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Writing in APA Style: faculty perspectives of competence and importance

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A US sample ($N = 360$) of psychology educators assessed 73 writing skills and competencies with regard to (a) the importance of each and (b) the typical performance of the top half of local psychology majors. An analysis of gap scores yielded results showing that specific skills, such as supporting claims with citations and proofreading ability, are areas in need of greater emphasis and renewed pedagogical attention by instructors. Educators may use the results of this study to help to identify areas of increased need for writing instruction regarding undergraduate psychology education.

For some time, scholars and researchers have studied how individuals develop writing skills. The typical division of writing processes tends to fall within these categories: (a) planning what to write, (b) translating ideas into text (such as transcription and text generation), and (c) reviewing and revision (De La Paz & McCutchen, 2011). Not surprisingly, much of the research in this area is generated by scholars with expertise in English composition. The topics are wide-ranging, and the pedagogical research (Graham, 2006) and metacognitive applications (Hayes, 2006) are striking in the context of current scholarship of learning and teaching efforts. For example, researchers address issues such as the use of computers to assist in the assessment of writing (Shermis, Burstein, & Leacock, 2006), and study how a student's motivation and self-efficacy about writing influence their writing development (Pajares & Valiante, 2006). There is broad scholarship available about (a) the development of writing processes and skills, (b) writing ability within the context of psychology, and (c) writing in American Psychological Association (APA) style and format. This is important work, given the emphasis on writing in psychology and the enormous investment of instructional energy devoted to teaching writing by psychology educators worldwide.

In 2007, the American Psychological Association published the *APA Guidelines for the Undergraduate Psychology Major* (APA, 2007) ('the Guidelines'); writing skills fit within the realm of Guideline 7, Communication Skills. The skills and abilities outlined in the Guidelines are subsumed by the recent McGovern et al. (2010) characterization of psychological literacy, which includes 'communicating effectively in different modes and with many different audiences' (p. 11). As psychology educators consider how to assess and gather evidence in support of a student's achievement of psychological literacy, the products of multiple writing samples will be key in evaluation; fortunately, writing is a demonstrable skill that leaves artifactual evidence.

The ability to write is clearly one method by which students can demonstrate habits of mind and critical thinking skills (Lawrence, Serdikoff, Zinn, & Baker, 2008). Writing ability can serve as an index of other cognitive functions, so it should be no surprise that writing ability may serve as a proxy measure for thinking like a psychologist or measuring a psychological 'habit of mind'. For example, Furnham (2010) concluded on the basis of a series of studies that proofreading for errors and omissions is positively correlated with verbal reasoning; specifically, the measures of general knowledge and vocabulary within the framework of crystallized intelligence.

In a US-based survey conducted on behalf of the Association of American Colleges and Universities (AAC&U, 2008), employers were asked how colleges should improve student learning.

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One third of business executives think that a substantial proportion of recent college graduates do not have the requisite skills and knowledge for the workplace, and out of 10 key areas of preparedness, employers believe that college graduates are least prepared in the areas of global knowledge, self-direction, and writing skills. In another US study of employers (AAC&U, 2010), 89% reported that higher education should place more emphasis on written and oral communication – this was the skill set in most need of improvement. Writing success, and in particular successfully writing using APA style and format, requires attention to detail – a trait that employers also value. In Gardner's (2007) study of new collegiate hires and the reasons why they are disciplined or fired, the inability to effectively communicate in writing as a reason for disciplinary action was reported by 28% of employers, and the failure to follow instructions was reported by 9% of employers as the reason for firing.

In addition to employers, it is apparent that graduate schools value writing, not only for admission to graduate school (e.g., Keith-Spiegel, Tabachnick, & Spiegel, 1994; Powers & Fowles, 1997) but also for success during graduate school (Lambie, Sias, Davis, Lawson, & Akos, 2008).

Although there are numerous examples of advice given to faculty members teaching APA-style writing in the literature of psychology (e.g., Fallahi, Wood, Austad, & Fallahi, 2006; Goddard, 2003), as well as a cottage industry of writing guides for students facing the challenges of APA-style writing (e.g., Beins & Beins, 2008; Landrum, 2012), there appears to be very little empirical literature about faculty attitudes toward teaching writing skills, as well as a dearth of evidence-based advice about how to improve student writing. Fortunately, there are exceptions (e.g., Luttrell, Bufkin, Eastman, & Miller, 2010). For instance, Johnson, Tuskenis, Howell, and Jaroszewski (2011) reported on the development and impact of a course specifically designed to improve writing skills, and how students showed improved writing ability when measured pre-course to post-course. Estow, Lawrence, and Adams (2011) provided evidence for an effective writing assignment specifically targeted at improving paraphrasing skills and helping students to avoid plagiarism. An evidence-based approach is also utilized in the present study.

For this study, we surveyed psychology educators in the USA to ascertain opinions about the challenges that students face regarding a variety of writing and APA-formatting skills. Although there is good advice available for faculty in designing writing assignments (e.g., Morgan & Morgan, 2006), simultaneously measuring faculty members' perceptions of the importance of particular skills, coupled with their assessment of students' general competency regarding those skills could help identify important gaps to address in writing instruction.

Method

Participants

With organizational consent, we extracted every valid email address available from the Society for the Teaching of Psychology (STP; APA Division Two) website (www.teachpsych.org), which yielded 4474 email addresses. There were 78 out-of-office auto-replies and 330 emails bounced back as undeliverable, yielding a sample frame of 4066; 360 respondents participated yielding an 8.9% response rate. Of those reporting gender, 30.2% were men and 69.8% were women. The average respondent age was 46.02 (SD = 12.2), and the average number of years of teaching experience reported was 15.36 (SD = 10.8). Of those reporting rank, there were 36 adjuncts, 31 lecturers, 34 instructors, 69 assistant professors, 69 associate professors, 93 full professors, 18 administrations, 4 emeritus, and 16 selected 'other' (participants could select more than one category). From those participants reporting highest degree earned, 3 reported bachelor's degree, 37 reported master's degree, and 260 reported doctoral degrees.

Materials

After an extensive literature review and consultation with content experts, we developed a 73-item inventory of potential APA writing style problems, issues, or challenges. Each participant was asked to frame their responses thinking about junior- and senior-level psychology majors; in addition, we asked participants to rate each item thinking about their better students in the top half of the grade distribution – that is, 'top-half' students. Participants replied using two response scales for each

item: the skill level of top-half students (ranging from 1 = not at all competent to 4 = extremely competent) and the importance of the particular skill or ability (ranging from 1 = not at all important to 4 = extremely important). As an item appeared in the online survey, respondents were asked to rate competency first, followed by importance. See Table 1 for the survey items and descriptive outcomes.

Table 1. Skill and importance items rated by faculty, with gaps.

Item	Mean importance level (*SD*)	Mean skill level (*SD*)	Gap[1]	Statistical significance[2]
a space used before and after an equal sign	2.20 (0.8)	2.71 (0.7)	-0.51	$t(341) = 8.62^{\star}$
ability to properly revise rough drafts	3.92 (0.3)	2.81 (0.6)	1.11	$t(340) = -28.21^{\star}$
ability to upload writing assignments accurately	3.08 (0.9)	3.46 (0.6)	-0.38	$t(339) = 6.63^{\star}$
avoid being too colloquial	3.40 (0.6)	2.74 (0.7)	0.66	$t(350) = -13.88^{\star}$
avoid ending a sentence with a preposition	2.82 (0.8)	2.68 (0.7)	0.14	$t(342) = -2.42$
avoid passive voice	2.96 (0.8)	2.40 (0.7)	0.56	$t(338) = -9.98^{\star}$
avoid using phrases like 'psychologists prove … '	3.63 (0.6)	2.63 (0.8)	1.00	$t(348) = -19.91^{\star}$
avoiding biased language	3.64 (0.5)	2.96 (0.6)	0.68	$t(342) = -16.35^{\star}$
basic grammar properly used	3.88 (0.3)	2.97 (0.6)	0.91	$t(349) = -23.73^{\star}$
basic punctuation properly used	3.78 (0.5)	3.03 (0.7)	0.75	$t(346) = -17.22^{\star}$
be specific – avoid using the word 'thing'	3.50 (0.6)	3.02 (0.7)	0.48	$t(348) = -10.38^{\star}$
block quotes properly identified and formatted	2.97 (0.8)	2.63 (0.7)	0.34	$t(336) = -5.78^{\star}$
book titles properly capitalized	2.87 (0.8)	2.88 (0.7)	-0.01	$t(345) = 0.11$
book titles properly italicized	2.86 (0.8)	2.81 (0.8)	0.05	$t(336) = -0.96$
claims made with appropriate supporting evidence	3.96 (0.2)	2.66 (0.7)	1.30	$t(347) = -33.74^{\star}$
conducting a literature review using Google Scholar	2.81 (1.0)	2.58 (0.8)	0.24	$t(324) = -3.82^{\star}$
conducting a literature review using PsycINFO	3.73 (0.5)	2.76 (0.8)	0.97	$t(342) = -21.06^{\star}$
conducting a literature review using Social Sciences Citation Index (SSCI)	2.54 (1.0)	1.86 (1.0)	0.68	$t(282) = -11.97^{\star}$
creating and formatting keywords for abstract	2.52 (0.9)	2.13 (0.8)	0.39	$t(301) = -7.06^{\star}$
defining acronyms prior to first use	3.12 (0.8)	2.76 (0.8)	0.36	$t(312) = -6.87^{\star}$
direct quotes are accompanied by page or paragraph numbers	3.50 (0.7)	2.82 (0.8)	0.68	$t(309) = -12.38^{\star}$
direct quotes used appropriately/sparingly	3.69 (0.5)	2.66 (0.8)	1.03	$t(317) = -19.68^{\star}$
effect sizes properly presented	3.13 (0.8)	2.02 (0.8)	1.11	$t(294) = -20.15^{\star}$
ensuring that references cited in text are presented in References section	3.81 (0.4)	3.17 (0.7)	0.64	$t(319) = -14.35^{\star}$
exact *p* values reported	3.18 (0.8)	2.74 (0.9)	0.44	$t(295) = -6.98^{\star}$
figures properly prepared	3.32 (0.7)	2.42 (0.8)	0.90	$t(297) = -17.53^{\star}$
follows proper hyphenation rules	2.53 (0.8)	2.41 (0.7)	0.12	$t(293) = -2.12$
headings and subheadings properly used	3.08 (0.7)	2.69 (0.7)	0.39	$t(304) = -7.14^{\star}$
how to write numbers and follow number rule exceptions	2.85 (0.8)	2.48 (0.7)	0.37	$t(310) = -6.86^{\star}$
in-text citation reference format	3.64 (0.6)	2.96 (0.7)	0.68	$t(317) = -15.36^{\star}$
issue numbers properly omitted in journal article reference	2.54 (0.9)	2.37 (0.8)	0.17	$t(307) = -2.62$
journal article titles properly capitalized	3.08 (0.8)	2.92 (0.7)	0.16	$t(315) = -2.85$
journal titles properly capitalized	3.12 (0.8)	2.99 (0.7)	0.13	$t(312) = -2.39$
line spacing (double spaced, no extra line spaces between paragraphs)	3.00 (0.9)	2.99 (0.8)	0.01	$t(315) = -0.10$
no anthropomorphizing – avoid 'data indicate', 'research found'	2.96 (0.8)	2.16 (0.8)	0.80	$t(315) = -14.93^{\star}$
no contractions	2.92 (0.9)	2.71 (0.8)	0.21	$t(312) = -3.48$
no first names in APA reference citations	3.23 (0.8)	3.05 (0.8)	0.18	$t(318) = -2.99$
no period at the end of URL in reference	2.40 (0.9)	2.72 (0.9)	-0.32	$t(292) = 5.38^{\star}$
no space after the colon in a doi	2.24 (0.9)	2.41 (0.9)	-0.17	$t(272) = 2.88$
no spelling errors	3.75 (0.5)	2.92 (0.7)	0.83	$t(297) = -17.02^{\star}$
no 'we' or 'us'– single-author paper from first person perspective	3.00 (0.9)	2.74 (0.8)	0.26	$t(289) = -4.27^{\star}$

one space after a period ending a sentence	2.37 (1.0)	2.86 (0.9)	-0.49	$t(294) = 7.85^{\star}$
page margins correctly set at 1 inch	3.24 (0.8)	2.82 (0.9)	0.42	$t(298) = 6.87^{\star}$
personal opinions presented with appropriate framing	3.64 (0.5)	2.63 (0.7)	1.01	$t(303) = -20.02^{\star}$
preparation of tables	3.25 (0.7)	2.44 (0.8)	0.81	$t(286) = -15.04^{\star}$
proofreading ability	3.85 (0.4)	2.64 (0.7)	1.21	$t(299) = -26.45^{\star}$
proper attributions and avoiding plagiarism	3.96 (0.2)	2.99 (0.7)	0.97	$t(306) = -24.56^{\star}$
proper formatting of orphans/widows	2.41 (0.9)	2.36 (0.8)	0.05	$t(245) = -0.76$
proper hedging of conclusions	3.54 (0.6)	2.54 (0.7)	1.00	$t(288) = -20.42^{\star}$
proper presentation of multiple citations in parentheses	3.16 (0.7)	2.72 (0.7)	0.44	$t(300) = -8.05^{\star}$
proper use of 'and' and '&' in in-text reference citations	2.91 (0.8)	2.75 (0.8)	0.16	$t(306) = -2.77$
proper use of abbreviations	2.90 (0.8)	2.74 (0.6)	0.16	$t(294) = -3.24$
proper use of boldfacing and underlining	2.77 (0.8)	2.65 (0.7)	0.12	$t(291) = -2.07$
proper use of ellipsis (...)	2.49 (0.8)	2.38 (0.7)	0.11	$t(271) = -1.93$
proper use of 'et al.'	3.09 (0.8)	2.67 (0.7)	0.42	$t(294) = -7.34^{\star}$
proper use of font and font size	2.90 (0.8)	3.25 (0.7)	-0.35	$t(287) = 5.96^{\star}$
proper use of seriation rules	2.74 (0.8)	2.60 (0.7)	0.14	$t(255) = -2.60$
proper use of subheadings in the Method section of a manuscript	3.24 (0.7)	2.96 (0.8)	0.28	$t(273) = -4.64^{\star}$
punctuation placed inside of quotation marks	2.83 (0.8)	2.55 (0.8)	0.25	$t(287) = -4.43^{\star}$
reference citations presented with hanging indent	3.12 (0.8)	3.16 (0.8)	-0.04	$t(289) = 0.53$
reference list formatted properly	3.50 (0.7)	3.04 (0.7)	0.46	$t(290) = -8.52^{\star}$
repeat title as appropriate on subsequent page	2.74 (0.9)	2.78 (0.8)	-0.04	$t(267) = 0.66$
running head changed appropriately from page 1 to subsequent pages	2.65 (0.9)	2.70 (0.9)	-0.05	$t(280) = 0.65$
running head properly formatted on page 1	2.76 (0.9)	2.83 (0.8)	-0.07	$t(275) = 0.96$
statistical terms properly italicized	3.00 (0.8)	2.58 (0.8)	0.42	$t(276) = -6.76^{\star}$
statistics reported to proper number of decimal places	3.10 (0.8)	2.59 (0.8)	0.51	$t(276) = -8.80^{\star}$
the word 'data' presented as plural	3.15 (0.8)	2.41 (0.8)	0.74	$t(282) = -12.06^{\star}$
colons and semi-colons appropriately used	3.01 (0.7)	2.43 (0.7)	0.58	$t(287) = -10.54^{\star}$
track changes used in Microsoft Word	2.83 (0.9)	2.55 (0.9)	0.28	$t(251) = -4.10^{\star}$
using terms like significant and correlation properly	3.80 (0.4)	2.78 (0.8)	1.02	$t(286) = -21.10^{\star}$
verb tense and how it changes depending on the section of the manuscript	3.48 (0.6)	2.56 (0.7)	0.92	$t(280) = -17.32^{\star}$
volume number of journal articles italicized	2.76 (0.9)	2.86 (0.8)	-0.10	$t(281) = 1.69$
writing an abstract	3.66 (0.6)	2.57 (0.7)	1.09	$t(280) = -21.24^{\star}$

Notes.
[1]Gap scores were calculated by subtracting the skill level mean from the importance mean.
[2] Paired samples t-tests with multiple comparisons correction; only $p < .001$ determined to be statistically significant (indicated by ⋆).
Importance ratings ranged from 1 = not at all important to 4 = extremely important; skill level ratings ranged from 1 = not at all competent to 4 = extremely competent.

Procedure

We emailed and invited every member of the STP membership database to participate in this survey via Qualtrics (online survey software). Participants were able to self-select to participate and could withdraw from the survey at any time; responses were anonymous. Respondents were allowed unlimited time to complete the survey. After completing the 73 survey items, we asked respondents demographic questions and provided an open-ended 'any comments' item.

Results

Using a paired comparison *t*-test with a correction for multiple tests, 54 of the 73 paired-samples *t*-test comparing these two ratings were statistically significant; all items appear in Table 1. Subtracting the average skill and competency score from the average importance score for each item yields a gap score, also presented in Table 1. The gap scores are meaningful in the sense that

larger gap scores suggest potential areas that need to be addressed by psychology educators regarding writing and APA-style instruction. Gap scores ranged from 1.30 to -0.51, with the top 10 gap scores being 'claims made with appropriate supporting evidence' (1.30), 'proofreading ability' (1.21), 'ability to properly revise rough drafts' (1.11), 'effect sizes properly presented' (1.11), 'writing an abstract' (1.09), 'direct quotes used appropriately/sparingly' (1.03), 'using terms like significant and correlation properly' (1.02), 'personal opinions presented with appropriate framing' (1.01), 'avoid using phrases like "psychologists prove …"' (1.00), and 'proper hedging of conclusions' (1.00).

Discussion

The information in Table 1 is useful data for psychology educators regarding widely held beliefs about writing and the performance of top-half students. Psychology educators who choose to concentrate pedagogical energy on the largest gaps may be able to provide students with developmental opportunities for skills most in need of improvement, allowing for strategic instruction. This information should be useful for the creation of resources for writing improvement. Furthermore, by analyzing the survey items in Table 1, educators can compare their own personal perceptions of student achievement with those of a larger sample of psychology educators. Instructors may individually determine that writing instruction in a particular area for junior and senior psychology majors is adequate or more than adequate in some areas where gap scores are large, thus allowing individual adjustments to be made to writing instruction based on local norms and expectations. By examining negative gap scores, instructors may learn of practices that are already well understood by students, and those topics may need less instructional energy. Hopefully, by providing broad-based data on psychology educators' opinions about the importance of specific writing tasks and top-half student competence on those tasks, meaningful conversations can continue regarding the essential role that writing skills play in student post-baccalaureate success.

Much of the good work provided in the area of writing instruction comes from researchers with a background in English composition. Although this makes good sense, we believe that psychology educators should also explore writing skill development in an empirical manner, and we recommend collaborations with our colleagues in English composition. The level of importance of writing skill is well documented in employer-based surveys; not only do educators need to know more about which writing practices need to be strengthened, we also need to do more as a discipline to ensure writing competency for our undergraduate psychology majors at graduation. Failure to do so may mean that our graduates are less successful at attaining gainful employment or graduate school admission; furthermore, with the emergence of badges, massive open online courses, and certification programs, if psychology educators fail to ensure the skill levels of our own students, this gap may be filled by others.

Writing is clearly identified as an important skill by a number of stakeholders, ranging from psychology educators, discipline-based organizations like the American Psychological Association (APA, 2007), and employers as surveyed by organizations such as the Association of American Colleges and Universities (AAC&U, 2010). The largest gaps identified were (a) claims being made without appropriate supporting evidence, and (b) poor proofreading ability. As indicated by the APA (2007) Guidelines, it is well understood by psychology educators that writing ability is a key skill for our students to possess. Psychology educators may want to use the results of this study to frame future instructional practices, whether that be areas of emphasis with students, or to aid in the areas where teaching materials and assessments may be most useful.

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