From the Front Lines

An Academic Librarian Reports on the Impact of APA's New Electronic References Guidelines

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Guest Columnist**

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This column addresses the impact of recent changes to APA style citation on the academic community, which widely uses this style to document its research. The author notes that these changes, especially the wholesale adoption of Digital Object Identifiers (DOIs) for citing electronic journal articles, have caused frustration and confusion for users of APA style, and the problem is likely to worsen as more students and faculty realize what the new changes entail. The column also touches on the problems these changes will create for citation software and online bibliographic management tools like RefWorks, EndNote, and Zotero. Lewis concludes that the American Psychological Association needs to recognize the problems its new changes are causing and institute an interim measure for the millions who use APA style on a daily basis to document their research.—*Editor*

A common question at academic library reference desks is how to properly cite a source in a specific citation style. Because students and faculty may use a variety of citation styles, libraries often keep copies of the most current versions of major citation styles at the reference desk. While librarians are not necessarily experts on all styles, they will usually be familiar with the styles most used at their institutions. If institutions offer subscription citation tools like RefWorks or EndNote, reference desk librarians will also receive numerous questions pertaining to the use of these tools and their rendering of particular citation styles. Not surprisingly, it is often reference librarians who teach classes or workshops on citation styles and citation tools at institutions of higher learning. Thus academic reference librarians are among the first to deal with the impact of citation style updates. A perfect example involves recent changes to APA style, which is widely used today by many disciplines in the academic community.

In June 2007, the American Psychological Association (APA) released an update to its citation style entitled *APA Style Guide to Electronic References*. This twenty-four page pamphlet, available for purchase as a PDF from the APA website (www.apa.org), does not replace the fifth-edition (2001) manual, but rather revises and updates that section of the manual dealing with electronic resources. Because APA has not released a new edition of its manual and because this electronic addendum has restricted access even when purchased (e.g., libraries must purchase site licenses to post the electronic version and limit access to authenticating users), users of APA style have been slow to realize the changes and their ramifications. In addition, although the update addresses many new types of electronic content and technologies,

the wording of the publication itself is at times ambiguous, confusing, and difficult for users to interpret.

APA's most significant change to citing electronic resources is the application of the Digital Object Identifier (DOI). A DOI is a unique alphanumeric code that identifies a specific article or document and provides a persistent link to its location on the Internet. The intent of the DOI is to provide a consistent way for users to find articles and documents on an ever-changing Internet. In a very forward-looking move, APA made the inclusion of DOIs in citations *the* method of choice when citing scholarly journal articles accessed online. Now, instead of adding a retrieval date and URL or retrieval date and database name when citing journal articles accessed electronically, users are directed to include the DOI assigned to that article by an approved registration agency (see figure 1).

While this change makes sense conceptually, in practice its implementation seems a bit premature. DOIs may well be the wave of the future, but right now not all articles have DOIs. Furthermore, many research databases do not yet include DOIs in their records or articles. At the same time, as many academic librarians will tell you, students at the college and university level currently access the majority of the journal articles used in their research papers from the myriad subscription research databases available through their institutional libraries. Therefore the most common form of journal article citation at the college and university level is that of the journal article retrieved from a research database. The recent changes to APA style, however, now make this a confusing and difficult source to cite.

Subscription research databases enable students to search for information on their topics and find full-text articles electronically from a wide range of publications. They allow faster, more efficient searching and the reassurance that students are searching authoritative sources. When citing these sources, students want a quick, efficient way to glean the information needed for whichever citation style they might be using. They certainly want all of the required information to be readily available in the databases they are using. What if they do not see a DOI for a journal article they want to cite? This is currently a very common dilemma, and herein lies much of the problem with APA's change in electronic citation style.

Some research databases, like PsycINFO and PsycARTICLES (both sponsored by the American Psychological Association), do a great job of including DOIs, and citing articles from these sources is simple. Many other research databases, however, do not—or at least have not yet—embraced this new technology. APA realizes this and offers the following solution: If one does not find a DOI for a journal article in a research database, one should then search for an article's DOI by going to the CrossRef.org website and using its "free DOI lookup."[1]

If one goes to CrossRef.org and finds that no DOI has been assigned to a particular article (currently a very real and distinct possibility), one should then "give the exact URL (if the content is open-access) or the URL of the journal home page (if the content is accessible by subscription)."[2] Needless

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to say, this explanation has left many a student, faculty member, researcher, and librarian scratching their heads. These additional, external steps are making databases, the primary research tool at the college and university level, harder, not easier, to use, if one wants to cite one's sources properly in APA style. What happened to simply citing the name of the database itself in one's retrieval statement, which was what the fifth edition of the APA manual specifically prescribed?[3]

APA states, however, that one should no longer include the name of a database in a retrieval statement for a journal article. Instead, if unable to locate a DOI for an article (either by finding it in the article itself, in the database record, or via CrossRef.org), one should then go searching further on the Web for an appropriate URL. The APA Style Expert confirmed this cumbersome procedure in response to an e-mail query: "Please note that if the article is open access, the exact URL of the *article* (not the database home page URL) should be provided. If the content is accessible by subscription, the URL of the *journal home page* should be provided."[4]

The new APA style guide does not address what to do when neither an article URL nor a journal home page is available for an article lacking a DOI. The fact remains that researchers today will find such articles in many research databases. How then should they properly cite these articles in APA style? Would it not make sense to cite the name of the database, at least when no DOI is readily available?

While the APA style was developed specifically for articles published in American Psychological Association journals and publications, APA style is widely used today by students and researchers in many different disciplines. At my university alone, our schools of nursing, business, and education all use APA style, as do many of the departments in the social sciences and health sciences. Many students coming to the university have never heard of APA style before, and if familiar with any citation style, it is usually Modern Language Association (MLA). Now not only will librarians and faculty be teaching their students a new style that is quirky and detail-oriented, they will also be telling them to search for DOIs, article URLs, and journal homepage URLs to cite articles accessed in research databases. This process seems very untenable indeed, especially for undergraduates.

Students and faculty increasingly use various forms of citation software and online reference management tools to organize their research and cite their sources more easily. The problem of citing journal articles accessed electronically in APA is further complicated by how well these tools can handle the recent changes to APA. RefWorks, a subscription Web-based bibliographic management tool, has been

proactive in trying to encompass the new APA changes in its software. So far, however, it has done so with only limited success, and this causes even more confusion for researchers using APA style.

RefWorks describes its "improved APA bibliographic formatting" as the first to search for DOIs and explains that its software "will look for Digital Object Identifier (DOI) information for the reference and print that first. If there is no DOI in the reference, then RefWorks will print the information in the Links and the Retrieved Date fields. If there is no DOI or Links information, RefWorks will print the Database information and the Retrieved Date for a particular reference."[5] While RefWorks follows this stated protocol fairly consistently, its process is not in accordance with APA's new guidelines.

RefWorks does an effective job citing articles that have DOIs from databases like PsycArticles. Problems arise when an article does not have an apparent DOI or DOI information does not come through from the research database in question. In the absence of a DOI, RefWorks inserts the URL from its Links field into a dated retrieval statement. However, the Links field that RefWorks describes is neither an open-access article URL nor a subscription journal home page URL. Rather, the Links field is most often populated by a URL that takes one directly to an article in a particular research database, and in many cases it includes an authentication string for users affiliated with a particular institution. As far as RefWorks' last resort option of inserting a retrieval date and database name, APA's new guidelines state that database names should not be included in citations for journal articles. Furthermore, retrieval dates are no longer needed for journal articles retrieved electronically.[6] (Note: RefWorks has since changed its software so that the retrieval statement only includes the URL from the Links field or the database name and *not* the retrieval date.)

Soon after RefWorks' release, EndNote, a popular commercial software-based citation tool, made its own APA style update available for free download to its users.[7] This amended version of APA style is problematic as well. For example, while the latest EndNote APA output style will format data in the DOI field and/or the URL field of references with an "Electronic Article" reference type, the EndNote filters normally input all journal articles from databases with a "Journal Article" reference type. That causes the citations to look as if the articles were in print rather than accessed electronically, and even if the articles have DOIs listed in their database records, they will not show up in the EndNote citations. Even if an article is imported as an "Electronic Article," if it does not have a DOI, the URL field will be populated by that article link specific to the database and not the one APA recommends.

Another citation tool that has tried to encompass the new changes to APA is Zotero, a free, open-source reference management tool that works directly from a Firefox browser. This software, developed by the Center for History and New Media at George Mason University and available for free download at the Zotero website (www.zotero.org), is capable of matching the new APA style for an article accessed in a research database as long as the article has a DOI in its database record.[8] If there is no DOI in the record, Zotero creates a retrieval statement with a retrieval date and a URL that takes one directly to the article in that database.

Granted, citation software and online bibliographic management tools are just that—tools. They are imperfect replacements for manual citation and knowledge of particular citation styles. Still, it remains to be seen how well these tools will be able to adapt in the long run to the new changes in APA. Conceivably, citation software tools can—and some already do—encompass DOIs, and this will work well for databases that include DOIs in their records. If articles do not have DOIs associated with them, it is unlikely that citation tools will be able to look up DOIs by themselves. It is even less likely that they will be able to determine if an article is from an open-access journal or subscription journal and attribute the appropriate URL. Considerable additional manual work would still be needed.

Whether citing journal articles retrieved from research databases manually or using citation tools, researchers using APA style will have to make considerable effort when they encounter articles lacking DOIs. While such a long, involved process might be acceptable to advanced level graduate students or researchers seeking publication, it does not seem like a reasonable requirement of undergraduate students.

Furthermore, librarians witnessing firsthand student confusion and frustration over the new changes to APA worry about the impact on future undergraduate research. Today's undergraduate students want quick and easy access to information, and they will often favor ease of access over quality of information—hence, the heavy reliance on search engines like Google and Yahoo! to find information on the Internet that may or may not be appropriately authoritative for university-level research. Vendors and librarians strive to make research databases easier to use so students will be more inclined to use them. Because many disciplines today require students to cite their research in APA style, will the recent changes to APA negatively influence database use? Students may want to avoid the new hassles of citing journal articles retrieved from research databases. Students want one-stop shopping; they do not want to have to look multiple places for DOIs or URLs.

In addition, undergraduate students tend to have poor citation skills, not only regarding when to cite but also how to cite. Most undergraduates are unfamiliar with APA style and find it a difficult style to use. Thus students gravitate toward citation tools that are free and easy to use, regardless of how accurate they are, and there are many such citation websites available on the Internet. This is one reason why many institutions provide their students with access to higher quality citation tools like RefWorks, EndNote, or Zotero. Many databases allow users to export citations directly to quality citation management tools, thus making citation that much easier still. If these tools are unable to accurately or adequately encompass the new changes to APA, though, then they will

not be serving students well. In fact, they will not be serving any of their users effectively.

Many of us out here on the front lines (i.e., in college and university classrooms and at academic library reference desks) are being increasingly bombarded by questions from students and faculty who are trying to cite in APA style, possibly using citation tools to help them do it. We are hard-pressed to know how to answer their questions, let alone teach new users how to use APA, possibly in RefWorks, EndNote, or some other online citation tool.

There has been considerable discussion of this issue on academic discussion lists and among colleagues from different institutions of higher learning. While some librarians have already posted their own interpretations of the new APA rules on their institutional websites and blogs, many of these interpretations are at odds with what APA is saying. To simplify citing, some librarians and faculty recommend that users cite journal articles as if they were in print. There is a great deal of confusion and frustration out here, and it is only likely to get worse as more users come to realize the changes APA has made to its style. For example, what are departments that require their students to use APA to do? How should they be teaching their students to cite articles retrieved from research databases? One of our schools requires not only that its students use APA style but also that its PhD candidates use RefWorks to document their research. How can reference librarians teach APA style in a manageable and consistent way, and how can they assist users with the current inconsistencies in citation tools like RefWorks and EndNote? Perhaps this begs the question: If APA is so difficult to use, why do so many disciplines outside of psychology require their students and practitioners to employ it?

There may well come a day when DOIs will be prominently displayed on all new journal articles, publishers will retroactively assign DOIs to all the articles they have ever published, and all research databases will include DOIs in their article records, but such is not the state of affairs today. Every day millions of college and university students, faculty, and researchers are citing journal articles accessed in research databases, and many are using APA style. Every day they are coming to reference librarians for help. This issue is particularly problematic with undergraduate students. It is hard enough to teach college students APA style; expecting them to go out on the Internet looking for DOIs, article URLs, or journal home page URLs every time they want to cite journal articles found in a research database is unreasonable.

I am all for DOIs. I am all for developing a consistent way to cite journal articles retrieved electronically. But for right now, there needs to be a stop-gap measure that is tenable and practical. The simplest solution would be for APA to recognize that we are in a period of transition and allow researchers to use the traditional method of citing a research database whenever a DOI is not readily available. If APA will not amend its style and make citing journal articles retrieved from databases more realistically user-friendly, then perhaps librarians and faculty should consider creating simpler,

institution-specific APA styles for at least their undergraduates to use.

In response to the confusion and questions coming from academic librarians, APA sponsored a live online meeting in early May 2008, where APA style experts and academic librarians and writing teachers from a variety of institutions joined to discuss the recent changes to APA style citation and the possibility of future workshops and online resources. Librarians emphasized the difficulty with citing journal articles retrieved from research databases, especially for their undergraduate students. Many wanted to know if users could just cite the database used when no DOI was readily available; others suggested citing the source as if it were in print or adding a generic statement like "Retrieved online."[9]

It was during this session that the APA style experts clarified their position on citing a journal article retrieved from a database, lacking a DOI, *and* coming from a journal that does not have a current website. No example of this situation was given in the *APA Style Guide to Electronic References*, and it was causing a lot of confusion for users. According to APA, this situation would qualify as a work of limited circulation and thus one would add a retrieval statement with the name of the database.[10]

While this APA–academic dialogue was very productive, it highlighted the different perspectives of the APA style experts, who are primarily concerned with the future of research and publication, and the librarians, who deal with students and faculty documenting research on a daily basis. The session accentuated the need for further exploration and communication as we move through this period of transition.

References and Notes

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9. This online meeting was organized by Anne Breitenbach, Trainer, APA Journals Program, and conducted via Microsoft Office Live Meeting on May 6, 2008. Other APA style experts participated, as well as an assortment of academic librarians and writing style teachers, who gave input on the changes to citing electronic references in APA style.
10. APA, *Focus on Electronic Resources*, PowerPoint presentation presented at an online meeting between APA style experts, academic librarians, and writing style teachers on May 6, 2008.