

APA Style Writing Instruction in Graduate Education

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Abstract

Writing skills are important for graduate students to be successful in their academic programs. However, some graduate students are underprepared for the rigor of academic writing. A doctor of education student designed an APA Style writing workshop using a systematic method outlined by Dick, Carey, and Carey (2015). The workshop included online videos, group discussion, online quiz games, a hands-on activity, handouts, and a PowerPoint lecture. The current study assessed the effectiveness of the workshop on teaching select elements of APA Style writing. The results of the repeated measures design indicate that the instruction increased participants' ($N = 19$) knowledge of elements of APA Style and reduced the number of errors participants made in written references, including those participants with prior formal APA Style instruction. Additionally, there appears to be a demand among graduate students for more support in the development of their writing skills.

Keywords: graduate students, APA Style, writing instruction

Background

Members of the scientific community share their research so that others may benefit and learn from it. VandenBos (2010), the publisher of the sixth edition of *Publication Manual of the American Psychological Association*, noted that for over 90 years, researchers and academics have recognized the need for clear communication of scientific work. Specifically, the purpose of the *Publication Manual* is to provide style guidelines and rules for the communication of ethical, scholarly, and nonbiased work (American Psychological Association [APA], 2010).

Graduate students who are aspiring to be part of the scientific community need to follow APA Style guidelines in order to communicate their research and scholarly work to others in their field. Additionally, graduate students need writing skills in order to be successful in other types of careers. According to the Association of American Colleges and Universities (2015), 82% of employers rate written communication as an important skill. However, students lack proficiency in writing, including the proper use of APA Style, despite its importance (Landrum, 2013). Many colleges and universities anticipate that a portion of their new students arrive on campus underprepared for the rigor of higher education. These institutions implement programs or strategies to improve the writing skills of underprepared students (e.g., requiring developmental courses, writing centers), typically targeting the needs of undergraduate students. Yet, graduate students come to school underprepared as well (Waytowich, Onwuegbuzie, & Jiao, 2006).

Previous research has examined graduate students' ability to learn APA Style writing. Van Note Chism and Weerakoon (2012) explored the factors that interfere with graduate students' mastery of APA Style. Their study indicated that while graduate students do view the *Publication Manual* as a credible resource, 75% of participants in the study preferred other, less reliable resources. Additionally, the participants indicated that they did not utilize their peers for learning APA Style formatting because their peers were error-prone as well, and rather, preferred to consult their professors about proper formatting. Thus, a more formal approach to learning APA Style may be necessary in graduate degree programs.

Formal approaches to teach APA Style skills have been successful at the undergraduate level. Jorgensen and Marek (2013) reported that a series of 30-minute workshops reduced errors in APA Style writing. Luttrell, Bufkin, Eastman, and Miller (2010) found that students who engaged in a one-credit scientific writing course (i.e., APA Style) had significantly more knowledge of APA Style components at the end of the semester than those who did not participate. The researchers posited that scores on the end-of-semester literature reviews did not differ between the groups because the comparison group was comprised of third- and fourth-year students. In other words, the literature reviews of the students who enrolled in the writing course (i.e., first- and second-year students) were on par with more experienced students.

Adult Learning Theory

Adult learning theory (Knowles, Swanson, & Holton, 2005) suggests the needs of graduate students may differ from those of undergraduates. There are five assumptions of andragogy. The first assumption is that adult learners seek to know the value or application of information prior to learning. Conversely, younger learners are content to learn that which the teacher deems important. Further, adult learners are self-directed. In the context of the current study, graduate students may prefer to be self-directed and welcome opportunities to become more independent learners. Graduate course faculty members are in a position to help their students become more self-directed.

Third, adult learners bring more experience to the learning environment simply by having had more opportunities for experiences (e.g., education, jobs, families) in their lives compared to young learners. They bring these experiences into the classroom by way of discussions and activities. However, Knowles, Swanson, and Holton (2005) caution that increased experiences can result in more solidified patterns and habits of thinking. Plakhotnik and Rocco (2017) noted that adults in a pilot writing skills program had difficulty recognizing their own writing weaknesses. Therefore, Knowles and colleagues (2005) recommend that adult educators help adult learners be open to new perspectives and methods of thinking.

It may be the result of the experiences of adults that prompts them to further their education. Knowles and colleagues' (2005) fourth assumption encompasses the idea that adult learners are ready to apply learning in practical ways to relevant situations. However, readiness to learn is not limited to the initial reasons that adult learners return to higher education. Knowles and colleagues suggest that as adult learners engage in academic experiences and are exposed to higher standards, their notion of relevance may shift. In other words, adult learners may not fully comprehend the necessity of some skills until they are placed in situations that demand those skills. Lastly, the fifth assumption is that adult learners have different motivations for learning and learn best when they understand the real-life application of the skills or knowledge taught.

APA Style writing instruction as conducted for undergraduates may not be effective for graduate students. In the context of the current study and through the lens of adult learning theory, graduate students are more likely to want to know how APA Style writing will be useful to them prior to learning the writing style. Additionally, they may need assistance transitioning to self-directed learning and may have well-established writing habits that differ from APA Style. Graduate students may be ready to learn APA Style because it is relevant to their current course work in their graduate program and, therefore, satisfies a real-life context for learning the skill.

This study investigated the effectiveness of a systematic instructional design (Dick et al., 2015) on teaching critical elements of APA Style to 20 doctoral students. The instruction addressed many of the areas previously identified as problematic (Mandernach, Zafonte, & Taylor, 2016), including plagiarism, paper formatting, in-text citations, and formatting references. This study adds to the research on programs that target graduate students' needs.

Method

Participants

Twenty graduate students enrolled in a doctorate of education program at a private college in Florida attended an APA Style writing workshop hosted by the doctoral program. The researcher invited the workshop attendees to participate in the research study and only one attendee declined ($N = 19$). The participants varied in experience with APA Style as well as the number of credit hours completed. The background characteristics of the participants are listed in Table 1.

Table 1. *Participant Background Characteristics*

Characteristic	<i>n</i>	%
Gender		
Male	7	36.8
Female	12	63.2
Race/Ethnicity		
White/Caucasian	10	52.6
Black/African-American	2	10.5
Hispanic/Latino	5	26.3
Arab	2	10.5
Formal APA Instruction		
None	12	63.2
Within 6 months	3	15.8
6 months – 1 year ago	0	0
1 year – 2 years ago	2	10.5
2 years – 3 years ago	0	0
More than 3 years ago	2	10.5
Credits Completed		
None	4	21.1
4	3	15.8
8	3	15.8
12	2	10.5
16	2	10.5
20	1	5.3
24	3	15.8
28	0	0
32	1	5.3

Procedures and Materials

A doctor of education student developed the three-hour APA Style workshop used in this study as part of an instructional design course. The workshop's design is based on the five learning components outlined by Dick et al. (2015): pre-instructional activities, presentation of content, learner participation, assessment, and follow-through activities (see Table 2). Instructional materials included pre- and post-test assessments, online videos, group discussion, online quiz games, a hands-on activity, handouts, and a PowerPoint lecture.

Separate from the APA Style writing workshop, participants completed a five-item background survey and a six-item workshop evaluation survey. The background survey preceded the pre-test and the evaluation survey followed the post-test. The pre-tests and post-tests included an identical set of seven multiple choice questions on APA Style general formatting and in-text citations as

Table 2. *Instructional Procedures and Materials*

Stage	Materials	Description	Rationale
1. Pre-Instructional	Pre-test Introductory Memes	Assessed prior knowledge of APA Style writing standards via seven multiple-choice questions and two short answer questions Use of casual memes (see Figure 1) or comics at the beginning of each lesson segment	Pre-instructional activities focus students' attention and multiple-choice questions illustrate examples and nonexamples side-by-side (Dick et al., 2015). The instructor used memes and comics to introduce a warm learning environment. Students who experience high levels of writing anxiety prefer a warm learning environment (Onwuegbuzie, 1998).
2. Presentation of Content	PowerPoint Videos, Handouts, Question and Answer Sessions	Demonstrated the APA Style rules and standards, provided examples and non-examples, and reviewed common mistakes Interspersed use of videos, handouts, and Q&A throughout the instruction	Systematic instruction developed from Gagné's conditions of learning may increase learning (Dick et al., 2015). Adult learners prefer social learning environments and to bring their experience and self-identity to the learning (Knowles et al., 2005).
3. Learner Participation	Kahoot! "Is Et Al. Correct?"	Instructor presented each lesson and then invited students to answer questions via Kahoot! Students worked in groups of four and used dry-erase markers to find the 43 errors on a four-page laminated mock reference section of an academic paper (see Figure 2)	Kahoot! is a free, interactive quiz-style game that students can play in the classroom using their own digital devices (Kahoot!, 2018). Students engaged in peer-learning (Knowles et al., 2005) to detect errors as well as discuss the APA Style rules with each other.
4. Assessment	Post-test	Identical to the pre-test and assessed graduate students' knowledge of information presented in the course	The instructor used a post-test to assess learning (Dick et al., 2015).
5. Follow-Through	APA Quick Reference Guide	Instructor provided a color-coded quick reference APA Style guide (see Figure 3) and a handout demonstrating proper APA headings to all students at the end of the workshop	The memorization of APA Style rules is not required to successfully write papers. This resource will assist students after the instruction in the performance context (Dick et al., 2015).

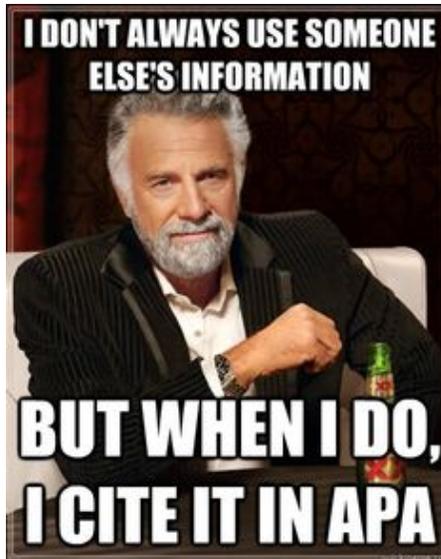


Figure 1. Example of a meme for APA Style writing workshop.

“Is Et Al. Correct?”

Directions: On the following set of pages is an APA Style reference section containing citations for real books and journal articles. However, there is at least one error in each citation. Your team’s task is to find all the errors. Some may be obvious and others may require an eye for detail. Use your dry erase marker to circle as many errors as you can find.

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Figure 2. “Is Et Al. Correct?” error-detecting game sample page.

well as two short-answer questions on APA Style references. Sample multiple choice questions include: “Lisa would like to cite two different sources at the end of a sentence because both sources support her statement. Choose the answer EXCEPT that is formatted correctly in APA style” and “A title page should have all of the following EXCEPT.” The short-answer questions assessed

participants' ability to correctly write the APA Style reference for a book and a journal in a reference section. Participants identified the required information from a list that included necessary and extraneous information. The list of information for the journal reference included the authors, article title, journal name, volume number, issue number, page numbers, page count, year, publisher, and language. The list of information for the book reference included the authors, book title, page count, year, publisher, city, language, and ISBN. Thus, participants first identified the necessary information and then composed their written response by placing the information in the correct order and format.

The participants provided self-generated codenames on their surveys and tests to maintain their confidentiality and to allow the researcher to match their responses. The workshop attendees who did not consent to participate in the study did not create codenames and did not complete the surveys.

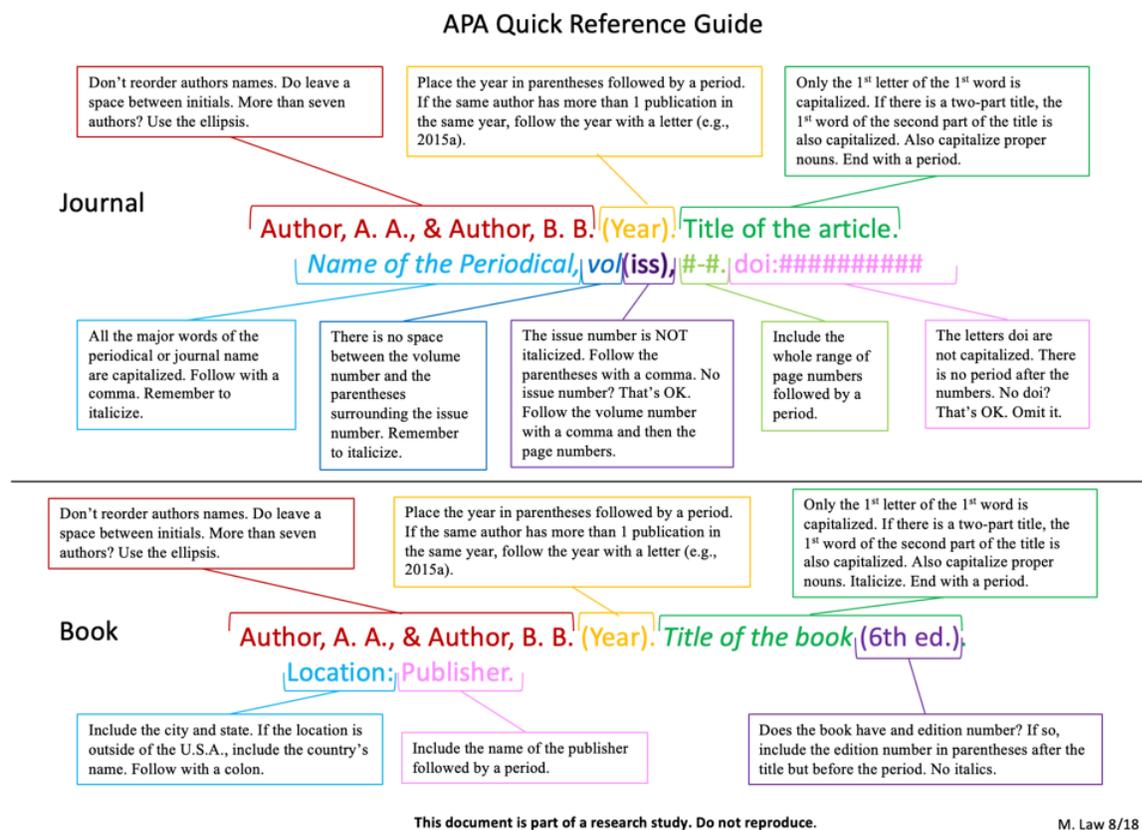


Figure 3. Sample image of the APA quick reference guide for students.

Results

The current study is a within-subjects design whereby participants' pre-test scores are compared to their post-test scores. The initial analysis of the data investigated the influence of participants with previous formal APA Style instruction. The researcher compared the changes in multiple-choice scores of participants with no previous formal APA Style instruction to the changes in multiple-choice scores of participants with previous formal APA Style instruction. A repeated-measures ANOVA indicated that there was a main effect for changes in participants' multiple-

choice scores, $F(1, 17) = 25.42, p < .001$. However, an interaction for formal APA Style instruction was not present, $F < 1$. A further independent t -test analysis indicated that participants with previous formal APA Style instruction ($M = 4.29, SD = 1.60$) and participants without previous formal APA Style instruction ($M = 4.08, SD = 1.73$) did not differ significantly on their baseline pre-test scores, $t(17) = -.25, ns$. A repeated measures t -test indicated that all participants performed better on the multiple-choice questions on post-test ($M = 6.0, SD = 1.05$) than they did on the same questions on the pre-test ($M = 4.16, SD = 1.64$), $t(18) = 5.49, p < .001$. Lastly, an independent t -test comparing post-test scores for participants with previous formal APA Style instruction ($M = 5.86, SD = 1.22$) and without previous formal APA Style instruction ($M = 6.08, SD = 1.0$) was not statistically different, $t(17) = 0.44, ns$.

On the assessments of APA Style written references, a repeated-measures ANOVA indicated a main effect for changes in participants' short-answer written responses, $F(1, 13) = 63.60, p < .001$. An interaction for previous formal APA Style instruction was not present, $F(1, 13) = 2.28, ns$. There was no significant difference between the pre-test short-answer scores for participants with previous formal APA Style instruction ($M = 8.12, SD = 3.89$) and participants without previous formal APA Style instruction ($M = 9.44, SD = 2.01$), $t(14) = 0.87, ns$. A dependent t -test indicated that participants made significantly fewer errors on the post-test ($M = 3.80, SD = 2.78$) compared to the pre-test ($M = 9.13, SD = 2.85$), $t(14) = 8.09, p < .001$. A final independent t -test compared the post-test short-answer scores for participants with previous formal APA Style instruction ($M = 4.5, SD = 3.45$) and those without ($M = 3.33, SD = 2.35$) and was not significant, $t(13) = -0.79, ns$.

When answering how well the workshop improved or reinforced participants' understanding of APA Style writing, nearly 74% of participants indicated "very well" and over 26% indicated "somewhat well." There were no neutral or negative responses to this question. The researcher compared participants with no formal APA Style instruction and those who reported having formal APA Style instruction. There was no difference between the groups' ratings of how well the workshop improved or reinforced participants' understanding, $t(17) = -0.16, ns$.

Responding to which elements of instruction helped them learn, participants indicated Kahoot! (89.5%), PowerPoint presentation (73.7%), handouts (63.2%), Is Et Al. Correct? game (47.4%), and videos (21.1%). Additionally, nearly 16% of participants wrote-in that "discussion" helped. Over 75% of participants provided written comments on the evaluation survey about the workshop. Some comments addressed the instructional methods. For example, Participant 12 wrote, "...I learn by doing, so repetition is key for me." Others addressed the instruction more generally. Participant 10 indicated that the workshop was, "Well worth a FRIDA[y] evening," and Participant 7 stated, "Wish this had been offered at the start of the doctoral program."

In response to the question about future workshops, participants expressed an interest in multiple subject areas. Participants were most interested in a workshop on active and passive voice (73.7%) followed by creating a table of contents and list of figures (63.2%), advanced APA citations and references (57.9%), and finding scholarly resources (47.4%). Two participants wrote-in suggestions for a workshop on using Microsoft Word (10.5%).

Discussion

Graduate students, including those with previous formal APA Style instruction, are likely to benefit from additional instruction. The baseline scores for graduate students with previous formal APA Style instruction and those without were similar on the multiple-choice and short-answer pre-tests. Additionally, prior formal APA Style instruction did not significantly influence graduate students' post-test scores for the multiple-choice and short-answer post-tests. However, overall, graduate students' assessment scores did improve after the workshop. Thus, graduate

students' improvements in APA Style knowledge was not influenced by prior experience. These findings suggest that graduate programs should not assume that graduate students will engage in self-directed learning for APA Style writing.

Van Note Chism and Weerakoon (2012) have noted that graduate students prefer to rely on their professors for writing style guidance, not the APA Style manual or their peers. Workshops similar to the one designed for this study may be an alternative method for graduate program faculty members to guide graduate students' writing. The graduate students identified that the workshop helped to improve or reinforce their knowledge of APA Style writing. This finding is corroborated by participants' improvement in performance from the pre-test to the post-test assessments and supports previous research on the benefits of systematic instructional design on learning (Dick et al., 2015).

The research results also suggest that formal instruction in APA Style writing is not only beneficial to graduate students but in demand. In addition to positive statements about the current workshop, participants indicated that they desired additional writing workshops. Furthermore, systematic instruction may be as beneficial to graduate students with APA Style writing experience as it is to those who have none. In other words, instruction on APA Style should not be limited only to newly enrolled graduate students. Knowles and colleagues (2005) point out that although adult learners are typically motivated and self-directed, they are less likely to engage in self-directed learning when the subject-matter is complex and technical. Thus, graduate students need writing support and decisionmakers in graduate programs can provide that support by offering systematic writing instruction to their students.

Instructors of formal APA Style writing should consider using a variety of instructional methods. According to this study's participants, multiple interactive instructional methods helped them learn, especially the interactive online quizzes (i.e., Kahoot!), the hands-on group game, and discussions. This finding supports the previous research on adult learners' preference for learning in a social setting because it affords them opportunities to share experiences and engage in peer-learning (Knowles et al., 2005). Supporting previous research on adult learners indicating that systematic instruction improves learning (Dick et al., 2015), the majority of participants reported that the PowerPoint presentation and handouts helped them learn.

Limitations

The research has several limitations. First, the research sample includes graduate students from one doctoral program from one college. The needs of graduate students may differ among graduate programs and colleges or universities. Second, the study's design did not include a control group. Therefore, it was not possible to conduct between-subjects comparisons of the graduate students who participated in the workshop and graduate students who did not. It is possible that those graduate students who attended the workshop found more relevance in learning APA Style and possessed more readiness to learn (Knowles et al., 2005). The inclusion of a control group would increase the validity of the research by making it possible to directly attribute participants' improvement to the workshop. However, participants completed the pre-tests and post-tests approximately two hours apart. Therefore, confounding factors (e.g., maturation, learning from other means, history effects) are limited.

A third limitation is that handwritten APA Style references may not be as accurate as typed references. The informal and less familiar approach may have led some participants to be less thorough or detailed as they would have otherwise been. Finally, the data in this study represents the short-term effects of instruction over the span of the three-hour workshop. The long-term effects of the instruction on learning are unknown. However, some participants in the study did agree to allow the researcher to contact them in the future for follow-up studies.

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