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Abstract:

As an editor-in-chief, I perceive we are approaching a crisis point with literature reviews and the reviewing process. The quality of literature reviews in submitted research is dropping, while there are more submissions with an expectation of faster reviews. The impact is that appropriate sources are not being cited and limited reviewer resources are being stressed on reviewing literature reviews. This paper reviews the literature on literature reviews and discusses how to perform them. I categorize literature review issues into five categories and make recommendations on how to correct literature review issues.

Keywords: Literature Review, Conducting Literature Review, Conducting Research.

I. INTRODUCTION

Jennex (2009) discusses the value of good literature reviews as building and strengthening a body of knowledge. Good research builds on that which was done before, and uses previous research to ground current research in theory and as a lens for interpreting results. As academics and researchers, we are trained to conduct and report on our research. One of the basic skills we learn is to conduct and write the literature review. However, as the numbers of information systems (IS) journals grow—Lamp (2014) lists 861 IS journals with 735 still active (as of March 25, 2014)—the time and effort it takes to conduct a thorough and comprehensive literature review is growing. Researchers have finite resources with respect to time and effort, and are faced with the choice of how to spend these resources on their research. As a journal editor-in-chief, I see that many are choosing to spend these resources on conducting research and not on writing literature reviews. The result is that the literature review's quality is declining. Additionally, fueling the growth of IS journals is the increase in academics and researchers conducting and submitting research. The result of having more research papers being written and submitted is that there are more paper to review, which drains the limited number of reviewers' resources. This paper recommends how to perform and document literature reviews so that reviewers will not have to spend excessive time in the review of literature reviews. In the rest of this section, I discuss why literature reviews are a problem. In Section 2, I discuss what a literature is and how it adds value to research. In Section 3, I discuss the reasons/practices that lead to lower-quality literature reviews. In Section 4, I outline a process for performing and documenting the literature review and make recommendations for all participants in the review process (authors, editors, and reviewers). In Section 5, I concludes the paper by summarizing what should be done to improve literature review quality and establish a baseline publishing policy on literature reviews.

We should care about these issues first because of plagiarism. As a field, IS is very concerned with plagiarism: indeed, postings on the topic periodically appear on the field's list server, ISWorld. As a field, we are concerned that authors may publish other's work as their own. Journals have, or are adopting, tools to assist in ensuring that papers sufficiently differ from previously published work. The AIS has published and used a procedure for authors to grieve and have resolved charges of plagiarism. Good literature reviews help authors avoid accidental plagiarism by ensuring they have documented what is known and given credit where it is deserved. Additionally, authors have to be careful of self-plagiarism, or, in other words, of copying their own work without attributing proper credit to their work (a special issue in *CAIS* was published in 2009 that focused on citation issues, including self-citation and recommended citations from reviewers and editors). Ultimately, we should care about literature reviews because good-quality ones prevent accidental plagiarism.

Additionally, our research's value is in how it contributes to what Jennex (2009) calls the body of knowledge, that core of understanding that reflects what we know of our field. As researchers, we strive to push and extend the boundaries of understanding and contribute to that which is known. The value of our research contributions is not always obvious, so we measure the number of citations a paper and/or an author receive. Citation counts for authors, as measured by the h-index or the impact factor, are important measures of our work's relevancy and importance. Seminal papers are determined by how many citations a paper receives, which evidences its impact on other researchers. The issue of declining quality of literature reviews directly affects these measures and, as such, should be a concern to all researchers when researchers fail to cite appropriate sources.

Concurrent with the concern on the quality of literature reviews is the rapid growth in the number of paper that need reviewing. I see this growth fueled by three main sources. The first is the success of AIS's global outreach to all IS researchers to contribute to our common body of knowledge. Universities and researchers from the non-native English speaking parts of the world such as Asia, Africa, South America, and the Middle East are submitting research to the traditional American and European IS journals, and turning them into global journals. Second, we are finally seeing growth in the numbers of junior faculty as the hiring impact from the 2008-09 economic crisis subside; and, of course, these academics and researchers are feeling the pressure of publish or perish. Thirdly, to support global access to research, we have the open access movement. This movement is changing the way we publish and is also generating a large number of new journals. The first two reasons generate a push demand on the number of researchers attempting to publish their research. The third reason is generating a pull demand for research because the open access journals are competing for papers to publish. Ultimately, we have more sources of research and more outlets to publish that research, with the result we have more research being produced.

Finally, reviewing has traditionally been the service provided by senior academics and researchers. There is starting to be a decline in the numbers of senior faculty available to provide this service, and we can expect that this will be a growing trend over the next several years as the "baby boomer" generation retires (Jennex, 2013). A decline in the numbers of senior academics/researchers leads to pressure on those still serving to do more reviewing, especially as the numbers of reviews needing to be performed increases. As such, should we spend our reviewing resources on reviewing literature reviews or on reviewing research methods, findings, and conclusions? Even if papers have good literature reviews, is there a way to document them such that reviewers do not have to spend any extra time reviewing them?

Ultimately, in this paper, I address the impact that lower-quality literature reviews and increased numbers of papers to review is having on our limited reviewer resources and what can be done to mitigate it.

II. THE LITERATURE REVIEW

Lamb (2013) defines the literature review as a review of secondary sources documented in text that considers the critical points of current knowledge, including substantive findings and theoretical and methodological contributions to a particular topic. A systematic review is a literature review that addresses a research question by identifying, appraising, selecting, and synthesizing all high-quality research evidence relevant to that question (also Fink, 2005). The key words are "all high quality". "All" necessitates a wide-ranging search that is difficult when we remember that there are 861 journals that need to be checked, plus, perhaps, journals from other related field. High quality is difficult to define. Does high quality only refer to the top tier of journals, and, if so, what are the top tier journals? This is a subjective call. Do we only consider the AIS Senior Scholar basket of journals to be the only sources of high quality research? I would hope not given that there are 861 IS journals but only 8 listed in the basket: that would mean approximately only 1 percent of our journals publish high-quality research.

The University of Arizona (2011) notes that the literature review has two purposes. The first is to justify the review by showing there are gaps of knowledge that are worthy of closer investigation, that the contribution is original, that the research has been approached in a rigorous manner, and whether existing research contradicts or supports the research approach. The second is to develop an argument by showing an understanding of the critical literature, identifying issues, and framing the research into what is known, what remains to be learned, and how the research will contribute. Dennis and Valacich (2001) summarize the literature review's purpose as identifying theory that can be used to explain findings and conduct the research. Dennis and Valachich (2001) also identify the top two ways of getting rejected by a quality journal as avoiding theory in favor of summarizing prior research and omitting key papers from the literature review. As such, as these sources indicate, the literature review is more than just summarizes the literature—it also frames the research in theory. This is important to understand because it shows that the literature review is a very important part of research and not just something that we are required to do.

Fink (2012) discusses the process of doing a systematic literature review and breaks it into seven tasks (note that these tasks also correspond to what is commonly called a literature review; thus, to avoid confusion, I use the term literature review henceforth to also refer to a systematic literature review).

1. Selecting research questions
2. Selecting bibliographic or paper databases
3. Selecting search criteria
4. Applying practical screening criteria
5. Applying methodological screening criteria
6. Doing the review
7. Synthesizing the results

These steps have been further enhanced by vom Brocke et al. (2009), who state that the quality of a literature review depends on the rigor of the search process (i.e., steps 2 through 5 above). Additionally, Bandara, Miskon, and Fielt (2011) propose that the quality of a systematic literature review is improved by using tools such as Google Scholar, Endnotes, and so on to aid in identifying appropriate papers and by using NIVIVO for coding, interpreting, and synthesizing the literature. Finally, Davison, de Vreede, and Briggs (2005) state that it is the reviewer's duty to ensure the good quality of the literature review by ensuring that the papers under their review use appropriate citations and theory.

Limitations to the above literature review process come from a few sources. Boell and Cezec-Kecmanovic, (2011) contend that there is little difference between systematic literature reviews and non-systematic literature reviews (hence why I just use the term literature review). To improve overall literature review quality, Boell and Cecez-Kecmanovic (2014) propose a hermeneutic approach to understanding the literature in literature reviews and provide

several steps for researchers to understand and synthesize the literature. Sammon, Nagle, O'Raghallaigh, and Finnegan (2011) recognize that doctoral students and new researchers have a difficult time understanding and synthesizing theory in the literature review and propose that these researchers focus on creating a pedagogical artefact. Webster and Watson (2002) lament that theory-building progress in IS has been slow due to a lack of review papers and the field's newness. Finally, Okoli and Schabram (2010) use Fink's (2012) steps for conducting the literature review but recognize the difficulty in doing them well and so provide a focus on the practical screen. The practical screen is a process used to narrow down the papers to use in the literature review. They identify the following as acceptable reasons to not consider papers:

- Content (topics or variables): the review must always be practically limited to studies that have bearing on its specific research question.
- Publication language: reviewers might only review studies written in languages they can read, or for which they have access to scholarly databases.
- Journals: the scope of the review might limit itself to a select set of high-quality journals, or include only journals in a particularly field of study.
- Authors: the study might be restricted to works by certain prominent or key authors (potentially including the reviewer).
- Setting: only studies conducted in certain settings, such as specific industries or regions, might be considered.
- Participants or subjects: studies may be restricted to those that study subjects of a certain gender, work situation, age, or other pertinent criteria.
- Program or intervention: there might be a distinction made between the nature of the measurement in the studies, such as if data is self-reported versus researcher-measured, or if subjects are self-selected into various groups in the study.
- Research design or sampling methodology: studies might be excluded based on not using a particular research design. Note that there are significant differences between these judgments between fields.
- Date of publication or of data collection, or duration of data collection: studies will often be restricted to certain date ranges.
- Source of financial support: studies might be restricted to those receiving non-private funds unless there is a concern that this might be a source of bias in the results.

This section has documents how IS researchers believe a literature review should be conducted; but what are universities actually teaching IS doctoral students? To determine what doctoral programs are teaching, I conducted a Google search using "conducting literature reviews" as the search term. I found several universities with online guides for conducting literature reviews. I reviewed two: the Writing Center of the University of North Carolina and the Writing Handbook of the University of Wisconsin. Both contain guidance that is similar to that discussed above, and they show that there is some consistency in teaching young researchers how to perform literature reviews. The Writing Center (University of North Carolina, no date) defines a literature review as a discussion of published information in a particular subject area that can sometimes be bracketed in a certain time period. Additionally, literature review can be just a simple summary of the sources, but it usually combines both summary and synthesis. The Writing Handbook (The University of Wisconsin, no date) states the purpose of the literature review as being to analyze critically a segment of a published body of knowledge.

To summarize and synthesize this section, for IS research, we are teaching researchers to perform systematic literature reviews (or what is commonly referred to as the literature reviews). In a literature review, one summarizes the relevant literature and synthesizes theory to frame results and provide research approaches and measures. Additionally, literature reviews make an original contribution and give credit where credit is due

III. ISSUES WITH THE LITERATURE REVIEW

I have observed that reviewers are commenting more on the literature review than on other content in papers, and this has impacted their workload because, as Davison et al. (2005) state, reviewers need to provide specific citations/references as a part of their reviews. Many times, I have felt the reviewer almost had to rewrite the literature review so it provided the specific needed references. I have also observed that there are few senior researchers willing to do all or part of the literature review for an author as part of their review. The result is that, as an editor-in-chief, I reject or require major revisions for papers without quality literature reviews as Davison et al. (2005) describe, and so authors are taking longer to complete their research. In this age of Internet publishing and expectations of 30-day review cycles, can journals afford their reviewers to expend such effort and their authors to perform multiple revisions expand such effort? I would prefer authors put this effort in initially so that reviewers can focus on the merits of their research and so that decisions on a paper can be made without many revision iterations.

What impacts the quality of literature reviews? I have reviewed many reviews and offer the following observed reasons that I've deduced from the reviewer comments to answer this question:

1. Literature reviews of convenience: these literature reviews are usually done by authors who do not have immediate access to all the relevant papers. I commonly observed such papers occur when a paper's literature review contained papers from only one or a few relevant journals, usually the open access journals or those journals available through online repositories. Authors commonly respond to this issue by saying that their university cannot pay for access.

2. Weak search criteria: these literature reviews are usually done by authors who want to ensure that they are doing new work. I commonly observed such papers occur with students and new/junior academics/researchers and with search criteria that were not consistent with the logical breakdown of the subject being examined (e.g., using partial ontology such as knowledge transfer and not associated terms such as knowledge flow or knowledge sharing, or using new names for constructs that already have agreed-on ontology such as a knowledge management repository system rather than the common term knowledge management system).

3. Artificial search criteria: these literature reviews are usually done by authors who want to limit the number of papers they need to include in the literature review. I have observed such papers in several cases with no discernable pattern for its use. These literature reviews are characterized by constrained search criteria (examples include search criteria that only look at journals in the AIS Senior Scholar basket, search criteria that are regionally constrained such as search criteria that only look for papers in South Africa papers written in a language other than the language of the journal such as Chinese, or search criteria that only look at quantitative papers instead of also qualitative papers that use quantitative measures).

4. Not going to the source: these literature reviews are done by authors who may not know better than to use original papers or who do not have access to them. This is rapidly becoming a major issue due to the open source movement and the Internet. Reviewers who understand seminal works and key concepts typically identify this issue. These literature reviews cite a paper that cites another paper instead of finding the source document (e.g., an example would be citing Jennex (xxxx) for a point made by Alavi and Leidner (xxxx) because the author has the Jennex paper but not the Alavi and Leidner paper). This issue is potentially the most damaging because it causes authors to not build on the existing body of knowledge and can potentially damage colleagues by not giving the appropriate credit where it is due. The issue is becoming more prevalent due to authors citing Wikipedia instead of the source citation, authors citing an edited book's editor instead of the chapter's author, or authors who cite an open source paper instead of the cited source in the document. I suspect that this could also be an issue with journals in other languages due to translation errors or lack of knowledge on how to cite properly by the translator.

5. Not understanding the source: these literature reviews usually do a good job of summarizing the literature but fail to synthesize it or, even worse, incorrectly synthesize the knowledge in the source. Reasons for these literature misinterpretations vary and many may be due to translation issues for non-native English speakers.

Of course there are other literature review issues but the above five account for the vast majority that I have seen.

IV. RECOMMENDATIONS

I do not mean to state that we are not training academics and researchers correctly. However, I do believe that the acceptable reasons for limiting literature reviews using Okoli and Schabram's (2010) practical screen criteria are being incorrectly applied and, perhaps, should be done away with. Indeed, the five issues I identify above can be justified using the practical screen criteria. Of course, I do not mean to suggest that Okoli and Schabram (2010) intentionally encouraged poor-quality literature reviews; however, I do believe that authors have used the practical screen to justify poor-quality literature reviews. As such, I recommend that authors should:

- Realize that the literature review's purpose is to ground the research in the literature and to recognize what has been done and what has not. This includes using validated instruments and using the theory to explain results.
- Heed Dennis and Valachich's (2001) advice and ensure that they synthesize and summarize the literature and that they do not use citations of citations.

- Include in the methodology section the methodology used to perform the literature review. Include in this discussion search criteria, repositories searched, and reasons for excluding papers. Here is an example of how I would have written the methodology for conducting the literature review for this paper:

To generate the literature review for this paper, I searched Google Scholar and the AIS E-library using three key phrases: literature review, conducting literature reviews, and conducting research. Because I focus on current practice, I examined only papers after 1990 (i.e., I discarded papers before this date). Also, because I focus on IS research, I did not incorporate papers that discuss literature reviews in other fields, nor did I consider papers discussing the differences between IS and other fields.

- Utilize all the search tools and repositories at your disposal as per Bandara et al. (2011).
- Realize what the journals are in their field and search them all. If they do not have access to an paper through their university, they should contact the authors directly or at least search repositories such as research gate to see if they can get access to the paper. If the paper is highly relevant to the research then do what it takes to get it.
- Never settle for "enough" papers in your literature review. There is no minimum and the right number of papers are all those relevant to the research.
- Understand the ontology of the field and use multiple search criteria from this ontology to search for relevant papers. Authors should not create their own ontology for the field because this displays a lack of understanding and respect for the field. As an example from research into knowledge transfer in small teams, authors can use the terms "knowledge network", "community of practice", and "virtual team" individually to limit a literature search, but previous authors could have used them interchangeably, so all three terms should be used to search for literature.
- Should not ignore literature that contradicts their research or that suggests doing something different from their own. In particular, if they find literature after the fact that suggests constructs or instruments they did not use, do not ignore it. Include it in some manner, perhaps as future research, limitations to research, or in the discussion on what the research means.
- Make a good faith effort to review all the relevant literature.

I recommend that editors should:

- Not burden reviewers with reviewing unacceptable or low-quality literature reviews: desk reject the paper and explain what it is expected for the literature review to the author(s).
- Assist authors in finding appropriate literature from their journal and encourage reviewers to suggest their own papers if they are relevant as Jennex (2009) suggests.
- Be aware of the journals in their field so that they can ensure authors are covering them.
- Do not automatically accept the reasons of the practical screen (Okoli & Schabram, 2010) for limiting literature reviews. Require authors to explain why applying the practical screen is acceptable and ensure reviewers concur.
- Include guidance and best practice for performing literature reviews in the guide to authors.
- Include standards and expectations for literature reviews in the guide to authors.

Lastly, I recommend that reviewers should:

- Not perform the literature review for the author: it is okay to tell the author to do their job.
- Understand the ontology of the field and ensure that the methodology used to perform the literature review is appropriate.
- If authors are applying a practical screen, ensure that the reasons used to justify it are reasonable and acceptable.
- Recommend a strategy for doing the literature review when there are significant issues with it.
- Recommend your own work when it is relevant; build the body of knowledge as per Jennex (2009).
- Ensure the critical papers in the field are reviewed as appropriate (Dennis & Valachich, 2001).
- Ensure that authors synthesize the literature and demonstrate correct understanding of it; expect more than a summary of papers (Dennis & Valachich, 2001).
- Not consider the literature review as just something that needs to be done: it is an important part of research and ultimately the goal is to further the body of knowledge.

V. CONCLUSIONS

In this paper, I posit that we have seen a decrease in the quality of literature reviews included in submitted research. The reasons are many but probably include the large number of IS journals (861 per Lamb, 2004) and may all be based on the acceptable reasons for limiting a literature review; that is, the practical screen (Okoli & Schabram, 2010). The result of lower-quality literature reviews is an increased work load on reviewers at a time when there are more papers being submitted to journals and conferences with pressure to do reviews faster. There is no simple fix to the problem. I suggest that authors should include the methodology they used to conduct the literature review in their papers' methodology sections; that editors should include guidance, standards, and expectations for the literature review in the guide to authors; and that reviewers should suggest a strategy for performing the literature review rather than focusing on recommending specific papers. Focusing on how literature reviews are performed and recommending a literature-review strategy will reduce impact on reviewer time. While it will be difficult to improve the quality of literature reviews, it is critical that we do so to ensure that credit is given where deserved and, in the process, build on the body of knowledge and so that we can manage the work load we expect of our limited number of reviewers.

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Editor's Note: The following reference list contains hyperlinks to World Wide Web pages. Readers who have the ability to access the Web directly from their word processor or are reading the paper on the Web, can gain direct access to these linked references. Readers are warned, however, that:
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