the Proposal rubric, and 55 themed sections and 40 non-themed sections scored by the Annotated Bibliography rubric.

Instructors also had the option of whether or not to bring their class to a library session. The library session was designed to support the learning outcomes of the annotated bibliography project—topic development, searching in an academic database, and evaluating information resources. These learning outcomes remained the same regardless of which librarian taught the instruction session. Instructors chose whether or not to bring their class to the library; both themed and non-themed sections took advantage of this option. In this study, the Proposal rubric scored work from 78 sections that attended a library session and 14 that did not; the Annotated Bibliography scored work from 80 sections attended a library session and 15 that did not.

## Sampling

For internal programmatic assessment purposes, the English composition program already uses a form of systematic sampling for collecting student work, where the work from every 5th, 10th, and 15th student in each section is collected, though some instructors turned in as many as 4 papers while others turned in none at all. Only sections that submitted at least 3 papers were included in this study. In the 2012-2013 academic year, there were 127 sections of ENG 102. Not all sections submitted a completed project—92 sections submitted 3-4 copies of paper proposals and 95 sections turned in 3-4 copies of the annotated bibliography. Since each component of the project had a discrete rubric and were scored separately, we included all sections that turned in the required minimum of 3 projects, even if those projects were incomplete.

In compliance with IRB protocol, the ENG 102 Coordinator removed the student's name and identifying information from each annotated bibliography before giving them to the authors. Section numbers were retained so that we would be able to analyze the variables of library attendance and section theme. Because these variables apply to an entire section of a course, not only an individual paper, for our unit of analysis we used average section scores, not individual paper scores. For each of the rubric criteria, we used the aggregated mean rank for each ENG 102 section in order to give the most reliable score point—instead of analyzing an individual proposal or bibliography, we aggregated the scores of the 3-4 proposals or bibliographies from each section to provide the best estimate of how students in a particular section performed.

#### **Procedures**

The application of the Proposal and Annotated Bibliography rubric occurred twice, at the end of the Fall 2012 and Spring 2013 semesters. After the student work was collected and section information for each paper was recorded, the author trained a group of three other librarians to apply the rubrics to student work. Each semester, we conducted two, 2-hour training sessions for each rubric. The first two trainings only concentrated on the Proposal rubric, and the subsequent training sessions were for the Annotated Bibliography rubric; the process was the same for each rubric. The author used a training

process based on the recommendations of Oakleaf and Maki (Oakleaf, 2009; Maki, 2010). The author introduced the annotated bibliography assignment to the group, explained the rubric and criteria, and conducted a read-aloud of several sample papers so the group could see how to apply the rubric (Rinto, 2013). Each librarian then individually scored an identical set of student work, the group discussed differences in scoring, and worked toward a shared understanding of how to apply the rubric.

At the conclusion of the norming for each rubric, the author calculated the group's interrater reliability using Fleiss's kappa and Conger's kappa, which modify Cohen's kappa to adjust for agreement between more than two raters (Stemler, 2004; Oakleaf, 2009; Fleiss, 1971; Conger, 1980; Gwet, 2010). For the Fall 2012 norming sessions, the group of raters never reached sufficient agreement, so the author used the suggested "tertium quid" method for resolving dissimilar ratings (Johnson, Penny, and Gordon, 2008, p. 241). This method involves having each paper scored twice, by two different raters, with a third rater serving as an adjudicator to resolve any scoring differences. At the end of the Spring 2013 scoring sessions, agreement between the four raters was at least 0.70 for all of the rubric criteria, which is "substantial agreement" according to the Landis and Koch index for interpreting kappa statistics (Landis & Koch, 1971). This means that for this semester, the group had a shared understanding of how to apply the rubric and the student work could therefore be divided equally between the four raters. After the training, the author put electronic copies of each librarian's assigned scoring set into their corresponding folder in Google Drive. The librarians had 2-3 weeks to score their set of papers and record the scores on a Google Form, which was linked to an electronic spreadsheet. In the case of the Fall 2012 papers, any scores that did not match between the two assigned raters were reconciled by a third rater from the group, and that final score was the one recorded.

The author then prepared the data for analyses in the SPSS statistical package. Each paper was assigned a unique identification number, and the corresponding rubric scores, section number, and variables Section Theme (yes, no) and Library Attendance (yes, no) were recorded.

#### **Results**

## **Proposals**

Analyses included a two-tailed analyses of variance (ANOVA) using data on library attendance and section theme based on a 2 (Theme: yes, no) x 2 (Attendance: yes, no) between-subjects factorial design in which the two independent variables (section theme and section library attendance) each had two levels (yes or no). The unit of analysis was the continuous mean rank (range = zero to two) for each section of ENG 102 using either three or four randomly selected students from each section. Each section had approximately 25 total students; thus, a random sample of students provides an estimate of the theme and attendance treatments for each of the 95 sections of ENG 102 used in the study; of these 95 sections, 3 sections were missing proposals.

There were three variables on which paper proposals were scored: topic development, use of sources to focus topic, and development of thesis statement. We conducted three separate analyses, one for each outcome score, due to the narrow range of scores (i.e., zero to two). A Pearson correlation test was performed and found that these three variables are not strongly correlated with one another (i.e., r < .30), suggesting they assess separate dimensions of student learning. All three variables met assumptions of normality; thus, we used parametric ANOVA to compare the mean ranks.

## Quantitative Analysis

The data was analyzed using the SPSS statistical package. Significance levels are reported using p < .05, .01, or .001 depending on probability of significance reported in the SPSS output. Table 1 shows the means, standard deviations, and number of participants for the four groups.

#### Table 1

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- 1		Themed	Non-themed
		Hiemeu	Non-themed

Library Attendance		
	Mean SD (N = 48)	Mean SD (N = 30)
Attendance		
Topic Development	1.47 0.38	1.38 0.32
Use of Sources	0.86 0.48	0.78 0.35
Thesis Statement	1.73 0.29	1.74 0.31
	Mean SD (N = 7)	Mean SD (N = 7)
No Attendance		
Topic Development	1.32 0.42	1.00 0.00
Use of Sources	0.56 0.50	0.90 0.16
Thesis Statement	1.64 0.47	1.58 0.36

None of the interactions for the three outcome variables reached the p < .05 criterion. However, for the topic development variable, both the attendance F(1, 88) = 6.65 and theme variables F(1, 88), MSe = 3.92 reached significance at the p < .05 level of significance. Those who attended library sessions outperformed (M = 1.41, SE = .04) those who did not (M = 1.16, SE = .10). Similarly, those in themed classes outperformed (M = 1.39, SE = .07) those without a theme (M = 1.19, SE = .07). No other effects reached significance.

## **Annotated Bibliographies**

The three bibliography scores were analyzed using a 2 (Theme: yes, no) x 2 (Attendance: yes, no) x 3 (Annotation score: currency, relevance, authority) repeated measures analyses of variance (ANOVA) in which the theme and attendance variable were between-subject independent variables (i.e., individuals are one or the other, but not both), and the outcome scores were within-subject manipulations (i.e., each individual received all three annotation scores). The unit of analysis was the composite rubric score (range = zero to 10) for each section of ENG 102 using the same three or four randomly selected students from each section. The increase in sections between annotated bibliographies and proposals is due to more sections only turning in the annotated bibliography without the accompanying proposal. Since the proposals and bibliographies were scored separately and examined different skill sets, the difference in the sample size is not an issue.

For the annotated bibliographies, three outcome variables were used to assess student work: use of evaluative criteria currency, use of evaluative criteria relevance, and use of evaluative criteria authority. A Pearson Correlation test was performed and found that the three variables were not significantly correlated and assessed three different skills. There was a small positive correlation between use of evaluative criteria relevance and use of evaluative criteria currency, but the correlation (r=0.27) was not significant. Thus, the three variables were not combined into a single score because they are examining discrete skills. The variables of relevance and authority met the assumptions of normality and the scores represented a normal range. Use of evaluative criteria currency was skewed negatively due to the majority of students scoring very low on this variable. We used a Mauchly's test of sphericity provided in the SPSS analysis output to determine if the homogeneity of variance assumption was met. This test compares whether the three annotation scores have equal variances and adjusts automatically if they do not. Mauchly's test was significant due to restriction of range in the currency variable; thus, we adjusted for all within-subject tests using the Huynh-Feldt adjustment provided in the SPSS output to control for bias due to unequal variances.

**Quantitative Analysis** 

Table 2 shows the means, standard deviations, and number of participants for the four groups.

Table 2

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	Themed	Non-themed
Library Attendance		
	Mean SD (N = 47)	Mean SD (N = 33)
Attendance		
Currency	1.06 1.92	0.44 0.70
Relevance	5.87 2.64	4.44 2.53
Authority	4.53 2.41	4.23 2.59
	Mean SD (N = 8)	Mean SD (N = 7)
No Attendance		
Currency	0.38 0.46	0.47 0.76
Relevance	3.47 2.79	2.35 1.87
Authority	4.82 2.01	4.42 2.20

In order to examine the effect of theme and/or attendance on summed annotation score, we conducted a comparison of between-subject effects for the theme, attendance and theme X attendance variables. This comparison revealed a marginally significant effect for the attendance variable, F (1, 91), MSe = 3.95 at the p = .06 level of significance. Those who attended library sessions outperformed (M = 3.42, SE = .16) those who did not (M = 2.65, SE = .37).

A comparison of within-subject effects for the annotation score, theme, attendance and interactions terms showed a significant attendance X annotation interaction, F (1.84, 91), MSe = 5.05 at the p = .01 level of significance. In this case, a significant interaction is observed when the gain (i.e., higher annotation scores) observed in one group (i.e., attendance) is statistically greater than the other group. Those who attended library sessions outperformed (M = 3.42, SE = .23) those who did not (M = 2.65, SE = .55). A significant within-subject main effect also occurred for the annotation score variable, F (1.84, 91), MSe = 54.23 at the p = .001 level of significance. Scores for authority (M = 4.50, SE = 3.44) and relevance (M = 4.03, SE = 3.64) were significantly higher than those for currency (M = .59, SE = .20), while the authority and relevance scores did not differ from one another. No other effects reached significance.

## Discussion

The results of this study suggest that attending a library instruction session has a significant positive impact on student performance on the annotated bibliography project, at least in terms of the information literacy skills we assessed with our rubrics. In particular, student work from sections that attended a library session scored significantly higher on the topic development criterion on the Proposal rubric, as well as the relevance and authority evaluative criteria on the Annotated Bibliography rubric. Since the library session was held at least a week before the writing projects were due, this study goes beyond an evaluation of the library session itself, and rather examines how students integrate information literacy skills into their authentic course assignments. Contrary to the literature that suggests one-shot sessions are not beneficial, our study supports research that indicates this model of instruction can lead to student learning of research and information literacy skills (King & Ory, 1981; Hovde, 2000; Emmons & Martin, 2002; Webster & Rielley, 2003; Saunders, 2003; Spievak & Hayes-Bohanan, 2013).

Though we know students who attended a library session performed better in terms of topic development and their use of evaluative criteria relevance and authority, we must be careful not to confuse correlation with causation and imply that the library session is the only reason these sections scored higher. There are, however, some characteristics of the library instruction session that allow us to conjecture about why the library attendance variable had a significant positive impact.

First, the library session spent a significant amount of time on the concept of topic development. An activity using the resource CQ Researcher walked student through identifying different points of view about their topic, selecting sub-topics, and establishing context through background information. Second, the library session emphasized the outcome of source evaluation. We introduced our "CRAAP test" handout, which underscores the importance of considering currency, relevance, and authority (along with accuracy and purpose, which were not part of the ENG 102 annotated bibliography assignment, so they were not examined in this study). The concepts of authority and relevance were also covered during the session during broader discussions around scholarly vs. popular sources, and appropriate uses of each. Therefore, the content of the library instruction session is one reasonable factor in the high significance of the library attendance variable in these areas.

The uniformity of the library session may also be worth noting; though the individual librarians that taught these sessions may have approached the outcomes differently, all sessions shared the same outcomes. Therefore, topic development, keyword searching, and source evaluation were taught in every library session, and the ENG 102 instruction librarians shared worksheets, handouts, and classroom assessments.

Finally, the motivation of the ENG 102 instructor may also play a role in how their sections' scored on the two rubrics. Since scheduling a library session was at the discretion of the ENG 102 instructor, those who did bring their classes to the library may have done so because they placed greater emphasis on the research process. These instructors may have given more support to the annotated bibliography assignment in class, or spent more time on teaching these concepts, simply because they valued these learning outcomes.

The present findings also suggest that composition section theme is a variable that is worth further exploration. While in this study, having a theme only had a marginal positive impact on annotation score, we also found that theme certainly did not negatively affect performance. In fact, section theme did reach significance on one criterion on the Proposal rubric: topic development. This echoes the proponents of themed courses, especially Beaufort's recommendation that in-depth knowledge of subject matter is essential for intellectual exploration (Beaufort, 2012). However, in our present composition program, themes vary widely based on instructor style and preference. Some themed sections are carefully developed over many semesters, while others are developed much closer to the beginning of the semester in which they are taught. Since instructors have the choice of whether or not to theme their sections, not all instructors choose to go this route and may not fully understand the various components involved when developing a theme.

Also, themes are not always listed in the course description when students register for classes, so students are not self-selecting into themes they are already interested in—which, according to the literature, may impact student engagement; unless the theme is flexible enough that students still have a great deal of choice in their research topics, an imposed theme can be more controlling—and detrimental to learning—than it is beneficial (Friedman, 2013; Beaufort, 2012; Sommers & Saltz, 2004). Nevertheless, according to our results, students who are given more structure regarding course content and research topic selection do better than students who are able to select their own topics—not significantly better, but the positive trend is certainly worth exploring in terms of information literacy learning and "buy-in" to the research process. It is also plausible that a combination of section theme and information literacy instruction targeted around that theme (such as a subject-specific database,

examples used in instruction that relate to the theme, etc.) would capitalize on the positive trends for both of these variables and create a deeper learning environment for first-year writing students.

Three criteria examined by the rubrics did not reach significance, for either of the two variables (library attendance and section theme): use of sources to focus topic, development of a thesis statement, and use of evaluative criteria currency. These scores were all low, regardless of library attendance or section theme, and suggest that these skills need to be reinforced and supported for all ENG 102 students. Many students did not discuss their research process at all in the paper proposal, resulting in lower scores ("not evidenced"). If students are revising their topics based on what they find as they search, they are not explicitly stating so. Though the assignment prompts them to discuss their search strategies, this may need to be emphasized more by instructors and librarians if we want to learn anything about how students revise and narrow their research topics. Additionally, the lower scores for thesis statement development could be related to the timing of the assignments and how they fit into the student research process: at the time of the proposal, which is due several weeks before their final research paper, many students are still in an "exploratory" phase—their research questions often prompt them to learn more about their topic, and many do not state an argument or persuasive stance. This may be appropriate for novice researchers, and librarians and instructors should support students in making the transition from an informative piece to a persuasive essay. Finally, we were surprised by how many students do not evaluate their sources based on currency. Regardless of the variable (library attendance or section theme), the scores for currency ranged between 0.38-1.06 on a ten point scale much lower than the other evaluative criteria examined. Currency was discussed at the same time as relevance and authority when we went over the "CRAAP test," so it is curious that students used this criteria much less than the other two. It is worth further exploring the idea of how students account for the date of their information sources, as well as how we can more effectively teach this concept.

The findings of this study will be used to reinforce the library's relationship with the ENG 102 program, which already fully supports our role as partners in education. However, as we advocate for more face time with the students—through a pre-library session class visit and post-library session research consultations, it will be important to note that even attending one library session has a significant effect on student information literacy skills. These findings will also be useful for communicating the value of the library instruction to campus partners outside of ENG 102. As our library continues to partner with teaching faculty in both lower- and upper-division courses, having local data that supports our role in student learning will be increasingly important. It is also important to communicate our findings on theme-based sections of ENG 102 so that the program coordinator can consider how theme should be used and developed in future semesters.

#### Limitations

One limitation of this study is the high variability in the content and robustness of section theme, which may be one reason our results showed only marginal positive impact of theme on annotation score. Currently, instructors who choose a theme develop it during a graduate teaching seminar and receive approval of their theme from the English composition program. But since many of these instructors are new to teaching college research, it becomes difficult for many instructors to find readings on their theme and sustain it over the course of the whole semester. The librarians anecdotally reported encountering sections that were listed as themed at the start of the semester, but by the time students were researching for their final paper, the theme was not strictly enforced. It's therefore hard to know the degree to which a theme was used throughout the semester.

The study is also limited by the small scale of the assessment instrument; the rubrics only had 3 score levels, which limits the details we can glean about student learning. The rubrics were designed to capture a simple snapshot of student application of information literacy skills—if they were present at all, and if so, if the student had more than a basic understanding of a particular concept. Now that we

have statistical evidence of the benefit of library instruction, a more detailed assessment instrument may be useful for determining more sophisticated levels of student understanding.

## *Implications and Recommendations*

One recommendation for future research is for longitudinal study on the continual development of library session content. After an initial review of these findings in 2013, we made changes to our library instruction program for the 2013-2014 academic year. A Topic Narrowing Tutorial was used as a pre-library session activity to free time in the library session to allow for more dedicated time on the learning outcome of source evaluation. In many cases, students still needed to use a great deal of class time to sufficiently narrow their topics, so this strategy did not always work as intended. However, a preliminary review of the annotated bibliographies produced in Fall 2013 and Spring 2014 shows some small improvements on source evaluation; an ongoing evaluation of student work will be needed in order to fully understand how changes to the library instruction program impact student learning.

As stated above, more research on the benefits of themed composition courses is also warranted. While much of the composition literature is focused on the theoretical arguments for or against theme-based writing, additional studies that look at the practical benefits or detriments of theme on student learning are needed. It is recommended that a more controlled study on themed sections is conducted, in which instructors have more time, resource support, and training in the development and application of their themes, and in which theme is the only variable that differs between two sections (i.e., the instructor, assignments, and learning supports remain the same while one section is themed and the other is non-themed).

#### Conclusion

The results of this study suggest that the variables of library instruction and section theme have significantly positive and marginally positive impacts, respectively, on annotated bibliography score. In particular, student work from sections of ENG 102 that attended a library session scored significantly higher on the topic development criterion on the Proposal rubric, as well as the relevance and authority evaluative criteria on the Annotated Bibliography rubric. Section theme had a significant positive impact on the topic development criterion on the Proposal rubric; on the Annotated Bibliography rubric, theme had only a marginal positive impact. These results indicate that library instruction contributes to information literacy skill development as evidenced by a course assignment, and point toward the possibilities of section theme as a contributing factor. If information literacy instruction programs and English composition continue to partner in teaching students research-based writing skills, a combination of targeted library instruction and well-developed themed courses has the potential to deeply impact student learning.

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