

## **Different Approaches to Teaching the Mechanics of American Psychological Association Style**

**Timothy M. Franz<sup>1</sup> and Tam M. Spitzer<sup>2</sup>**

*Abstract: Students have to learn two distinctly different tasks when writing research papers: a) creating and organizing prose, and b) formatting a manuscript according to the nuances and mechanics of a pre-determined format, such as Modern Language Association (MLA) or American Psychological Association (APA) guidelines. Two studies examined different approaches for teaching the details of APA style, including: a template, a checklist, and a combined approach that used both the template and checklist. The results demonstrated that while each technique individually helped students to learn APA style, using both together appeared to provide the most help to students.*

*Keywords: APA format, APA style, writing mechanics, teaching writing.*

### **I. Introduction.**

Writing research papers “serves as an important socialization experience” for psychology students (Madigan, Johnson, and Linton, 1995, p. 428) and is one of the more challenging tasks they face. According to Ault (1991), it “is a complicated task for undergraduates because they are creating and organizing the prose while trying to follow format conventions” (p. 45). Thus, students simultaneously have to learn two different tasks: a) creating and organizing prose, and b) formatting a manuscript according to predetermined guidelines, such as those in the *MLA Handbook for Writers of Research Papers* (Gibaldi, 2003) or the *Publication Manual of the American Psychological Association* (2001).

While there are many resources available to help students create and organize prose, relatively few are available that focus solely on teaching the mechanics and nuances of a specific formatting style. However, students often express frustration with formatting a manuscript according to the predetermined guidelines, which can become the focus of their efforts and undermine the quality of their prose. Our goal was to investigate ways to simplify teaching the format conventions – specifically, the formatting guidelines required by APA (i.e., APA style) – so that students could instead focus on their prose.

Although there are many methods that can be used to teach APA style in the classroom, the present study compared the effectiveness of two. The first method used was a template. By providing students with a template, they can have a paper that can serve as a model when writing future papers. Models are useful when learning writing (Braaksma, Rijlaarsdam, and van den Bergh, 2002) because they serve as an information source and provide practice. The second method was a checklist (Stahl, 1987). This can be helpful because it reminds students about necessary format conventions in the *Publication Manual* (2001) and helps them assess whether they have matched the conventions.

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<sup>1</sup>[tfranz@sjfc.edu](mailto:tfranz@sjfc.edu), 585/385-8170.

<sup>2</sup>[tspitzer@sjfc.edu](mailto:tspitzer@sjfc.edu), both at Department of Psychology, St. John Fisher College, 3690 East Avenue, Rochester, NY 14618.

The purpose of this paper is to report on two studies testing the effectiveness of these two different techniques to teach APA style. We accomplished this by assessing the students' knowledge of APA style at the beginning of the course, varying our teaching techniques in our sections of a similar course (a psychology laboratory course taught within a content area), and then again assessing the students' knowledge of APA style. In Study 1, the course taught by the first author used the template, while the one taught by the second author used the checklist. To help to control for potential course differences, we conducted a second study. In Study 2, the course taught by the first author again used the template, while the course taught by the second author used both the checklist and template.

## II. Study 1.

### A. Method.

*Design.* The study utilized a 2 (Teaching technique: Template versus checklist)  $\times$  2 (Time of testing: Pretest-posttest) mixed-factorial quasi-experimental design.

*Participants.* Participants included 43 students in two different laboratory classes (1 male and 42 females;  $n = 21$  and  $n = 22$  in the template and checklist classes, respectively). All participants were told that their participation was voluntary – it did not impact their grade in any way – and required their consent to participate. Because of tardiness and attendance, only 33 of the students completed both the pretest and posttest ( $n = 16$  and  $n = 17$  in the template and checklist classes, respectively). Students were juniors or seniors, had completed approximately 18-30 credits in Psychology, and received some past elementary instruction in APA style, which included at least one research course where students wrote one paper in APA style and potentially another 200-level psychology course where a literature review paper was required.

*Procedure.* As a pretest, the authors assessed students' knowledge of APA style during the second week, prior to any additional instruction on APA style. Students met in a computer laboratory and, after consenting to participate, received copies of *PsycInfo* abstracts of an article (Duncan, 1976) and book (Eiser and Stroebe, 1972). Duncan's article examined participants' attributions of an ambiguous action by a black versus a white target. The book by Eiser and Stroebe presented a theory of social judgment that attempts to explain, in part, attributions. They were also provided with the basics of a research study (modeled after Sagar and Schofield, 1980), which examined the attributions of children about ambiguous actions of black versus white targets. They used these bulleted details to create the method in their paper as if it were their study. As can be seen, these three papers were chosen for their relevance to the content of a social psychology laboratory class and a developmental laboratory class.

To maintain anonymity and keep instructors blind while allowing a method of comparing across the two classes?, students used pseudonyms on all materials. Students were instructed to type a Title page, an Introduction using the two abstracts, a Method section, and a Reference page. Specifically, we provided students with the following instruction:

Please write a short paper, in APA style, that includes the following sections: 1. A title page; 2. A short one to two paragraph introduction; 3. A method section; and 4. A reference page. Please skip all other sections. For each section you write, use complete APA format to the best of your ability.... You have 35 minutes to complete this. Please use your time wisely. Two references are provided to use in

your introductory paragraph. Please use some of the content when writing your paragraph, and cite and reference them appropriately.

Because of time constraints, other sections (Results, Discussion, etc.) were excluded. Students had no access to the *Publication Manual* (2001), and had approximately 35 minutes to write the papers.

In the week following the pretest, each instructor taught APA style. The first author used the template while the second author used the checklist. The semester then progressed as planned. Students wrote three research papers and instructors provided feedback on the first two, including comments on the proper use of APA style. At the end of the semester, a posttest session was conducted using the same materials and procedures as the pretest; these papers were the posttest data. After this session, we debriefed students and answered questions.

*Template.* During the third week of class students received a copy of an eight-page manuscript<sup>3</sup> written about and typed in APA style (Downing and Franz, 2002). As a homework assignment, each student typed the manuscript verbatim, retaining the formatting and returning it to the instructor five days later. This technique had three goals. First, students read a summary of the format conventions contained in the *Publication Manual* (2001) while re-typing the paper. Second, when done, students had a paper and electronic document that could serve as a template for subsequent papers. Third, it generated a question and answer session about APA style.

*Checklist.* A checklist was distributed to students in the third week of classes (Spitzer, 2002). The checklist included general items about APA style. The checklist also included corresponding page numbers indicating where key information was located in the *Publication Manual* (2001). The checklist had two goals. First, students would know, in advance, the items on which they would be graded. Second, the checklist would encourage students to use the *Publication Manual* (2001) by referring them to specific pages to find information.

*Scoring.* To keep our scoring unbiased, we (the authors/course instructors) had a laboratory assistant code each paper as to its course and pretest/posttest statuses, record the codes on a piece of paper, place that paper with the codes in a sealed envelope, and then completely randomize the order in which we read the papers. Because of the pseudonyms and codes, we were completely blind to pretest/posttest and class. To measure the students' knowledge of APA style, we then both scored each paper for adherence to APA style (ignoring the quality of the prose). Each section (Title Page, Introduction, Method, References) was scored on a 1-7 scale, where 1 represented no adherence to APA style at all and 7 represented perfect adherence to APA style. A Pearson correlation between the two sets of ratings demonstrated they were reliable ( $r = .96, p < .001$ ), thus demonstrating inter-rater reliability. These correlations did not differ substantially by section, technique, or pretest-posttest. We then discussed any disagreements and agreed upon one score for each section of the document. Analyses of internal consistency of these four rating scores (Title page, Introduction, Method, and References) demonstrated they were sufficiently reliable, average  $\alpha = .86$ . Thus, the four rating scores were averaged to create one overall evaluation score for each manuscript.

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<sup>3</sup> We recognized in our research that eight pages was too long, and a shorter version would be more useful. The Downing and Franz (2002) manuscript has been shortened to six pages since collecting the data presented in these studies.

*B. Results and Discussion.*

Because of the nature of the quasi-experimental design, we examined pre-existing differences in knowledge of APA style between the classes (see Table 1). A t-test of the pretest scores revealed no significant differences,  $t(31) = 1.7, p = 0.10$ .

A mixed-factorial ANOVA on the evaluation scores revealed a significant main effect for time of testing,  $F(1, 31) = 230.0, p < 0.001, \omega^2 = 0.67$ , demonstrating that the scores were significantly higher on the posttest than the pretest. This main effect was qualified by a significant teaching technique by time of testing interaction,  $F(1, 31) = 12.3, p < 0.001, \omega^2 = 0.07$ . Thus, students using either technique improved considerably, although the skill with APA style improved more with the template than with the checklist.

**Table 1. Study 1: Means and standard deviations for pretest and posttest average evaluation scores as a function of teaching technique.**

APA Style Teaching Technique	Pretest		Posttest	
	Mean	SD	Mean	SD
Template	2.92 <sub>a</sub>	0.94	5.94 <sub>b</sub>	0.59
Checklist	3.62 <sub>a</sub>	1.34	5.50 <sub>c</sub>	0.97
Overall	3.28 <sub>a</sub>	1.20	5.71 <sub>b</sub>	0.83

Note: Different subscripts represent means that are significantly different at  $p < 0.05$ .

Study 1 demonstrated that the template and checklist were both effective methods of teaching APA style. Second, the template appeared to be more effective than the checklist, although this effect size was small. Although several students complained about “how boring” the template copying assignment was, some also later commented about the usefulness of the electronic template when typing papers.

However, conversations during debriefing revealed diffusion across the classes – two students in the template class reported “borrowing” checklists from peers. Both commented on the usefulness of combining both approaches. In addition, the results from Study 1 could possibly be due to instructor/feedback differences rather than teaching approach. As a result, a second study was conducted to compare the effectiveness of a “combined” approach, using the template and checklist together, to the template alone. In addition, the instructor-teaching approach combination varied from that in Study 1. Specifically, the second author, who used the checklist in Study 1, used the combined approach in Study 2. The first author, who used the template in Study 1, continued to use the template in Study 2. Thus, if the differences in Study 1 were due solely to instructors, then the class using the template approach should again be more effective in Study 2 than the class using the combined approach. On the other hand, if the teaching approach rather than instructor caused the difference, the class using the combined approach should be at least as effective (and potentially more effective) than the class using the template.

### III. Study 2.

#### A. Method.

*Design.* The study utilized a 2 (Teaching technique: Template versus combined template and checklist)  $\times$  2 (Time of testing: Pretest-posttest) mixed-factorial quasi-experimental design.

*Participants.* Participants included 35 students in two different laboratory classes (8 males and 27 females;  $n = 15$  and  $n = 20$  in the template and combined classes, respectively). Because of tardiness and attendance, only 31 students completed both the pretest and posttest ( $n = 12$  and  $n = 19$  participants in the template and combined classes, respectively).

*Procedure.* The procedures were the same as Study 1, except that the second author (who used the checklist in Study 1) used both the template and checklist in Study 2.

*Scoring.* We scored each paper as we did in Study 1. A Pearson correlation demonstrated that the evaluation scores were again reliable ( $r = 0.97, p < 0.001$ ), and these correlations again did not differ substantially by section, technique, or pretest-posttest. Analyses of the internal consistency demonstrated that the scores were sufficiently reliable, average  $\alpha = 0.79$ , and thus, the four rating scores were again averaged.

#### B. Results and Discussion.

We first examined the pretest scores (see Table 2) to determine whether there were pre-existing differences in knowledge of APA style between the two classes. A t-test revealed no significant differences,  $t(29) = 0.76, p = 0.46$ .

A mixed-factorial ANOVA revealed a significant main effect for time of testing,  $F(1, 29) = 145.7, p < 0.001, \omega^2 = 0.51$ . This main effect was qualified by a significant teaching technique by time of testing interaction,  $F(1, 29) = 12.2, p < 0.001, \omega^2 = 0.05$ , showing that students learned APA style better when taught using both the template and checklist combined than with the template alone.

**Table 2. Study 2: Means and standard deviations for pretest and posttest average evaluation scores as a function of teaching technique.**

APA Style Teaching Technique	Pretest		Posttest	
	Mean	SD	Mean	SD
Template	3.90 <sub>a</sub>	1.04	5.18 <sub>b</sub>	1.15
Template and Checklist	3.61 <sub>a</sub>	1.00	5.96 <sub>c</sub>	0.67
Overall	3.72 <sub>a</sub>	1.01	5.65 <sub>b</sub>	0.94

Note: Different subscripts represent means that are significantly different at  $p < 0.05$ .

### IV. General Discussion.

The results of the two studies indicate that students improved their skills with APA style whether instructors used a template, a checklist, or both together. The results from Study 1 and 2, taken together, also make it likely that the effects are due to teaching technique rather than

instructor. The teaching approach and instructor combinations were varied in Studies 1 and 2. Thus, if the effects in Study 1 were solely due to the instructor, we should have seen the same pattern of results due to instructor in Study 2. However, the results showed the opposite, suggesting that the results are due to teaching approach rather than instructor.

As with most research, the reader should exercise caution when interpreting the results because of several limitations. First, the evaluation focused on APA style while ignoring “creating and organizing prose” (Ault, 1991, p. 45). This was because the main goal of the study was to make it easier for students to understand APA style so they would focus on and improve their prose rather than dwell on formatting issues. Unfortunately, we did not test this second question in this study and leave that for future research. Second, we used quasi-experimental designs, which cannot absolutely rule out differences due to instructors. However, it is more parsimonious to attribute the results of both studies together to the teaching approach. Third, because of time constraints students did not use the *Publication Manual* (2001) while writing their papers. Although this is a different from what instructors often encourage, these pretest-posttest differences would only be expected to improve if students did use the manual. One remaining concern is that the checklist actually encourages students to use the manual, so the effect of the checklist may actually be underrepresented in the evaluation scores. Fourth, a certain portion of the pretest-posttest effect is certainly due to instructor feedback. However, if the results were solely due to feedback, we would not expect any differences due to technique(s) used.

Finally, the present research focused only on APA style because that is the predominant format used in the psychology courses that served as the sample and it is the style used by the authors. However, there are many other formats that students can use (e.g., Modern Language Association/MLA and Council of Biological Editors/CBE). While the paper and checklist used in this study are not directly transferable to these other styles, they could easily be modified (or similar ones could be created) that would be likely to yield comparable results in the classroom.

In conclusion, teaching approaches like the template and checklist appear to help students learn formatting conventions especially when they are used together. There are other teaching approaches that could be used (e.g., Addison, 2000; Ault, 1991; Madigan et al., 1995; Peden, 1994; Rileigh, 1998; Smith and Eggleston, 2001), but many of these emphasize prose *and* format while the template and checklist approaches used in this study emphasize format only. Although well-written and organized prose is essential to writing papers, our goal was to separate formatting conventions from prose and make the difficult task of following the requirements easier for students, allowing instructors to spend more time helping students improve prose and organization.

### **Author Notes**

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