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Editorial: Evidence-Based Guidelines for Avoiding the Most Common APA Errors in Journal Article Submissions

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In this editorial, we provide evidence-based guidelines to help authors avoid committing APA errors. Specifically, we provide guidelines for adhering to APA style using findings from Combs, Onwuegbuzie, and Frels' (2010) mixed analysis of 110 manuscripts submitted to Research in the Schools over a 6-year period. Combs et al. identified the 60 most common APA errors grouped into 14 themes. We contend that an efficient way for authors to learn APA style is to focus initially on these common errors and error themes. Further, we contend that these errors provide useful starting points for persons who teach APA style. Finally, authors of the APA Publication Manual might use this information to determine which rules and guidelines to emphasize.

As co-editors and first-round copyeditors of *Research in the Schools* (John R. Slate and Anthony J. Onwuegbuzie), outgoing editor and associate editor of *Educational Researcher* (Anthony J. Onwuegbuzie and Julie P. Combs, respectively), recent guest editor of the *International Journal of Multiple Research Approaches* (Anthony J. Onwuegbuzie), editorial assistant/production editor of *Research in the Schools* (Rebecca K. Frels), and reviewers for and editorial board members of numerous journals, we have observed the difficulties that many authors have experienced in conforming to the guidelines specified in various editions of the *Publication Manual of the American Psychological Association* (APA)—hereafter called the *Publication Manual*. Further, as instructors of graduate-level research methods and writing courses, as well as other courses in which one or more substantive writing assignments are required, we have seen our students struggle to an even greater extent in conforming to the *Publication Manual* guidelines. And, examining the rampant nature of APA errors in doctoral dissertations (see, for e.g., Jiao, Onwuegbuzie, & Waytowich, 2008; Onwuegbuzie, Waytowich, & Jiao, 2006; Waytowich, Onwuegbuzie, & Jiao, 2006), it is clear that a substantial proportion of doctoral students from the social and behavioral science fields graduate without an adequate knowledge of the *Publication Manual* style. Unfortunately, this inadequacy likely makes the transition from doctoral student to beginning author to emergent scholar more difficult. Indeed, over the years, we have observed that some of our reviewers (i.e., editorial board members) have extremely low tolerance for APA errors. Thus, it is clear that authors who submit manuscripts to journals wherein APA style is required would benefit from becoming as familiar as possible with the *Publication Manual*.

Unfortunately, during the last 9 years, authors have had to become familiar with up to 467 pages of the fifth edition of the *Publication Manual* (APA, 2001), which is an extremely daunting task. Nor does the *Publication Manual* contain elements in sections that are presented sequentially in order of difficulty or elements in sections that build directly on each other. For example, in the fifth edition of the *Publication Manual*, should an author learn how to express ideas and reduce bias in language (chapter 1) before or after learning about APA editorial style (chapter 3)? As another example, within APA editorial style, should an author learn about capitalization (sections 3.12–3.18) before or after learning about numbers (sections 3.42–3.49)? Similarly, where should an instructor of the *Publication Manual* begin when teaching a group of students or an individual student? Without any such guidance, it is likely that students of the *Publication Manual* are unable to learn APA style in an optimal way, and instructors and mentors are unable to teach APA style in an efficient manner.

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Since the onset of the third edition of the *Publication Manual* (APA, 1994), several scholars have developed tools and strategies that might assist students/authors in mastering APA writing style. In particular, Stahl (1987) documented that using checklists and aligning writing requirements across courses improved the quality of instruction in APA style. A few years later, Gelfand and Walker (1990) developed a training manual that provided students with the ability to assess their knowledge of APA guidelines via multiple-choice items and exercises. The following year, Ault (1991) designed an assignment whereby students became familiar with the appropriate structure of empirical reports by sorting scrambled paragraphs of an article into the appropriate sections. Later in that decade, Rosenthal, Soper, Coon, and Von Bergen (1999) created a procedure wherein the instructor anonymously displayed the first page of each student's manuscript via an overhead projector and co-edited each introduction section with the class. Dunn et al. (2001) developed a checklist to assist students in being aware of what they believed were some of the most common APA formatting errors. During this same year, using Gelfand and Walker's (1990) training manual, Smith and Eggleston (2001) conducted a study in which 18 students read a poorly written paper and identified as many style errors as possible. Smith and Eggleston observed that students reported positive attitudes toward this assignment. Additionally, these students' knowledge of APA (1994) style improved substantially as a result of the activity. Further, performance on the activity was statistically significantly and moderately ($\eta^2 = 0.59$) related to the application of APA (1994) style in an empirical report. Ware, Badura, and Davis (2002) and Gelfand, Walker, and APA (2002) developed a set of procedures and a training manual, respectively, for learning the APA (2001) style guide. Most notably, Juve, Weiser, Kennedy, Davis, and Rewey (2000) conducted a study wherein they identified the most common APA (1994) formatting errors in 69 manuscripts that were submitted to the *Psi Chi Journal of Undergraduate Research.* Juve et al. identified 780 total APA errors, yielding an average of 11.3 formatting errors per manuscript. Based on these errors, Rewey, Juve, Weiser, and Davis (2000) developed a checklist of common formatting errors.

Although these manuals, techniques, guides, checklists, and assignments are useful for both students and instructors of the *Publication Manual*, with the exception of Juve et al. (2000), they were developed based on what the authors *assumed* were the most common APA errors and not based on what actually *were* the most common APA errors. That is, with one exception, these materials were not evidence-based. As such, it is likely that these materials provided information or strategies for adhering to APA rules that yielded low-incidence errors. Yet, high-incidence APA errors likely arise from the most frequently used APA rules. Thus, bearing in mind the length of the *Publication Manual* and the length of time it takes potentially to master it, any non-evidence-based material that focuses, at least in part, on low-incidence APA errors likely will not be adequately efficient for learning and teaching APA style. For example, it would appear to be more efficient for an instructor of APA to focus, at least initially, on formatting errors identified by Juve et al. (2000) than on other formatting errors—as Rewey et al. (2000) did. Unfortunately, although very helpful, Juve et al. and Rewey et al. only focused on formatting errors, representing only a portion of APA errors that authors can commit. Further, these errors represented deviations from the fourth edition of the *Publication Manual* (APA, 1994), which was replaced by the fifth edition of the *Publication Manual* (APA, 2001) approximately 9 years ago.

Sources of Evidence

Until recently, no researcher has provided evidence-based information regarding the most common APA errors associated with the fifth edition of the *Publication Manual*. To this end, Combs, Onwuegbuzie, and Frels (2010) conducted a mixed research study in which they examined 110 manuscripts submitted to *Research in the Schools* over a 6-year period. According to the authors, the 110 manuscripts represented approximately 55% of all manuscripts submitted to this journal over this period, thereby justifying generalizations being made to the population of manuscripts submitted to *Research in the Schools*—at least over this period of time. This 6-year period also represented the years 2003 to 2009, with 2003 being a good starting point because it represented 2 years after the fifth edition of the *Publication Manual* was introduced—long enough for all users of the fourth edition fully to make the change to the fifth edition.

Combs et al. (2010) diligently documented every APA error committed by these 110 sets of authors over a 6-year period, with each manuscript taking 4 to 6 hours to code, depending on its length—yielding a total of at least 440 hours of coding. Consequently, Combs et al.'s data set likely represents the only one of its type anywhere. In fact, only journal editors have the opportunity to collect these data, and because such data collection is so time-consuming, it is extremely unlikely that any other editor documents APA errors in such a comprehensive and systematic manner as did these editors. As such, we believe that Combs et al.'s findings should be disseminated as widely as possible.

Most Common APA Errors

Combs et al. (2010) identified a total of 1,163 APA errors that were committed at least one time by the 110 sets of authors who submitted manuscripts to *Research in the Schools*, which yielded a mean APA error rate of 10.57 (*SD* = 5.15) per manuscript submitted to *Research in the Schools*. Interestingly, every manuscript contained at least 1 APA error, with the maximum number of unique APA errors in a manuscript being 25.

Combs et al. (2010) used a four-stage mixed analysis procedure developed by Onwuegbuzie and Combs (2009b), in which the first stage involved a classical content analysis (Berelson, 1952; see also Leech & Onwuegbuzie, 2007, 2008) of the 110 coded manuscripts to determine the number of unique APA error codes committed. These codes were extracted a priori (Constas, 1992) using rules delineated in the fifth edition of the *Publication Manual*. The second stage involved the use of constant comparison analysis (Glaser & Strauss, 1967) to extract themes from the identified codes. These themes were extracted iteratively involving a combination of the use of the fifth edition of the *Publication Manual* (a priori) and the emergent data (a posteriori). The third stage involved quantitizing (Tashakkori & Teddlie, 1998) the themes. Specifically, the themes were converted to numeric data by assigning a "1" if the manuscript contained one or more APA errors that were classified under that theme and a "0" if the manuscript did not contain any APA errors that were classified under that theme. This dichotomization or binarization led to the creation of what Onwuegbuzie (2003) referred to as an "inter-respondent matrix" (i.e., *manuscript x theme matrix*) that contained a combination of 0s and 1s (p. 396). The inter-respondent matrix, indicating which manuscripts contributed to each emergent theme, was used to conduct (a) an exploratory factor analysis to determine the underlying structure of the APA error themes; and (b) a latent class analysis to determine the number of clusters (i.e., latent classes) underlying the APA error themes.

In Stage 4, Combs et al. (2010) used the inter-respondent matrix to examine the correlation between error codes/error themes and an array of variables. In particular, they conducted (a) two sets of canonical discriminant analyses to determine which of the error themes best predicted the decision that the editor made on the manuscript (i.e., reject, revise and resubmit, or accept); and (b) a canonical correlation analysis to determine the multivariate relationship between selected demographic variables (e.g., number of authors, length of manuscript) and the APA error themes.

Stage 1

The classical content analysis led to the identification of a total of 60 unique APA errors that were committed across these 110 manuscripts. These 60 (fifth edition-based) APA errors are presented in order of prevalence in Figure 1. Also presented in Figure 1 is the description of the code (i.e., APA error) as stated in the fifth edition of the *Publication Manual* with the associated page number(s), the description of the code as stated in the (current) sixth edition of the *Publication Manual* (if different from the fifth edition) with the associated page number(s), and the prevalence rate (i.e., percentage).

It can be seen from Figure 1 that the most common APA error code pertained to the incorrect use of numbers, which consists of (a) numbers expressed in figures (APA, 2001, section 3.42), comprising failure to use figures to express "all numbers 10 and above"; "all numbers below 10 that are grouped for comparison with numbers 10 and above (and that appear in the same paragraph)"; "numbers that immediately precede a unit of measurement"; "numbers that represent statistical or mathematical functions, fractional or decimal quantities, percentages, ratios, and percentiles and quartiles"; "numbers that represent time, dates, ages; sample; subsample; or population size; specific numbers of subjects or participants in an experiment; scores and points on a scale; exact sums of money; and numerals as numerals"; "numbers that denote a specific place in a numbered series, parts of books and tables"; and "all numbers in the abstract" (APA, 2001, pp. 122-125); (b) numbers expressed in words (APA, 2001, section 3.43), comprising failure to use words to express "numbers below 10 that do not represent precise measurements and that are grouped for comparison with numbers below 10," "the numbers *zero* and *one* when the words would be easier to comprehend than the figures or when the words do not appear in context with numbers 10 and above," "any number that begins a sentence, title, or text heading"; "common fractions" ; and "universally accepted usage" (pp. 125-127); and (c) combining figures and words to express numbers (APA, 2001, section 3.44), comprising failure to use a combination of figures and words to express "rounded large numbers (starting with millions)"; and "back-to-back modifiers" (p. 127). Errors associated with this code were committed by more than one half of the authors (57.3%).

No	APA Error Code	%	Description of Error and Reference to Fifth Edition APA Rule Page No.	Description of Error and Reference to Sixth Edition APA Rule Page No.
1	Numbers	57.3%	Not using figures (e.g., all numbers 10 and above; p. 122); not using numbers to represent time, dates, ages, sample, subsample, or population size or in a numbered series (pp. 124-125)	No change in the rule, with the exceptions that (a) do not use figures for sample size, population size, or specific numbers of subjects or participants in an experiment; (b) use words for approximations of numbers of days, months, and years; and (c) do not use numerals for numbers below 10 that are grouped with numbers above 10 (p. 112)
2	Hyphenation	55.5%	Not hyphenating a compound with a participle when it precedes the term it modifies (p. 91)	No change in the rule (p. 97)
3	Use of *et al.*	44.5%	Not citing all authors the first time; in subsequent citations, not including only the surname of the first author followed by "et al." (not italicized and with a period after "al"; p. 208)	Clarifications were provided for citing works by six or more authors (p. 175)
4	Headings: Punctuation	44.5%	Not capitalizing the words in headings appropriately; incorrectly using capitalization or punctuation with Level 4 headings (pp. 113-114, 289-290)	No change in rule (pp. 101-102)
5	Use of s*ince*	41.8%	Using *since* instead of *because* (p. 57)	No change in the rule (p. 83)
6	Tables and figures	40.0%	Not presenting tables in tabular form and repeating information in the text; not formatting figures according to APA (e.g., not copied, SPSS outputs; p. 201)	No change in format, but a table may be single or double spaced (p. 141)
7	Use of commas between elements	40.0%	Not using commas between elements (including before *and* and *or*) in a series of three or more items (p. 78)	No change in the rule (p. 88)
8	Use of abbreviations/ acronyms	37.3%	Not spelling out acronyms on the first occasion used (p. 104)	No change in the rule (p. 106)
9	Spacing	30.0%	Not consistently using double spacing between lines, including use of direct quotations (p. 286)	No change in the rule (p. 229)
10	Usage of & as opposed to the word *and*	33.6%	Incorrectly using the ampersand in the text or the word *and* in the citation (p. 209)	No change in the rule (p. 177)
11	Use of past tense	32.7%	Not using past tense to describe previous findings (p. 42)	No change in the rule (p. 78)
12	Use of italics for symbols	30.9%	Not italicizing symbols (e.g., *n*; pp. 10, 140)	No change in the rule (p. 118)
13	Misuse of *while*	29.1%	Using the word *while* instead of the word *whereas* or *although* (p. 56)	No change in the rule (pp. 83-84)
14	Formatting	29.1%	Not formatting correctly (e.g., incorrect indentations, use of italicizing or bold, title too long, title not being on the first page, header font not matching body of paper; pp. 288-291)	Changes in the running head (p. 230); boldface and levels of headings (p. 62)
15	Misuse of *which*	28.2%	Using the word *which* instead of the word *that* when the clause is restrictive (p. 55)	No change in the rule (p. 83)
16	Anthropomorphism	27.3%	Giving human characteristics to inanimate sources (pp. 38-39)	No change in the rule (pp. 68-69)
17	Alphabetizing citations and references	26.4%	Not placing all references in alphabetical order; not placing citations in text in alphabetical order (p. 219)	No change in the rule (pp. 178, 181)
18	Capitalization of titles	24.5%	Not capitalizing nouns followed by numerals or letters that denote a specific place in a numbered series (e.g., year 1 instead of Year 1; p. 124)	No change in the rule (p. 101)

No	APA Error Code	%	Description of Error and Reference to Fifth Edition APA Rule Page No.	Description of Error and Reference to Sixth Edition APA Rule Page No.
19	Misuse of the word *data*	24.5%	Misusing the word *data* as singular as opposed to plural (pp. 44-45)	No change in the rule (p. 79)
20	Elements and seriation	23.6%	Incorrectly using 1, 2, 3, instead of (a), (b), (c) (p. 116)	No change in the rule (p. 64); however, more options for use of bulleted or numbered lists
21	Misuse of superscript with numerals	22.7%	Incorrectly using superscript (e.g., 4^{th} as opposed to 4th; p. 123)	No change in the rule (e.g., p. 113)
22	Citations: Commas and authors	22.7%	Not placing a comma to separate the last two authors in a list of three or more authors (p. 208)	No change in the rule (p. 184)
23	Boldface and italicized type	22.7%	Misusing bold or italicized text (pp. 100, 140)	No change in the rule (p. 106)
24	Citations: Direct quotes and page numbers	19.1%	Neglecting to state a page number when direct quotations are used; a page number is not needed when direct quotations are not used; incorrectly using a capital P instead of a lowercase p (pp. 117-118)	No change in the rule (pp. 170-171)
25	Misuse of the term *subjects*	17.3%	Incorrectly using the term *subjects* instead of the correct term: *participants* (p. 70)	Acknowledge participation consistent with the traditions of the field in which the researcher is working and the use of the terms *subjects* and *sample* is permissible (p. 73)
26	Capitalization of ethnic groups	16.4%	Not capitalizing or misusing terms to refer to ethnicity (e.g., black as opposed to Black; p. 68)	No change in the rule (p. 75)
27	Statistical copy	16.4%	Incorrectly reporting statistical results, including misusing statistical symbols (e.g., no space between symbols and equal signs; pp. 136-146)	No change in the rule (pp. 118-123)
28	Citing multiple authors: First time	16.4%	Not citing correctly three, four, or five authors by specifying all authors on the first occasion (p. 209)	When citing the initial citation, authors are to cite only the first author followed by *et al.* when a work has six or more authors (p. 175)
29	Numbers and hyphenation	15.5%	Not hyphenating a number when used with an element (e.g., 7-point; p. 127)	No change in the rule (pp. 112-113)
30	Decimal places	14.5%	Not using only two decimal places when the numeral is greater than 1 (p. 129)	No change in the rule (p. 113)
31	Percent symbol	14.5%	Not using the % sign (e.g., stating 29 percent; p. 140)	No change in the rule (p. 118)
32	Punctuation of dashes	12.5%	Not inserting an em dash (pp. 81-82)	No change in the rule (p. 97)
33	Quotations	11.8%	Misusing punctuation with quotations (e.g., missing the beginning of quotation marks, misplacement of period at the end of a quotation; p. 293)	No change in the rule (pp. 170-172)
34	Spacing in text	11.8%	Missing a space when citing the page number (e.g., p. 68) or not using a single space after all punctuation (p. 290)	No change in the rule (p. 171) with page number; however, two spaces are recommended, but not stipulated, at the end of a sentence (p. 88)
35	Misuse of *who* and *that*	10.9%	Incorrectly using *that* instead of *who* as a pronoun (p. 48)	No change in the rule (p. 83)
36	Acronym at the start of a sentence	9.1%	Beginning a sentence incorrectly with an abbreviation (p. 111)	No change in the rule (p. 111)
37	Citations in text	8.2%	Incorrectly citing a reference in the text (e.g., year is missing, citation misplaced; pp. 207-214)	No change in the rule (cf. Table 6.1, p. 177)
38	Misuse of comma	8.2%	Not using a comma appropriately (e.g., numbers with more than three figures; p. 78)	No change in the rule (p. 114)

No	APA Error Code	%	Description of Error and Reference to Fifth Edition APA Rule Page No.	Description of Error and Reference to Sixth Edition APA Rule Page No.
39	Misuse of punctuation with citation	8.2%	Using a letter after publication year when the reference is the only citation for an author (e.g., College Board, 1995a; p. 212)	No change in the rule (p. 178)
40	Comma with quotation	6.4%	Not using a comma before the end of the quotation mark (commas should be placed within quotations, p. 119)	No change in the rule (p. 171)
41	Placement of title	6.4%	Misplacing the title on cover page (p. 10)	No change in the rule (p. 23)
42	Mixed tenses	6.4%	Mixing verb usage between present and past tense (p. 33)	No change in the rule (p. 78)
43	Capitalization of title	6.4%	Capitalizing words with more than three letters (p. 95)	No change in the rule (p. 23)
44	Colloquial language	5.5%	Not avoiding statements or terms that are colloquial (p. 37)	No change in the rule (p. 68)
45	Same author and lists	5.5%	Not using suffixes a, b, c, after a year in the reference list when referring to the same author (p. 212)	No change in the rule (p. 178)
46	Misuse of abbreviation	5.5%	Using *vs*. and not *versus* in parenthetical material (p. 104)	No change in the rule (p. 108)
47	Abstract	4.5%	Exceeding 120 words in the abstract and/or using more than one paragraph (p. 13)	Word limits are different for different journals and range from 150 to 250 words (p. 27)
48	Parallelism	4.5%	Not presenting elements in parallel form (p. 60)	No change in the rule (p. 86)
49	Table and highlights	4.5%	Not discussing only a table's highlights (p. 154)	No change in the rule (p. 130)
50	Use of a contraction	4.5%	Not spelling out full words (colloquial language; cf. p. 37)	No change in the rule (p. 68)
51	Figure placement	3.6%	Not placing a figure after the reference list but instead embedding it within the body of the manuscript (p. 287)	No change in the rule (p. 230)
52	Misplaced reference list	1.8%	Not placing the reference list before tables (cf. order of manuscript; p. 287)	No change in the rule (p. 230)
53	Short Paragraph	1.8%	Using a paragraph that is less than three sentences (p. 36)	No change in the rule (p. 68)
54	Long Paragraph	1.8%	Using a paragraph that is longer than one page (p. 36)	No change in the rule (p. 68)
55	Usage of acronym *SD*	1.8%	Using *S* instead of *SD* to represent standard deviation (p. 143)	*SD* remains the symbol for standard deviation; however, *S* now represents sample standard deviation (p. 121)
56	Misuse of term *sex* for *gender*	1.8%	Using the biological term *sex* instead of the cultural term *gender*	No change in the rule (p. 73)
57	Not correctly citing a website	1.8%	Citing a website instead of the author and year (pp. 278-281)	Changes for electronic dissemination of information, specifically DOIs (p. 188)
58	Use of the word *done* instead of *undertaken*	1.0%	Using colloquial language (cf. p. 37)	No change in the rule (p. 68)
59	Beginning a sentence with a quotation	1.0%	Placing a quotation in a manner that might confuse readers (p. 118)	No change in the rule (pp. 170-171)
60	No header page number	1.0%	Not placing page numbers in manuscript (p. 288)	No change in the rule (p. 230)

Figure 1. Errors and percentages of occurrence with references to the fifth edition of the *Publication Manual* (APA, 2001) and the sixth edition of the *Publication Manual* (APA, 2010).

The next most common error code—the only other error code with a prevalence rate greater than 50%—pertained to the incorrect use/non-use of hyphenation (APA, 2001, section 3.11). These authors typically incorrectly failed to use hyphenation in one or more of the following situations: (a) "a compound with a participle when it precedes the term is modifies"; (b) "a phrase used as an adjective when it precedes the term it modifies"; (c) "an adjective-and-noun compound when it precedes the term it modifies"; or (d) "a compound with a number as the first element when the compound precedes the term it modifies" (APA, 2001, p. 91).

The following error codes that had prevalence rates between 40% and 45% were, respectively: incorrect use/non-use of *et al.* (44.5%), incorrect capitalization in headings (44.5%), incorrect use of *since* versus *because* (41.8%), incorrect use of commas among elements (40.0%), and incorrect formatting of tables and figures (40.0%). Further, the following error codes that had prevalence rates between 30% and 38% were, respectively: not spelling out acronyms the first time (37.3%), incorrect use of *and* versus *&* (33.6%); incorrect use of tense for reporting findings (32.7%), non-italicization of statistical symbols (30.9%), and incorrect use/non-use of spacing (30.0%). Also, the following error codes that had prevalence rates between 20% and 29.1% were, respectively: incorrect use of *while* versus *whereas* (29.1%), formatting errors (29.1%), incorrect use of *which* versus *that* (28.2%), anthropomorphism (27.3%), references and in-text citations not presented in alphabetical order (26.4%), incorrect capitalization in titles (24.5%), subject-verb disagreement involving the word data (24.5%), seriation (23.6%), incorrect use of superscripts (22.7%), and incorrect use of boldface text (22.7%). As can be seen from Figure 1, all other errors codes had prevalence rates of less than 20%.

Stage 2

Using constant comparison analysis of the 60 APA error codes, Combs et al. (2010) extracted the following 14 themes that represented the errors made by authors submitting manuscripts to *Research in the Schools*: grammar, format, hyphenation, citing multiple authors, in-text citations, numbers, capitalization, formality and clarity, statistical copy, punctuation, tables and figures, abbreviations, quotations, and bias in language. The prevalence rate of each of these themes is presented in Table 1. In this table, the frequency can be treated as effect sizes. As such, Table 1 reveals that nine of the APA error themes had effect sizes above .50. An effect size greater than .50 is extremely large because it implies that the majority of manuscripts contained this error theme. The remaining five APA error themes had effect sizes between .32 and .48, which can all be considered large. Disturbingly, the authors who submitted manuscripts to *Research in the Schools*, on average, committed more than one half of these errors (M = 7.54, SD = 3.06). In the following sections, the 14 APA error themes are described and the errors contained in each theme are outlined with respect to both the fifth and the sixth editions of the *Publication Manual*.

Grammar. Errors in grammar were identified in 71.82% of the manuscripts. When defining grammar, the authors of the fifth edition of the *Publication Manual* did not include all components of grammar but rather grammar and usage errors "that occur frequently in manuscripts submitted to APA journals" (APA, 2001, p. 41). Combs et al. (2010) coded grammatical errors in manuscripts in the following areas: disagreement between the subject and verb (e.g., "data is" instead of "data are"), pronoun disagreement (e.g., pronouns disagree in number and gender), incorrect use of relative pronouns (e.g., who, whom, that, which), and incorrect use of subordinate conjunctions (e.g., while, since, although). These errors then were combined and assigned to the theme of *grammar*. The most frequently occurring error within this theme was the use of *since* when the word *because* would have been more specific (see APA, 2001, p. 57; APA 2010, p. 83); this error was located in 41.82% of the manuscripts. The next most frequently occurring error revealed in 29.09% of the manuscripts was the use of *while* instead of *although* or *whereas* (see APA, 2001, p. 56; APA, 2010, p. 84). In addition, a significant number of authors had difficulty determining when to use the word *which* versus the word *that*. As such, this APA violation was present in 28.18% of the manuscripts. Although errors were noted in subject/verb disagreement, the use of the word *data* paired with a singular verb (e.g., *data is*) was located in 24.55% of the manuscripts. Thus, attention to the correct use of the words *although*, *because*, *which*, and *that*, and the understanding that the word *data* is plural could help authors avoid some of the most common violations reported by Combs et al. (2010). Parallel to the fifth edition, authors of the sixth edition of the *Publication Manual* maintained identical grammar rules as those aforementioned rules and dedicated seven pages to describing the correct and incorrect usage of (a) subject and verb agreement, (b) pronouns, (c) misplaced and dangling modifiers and adverbs, and (d) relative pronouns and subordinate conjunctions (APA, 2010, pp. 78-84).

Table 1

Themes Emerging from APA Errors Identified by Editor for Manuscripts Submitted to Research in the Schools

Themes	Rank	Frequency (%)
Grammar	1	72%
Format	2	67%
Hyphenation	3	65%
Citing multiple authors	4	61%
In-text citations	5	60%
Numbers	6	57%
Capitalization	6	57%
Formality and clarity	8	56%
Statistical copy	9	54%
Punctuation	10	48%
Tables and figures	11	45%
Abbreviations	12	42%
Quotations	13	36%
Bias in language	14	32%

Format. Errors involving formatting were located in 67.27% of the manuscripts that were submitted. The theme of *format* included categories that can be located in chapter 1 of the fifth edition of the *Publication Manual* concerning the manuscript's organization, and chapter 5 of the fifth edition regarding the preparation of the manuscript. The most frequently occurring error within this theme that emerged in 30.00% of the manuscripts involved the use of incorrect spacing between words, sentences, and lines. Specifically, the authors of the fifth edition of the *Publication Manual* specified that double-spacing was to occur between all lines in the manuscript, including the title, headings, quotations, references, and tables. With respect to the spacing between characters, one space should have occurred after all punctuation—including periods, commas, colons, and semicolons (APA, 2001, p. 286). With regard to the fifth and sixth edition guidelines, the lines of a text are not to be justified; instead, authors are instructed to leave "the right margin uneven, or *ragged*" [italics in original] (APA, 2001, p. 287; APA, 2010, p. 229). Other errors noted in the theme of format were missing indentations for paragraphs, incorrect use of underlining, incorrect use of bold typeface, incorrect presentation of lists, and incorrect ordering of the various components of the manuscript (e.g., title page, abstract, references). In addition, a problematic aspect for authors concerned the lack of information provided in the abstract. This finding is consistent with that of Hahs-Vaughn and Onwuegbuzie (2010) (see also the editorial by Hahs-Vaughn, Onwuegbuzie, Slate, & Frels, 2009).

With respect to author responsibilities, the authors of the sixth edition of the *Publication Manual* (APA, 2010) maintained many of the same rules for preparing the manuscript for submission as the rules outlined in the fifth edition of the *Publication Manual*, with the exception of the abstract. Otherwise, changes in the formatting of manuscripts have been prescribed in that authors should now place the running head in the page header on the same line as the page number (APA, 2010, p. 230), and only on the cover page. Referring to the abstract, authors of the fifth edition suggested a maximum of 120 words (APA, 2001, p. 23), although authors of the sixth edition now propose that "word limits vary from journal to journal and typically range from 150 to 250 words" (APA, 2010, p. 27). In addition, the authors of the sixth edition of the *Publication Manual*

suggest the use of two spaces after all end-of-sentence periods for ease of reading comprehension (APA, 2010, p. 87). It is important to note that writers who attend to the details of formatting might be perceived as being those persons who also attend to other details in their manuscripts. Also, by paying attention to the formatting of an abstract and the body of a manuscript, authors might prepare manuscripts that are polished in appearance and therefore increase the chances that the editors will send the manuscript to reviewers.

Hyphenation. Even though the hyphen represents a small character, its use appeared to cause much confusion for authors. In fact, errors in hyphenation were documented in 65.45% of the manuscripts reviewed by Combs et al. (2010). Instructions regarding hyphenation were contained in the Spelling section of the fifth and sixth editions of the *Publication Manual*. Admittedly, the authors of the fifth edition of the *Publication Manual* noted that "choosing the proper form [hyphenated or not hyphenated] is sometimes frustrating" (APA, 2001, p. 89). Authors of manuscripts were instructed initially to consult a dictionary. Then, if the word could not be located, instructions were provided in Table 3.1 of the *Publication Manual* (see APA, 2001, p. 91). According to authors of the sixth edition and as with the guidelines of the fifth edition of the *Publication Manual*, "APA follows *Webster's Collegiate* in most cases" (APA, 2010, p. 97), and authors are referred to the general principle in Table 4.1 (p. 98) when a compound is not in the dictionary.

With respect to the most common hyphenation errors reported by Combs et al. (2010), the following errors were prominent: (a) not hyphenating a compound with a participle when it was preceding the term it modified (e.g., role-playing technique), (b) not hyphenating an adjective-and-noun compound when it preceded the term it modifies (e.g., middle-class families), (c) using a hyphen with a compound including an adverb that ended in *ly* (e.g., widely used practice), and (d) not hyphenating a compound with a number as the first element when the compound preceded the term it modified (e.g., 12th-grade students). Another common error involved the incorrect placement of a hyphen with regard to common fractions used as nouns. For example, in both editions, in the phrase *one third of the principals*, the compound words *one third* would not be hyphenated. Authors also should be aware that spell check functions in word processing software might indicate mistakenly that a hyphen is needed.

Citing multiple authors. The next most frequent error present in the manuscripts reviewed by Combs et al. (2010) involved the use of citations regarding more than one author used in the text of the paper. Such errors were located in 60.91% of the manuscripts. In their analysis, Combs et al. noted instances wherein (a) all authors' names were cited each time their work was cited and (b) a work was abbreviated each time it was cited (including the first time) by using *et al.* after the first author's name. Several other errors were noted in the formatting of *et al.*, such as commas and periods being misplaced. Further, in listing a work with three or more authors, a comma should have separated the last two authors.

Within the theme of citing multiple authors, the most problematic convention was the use of *et al*. Specifically, the authors of the fifth edition of the *Publication Manual* stated that

> when a work has three, four, or five authors, cite all authors the first time the reference occurs; in subsequent citations, include only the surname of the first author followed by et al. (not italicized and with a period after "al"). (APA, 2001, p. 208)

However, it was possible that the fifth edition of the *Publication Manual* contributed to the problems that authors experienced when citing multiple authors because, as noted by Daniel and Onwuegbuzie (2007), the fifth edition of the *Publication Manual* contained a glaring inconsistency:

> APA contains a gross contradiction that, to date, no one seems to have noticed. Specifically, on page 209, the *Publication Manual* states that "When a work has six or more authors, cite only the surname of the first author followed by *et al.* (not italicized and with a period after 'al') and the year for the first and subsequent citations" [italics in original]. Yet, several pages later, on page 241, it is stated that "After the sixth author's name and initial, use *et al.* to indicate the remaining authors of the article" [italics in original]. Clearly, "six or more" (p. 209) is not the same as "After the sixth." Thus, this inconsistency needs to be resolved in future editions of the *Publication Manual*. (p. viii)

Authors of the sixth edition of the *Publication Manual* make clearer the rules for crediting sources, especially with respect to one work by six or more authors, repeated citations, and publisher location. In the sixth edition, when citing the initial citation, authors should cite only the first author followed by *et al.* when a work has six or more authors. In addition, for all references within a paragraph and after the initial citation, the year may only be omitted from citations included in the narrative; however, the year may not be omitted from parenthetical citations (APA, 2010, p. 174). Authors of the sixth edition present the following example: "Kisangau et al. found [Omit year from subsequent citations after first nonparenthetical citation within a paragraph. Include the year in subsequent citations if first citation within a paragraph is parenthetical.]" (p. 175). Regarding

works with more than seven authors, references should include the first six authors followed by three ellipses and the final author's name. Importantly for authors, it appears that learning the conventions of citing multiple authors within a manuscript would be time well spent.

In-text citations. Similar to the previous theme, the theme of in-text citations emerged as a common error in 60.00% of the manuscripts. The most common error coded in this theme was the incorrect use of *and* and *&* when citing authors in the text of a document, which was identified in approximately one third (33.64%) of the manuscripts. Another common error located in 26.36% of the manuscripts involved the incorrect ordering of multiple works within a parenthetical citation. In both editions, when multiple citations are used to provide evidence to an assertion, the multiple references should be placed in alphabetical order. However, inexperienced academic writers might confuse the placement of multiple citations with the placement of individual authors' names within a single citation. Thus, a distinction referring to the order of authors within a single citation and alphabetical arrangement of multiple citations listed in parentheses should have been highlighted for writers. Other errors coded in this theme included the incorrect placement of the year and the incorrect use of authors' initials in citations appearing in the text. Logically, authors of the sixth edition of the *Publication Manual* maintained the same style rules for the use of *and* and *&* and the order of authors within a single citation and the alphabetical arrangement of multiple citations (APA, 2010, p. 175). Hence, academic writers would be wise to understand and to master the standard conventions for citations.

Numbers. Errors made with respect to numbers was the sixth most frequently occurring APA violation; such errors were documented in 57.27% of the manuscripts. Interestingly, nine pages in the fifth edition of the *Publication Manual* were devoted to the use of numbers. However, more pages were used to explain exceptions regarding the use of numbers rather than the few rules that apply to the use of numbers. The first two rules specified that authors should "use figures to express all numbers 10 and above" and should use figures with "all numbers below 10 that are grouped for comparison with numbers 10 and above" (APA, 2001, p. 123). The exceptions were presented after these two rules. Some exceptions listed were the use of numbers when representing: (a) percentages, (b) ratios, (c) time, (d) ages, (e) the number of participants, and (f) scores on a scale. Another error that authors committed when using numbers and common to authors whose writing referred to education is the notation of grade levels. Some examples of correct APA format of grade levels using numbers are as follows: Grade 8, eighth grade, Grade 12, 12th grade, and 12th-grade students (note that the ordinal number is not a superscript font and the hyphen is used in the last example because *12th grade* describes the noun *students*).

With regard to the use of numbers in text, one addition and two sets of deletions are presented in the sixth edition of the *Publication Manual*. With the exception of discussing *approximations* of days and months (e.g., "about *ten* days") authors should express in numerals: (a) numbers 10 and above; (b) numbers in the abstract of a paper or in a graph; (c) numbers that represent statistical or mathematical functions; (d) numbers that represent time, dates, ages, scores, and points of a scale; and (e) numbers that denote a specific place in a series. In addition, authors may combine numerals and words to express back-to-back modifiers (APA, 2010, p. 112) and write for example, that *researchers conducted six trials in 12 days*—because "a combination of numerals and words in these situations increases the clarity and readability of the construction" (APA, 2010, p. 113). Due to the fact that numbers are present in almost each circumstance of academic writing, it would be worthwhile for authors to learn conventions for using numbers.

Capitalization. Similar to number errors, capitalization errors were revealed in 57.27% of the manuscripts. The presentation of titles and headers accounted for capitalization errors in 50.00% of the manuscripts. Specifically, authors of the *Publication Manual* stated that "major words in titles" and all words with four letters or more should be capitalized (APA, 2001, p. 95; APA, 2010, p. 101). If conjunctions, articles, or short prepositions contained less than four letters, then these words should not have been capitalized. In addition, words following a hyphen or a colon within a title should be capitalized. For both editions, Levels 1, 2, and 3 headings follow the same rules for capitalizing titles applied to these headings. According to the authors of the fifth edition, it was rare that all five levels of headings would be used; rather, most articles contained only three levels of headings: Level 1, Level 3, and Level 4. Similar to the fifth edition, in the sixth edition of the *Publication Manual*, five levels of headings are presented, and authors are directed to use each level in a "top-down progression" (APA, 2010, p. 62). Unlike the fifth edition, the first four levels of headings require the use of boldface text and might delineate sections more clearly for readers. Important for academic writers, the introduction section to a manuscript does not carry a heading that labels it as the introduction, and headings should not be labeled with numbers or letters (APA, 2010, p. 63). Due to the fact that headings are bold in typeface, authors

would be wise to follow meticulously the guidelines for headings to convey better attention to details.

Formality and clarity. Of the manuscripts reviewed, 56.36% contained errors related to the theme of formality and clarity. This theme, which encompasses errors contained in chapter 2 of the *Publication Manual*, refers to errors relating to smoothness of expression, economy of expression, word choice, colloquial expressions, and attributions. The errors coded with highest frequency with respect to this theme were the misuse of verb tense and attributions. In 32.27% of the manuscripts, authors misused verb tenses as follows: (a) abrupt shifts in tense within the same paragraph, (b) not using past tense verbs to describe the results of the study or to report previous findings, and (c) not using present tense verbs in the discussions and conclusions. In addition to verb tense, three specific errors of attribution were outlined in both the fifth and the sixth editions of the *Publication Manual*: "use of the third person, anthropomorphism, and use of the editorial *we*" (APA, 2001, p. 37; APA, 2010, pp. 69-70). Anthropomorphisms, which represent the attributions of human characteristics to inanimate sources, were identified in 27.27% of the manuscripts. Some examples of anthropomorphisms are *schools learned their lessons* and *programs created new roles*. Chapter 3 of the sixth edition of the *Publication Manual* (pp. 61-86), like chapter 2 of the fifth edition, is dedicated to writing clearly and concisely. Consequently, sections outlining formality and clarity with respect to smoothness of expression, economy of expression, word choice, colloquial expressions, and attributions have not changed from the fifth edition to the sixth edition of the *Publication Manual*. As a result, errors delineated by Combs et al. (2010) in this theme are important to writers to note in order to avoid anthropomorphisms and to express ideas in a more concise and clear manner.

Statistical copy. Errors were observed in 53.64% of the manuscripts, and these errors were categorized as statistical copy errors. The authors of the fifth edition of the *Publication Manual* devoted 10 pages to this topic. The most common error described in this theme and present in 30.90% of the manuscripts involved the incorrect formatting of statistical symbols. Statistical symbols are to be presented using an italic typeface. For example, "a lowercase italicized *n* is used to designate the number of members in a limited portion of the total sample (e.g., *n* = 30)" (APA, 2001, p. 139). Moreover, a space is inserted between the *n* and the equal sign, and between the equal sign and the numeral. The number of decimals used, in general, should be rounded to "two decimal places" (APA, 2001, p. 129), and a comma is used between groups of three digits of 1,000 or higher, with a few exceptions. Another common error made by authors was the exclusion of the percent (%) symbol when reporting percentages. Indeed, authors should have used "the symbol for percent only when it is preceded by a numeral" (APA, 2001, p. 140). Likewise, authors of the sixth edition of the *Publication Manual* dedicate a section (4.35) to decimal fractions and state that "as a rule, when properly scaled, most data can be effectively presented with two decimal digits of accuracy" (APA, 2010, p. 114) and note that authors should "use a zero before the decimal point with numbers that are less than 1 when the statistic can exceed 1" (APA, 2010, p. 113). The section on spacing, alignment, and punctuation in the sixth edition is similar to that in the fifth edition. Because many empirical reports contain descriptions using numbers (e.g., participants, demographics, frequencies), authors should note the conventions adopted in the sixth edition of the *Publication Manual* (pp. 111-124) and apply the style rules when presenting research reports.

Punctuation. Almost one half of the manuscripts (48.18%) contained punctuation errors. The theme of punctuation included inappropriate commas, semicolons, colons, and dashes. The placement of commas represented the majority of errors present in this theme. In fact, 40.00% of the manuscripts had errors of comma placement in a series of three or more items. In many cases, the comma was not included between the *and* or *or* and the last element in a series. Another common error in this theme was coded as a dash error. A dash—specifically, an em dash—is used to set off an element in a sentence or to show a "sudden interruption in the continuity of a sentence" (APA, 2001, p. 81). In some cases, authors used a single hyphen (i.e., en dash) instead of two hyphens or an em dash. Specifically, authors of the sixth edition of the *Publication Manual* delineate between the use of a dash (see section 4.06, p. 90) and the use of hyphenation (see section 4.13, p. 97). With respect to the hyphen, authors should note that: (a) a hyphen requires no space before or after (e.g., school-to-home); (b) an em dash is longer than a hyphen and is used to set off an element added to amplify or to digress from the main clause (see example above); (c) an en dash is longer and thinner than a hyphen, yet shorter than an em dash and is used between words of equal weight (e.g., Houston−London flight); and (d) a minus sign is halfway between an en dash and a hyphen, but is thicker and slightly higher and should have a space before and after (e.g., a - b). Although numerous punctuation guidelines are present, authors could eliminate many common punctuation errors by adhering to the rules specifically pertaining to the use of commas in a series between elements (APA, 2010,

p. 88) to increase the ease of reading for editors and reviewers.

Tables and figures. Although the use of tables and figures can assist authors in presenting results in a clear and concise manner, 45.45% of the manuscripts contained errors that were related to the preparation of tables and figures. The authors of the fifth edition of the *Publication Manual* stipulated that tables should be used to "supplement the text" (APA, 2001, p. 21). If the author were to discuss "every item of the table in text, the table is unnecessary" (APA, 2001, p. 154). Authors of the sixth edition provided an identical statement (APA, 2010, p. 130). Many errors in this category were related to the formatting used. Unfortunately, the default settings for creating a table in Microsoft Word include both vertical and horizontal lines, which ultimately must be reformatted. In addition, Combs et al. noted common errors in the presentation of titles prepared for tables and figures (cf. Daniel & Onwuegbuzie, 2007). The authors of the fifth edition of the *Publication Manual* specified that tables were to be double-spaced and were to adhere to other formatting guidelines. However, and in contrast to the recommendations of spacing in the fifth edition of the *Publication Manual*, the sixth edition authors offer flexibility in the spacing of text in tables in that "tables may be submitted either single- or double-spaced" to reflect a consideration of the readability (APA, 2010, p. 141). Finally, tables and figures are to be placed after the reference list instead of within the text of the document, and each table and figure should appear on a separate page. Similarly, authors of the sixth edition of the *Publication Manual* established that due to technological developments, much more flexibility is afforded for the displaying of results than in the fifth edition. As such, these authors dedicated chapter 5 (pp. 125-167) solely to guidelines for tables and figures. Basic components of a table are illustrated for authors (APA, 2010, p. 129), and basic components of a figure are summarized through a checklist (p. 167).

Abbreviations. Errors related to abbreviations were detected in 41.82% of the manuscripts. Authors should limit the use of abbreviations in their writings because an overuse could impede clear communication. In fact, authors of both the fifth and sixth editions of the *Publication Manual* suggested that if an abbreviation is used fewer than four times in a long paper, it should be spelled out each time. Additionally, if abbreviations are used, authors should spell out abbreviations the first time used and include the abbreviations in parentheses. Typically, abbreviations that are acronyms do not require the use of periods. Moreover, abbreviations should not be used to begin a sentence. One common abbreviation error is made by writers who refer to the *United States*. When used as a noun, *United States* should be spelled out. In contrast, when used as an adjective, an abbreviation, such as *U.S. schools*, can be used. Further, when deciding whether to use abbreviations, authors should consider their audiences and "use only those abbreviations that will help you communicate with your readers" (APA, 2001, p. 104). Similarly, in the sixth edition, authors affirm writers to "consider whether the space saved by abbreviations" justifies the time needed to master their meanings (APA, 2010, p. 106).

Quotations. Academic authors sometimes use other writers' and researchers' exact words. To avoid plagiarism, quotation marks should be used to indicate the exact words of others. In addition, authors of the fifth and sixth editions of the *Publication Manual* specified that a source and location of the material were required (e.g., page number, paragraph number). Combs et al. (2010) observed that 36.36% of the manuscripts in their sample contained errors related to direct quotations. The most frequent error occurred when authors failed to provide an exact location of the quoted materials. That is, a page number was not included. Although not stated directly in either the fifth or the sixth edition of the *Publication Manual*, in keeping with the principle of economy of expression, the use of direct quotations should be limited to those instances when another's exact words are more precise and clearer than could be expressed in a paraphrase. When using direct quotations, authors should adhere to the several specific formatting rules provided in the sixth edition of the *Publication Manual* (APA, 2010, pp. 170-171).

Bias in language. With respect to the principle of fairness, the fifth edition of the *Publication Manual* specified that writers should "avoid perpetuating demeaning attitudes and biased assumptions" (APA, 2001, p. 61). Combs et al. (2010) noted that 31.82% of the submissions contained errors related to labels used by authors to describe people. For example, the term *participants* should have been used instead of *subjects* when describing individuals in a study. Authors of the fifth edition of the *Publication Manual* noted that these terms used to refer to racial or ethnic groups of individuals "change often" (APA, 2001, p. 67), and writers "are encouraged to ask their participants about preferred designations and are expected to avoid terms perceived as negative" (APA, 2001, p. 68). Moreover, authors should remember that racial and ethnic groups are proper nouns and thus should be capitalized (e.g., Black, White, Hispanic). In reference to gender, authors should strive to minimize the use of pronouns such as *he* and *she*, and avoid the substitution of *he/she*, which is "awkward and distracting" (APA, 2001, p. 67; APA 2010, p. 80). When describing people and

their age groups, *boys* and *girls* are used to reference individuals who are younger than 18. For adults, the terms *men* and *women* should be used instead of *males* and *females*. Finally, authors should note the guidelines for referring to individuals with disabilities, adhering to the principle of putting "people first, not their disability" (APA, 2001, p. 75) and of putting "the person first, followed by a descriptive phrase" (APA, 2010, p. 72). To emphasize this point, authors of the sixth edition of the *Publication Manual* present three general guidelines for reducing bias as follows: (a) describe specifically (e.g., gender is cultural whereas sex is biological) and precisely (i.e., avoiding recognizing differences when not relevant); (b) be specific to labels and avoid broad categorizations (e.g., the elderly, the depressives); and (c) acknowledge participation consistent with the traditions of the field in which the researcher is working (e.g., reinstating the use of the terms *subjects* and *sample*; APA, 2010, pp. 71-73).

Stage 3

Exploratory factor analysis. Combs et al. (2010) used the inter-respondent matrix—after converting it to a matrix of tetrachoric correlation coefficients—to conduct a maximum likelihood exploratory factor analysis that examined the underlying structure of the 14 themes. These factors yielded what Onwuegbuzie (2003) referred to as "meta-themes" (p. 398) such that each meta-theme contained one or more of the APA error themes. Combs et al. used an oblique rotation (i.e., promax) because they expected the correlations among the themes to be non-trivial. Using the eigenvalue-greater-than-one rule (Kaiser, 1958) and *scree* test (Cattell, 1966; Zwick & Velicer, 1986), Combs et al. retained three factors (i.e., meta-themes). These authors presented the pattern coefficients and structure coefficients pertaining to each of these 14 themes across the three factors. However, we will not present them in this article because both sets of matrices revealed associated coefficients with very similar magnitudes. For example, for the abbreviations error theme, for Factor 3, the pattern coefficient was .55 and the structure coefficient was .54. Using a cutoff of .3 (Lambert & Durand, 1975) as an acceptable minimum value for pattern/structure coefficients, the following five APA error themes had pattern/structure coefficients with large effect sizes on Factor 1: formality and clarity, hyphenation, numbers, grammar, and statistical copy; the following five APA error themes had pattern/structure coefficients with large effect sizes on Factor 2: format, tables and figures, in-text citations, capitalization, and quotations; and the following four APA error themes had pattern/structure coefficients with large effect sizes on Factor 3: bias in language, abbreviations, punctuation, and citing multiple authors. Factor 1, Factor 2, and Factor 3 explained 21.1%, 10.8%, and 8.9% of the variance, respectively. Thus, these three factors combined explained 40.8% of the total variance, which is consistent with that typically explained in factor solutions (Henson, Capraro, & Capraro, 2004; Henson & Roberts, 2006). Combs et al. labeled Factor 1 as the *inappropriate writing of words and figures* meta-theme; Factor 2 as the *inappropriate structuring of text, displaying of results, and crediting of sources* meta-theme*;* and Factor 3 as the *inappropriate presenting of mechanics and labels* meta-theme. These meta-themes are informative because they indicate which error themes tend to occur together within the same manuscript. For example, Factor 1 indicates that manuscripts that contain errors associated with formality and clarity also tend to contain errors associated with hyphenation, numbers, grammar, and statistical copy.

Latent class analysis. Combs et al. (2010) conducted a latent class analysis to obtain the smallest number of clusters that accounts for all the associations among the variables, in this case, among the error themes. The assumption behind latent class analysis is that a certain number of distinct APA error themes exists, and that manuscripts can be grouped into a small number of distinct clusters known as latent classes based on their profiles of APA errors, with each manuscript belonging to only one cluster. Combs et al. focused on the nine APA error themes with effect sizes (i.e., frequency rate) greater than .5.

The latent class analysis on the nine most common APA error themes suggested that the optimal number of clusters was four. Figure 2 displays these four distinct groups of manuscripts. For example, it can be seen from Figure 2 that Cluster 1 is relatively high with respect to all nine APA error themes, with all effect sizes being greater than .6. This group clearly represents the manuscripts that consistently have the most errors. Thus, Cluster 1 (comprising 39.3% of manuscripts) could be labeled as *high APA error manuscripts*. Cluster 2 (comprising 31.5% of manuscripts) can be labeled as *persistent moderate APA error manuscripts*. Cluster 3 (comprising 21.0% of manuscripts) can be called *mostly high but fluctuating APA error manuscripts*. Finally, Cluster 4 (comprising 8.2% of manuscripts) can be labeled as the *fluctuating APA error manuscripts*. Combs et al. (2010) noted that the four clusters differed with respect to some of the variables. A particularly useful aspect of this latent class analysis is that it allows instructors and learners to focus on specific APA error themes depending on the profile of the author(s) (e.g., number of authors) and/or manuscript (length of manuscript).

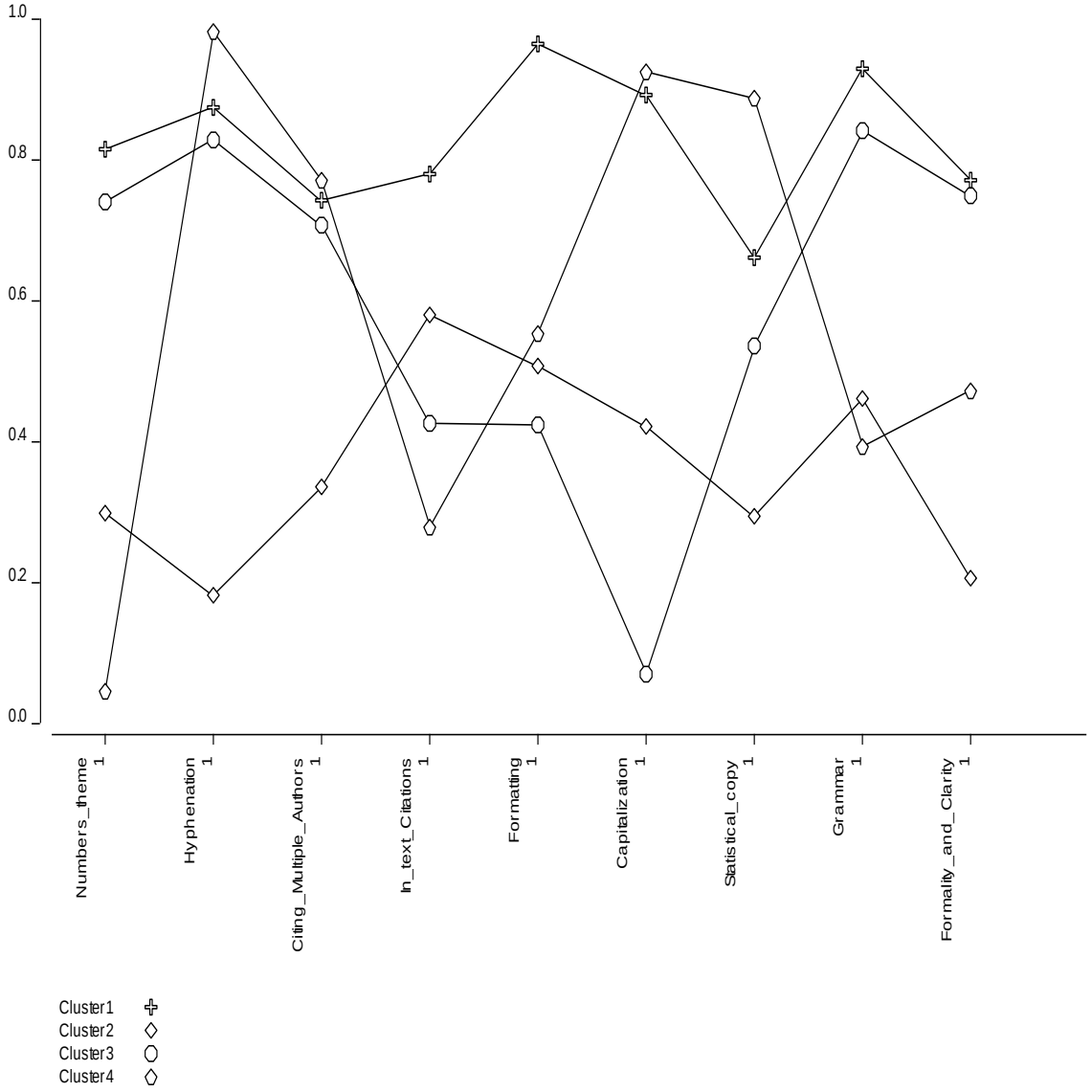

Figure 2. Profiles of most common APA error themes.

Stage 4

Relationship of emergent themes to manuscript disposition. Once the themes had been quantitized, Combs et al. (2010) conducted two sets of canonical discriminant analyses to determine which of the 14 themes best predicted the disposition of manuscripts (i.e., the editor's decision on manuscripts). For the first canonical discriminant analysis, Combs et al. sought to determine which of the 14 themes predicted whether the editor's decision for a manuscript was reject, revise and resubmit, or accept (i.e., manuscript disposition). This analysis revealed two statistically significant canonical functions. The first canonical function (R_c = .48; $X^2[28]$ = 47.47, p < .05) had a large squared canonical correlation coefficient of 23.14%, and indicated that the following six variables played an important role in predicting the editor's decision: *tables and figures* (standardized canonical discriminant coefficient = .70, structure coefficient = .69), *grammar* (standardized canonical discriminant coefficient = .34, structure coefficient = .30), *abbreviations* (standardized canonical discriminant

coefficient = .34, structure coefficient = .35), *citing multiple authors* (standardized canonical discriminant coefficient = .30, structure coefficient = .33), *formatting* (standardized canonical discriminant coefficient = .21, structure coefficient = .47), and *statistical copy* (standardized canonical discriminant coefficient = .17, structure coefficient = .30). The second canonical function (R_c = .45; X^2[13] = 22.08, p < .05) also had a large squared canonical correlation coefficient of 20.43%, and indicated that the following six variables played an important role in predicting the editor's decision: *formatting* (standardized canonical discriminant coefficient = .60, structure coefficient = .40), *capitalization* (standardized canonical discriminant coefficient = -.57, structure coefficient = -.21), *citing multiple authors* (standardized canonical discriminant coefficient = -.49, structure coefficient = -.40), *abbreviations* (standardized canonical discriminant coefficient = -.41, structure coefficient = -.33), *grammar* (standardized canonical discriminant coefficient = .33, structure coefficient = .11), and *formality and clarity* (standardized canonical discriminant coefficient = .30, structure coefficient = .25).

For the second canonical discriminant analysis, Combs et al. (2010) sought to determine which of the 14 themes predicted whether the editor's decision for a manuscript was reject versus non-reject (i.e., revise and resubmit or accept). This analysis revealed a statistically significant canonical function (R_c = .48; X^2[14] = 24.84, p < .05) with a large effect size (squared canonical correlation = 22.56%), which indicated that the following four variables played an important role in predicting the editor's decision: *tables and figures* (standardized canonical discriminant coefficient = .69, structure coefficient = .74), *grammar* (standardized canonical discriminant coefficient = .45, structure coefficient = .32), *formatting* (standardized canonical discriminant coefficient = .45, structure coefficient = .59), and *statistical copy* (standardized canonical discriminant coefficient = .24, structure coefficient = .32).

In summary, across the two canonical discriminant analyses, the following six APA error themes did not appear to play an important role in this prediction: numbers, hyphenation, in-text citations, bias in language, quotations, and punctuation. However, the following eight error themes played an important role in predicting the manuscript's disposition: tables and figures, grammar, abbreviations, citing multiple authors, formatting, statistical copy, capitalization, and formality and clarity. Of these variables, the three most important predictors of manuscript disposition were tables and figures (odds ratio = 4.68; 95% confidence interval [CI] = 1.96, 11.14), grammar (odds ratio = 2.43; 95% CI = 1.03, 5.71), and formatting (odds ratio = 3.57; 95% CI = 1.51, 8.42).

Relationship of total number of APA errors to manuscript disposition. Combs et al. (2010) used a one-way analysis of variance (ANOVA) to determine if the total number of error codes committed by an author(s) predicted the disposition of the manuscript. The ANOVA revealed a statistically significant difference in the total number of codes among the accept (M = 7.69, SD = 4.50), revise and resubmit (M = 9.62, SD = 4.85), and reject (M = 11.78, SD = 5.22) editor decisions (F[2, 103] = 4.45, p = .014; η^2 = .08). A follow-up Scheffé test revealed that manuscripts that were rejected by the editor contained statistically significantly more APA errors (i.e., error codes) than did manuscripts that were accepted by the editor. Even more interestingly, a statistically significant linear trend was present (F[1, 103] = 8.90, p = .004; η^2 = .09), with the number of errors increasing monotonically as the editor decision went from accept to reject.

Further, when Combs et al. (2010) combined the revise and resubmit and accept decisions to form a non-reject decision, an independent samples t test revealed that manuscripts that were rejected by the editor contained statistically significantly (t[93.18] = 2.80, p = .007) more APA errors than did manuscripts that were not rejected (M = 12.09, SD = 5.41), with a moderate effect size of Cohen's (1988) d = 0.55. Combs et al. further noted that manuscripts that contained nine or more different APA errors were 3.00 times (95% CI = 1.31, 6.87) more likely to be rejected than were manuscripts containing less than nine APA errors. Thus, manuscripts that contain numerous different APA errors—in particular, at least nine different APA errors—have a greater probability of receiving a reject decision than do manuscripts with fewer errors.

Relationship of total number of emergent themes to manuscript disposition. A one-way ANOVA also revealed a statistically significant difference in the total number of themes among the accept (M = 5.58, SD = 3.45), revise and resubmit (M = 6.79, SD = 3.02), and reject (M = 8.31, SD = 2.83) decisions made by the editor (F[2, 103] = 5.74, p = .004; η^2 = .10). A follow-up Scheffé test further revealed that manuscripts that were rejected by the editor contained statistically significantly more APA errors that represented one of the 14 themes than did manuscripts that were accepted by the editor. Further, a statistically significant linear trend emerged (F[1, 103] = 11.43, p = .001; η^2 = .10), with the number of themes increasing monotonically as the editor decision went from accept to reject.

Further, when the revise and resubmit and accept decisions were combined into a non-reject decision, an independent samples t test revealed that

manuscripts that were rejected (M = 8.31, SD = 2.83) by the editor contained statistically significantly (t[78.38] = 3.09, p = .003) more APA errors that were classified as one of the 14 themes than did manuscripts that were not rejected (M = 6.44, SD = 3.16). The effect size (d = 0.63) associated with this difference was large (Cohen, 1988). Moreover, manuscripts that contained APA errors that can be classified as falling into eight or more different themes were 3.68 times (95% CI = 1.61, 8.43) more likely to be rejected than were manuscripts that contained less than eight APA error themes. Thus, manuscripts that contain many classes (i.e., themes) of APA errors—in particular, at least eight different APA error themes—have a greater probability of receiving a reject decision.

Relationship of emergent themes to demographics of manuscript/author(s). Combs et al. (2010) used the inter-respondent matrix to conduct a canonical correlation analysis that examined the relationship between the 14 APA error themes and the following 4 demographic variables: gender of the first author, number of authors, length of the manuscript, and the size of the institution represented by the first author. The canonical analysis suggested that the first canonical function was both statistically significant (p < .05) and practically significant (Canonical R_{c1} = .70). Using a cutoff correlation of .3 (Lambert & Durand, 1975), an examination of the standardized function coefficients and structure coefficients revealed that the numbers theme (standardized function coefficient = .45, structure coefficient = .55) and the abbreviation theme (standardized function coefficient = .68, structure coefficient = .75) made practically significant contributions to the multivariate relationship. With respect to the demographic set, the number of authors (standardized function coefficient = .42, structure coefficient = .58), the length of the manuscript (standardized function coefficient = .75, structure coefficient = .73), and the size of the institution represented by the first author (standardized function coefficient = -.49, structure coefficient = -.37) made noteworthy contributions. Interestingly, the signs of the standardized function coefficients and structure coefficients revealed particularly that manuscripts with more authors, longer manuscripts, and manuscripts whose first author were from smaller institutions were more likely to commit APA errors associated with numbers and abbreviations than were their counterparts.

Conclusions

If only published articles are read that have undergone professional copyediting, it is easy to obtain the impression that authors, in general, do not have problems adhering to the APA style guide. However, Combs et al.'s (2010) landmark study provides compelling evidence that this assumption is extremely false. Indeed, Combs et al. documented that *all* authors who submit manuscripts to *Research in the Schools* commit APA errors. Bearing in mind the number of rules that are contained in *Publication Manuals*, this finding is not surprising. In fact, it might be argued that it is extremely difficult—if not impossible—for authors to write a manuscript that is 100% free from APA errors. However, what is surprising is how prevalent APA errors appear to be among authors who submit manuscripts to *Research in the Schools*, with more than 10 different APA errors that represent more than 7 different error themes, on average, being committed per manuscript.

Although *Research in the Schools* represents only 1 of more than 1,100 journals that publish education research articles each year (Mosteller, Nave, & Miech, 2004), our experience as editors of other journals and editorial board members and reviewers for more than 30 journals among us suggests that APA errors are just as rampant—if not more rampant—than that noted by Combs et al. (2010). And, what is even more compelling about the rampant nature of APA errors is that the number of APA errors strongly predicts whether or not a manuscript is rejected for publication by the editor—at least with respect to *Research in the Schools*. Indeed, the fact that manuscripts containing nine or more different APA errors are exactly 3 times more likely—and based on the 95% confidence interval can be as much as nearly 7 times more likely—to be rejected than are manuscripts containing less than nine APA errors suggests that approximately two thirds (i.e., 63.6%) of *Research in the Schools* authors who commit nine or more different APA errors are at increased risk of having their manuscripts rejected. Similarly, the 50% of *Research in the Schools* authors who make eight or more different APA error themes are more than 3.5 times more likely—and based on the 95% confidence interval can be more than 8 times more likely—to have their manuscripts rejected.

We recognize that the strong relationship documented between the number of APA errors and the editor's decision does not imply a cause-and-effect relationship. That is, this relationship does not necessarily mean that having a large number of APA errors *causes* a manuscript to be rejected. However, from our experience reading hundreds of reviewer comments over the years, we have come to the conclusion that some reviewers have a very low tolerance for APA errors. In any case, a large number of APA errors is indicative of a general lack of attention to detail that prevails at one or more stages of the research process, which leads to a flawed study

and/or an incomplete or confusing manuscript—and subsequent rejection. Thus, we urge authors to strive to be as disciplined as possible when preparing their manuscripts.

In an attempt to help authors write with more discipline, in this editorial, we have used Combs et al.'s (2010) findings to provide evidence-based guidelines for avoiding APA errors. Specifically, we recommend that authors consider using Table 1 and Figure 1 as guides when preparing their manuscripts. In particular, if beginning authors are learning the APA style guide for the first time, Table 1 and Figure 1 can assist them in focusing their efforts. That is, beginning authors might benefit from focusing on the 60 most common APA errors (Figure 1) and the 14 most common APA error themes (Table 1), perhaps in order of the prevalence rate. Further, we believe that even emergent authors and experienced authors can benefit from using Table 1 and Figure 1. For example, these authors can use the list in Table 1 and Figure 1 to rule out APA stipulations and guidelines with which they are familiar and thus focus on the APA errors that they themselves are apt to commit. Indeed, after using Table 1 and Figure 1 to identify their most frequent errors, authors might find it useful to develop a personalized checklist to use when editing their works. The checklist might resemble that developed by Dunn et al. (2001) or Rewey et al. (2000).

Similarly, we believe that Table 1 and Figure 1 would serve as useful starting points for those persons who teach APA style. It is not possible—nor is it even advisable—for instructors to cover the whole *Publication Manual* within a course—even if a significant portion of the whole course is devoted to teaching APA style. Thus, focusing on these most common errors not only provides a much more manageable amount of material for instructors to cover, but likely provides a more efficient method of teaching APA style. Further, instructors might consider using Table 1 and Figure 1 to design APA worksheets such as the one presented in Appendix A. In Appendix A, we provide an excerpt, entitled *Writing with Style*, which has been modified from Onwuegbuzie and Combs' (2009a) article in such a way that it contains numerous APA style errors that represent one of the 60 errors presented in Figure 1 and/or one of the 14 APA error themes presented in Table 1. Appendix B represents a version of the *Writing with Style* excerpt in Appendix A that includes numbered boxes above the APA style errors contained in the *Writing with Style* excerpt (Appendix A). Appendix C provides a description of fifth edition-based APA errors identified in the *Writing with Style* excerpt, and Appendix D provides a description of sixth edition-based APA errors identified in the excerpt. Finally, Appendix E provides a corrected version of the excerpt.

Alternatively, authors could begin by focusing on the three error themes that are the best predictors of a manuscript being rejected, namely, tables and figures, grammar, and formatting. Specifically, although the theme of tables and figures, with a prevalence rate of 45%, is only the 11th most common error theme, it is the best predictor of whether a manuscript is rejected, with manuscripts containing tables and/or figures that have violations to APA style being 4.68 times more likely—and based on the 95% confidence interval can be more than 11 times more likely—to be rejected by the editor. The theme of grammar is not only the most prevalent class of error, with a prevalence rate of 72%, but manuscripts that contain errors of this type are nearly 2.5 times more likely—and based on the 95% confidence interval can be more than 5 times more likely—to be rejected.

The theme of format is not only the second most prevalent class of error, with a prevalence rate of 72%, but manuscripts that contain errors of this type are more than 3.5 times more likely—and based on the 95% confidence interval can be more than 8 times more likely—to be rejected. That these three error themes have such excellent predictive power has intuitive appeal. With respect to the first, failure to construct tables and/or figures that are clear, coherent, consistent, and, above all, accurate can affect both the readability and integrity of the manuscript, which, in turn, might increase the probability of the manuscript being rejected. Conversely, tables and figures that are well constructed make "a scientific article a more effective communication device" (APA, 2010, p. 126), thereby rendering an article more appealing to reviewers and editors. With respect to the theme of grammar, authors of the sixth edition of the *Publication Manual* state that "Incorrect grammar and careless construction of sentences distract the reader, introduce ambiguity, and generally obstruct communication" (p. 77). Thus, violations that fall under this theme can be extremely problematic for reviewers and editors. Further, not paying close attention to formatting—which includes the manuscript's organization (i.e., structure) and content—likely would give the reviewer and editor a sense that the author is not competent, thereby increasing the likelihood of a negative recommendation/decision, not only because the manuscript is more difficult to read, but because it might give the reviewer and editor the impression that the author was not meticulous.

Not only can authors and instructors of the *Publication Manual* benefit from the information provided in this editorial, but editors also might find

this information useful. For example, editors can use the errors delineated in Table 1 and Figure 1 to develop checklists that are used by their reviewers to assess the quality of manuscripts with respect to adherence to APA style. Finally, authors of the APA *Publication Manual* might use this information to determine which rules and guidelines to emphasize in future editions. Indeed, it is unfortunate that this editorial could not have been published prior to the release of the sixth edition of the *Publication Manual*.

As we enter the new era in the history of the *Publication Manual*, namely, the sixth edition, we think it is very appropriate to evaluate the extent to which authors adhered to the fifth edition of the *Publication Manual*. Although the findings of Combs et al. (2010) apply to this fifth edition—at least for manuscripts submitted to *Research in the Schools*—we believe that it is also applicable to the sixth edition because, even though the authors of the sixth edition "decided to remove from the *Publication Manual* much of the APA-specific information that is readily accessible on the web" (APA, 2010, p. 4), the vast majority of the rules and guidelines in the fifth edition remain associated with the sixth edition (Hughes, Onwuegbuzie, Daniel, & Slate, 2010). Nevertheless, as specified in the section entitled "New and Expanded Content" (APA, 2010, pp. 5-6), the sixth edition does contain some notable changes and additions, in particular with respect to using and preparing supplemental materials for the web, presenting APA heading style, reducing bias in language, presenting historical language, providing statistical abbreviations, presenting data electronically, and presenting electronic sources (including use of the digital object identifier). Thus, it will be interesting to determine in time whether any of these new additions or revisions will lead to further errors being committed. In the meantime, we hope that the findings of Combs et al., as presented in this editorial, can play a role, however small, in helping authors avoid making APA errors in the future.

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Appendix A

Writing with Style Excerpt with Numerous APA Style Errors

Educational research has the potential to play a pivotal role in improving the quality of education. However for educational research to play such a role, its findings must be disseminated to individuals (e.g., educators, administrators, stakeholders, policymakers, etc.) that can most effectively use them (Onwuegbuzie, Leech & Whitmore, 2008, Mosteller et al., 2004). Unfortunately, research findings do not disseminate themselves, regardless of how statistically, practically, clinically or economically significant they are for the field of education. Rather, it is educational researchers in general and practitioner-researchers in particular who must convey these findings.

One of the most effective ways of disseminating educational research findings is by publishing articles in education journals—of which there are more than 1100 journals that collectively contain more than 20,000 education research articles each year (Mosteller et al., 2004) --especially those journals that are considered to have the highest visibility for stakeholders and policymakers. Highly-visible journals tend to be those journals that have the most influence for policy and practice. These journals, in turn, tend to be those journals that have the lowest acceptance rates and highest impact factors (Saha, Saint, and Christakis, 2003).

Writing with discipline in the field of education means that males and females must adopt the language, format, conventions, and standards of the educational community if the work is to reach the intended audience. Simply put, it must follow the *style* belonging to that educational community. According to the 10th edition of Merriam-Webster's Collegiate Dictionary (2001), style is "a convention

with respect to spelling, punctuation, capitalization, and typographic arrangement and display followed in writing or printing." Notwithstanding, in the formal writing process, the individual components that characterize a style can vary from one field to the next. However, in the world of academia in general and the field of social and behavioral sciences in particular, fortunately, there are a limited number of formal style guides in the U.S., with 3 of the most common styles being the *Chicago Manual of Style* (Chicago Manual, 2003), the *Modern Language Association (MLA) Handbook for Writers of Research Papers* (Gibaldi, 2003), and the *Publication Manual of the American Psychological Association* (APA, 2001). In the field of Education, the *Publication Manual* of the American Psychological Association (APA, 2001) teaches the style that is most required by journal editors In fact, Henson (2007), who administered a survey to editors of fifty prominent journals in education, documented that 60 percent of education journals use APA style. Thus, in order to have articles published in education journals, it is difficult for authors from the field of education to avoid having to be familiar with the APA *Publication Manual*.

Note. A reference list is not provided in this activity. This material was adapted from the following publication: Onwuegbuzie, A. J., & Combs, J. P. (2009a). A call for avoiding APA style guide errors in manuscript preparation. *School Leadership Review 4*, 116-149.

Appendix B

Writing with Style Excerpt with Errors Labeled

Educational research has the potential to play a pivotal role in improving the quality of education. However for educational research to play such a role, its findings must be disseminated to individuals (e.g., educators, administrators, stakeholders, policymakers, etc.) that can most effectively use them (Onwuegbuzie, Leech & Whitmore, 2008, Mosteller et al., 2004). Unfortunately, research findings do not disseminate themselves, regardless of how statistically, practically, clinically or economically significant they are for the field of education. Rather, it is educational researchers in general and practitioner-researchers in particular who must convey these findings.

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with respect to spelling, punctuation, capitalization, and typographic arrangement and display followed in writing or printing." Notwithstanding, in the formal writing process, the individual components that characterize a style can vary from one field to the next. However, in the world of academia in general and the field of social and behavioral sciences in particular, fortunately, there are a limited number of formal style guides in the U.S., with 3 of the most common styles being the *Chicago Manual of Style* (Chicago Manual, 2003), the *Modern Language Association (MLA) Handbook for Writers of Research Papers* (Gibaldi, 2003), and the *Publication Manual of the American Psychological Association* (APA, 2001). In the field of Education, the *Publication Manual* of the American Psychological Association (APA, 2001) teaches the style that is most required by journal editors In fact, Henson (2007), who administered a survey to editors of fifty prominent journals in education, documented that 60 percent of education journals use APA style. Thus, in order to have articles published in education journals, it is difficult for authors from the field of education to avoid having to be familiar with the APA *Publication Manual*.

Note. This excerpt contains at least 22 errors. A reference list is not provided in this activity.

This material was adapted from the following publication: Onwuegbuzie, A. J., & Combs, J. P. (2009a). A call for avoiding APA style guide errors in manuscript preparation. *School Leadership Review 4,* 116-149.

Appendix C

Description of Fifth Edition-based APA Errors Identified in *Writing with Style* Excerpt

1. Punctuation Error: Use of a comma following an adverb (APA, 2001, cf. pp. 53-54).
2. Abbreviation Error: The abbreviation *etc.* (and so forth) should not be combined with *e.g.* (for example).
3. Grammar Error: Use relative pronouns (who) when referring to people (APA, 2001, p. 54).
4. In-text Citation Error: When multiple references are used, place in alphabetical order within the parentheses (APA, 2001, p. 212).
5. Punctuation Error: Use a comma before *and* in a series of three or more authors (cf. APA, 2001, p. 78).
6. In-Text Citation Error: Use a semicolon to separate elements "that already contain commas" (APA, 2001, p. 80).
7. Citing Multiple Authors Error: "When a work has three, four, or five authors, cite all authors the first time the reference occurs; in subsequent citations, include only the surname of the first author followed by et al. (not italicized and with a period after 'al')" (APA, 2001, p. 208).
8. Punctuation Error: Use a comma "between elements (including before *and* and *or*) in a series of three or more items" (APA, 2001, p. 78).
9. Format Error: "Double-space between all lines in the manuscript" (APA, 2001, p. 286).
10. Format Error: "Indent the first line of every paragraph" (APA, 2001, p. 289).
11. Statistical Copy Error: Use a comma "to separate groups of three digits in most numbers of 1,000 or more" (APA, 2001, p. 79).
12. Format Error: Use an em dash with no space before or after to set off an element added to simplify or to digress from the main clause (cf. APA, 2001, pp. 81-82, 291).
13. Hyphenation Error: A hyphen is not needed with "a compound including an adverb ending in –ly" (APA, 2001, p. 91).
14. In-Text Citation Error: "Join the names in a multiple-author citation in running text by the word *and*. In parenthetical material, in tables and captions, and in the reference list, join the names by an ampersand (&)" (APA, 2001, p. 209).
15. Bias in Language Error: Consider rephrasing when it is not necessary to identify gender (APA, 2001, p. 66). If identifying the gender were necessary, use men and women (APA, 2001, p. 69), otherwise consider rewording.
16. Quotation Error: "when quoting, always provide the author, year, and specific page citation in the text, and include a complete reference in the reference list" (APA, 2001, p. 117). Place ending punctuation outside of the parentheses.
17. Abbreviation Error: When United States is used as a noun, it should be spelled out. When United States is used as an adjective, it can be abbreviated (APA, 2001, p. 110).
18. Numbers Error: "Use words to express numbers below 10" (APA, 2001, p. 125).
19. Formality and Clarity Error: The verb *teaches* is an anthropomorphism. "Do not attribute human characteristics to animals or inanimate sources" (APA, 2001, p. 38).
20. Punctuation Error: Use a period at the end of sentences (APA, 2001. p. 78).
21. Numbers Error: "Use figures to express all numbers 10 and above" (APA, 2001, p. 122).
22. Statistical Copy Error: "Use the symbol of percent only when it is preceded by a numeral" (APA, 2001, p. 140).

Appendix D

Description of Sixth Edition-based APA Errors Identified in *Writing with Style* Excerpt

1. Punctuation Error: Use of a comma following an adverb (cf. APA, 2010, pp. 82-83).
2. Abbreviation Error: The abbreviation *etc.* (and so forth) should not be combined with *e.g.* (for example).
3. Grammar Error: Use relative pronouns (who) when referring to people (APA, 2010, p. 83).
4. In-text Citation Error: When multiple references are used, place in alphabetical order within the parentheses (APA, 2010, pp. 178,181).
5. Punctuation Error: Use a comma before *and* in a series of three or more authors (cf. APA, 2010, pp. 88, 175).
6. In-Text Citation Error: Use a semicolon to separate elements "that already contain commas" (APA, 2010, p. 178).
7. Citing Multiple Authors Error: "When a work has three, four, or five authors, cite all authors the first time the reference occurs; in subsequent citations, include only the surname of the first author followed by et al. (not italicized and with a period after 'al')" (APA, 2010, p. 175).
8. Punctuation Error: Use a comma "between elements (including before *and* and *or*) in a series of three or more items" (APA, 2010, p. 88).
9. Format Error: "Double-space between all lines in the manuscript" (APA, 2010, p. 229).
10. Format Error: "Indent the first line of every paragraph" (APA, 2010, p. 229).
11. Statistical Copy Error: Use a comma "to separate groups of three digits in most numbers of 1,000 or more" (APA, 2010, p. 114).
12. Format Error: Use an em dash with no space before or after to set off an element added to simplify or to digress from the main clause (cf. APA, 2010, pp. 90, 97).
13. Hyphenation Error: A hyphen is not needed with "a compound including an adverb ending in –ly" (APA, 2010, p. 98).
14. In-Text Citation Error: "Join the names in a multiple-author citation in running text by the word *and*. In parenthetical material, in tables and captions, and in the reference list, join the names by an ampersand (&)" (APA, 2010, p. 175).
15. Bias in Language Error: Consider rephrasing when it is not necessary to identify gender (APA, 2010, p. 72). If identifying the gender were necessary, use men and women (APA, 2010, p. 73), otherwise consider rewording.
16. Quotation Error: "when quoting, always provide the author, year, and specific page citation in the text, and include a complete reference in the reference list" (APA, 2010, pp. 170-172). Place ending punctuation outside of the parentheses.
17. Abbreviation Error: When United States is used as a noun, it should be spelled out. When United States is used as an adjective, it can be abbreviated (APA, 2010, p. 88).
18. Numbers Error: Use words to express numbers below 10 (APA, 2010, p. 111).
19. Formality and Clarity Error: The verb *teaches* is an anthropomorphism. "Do not attribute human characteristics to animals or inanimate sources" (APA, 2010, p. 69).
20. Punctuation Error: Use a period at the end of sentences (APA, 2010. p. 88).
21. Numbers Error: "Use figures to express all numbers 10 and above" (APA, 2010, p. 111).
22. Statistical Copy Error: "Use the symbol of percent only when it is preceded by a numeral" (APA, 2010, p. 118).

Appendix E

Writing with Style Excerpt with APA Style Errors Corrected

Educational research has the potential to play a pivotal role in improving the quality of education. However, for educational research to play such a role, its findings must be disseminated to individuals (e.g., educators, administrators, stakeholders, policymakers) who can most effectively use them (Mosteller, Nave, & Miech, 2004; Onwuegbuzie, Leech, & Whitmore, 2008). Unfortunately, research findings do not disseminate themselves, regardless of how statistically, practically, clinically, or economically significant they are for the field of education. Rather, it is educational researchers in general and practitioner-researchers in particular who must convey these findings.

One of the most effective ways of disseminating educational research findings is by publishing articles in education journals—of which there are more than 1,100 journals that collectively contain more than 20,000 education research articles each year (Mosteller et al., 2004)—especially those journals that are considered to have the highest visibility for stakeholders and policymakers. Highly visible journals tend to be those journals that have the most influence for policy and practice. These journals, in turn, tend to be those journals that have the lowest acceptance rates and highest impact factors (Saha, Saint, & Christakis, 2003).

Writing with discipline in the field of education means that researchers must adopt the language, format, conventions, and standards of the educational community if the work is to reach the intended audience. Simply put, it must follow the *style* belonging to that educational community. According to the 10th edition of Merriam-Webster's Collegiate Dictionary (2001), style is "a convention with respect to spelling, punctuation, capitalization, and typographic arrangement and display followed in writing or

printing" (p. 1169). Notwithstanding, in the formal writing process, the individual components that characterize a style can vary from one field to the next. However, in the world of academia in general and the field of social and behavioral sciences in particular, fortunately, there are a limited number of formal style guides in the United States, with three of the most common styles being the *Chicago Manual of Style* (Chicago Manual, 2003), the *Modern Language Association (MLA) Handbook for Writers of Research Papers* (Gibaldi, 2003), and the *Publication Manual of the American Psychological Association* (APA, 2001). In the field of Education, the *Publication Manual* of the American Psychological Association (APA, 2001) is the style that is most required by journal editors. In fact, Henson (2007), who administered a survey to editors of 50 prominent journals in education, documented that 60% of education journals use APA style. Thus, in order to have articles published in education journals, it is difficult for authors from the field of education to avoid having to be familiar with the APA *Publication Manual*.

Note. A reference list is not provided in this activity. This material was adapted from the following publication: Onwuegbuzie, A. J., & Combs, J. P. (2009a). A call for avoiding APA style guide errors in manuscript preparation. *School Leadership Review, 4*, 116-149.