Supporting Source Integration in Student Writing

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A cross-disciplinary team of composition, communication, and library faculty used lesson study to investigate interdisciplinary instructional strategies to improve students' use of quoting in their writing. The team developed a three-class lesson plan to introduce the concept of quoting, practice the concept, and allow students to reflect on their use of quotations in their writing. We collected a pre and post quiz to measure students' understanding before and after the lesson, students' practice paragraphs, students' reflections, and students' final course research assignments. These samples were analyzed by the research team. Our evidence suggests that students can articulate how a quote from a source should be integrated into their writing by describing how they would use a signal phrase and quotation marks, but they have difficulty in applying this complex skill in their own writing even after focused instruction on how to use quotes.

In a changing information landscape, the challenges of teaching ethical and responsible use of sources in the 21st century has become more important, but also equally challenging, across the disciplines. Recognizing these challenges, five faculty representing the library, writing center, communication, and first-year composition programs partnered on an interdisciplinary project. Bringing these varied perspectives together helped to strengthen our understanding of what it means for students to integrate sources into their writing appropriately. This article presents our project of supporting source integration in student writing utilizing the lesson study method. We were drawn to lesson study as a research process by the work of Cerbin (2011). He described lesson study as "a method through which teachers can build the kind of *pedagogical content knowledge* that could not only improve their own teaching but move the practice of teaching forward in their fields" (p.105, italics in the original). Lesson study offered an empirical look advocated by Howard (2014) that would evaluate the effectiveness of our citation instruction.

At our college the problem of source integration appears each year when the composition program reviews first-year student writing, with integration and citation of sources as the lowest scoring areas on the assessment rubric. The rubric looks at both how students use the source to support their ideas and how they format their quotations. Historically, students' performance on the criteria measuring their ability to integrate and cite sources is lower compared to performance on other rubric criteria. To address this issue, the composition coordinator suggested utilizing a lesson study design in an effort to improve student source integration in courses across our curriculum. A call was made to interested parties in other disciplines to participate in the lesson study, and an invitation was extended to the library faculty member assigned to the English and Communication Department.

To improve students' integration of sources, our interdisciplinary team collected information about the effectiveness of a lesson plan that was focused on developing students' ability to appropriately integrate a quotation into their writing. This lesson plan was structured so that it was initially taught to second-year students in a business communication course, revised, and then taught to first-year students in a first-year composition course. Our evidence suggests that students can articulate how a quote from a source should be integrated into their writing by describing how they would use a signal phrase and quotation marks, but they have difficulty in applying this complex skill in their own writing even after focused instruction. In addition, course instructors across disciplines who expect source citation must provide multiple opportunities throughout a term for students to practice citation. These multiple touch points are essential as we found that even a week of dedicated instruction was not enough to help most students learn to integrate the ideas of others into their own writing appropriately.

Literature Review

One of the hallmarks of academic writing is writing from sources. But how do students learn to write from sources? In a review of the current research on student citations, Cumming, Lai, and Cho (2016) claim that "students experience difficulties with, but develop certain strategies to deal with, the complex processes of writing from sources" (p. 50). The landmark work of the Citation Project as reported in Howard, Serviss, and Rodrigue (2010) noted that students struggle with citation of sources because they have not understood, or are unable to understand, the source material. The study suggested that instead of writing from an understanding of an article in its entirety, students look for sentences they think apply to what they are writing about and use them in their writing. The authors speculated that students may only use sentences from the source instead of the entire article because they may not understand the source

article, they may not care about the research project, or they do not understand how to use their sources. The Citation Project was an outgrowth of Howard's (1993) work in which she described "patchwriting" as "copying from a source text and then deleting some words, altering grammatical structures, or plugging in one-for-one synonym substitutes" (p. 233). Howard suggested that patchwriting is a developmental stage of learning to use citations and is not a form of academic dishonesty. Instead, instructors need to help students to understand their sources and their reasons for using them in their writing in order to develop as responsible writers. Cooper (2007) too argued that the inability to read and reflect effectively results in students "assembling research as patchwork quilts rather than weaving a fabric of new knowledge" (p. 63). She stated that the practice of patchwork research emphasizes the problem students have distinguishing between knowledge and information. The ease of information access and sharing has further complicated the problem of patchwork research. She believed that millennial students who are comfortable sharing information informally find the transition to formal scholarship that requires reflection and understanding difficult.

This lack of understanding is supported by Jamieson's (2013) contention that there is a wide gap between instructors' goals and students' goals in research writing. Instructors assumed that students comprehended and processed the content of the sources they selected to write their research papers and thus the paper serves as a reflection of reading and reflection skills. However, students were frequently guided by the goal of producing the final product of a "Research Paper" and did not engage in the kind of reading that they need to gain an in-depth knowledge and understanding of the subject they were researching. These findings echo research conducted by Kennedy (1985) who identified fluent and not so-fluent-readers and examined their reading strategies while engaged in a "writing from sources" activity. The results were mixed, but the truly fluent readers engaged in more planning than the not-so-fluent readers, and they also used more reading strategies. Wells (1993) recognized the value of reading strategies and pointed out "[q]uite a few essential skills related to reading and thinking are . . . involved" in using sources appropriately (p. 63). One of these skills was the ability to quote source material. Wells asserted:

> Where to incorporate a quote in text, how much of a passage to use, how to edit a quoted passage using brackets and ellipses, how to work a quote into text fluidly and coherently, and how (and whether) to introduce it, are all considerations beyond the abilities of basic writers, who need sufficient practice, feedback, and reading

experience with quoted material to produce a research paper. . . (p. 63)

In addition to these difficulties, Vardi (2012) pointed out that students are further challenged when instructors teach referencing from a plagiarism perspective as opposed to through the lens of critical thinking. In doing so, the teaching focus is on convention rather than engagement with the ideas presented in the literature. Based on the results of a study that used a critical writing approach to referencing, Vardi concluded that the insistence on academic integrity can affect how referencing is taught. She suggested that academia needs to reevaluate how plagiarism and citations skills relate and how to develop citations skills as a way to engage and think critically with a discipline's ideas and practices. This notion of better connectivity between referencing and context was supported by the work of Stagg, Kimmins, and Pavlovski (2013), who argued that because "referencing, like research and other academic disciplines, has often not been taught explicitly," the attitude of first-year university students toward referencing is that of compliance (p. 453).

Awareness of these barriers in effective referencing by students increasing plagiarism led Owens and White (2013) to conduct a five-year systematic strategy to reduce plagiarism among first-year psychology students. They concluded that initially high plagiarism rates were reduced largely due to the systematic use of educational interventions that were integrated into the courses. Their interventions were not peripheral activities but involved students in interactive in-class and online activities that not only exposed students to the pitfalls of plagiarism, but also emphasized writing and referencing practices.

Since writing from sources is a common feature of academic writing, it might be expected that students will be able to easily transfer their knowledge and experience of using sources in one context to another. However, writing researchers (Robertson, Taczak, & Yancey 2012; Wardle, 2007) suggest that transfer is not an easy process for students. In Wardle's (2007) study, her students were not often asked to use the skills and knowledge they gained in their first-year writing courses when they progressed to their second-year courses. Robertson and colleagues (2012) argue that students may lack prior experiences to draw upon in writing from sources. These researchers suggest that the writing assignments given in other courses must be engaging and draw upon students' prior knowledge in order to facilitate transfer of students' knowledge of writing, including writing from sources.

It is evident from the literature that citation skills cannot be divorced from accompanying critical thinking and reading skills, followed by appropriate reflection.

Students are unable to understand the difference between citation and integration as distinct skills and frequently think if they do one, they are automatically meeting the requirements of the other. This misconception needs to be addressed with integrated classroom interventions that help students see them as separate but necessary complementary activities. To help students think beyond compliance and integrate sources responsibly and effectively, the need to nurture source integration in student writing becomes even more urgent.

The Source Integration Study

Settings and Participants

Our lesson study took place at an open enrollment regional campus of a large urban university in the Midwest. The college is home to over 5,000 students and is the third largest college within the larger university. Students need a GED or high school diploma for admission. The average high school GPA of incoming freshman is 2.65, and of the students who took the ACT or SAT, the average scores were 19 and 920 respectively. In addition, 47% of students are first-generation college students, and many of them were referred to the college by the main campus because they do not meet the selective admission requirements required for admission. Forty one percent of students are enrolled in a career program, and the remaining 59% of students are enrolled in an associate program designed for them to either transfer to the main campus or to another college or university. With this level of preparation and the great variation in skill level, many students coming to the college do not have much experience in using sources in their writing. Each class had approximately 20 students who participated in the lesson study process. Most students in the second-year communication class completed the required first-year composition course. Most students in the composition course were first-year students who had graduated high school the previous spring, but there were two returning students.

The Lesson Study Process

The lesson study method begins with identification of a concept or procedure that students have difficulty mastering. For this project, we identified source integration as the concept we would like to examine. Next, the team examined the research that has already been published on students' use of citations. We found the work of Howard (1993, 2010, & 2014) and Jamieson (2013) to be especially helpful in understanding the difficulties students have with source integration. Once the team understood how others have approached source integration, we worked collaboratively to design a lesson.

With the intersection of research and writing, it was clear that library instruction sessions would be needed for both the second-year business communication and first-year composition course to help support students in the research process. Prior to presenting the lesson in either class, both courses received two library instruction sessions each with sessions taking place one week prior to the lesson plan being taught. During these sessions the librarian focused on search strategies and the evaluation of sources to get students ready to conduct the research required for the course assignments. Although the research concepts were similar for each course, the course level and type of research assignment played a strong role in the content and the in-class activities.

The lessons were taught in both courses by the course instructors who were also members of the lesson study team. These two courses were selected for testing the lessons because both courses required students to write a major paper with citations. In the business communication class, students were asked to write a formal business report that proposed a service and illustrated how the service would benefit a specific company. In the composition class, students were tasked with writing a research paper. One of the learning outcomes for English Composition is information literacy and the research paper is an assignment that requires students to demonstrate skills in that area. The curriculum of the course is designed to help students develop information literacy skills over several assignments leading to the research paper. For both assignments, students were expected to conduct research and use signal phrases to introduce their research. Both courses are part of the general education curriculum. All students are required to take composition, and business communication is a general education elective. Both classes were 80 minutes in length. Part of the intent of the study was to design a lesson plan that could be used in a variety of disciplines and courses to instruct students on proper source citation, and, hence, the courses were selected because they were from separate disciplines.

The lessons for each course were taught during a different week in the semester, which provided time for the lesson study team to observe, reflect, discuss, and revise the lesson. During the fourth week of the semester, the first instructor taught the lesson to a second-year business communication class, and the lesson study team took extensive field notes on the students' performance and behavior during the lesson. The instructor also wrote a reflection on how she believed the lesson went. The team debriefed on the strengths and weaknesses of the lesson using field notes, student exercises, and student reflections. We reflected on this information to revise the lesson. After reviewing and making changes based on observations

during the business communication class, we tested the lesson in the composition class during the fifth week of the semester. The first modification explicitly required the first-year students to annotate the three assigned sources, which the second-year students were not required to do. To encourage engagement and participation during the group activity, the second modification had students exchange their in-class paragraphs with another group instead of within the same group. In this way students seemed more willing to share the paragraph's strengths and weaknesses during the class discussion because it was someone else's writing. The revised lesson was taught by the instructor of the first-year English composition class. As before, the other team members took field notes of students' behaviors and reactions to the lesson and collected student exercises and reflections. The data were then analyzed to determine the overall effectiveness of the lesson.

Data Analysis

The lesson study method depends upon the team analyzing the data about student learning that has been collected during the implementations of the lesson. Our analysis was guided by the following two questions:

1. Did the lesson fulfill the goals/outcomes?
2. How do we know? What evidence do we have?

We collected many types of evidence to evaluate the lesson's effectiveness: student quizzes, student-generated paragraphs, students' reflections on their integration abilities, and the team's field notes. For our analysis of the practice paragraphs and final research projects, we focused on the quotes students used in their writing. We looked for a sentence that connects the quote to their own argument, a signal phrase, and an explanation of how the quote pertains to the argument. Below is an example of an English composition student's use of quotation that we identified as effective:

> Society as a whole has formed very strong opinions, positive and negative, which can play havoc on a woman's perception of herself and influence her decision of whether or not to allow her hair to turn naturally grey. This decision can affect a woman mentally, socially, in the workplace, and within her family unit. Laura Clarke and Alexandra Korotchenko, co-authors of 'Shades of Grey: To Dye or Not To Dye One's Hair in Later Life,' state that 'Women are buckling under a beauty culture that insists that perfection is the only answer. This is greatly due to the innate ageist stereotypes that prompted this façade and deemed it as acceptable.'

> Although it sees the world is constantly engraving a lesson of acceptance, a woman's image is being discriminated against daily without her even realizing it. Women with grey hair should not be viewed or treated differently within our society because the effects of this is damaging to a woman's self-image.

In this example of an effective citation, the student has introduced her point in the beginning of the paragraph. She introduces the authors and title of the work she cites, then discusses how the quote relates to her point. This student clearly understands why she is using the source in her paper.

In other cases, students also produced ineffective citations. The most problematic citations were from those students who provided information without identifying the source such as this citation from a student in the second-year business communication course, "The Kroger Company is one of the most prominent grocery store's (sic) in the United States with 3,575 locations nationwide your brand is universally recognized." This student has obviously taken information from a website or perhaps an interview, but has not given credit to the source. In this case we said that citation was not done.

Even when the student below later cites information from an article, no context or explanation of the quoted material is provided to help readers understand why it has been included. For instance, the student wrote:

> I believe nothing sums up what team building truly does more than this abstract from an article called 'Team Building' by Christophe Orgueil, and John Sylvester they state that 'Teams might work in subgroups on the day, but will achieve a collective result by the end of the activity. Natural bonding will happen, and this will lead to a real sense of achievement and a collective feel good factor.'(1). This will lead to a satisfactory end to a day of well rounded (sic) activities that both you and your staff will enjoy.

Although this student has identified the article, readers do not know why the student has chosen to include this quoted material in his report, so we judged this quote as ineffective.

Field Notes

During the lessons, each group of students had one to two lesson study team members observing their behavior as they engaged in the lesson activities. We used the field notes to gauge the level of student engagement with the lesson. The observations were focused on answering four questions about key moments in the lesson: 1) What were students doing? 2)

Does student behavior match our expectations? 3) What does their behavior reveal about their learning? and 4) What patterns in student behavior and response to the instructor do you see? Our field notes from both class sessions revealed that most students were engaged in the key activities of the lesson. However, during the group work portion, one or two students would dominate the group. Groups tended to rush to closure instead of working through the criteria. Student behavior did not fully match our expectations as we hoped all students would be engaged in the lesson.

Our observations revealed a variety of student group dynamics that ranged from full engagement in the activity to group domination to non-participation. In our observations, many students engaged in the activities and attempted to apply the concepts and writing the in-class paragraph to demonstrate their understanding of source integration. However, within these same groups, it appeared that one or two students in the group controlled the activity. If these vocal students misunderstood the directions, the entire group was lost. However, when these same students understood the lesson, they helped explain it to others in their group who were confused. Ultimately, this group control resulted in these vocal students dominating the class discussion, which presented a challenge for the instructor to gauge how well all students understood the lesson. In addition, lesson study team members also observed the lack of participation by one or two students in the group who either chose not to work on the activity or only wrote one sentence instead of writing a paragraph as instructed. The instructors had good rapport with their classes, but it seemed students only wanted to do just enough to complete the activities.

Pre- and Post-Quizzes

Each lesson included a pre-quiz to assess what students knew about source integration followed by a post-quiz to see if they had a better understanding of these processes. We collected pre- and post- quizzes for students who completed all of the activities with a total of 30 students divided between the two courses. Figure 1 represents the percentage of both second- and first-year students who provided the correct answer on the pre and post quizzes.

As shown in Figure 1, most students answering the first question about introducing a quote seemed to know how to introduce a quote before the lesson. The two students who did not know were able to correctly answer the question in the post quiz. In answering the second question before the lesson, students were less sure about where to position a signal phrase, with only 31% of second-year students and 41% of first-year students knowing where to position it. However, after

the lesson 85% of second-year students and 53% of first-year students knew to position the signal phrase before the quoted material. In responding to the third question, the second-year students had an impressive increase in their understanding of where to place signal phrases after the lesson. Additionally, students were better able to choose appropriate verbs after the lesson and were also better able to explain why an integrated quotation was effective. In fact, 100% of the second-year students were able to explain why an integrated quote was effective in both the pre and post quizzes. In question four after the lesson, more students in both classes used the lesson criteria to explain their choice of the correct citation. However, three of the first-year students did not respond to this question in the post quiz.

Practice Paragraphs

The lesson for each class included an in-class activity where students wrote a practice paragraph that required them to integrate sources. We evaluated how well students integrated their sources into their practice paragraphs by utilizing a rubric designed to align with the lesson on source integration. The expectations for students included the following: a topic sentence for their paragraph, a signal phrase, appropriate punctuation, an explanation of the quote, and a separate sentence that made the connection between the source's ideas and the students' own ideas. The analysis of the paragraphs included a reading by two members of the research team followed by coding using the rubrics with a common score determined for each section of the rubric. The results of the analysis are presented in Figure 2 below with a total of 14 paragraphs from the first implementation of the lesson and 16 paragraphs from the second implementation of the lesson.

In the first implementation of the lesson, the second-year communication students struggled with applying the techniques described as shown in Figure 2. In the first implementation of the lesson, the second-year communication students began their paragraphs with the suggested topic sentence structure that was given during the lesson (71% effective, 21% ineffective, 7% not done). Most of the second-year students did not explain the topic sentence (7% effective). Few students included a signal phrase to introduce the cited material (29% effective, 36% ineffective, and 57% not done). The second-year students struggled with correctly formatting the quoted material (36% effective, 50% ineffective, and 14% not done). Students were better at explaining the quote (43% effective, 43% ineffective, 14% not done). Finally, students tried to connect the quote to their own point, but they did not do it effectively (29% effective, 50% ineffective, 19% not done).

Figure 1

Comparison of Quiz Scores for First-Year (n=17) and Second-Year (n=13) Students Given Before and After the Integrating Quotes Lessons Based on Quiz Questions (Refer to Appendix for Quiz Questions).
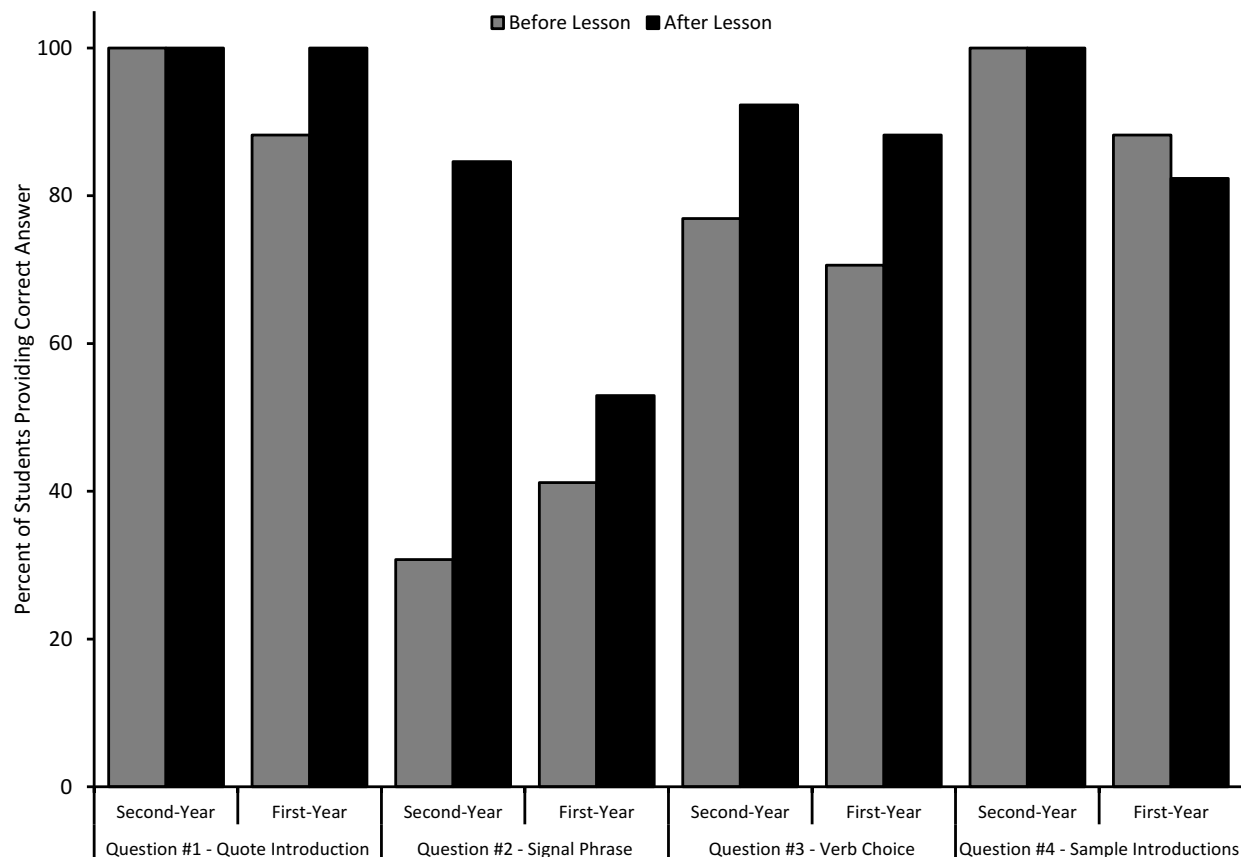

The second implementation of the lesson took place in the first-year composition class and the results ranged from effective to not completing the technique. Most students used the topic sentence structure provided as part of the lesson (81% effective, 13% ineffective, 6% not done). A few students explained the topic sentence; however, most students did not (25% effective, 63% ineffective, 12% not done). In this second implementation, many first-year students used a signal phrase to introduce the quote (56% effective, 31% ineffective). Students struggled with formatting the quote effectively (31% effective, 56% ineffective, 13% not done). Students also did not explain the quote (38% effective, 38% ineffective, and 25% not done). Few students effectively related the quote to their idea (13% effective, 56% ineffective and 31% not done). One perplexing outcome was the lack of difference between first and second-year students' performances on these paragraph activities. In fact, the first-year students seemed to do better at using signal phrases than the second-year students.

Student Reflections

Another part of the lesson included self-reflections where students were asked to reflect on their ability to integrate source material. These reflective paragraphs were analyzed using a rubric that examined students' ability to articulate what integration of sources meant, to identify other areas to apply source integration, and to discuss source credibility and how it relates to audience needs. Many students pointed out that time negatively influenced their performance of integrating sources in the practice paragraphs. They reported that they did not have time to do what they needed to do. Most of the students were able to explain the limitations of how they integrated the quote. They suggested specific revision strategies they would use to correct the

Figure 2

Comparison of First-Year and Second-Year Student Results Based on Rubric Criteria for Practice Paragraphs. There Were 16 First-Year and 14 Second-Year Students for the Practice Paragraph. TS = Topic Sentence; Q/P = Quote/Paraphrase.
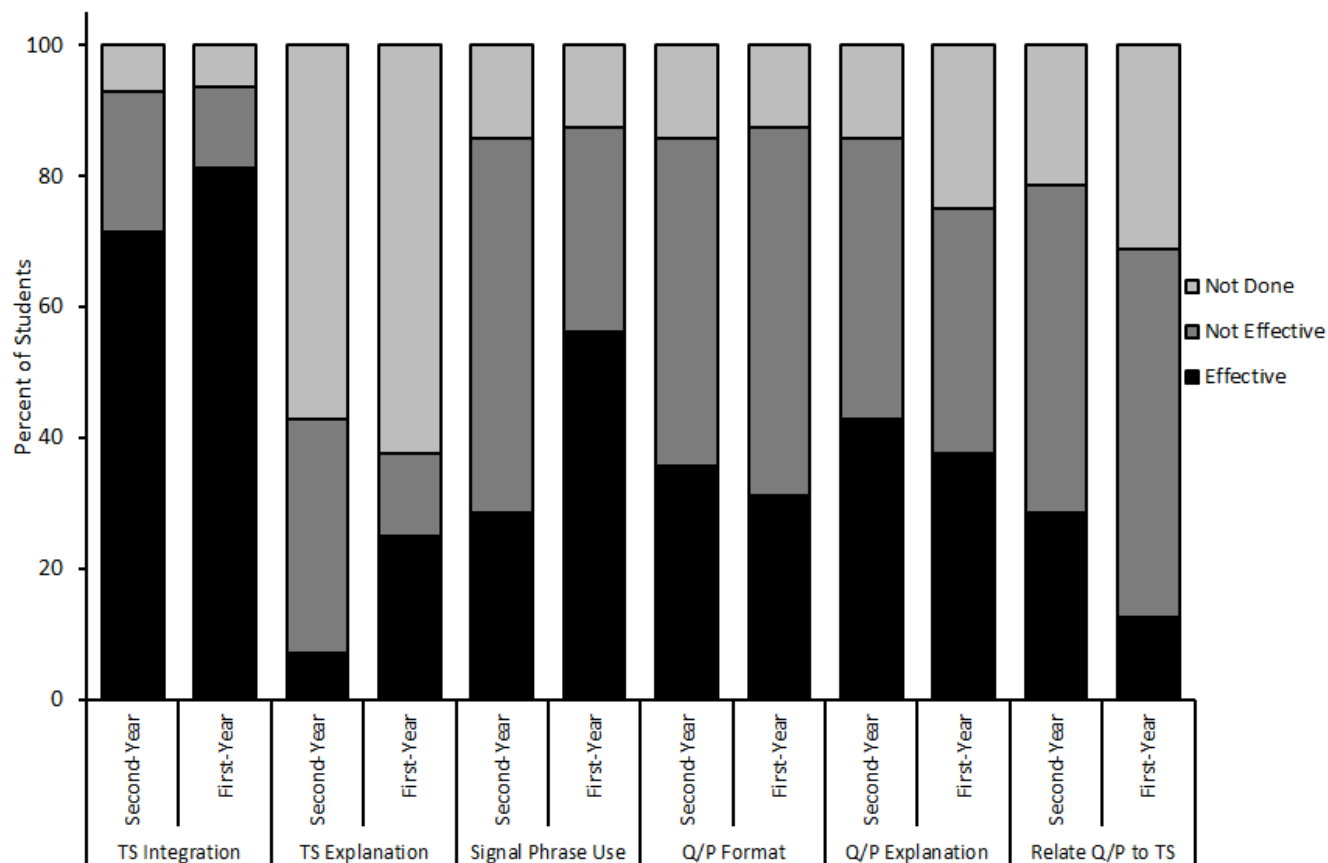

integration. For instance, one student wrote, "The most important thing that is left out in the paragraph is the explanation of the quote."

As part of their reflection, students also recognized the purpose of integrating sources. For example, another student wrote, "I would do a better job of using the sources to support my topic by explaining and interpreting the information it provides instead of forcing my audience to make the connection." Many students, especially first-year composition students, struggled with explaining the purpose of quote integration and did not recognize the rhetorical demands of appropriate integration. In their reflections, students were able to describe what worked and did not work using the criteria discussed in class. Although students were able to reflect on how a source should be integrated, they were not always able to successfully apply the techniques to their own writing.

Final Research Assignments

To understand the lasting effects of the citation instruction, we examined the students' final projects for each course. Using the same rubric from the practice paragraphs, we evaluated students' use of citations in the final projects utilizing the following criteria: use of a topic sentence, explanation of a topic sentence, introduction of the quote, proper quote format, explanation of the quote, and relation of the quote back to the topic sentence. The topic sentence should have been the student's own idea, which should have been followed with an explanation of that idea before a quote is inserted. We looked to see if a signal phrase or attributive tag was used to introduce the quote. We examined the quote for quotation marks and page numbers if appropriate. Students were expected to explain the quote to their readers or to provide some commentary for why it was there. Finally, we wanted

Figure 3

Comparison of First-Year and Second-Year Student Results Based on Rubric Criteria for Final Research Assignment. There were 17 First-Year and 12 Second-Year Students for the Final Research Assignment. TS = Topic Sentence; Q/P = Quote/Paraphrase.
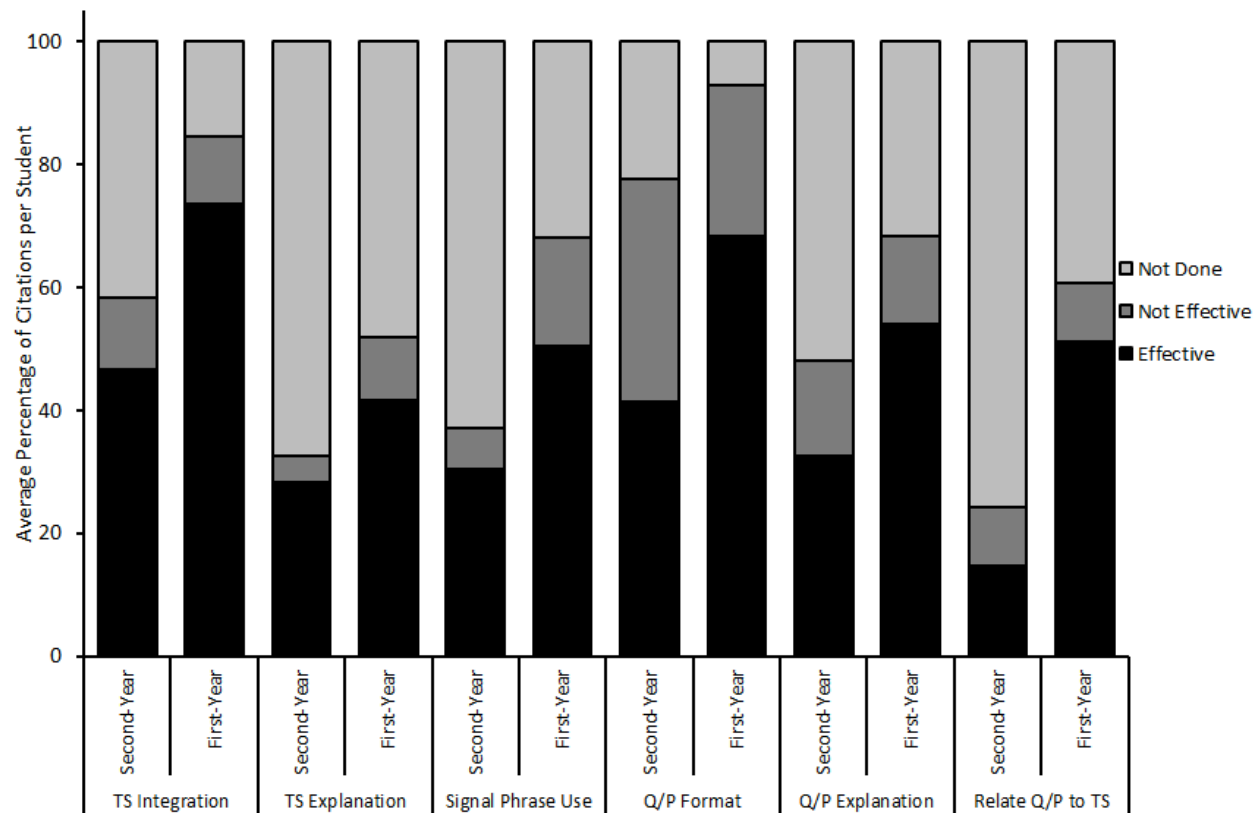
students to explain the relationship between the quote and their own idea in the topic sentence. First, each paper was read by two readers from the research team to determine when a citation was being used. Once team members agreed on the citations within a paper, each paper was again read by two readers. Each reader scored the citations, then met to discuss the ratings and arrive at a final score. If the readers could not agree on a common score, a third reader was consulted to arrive at a final score.

In the second-year course, students wrote a formal business research report that required students to select a company and either propose a teamwork training session, an employee assistance plan, or new payroll software to improve the company's functioning. We collected 13 of these assignments. One assignment did not have any references at all, so it was not included in our analysis. Of the 12 second-year students' papers, there were 85 citations. Of those 85 instances, about half contained topic sentences that effectively introduced students' ideas, and the other half did not

include a topic sentence where one should have been used (47% effective, 12% ineffective, 42% missing). Some second-year students did not include an explanation of the topic sentence in their assignments. In fact, they did this less often than the first-year students. In the second-year students' paragraphs, 67% of them did not have any explanation of the topic sentence. Only 28% of topic sentences in the second-year students' paragraphs were explained successfully.

In this assignment the second-year students did not use signal phrases to indicate cited material as often as we expected. In fact, in most cases there were no signal phrases (30% effective, 7% ineffective, 63% missing). The second-year students also did not format the citations, as was discussed in class, for most of their papers. Nearly half (42%) of the citations had effective formatting, while 22% were not formatted at all, and 36% were judged to be ineffectively formatted. In this assignment, students did not explain their cited material for their readers. Most citations did not have any explanation (33% effective, 15% ineffective, 52%

missing). For most citations, second-year students in this assignment did not attempt to relate the cited material to the topic sentence (15% effective, 9% ineffective, 76% missing). Second-year students either did not retain or transfer their knowledge on source citation they learned in their first-year required composition course. Students in our study used what they knew about how to format quotes, but it was not as strong in their mind as students in the first-year course who were actively taught MLA formatting conventions. Our findings here suggest that faculty in other disciplines and courses need to work with students as closely on source citation as done by English composition faculty.

In English composition students wrote a researched argument paper that required the use of supporting sources. We collected 17 final researched argument assignments that contained a total of 334 in-text citations. Most students did incorporate a topic sentence to express their own ideas about the topic. Topic sentences were mostly judged as effective (74% effective, 11% ineffective, 15% missing). There were no papers where students did not provide at least a few topic sentences, so it seems that students understood the importance of providing their own ideas before those of the authors they were citing.

Based on our results in Figure 3, first-year students were beginning to grasp the idea of how to use sources in their papers to support their own ideas instead of letting the source material dominate. Although a few papers were "data dumps," most students used their own ideas in the paper. The first-year students were less likely to include an explanation of their topic sentence (42% effective, 10% ineffective, 48% missing). First-year students did not use signal phrases to introduce their cited material as much as we expected (51% effective, 18% ineffective, 32% missing). Also, students were dropping quotes or paraphrases in their paper without any kind of introduction. Most first-year students were able to correctly format the quotes and paraphrases they used in their papers (68% effective, 25% ineffective, 7% missing). It seems this part of our lesson did remain with students as they worked on their final research project. In many instances, students explained the cited material for their readers (54% effective, 15% ineffective, 31% not done). First-year students also struggled with relating the quote to their topic sentence (51% effective, 10% ineffective, 39% not done).

Discussion

During this project, the lesson study team observed some struggles for students as well as some improvements. For example, the pre quiz responses before the lesson indicated students knew they had to introduce quotes but were less able to position the signal phrase appropriately. After the lesson students,

especially second-year students, were able to position the signal phrase appropriately. The practice paragraphs indicated students were continuing to work through the intricacies of source citation. Finally, their reflections on the quality of their practice paragraphs showed they understood what they were supposed to do even though the paragraphs were not well executed.

In their final research projects, each course required citation of sources, and we found the second-year students seemed to struggle more than the first-year students. Students in the second-year course wrote a formal business research report which required references. This might have been a genre of writing that is new to students, so they were unsure of how or why they needed to cite their sources. In fact, one student did not cite any sources in his report. Alternatively, the first-year students were completing the well-known "research paper" with its emphasis on using sources for support. Even if students were new to writing in this genre, they knew they had to cite their sources. The difference in performance between second- and first-year students may be due to the differences in the writing assignments, the amount of attention given to source citation in the courses, and to students' beliefs about the importance of citation in the course.

There was also variation in the amount of attention given to source citation in the courses. Source citation is a learning outcome and a large focus in the first-year writing course with repeated instruction and guidance. The second-year course expects to build on the foundation set by the first-year courses, so less time and attention were given to citation instruction so that other course learning outcomes could be developed. Spending three class sessions in the second-year course seemed like it would be more than enough instruction to remind students of what they had learned in their first-year course. We were surprised by the lack of transfer between the courses after we had made explicit connections in the instruction of source citation. This lack of transfer might have occurred because students did not believe they needed to cite sources in this communication course because it was not a "writing" course.

Conclusion

Our project findings echo the results of other researchers in this area such as Jamieson (2013); Howard and colleagues (2010); and Owen and White (2013). Our students made modest gains at integrating their sources but continued to struggle with this difficult concept. One way to help students understand the process of source citation would be to develop a shared vocabulary between our disciplines so we do not confuse students with different terms for the same concept. For instance, when we started this project, we realized that one of us used the term "signal phrase"

while another used "attributive tag" to refer to the same concept of introducing cited material. We also need to help our students see that their sources are engaged in a conversation and they are using the sources to enter this conversation. This metaphor spans our three disciplines and is a powerful way for us to help students see the connections between the learning outcomes in our fields. It links the work we do with students as library, communication, and composition faculty and allows us to develop this interdisciplinary examination of our students' experiences of writing with sources.

Our interdisciplinary project focused on showing students how to integrate sources into their writing in both a composition and business communication course. The findings echo Cumming and colleagues (2016) claims that students can better integrate citations when they are shown how to do this, given time to practice in class, and have the opportunity to reflect on how they are using sources in their writing. In addition, the results indicate it is important that the integration of sources be taught separately from the documentation of sources. With that in mind, course instructors across the disciplines may need to consider what this means for their students and the types of writing that takes place in the course and in the discipline. Additionally, source integration may look different from one field of study within a discipline to another. Therefore, building in multiple touch points throughout the course curriculum to emphasize what source integration looks like for that discipline may be one step in creating a foundation for the responsible and ethical use of sources. As other researchers (Owens & White, 2013; Robertson, Taczak, & Yancey, 2012; Wardle, 2007) suggest, programs may need to consider weaving this instruction throughout their curriculum. Furthermore, providing additional instruction time as well as creating multiple practice opportunities for students to directly apply what they are learning may help strengthen their understanding of what it means to use sources in discipline-based writing responsibly.

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