Citation Differences between ABC Journals and Related, but, Unaffiliated Quality Journals

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Abstract

This study sought to determine if the Association of Business Communication journal articles are influencing the business communication field than articles published by unaffiliated journals. Since researchers have agreed that citations effectively measure impact on a field, analyzing citations could determine if ABC articles are leading or lagging in influence. We examined 172 articles (cited 4,624 times) listed in Google Metrics, published between 2009 and 2013. We found 36 articles published by ABC’s two journals having the most influence when they were compared to 136 articles published in 10 unaffiliated journals. Using one-way analysis of variance revealed means differed between ABC journals and unaffiliated journals significantly when citations was the dependent variable. When time, as a factor, was added, the two-way ANOVA resulted in a non-significant interaction effect, which suggested the unaffiliated articles were gaining influence. Therefore, we have provided some recommendations for how ABC can offset these gains.

When determining journal quality, the two primary ways are used to measure quality, which are expert surveys and citation journal ranking impact measures (Lowry, Humphreys, Malwitz, & Nix, 2007; Lowry, Romans, & Curtis, 2004; Truex, Cuellar, & Takeda, 2009; Vincent & Ross, 2011).

**Expert Surveys**

When expert surveys are used, a number of active field researchers, practitioners and students, rank each outlet based on specified factors. A key benefit is that the journal's ranking position reflects a cumulative opinion of a representative group of its readers and contributors. Often, however, those opinions are skewed by common sense approaches, perceptual sets, and selection biases that have historically plagued the social sciences. The reputation of a journal is perceived to be of high quality because of the scholars [expert opinions] publish articles in that journal, and vice versa, because the journal is considered high quality, scholars publish their work in that journal. Macdonald and Kam (2008, p. 596) wrote the following:

> Academics are notoriously poor at identifying quality journals not known to be quality journals. They tend to be very familiar with very few journals, and are very ignorant of the vast majority... Once a journal is on one list of quality journals, it is fairly likely to appear on other lists of quality journals. It is a quality journal because it is on a list of quality journals. Conversely, journals not on the lists are likely to remain excluded... One characteristic of quality journals in Management Studies is that authors from top business schools publish in them, but then, which are top business schools is often determined by publication in quality journals.

In addition, circular reasoning and logic has occurred when experts determine a journal to be of high quality for anecdotal reasons only, which is often hard to prove. Such behavior among expert raters has been substantiated in numerous empirical studies (Bell & Chong, 2010; Chong & Bell, 2010). Even more so, scholarly journals are prone to have celebrity authors whose influence increases a journal’s prestige and citations of its articles, just as casting a well liked and popular star can boost ticket sales when a mega-star is cast in the leading role (Bell, 2013).

Expert ratings of business and management journal quality through survey methods have been shown to be subjectively biased (Katerattanakul, Razi, Han, & Kam, 2005). Because of such bias, Carnegie classified research intensive institutions have received favorable treatment among the most selective journals (Bell & Chong, 2010).

**Journal Citation Studies**

The second primary method of judging quality is journal citation studies. This method produces impact scores that eliminate most of the subjectivity inherent in expert surveys. Citation studies assume a positive relationship between the independently reported indices and the journal’s rank (Serenko & Dohan, 2011). The most popular journal impact measures include the Journal Impact Factor (JIF), eigenfactor and article influence factor reported in Thomson Reuters’ Journal Citation Reports (Franceschet, 2010), as well as h-index (Hirsch, 2005), g-index (Egghe, 2006) and hc-index (Sidiropoulos, Katsaros, & Manolopoulos, 2007), which are typically obtained from Google Scholar (GS) (Harzing & Van Der Wal, 2009) or Scopus (Meho & Yang, 2007).

Longitudinal analysis of article citations is not new to business communication. In the past, researchers have found a core list of monographs, dissertations and most cited journals for business communication

Smith (2000, p. 131) found that from 1600 serials and 25000 plus citations that 99 serials accounted for most of the citations out of over 25000 plus citations; technical communication subjects also correspond very well to outsider disciplines, including “the diversity of resources referred to from business, education, psychology, science, and technology-related sources.” Reinsch and Reinsch (1996) found favorable comparisons between business communication journals and ten other communication journals to which they were compared. Vincent and Ross (2011) reported that the IJBC was not considered in 1994 to be a research-based or hard-science journal but was moving in that direction. We now know that IJBC is, in fact, currently a research-based journal. Business and technical communication subjects are substantiated to be pertinent to research conducted in the social sciences (Reinsch & Reinsch, 1996; Reinsch & Lewis, 1993). Other longitudinal studies continued to show evidence of the relevancy of business and technical communication articles on the main topics of social science research (Moran & Tebeaux, 2011; Moran & Tebeaux, 2012).

Furthermore, it appears to take roughly 25-years to know the full impact of a scholarly article. Possibly the best summary of an article’s influence over a 25-year period comes from Walters (2011, p. 1629) who analyzed the annual citation counts for 1172 articles published by 13 American Psychological Association journals:

> When the sample was divided into four categories of impact using the total citation counts for each article—low impact (0–24 citations), moderate impact (25–99 citations), high impact (100–249 citations), and very high impact (250–1763 citations) —the yearly citation counts of low to high-impact articles peaked earlier and displayed a steeper decline than the yearly citation counts of very high-impact articles. Using 5 or more citations a year, 10 or more citations a year, and 20 or more citations a year as markers of moderate-impact, high-impact, and very high-impact articles, respectively, and using the most cited articles in a journal during the first 5 years of the follow-up period as indicators of high impact and very high impact showed promise of predicting impact over the entire 25-year period.

We used this measure as a guidepost for the impact of the top articles published in the 12 journals examined in this study. Citation studies which provided impact scores are a better measure of a journal’s quality as the ratio level data (dependent variable having a true zero value) of citations of articles published by a journal is determined. The true influence a journal has on the business communication field can be confirmed by the articles it publishes and measured by its impact factor or citations of the articles in a short window of time. Thus, citations are the best indication of the influence a research work is having on the field.

Citation databases remain the most viable methods for generating bibliometric data and for making accurate citation-based research assessments and large-scale comparisons between works, authors, journals, and departments (Meho, & Yang, 2007); even when authors’ self-citations and journals’ self-citations are controlled, the individual merit of the article itself will determine, eventually, its citations
tendency (Vincent & Ross, 2011). Rogers et al (2007) used an expert survey to determine perceive journal ranking, however, they left two questions unanswered, which are:

- Do the journals of ABC differ from the other journals that business communication experts are reading frequently?
- Are the ABC journals having more influence than other journals not published by ABC?

Therefore, this study will build upon the work begun by Rogers et al (2007). However, it will take a different research approach, using actual citations of articles published by 12 journals rather than survey responses, to seek an answer to one critical research question:

**Question 1:** Do articles published from 2009-2013 by the Association of Business Communication differ from articles published in journals related to business communication, but not affiliated directly with ABC, in terms of citation counts found in Google Metrics?

Table 1 shows a few pertinent journal ranking and citation studies from 2005 to 2015 with methods using survey, Google Scholar Metrics, and citation databases as methodologies.

<table>
<thead>
<tr>
<th>Year</th>
<th>Study Title</th>
<th>Journal/Methodology</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>Fei, Chong, &amp; Bell (2015). The diminishing influence of celebrity authors in a diversified world of accounting journals.</td>
<td>Google Scholar Metrics, survey</td>
</tr>
<tr>
<td>2014</td>
<td>Gibson, Anderson, &amp; Tressler (2014). Which journal rankings best explain academic salaries? Evidence from the University of California.</td>
<td>Citation databases, survey</td>
</tr>
<tr>
<td>2013</td>
<td>Bell (2013). Management journals and the celebrity researcher effect on tiers.</td>
<td>Citation databases, survey</td>
</tr>
<tr>
<td>2012</td>
<td>Bell (2012). An empirical investigation of communication content in reputable management journals.</td>
<td>Citation databases, survey</td>
</tr>
<tr>
<td>2011</td>
<td>Miller, Taylor, &amp; Bedeian (2011). Publish or perish: Academic life as management faculty live it.</td>
<td>Citation databases, survey</td>
</tr>
<tr>
<td>2010</td>
<td>Albrecht, Thompson, Hoopes, &amp; Rodrigo (2010). Business ethics journal rankings as perceived by business ethics scholars.</td>
<td>Citation databases, survey</td>
</tr>
<tr>
<td>2009</td>
<td>Harzing &amp; Van Der Wal (2009). A Google Scholar h-index for journals: An alternative metric to measure journal impact in economics and business.</td>
<td>Citation databases</td>
</tr>
<tr>
<td>2008</td>
<td>Carraher &amp; Paridon (2008). Entrepreneurship journal rankings across the discipline.</td>
<td>Citation databases</td>
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<tr>
<td>2008</td>
<td>MacDonald &amp; Kam (2008). Quality journals and gamesmanship in management studies.</td>
<td>Citation databases</td>
</tr>
<tr>
<td>2008</td>
<td>Yuyuenyongwatana &amp; Carraher (2008). Academic journal ranking: Important to strategic management and general management researchers?</td>
<td>Citation databases</td>
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</table>
Top Journals Do Exist

Analyzing and discussing the quality journals in a discipline needs to be continual, relevant, and rigorous to inform and convince internal and external stakeholders (Straub & Anderson, 2010). In addition, timely discussions regarding the rigor and scope of a field’s top journals will educate stakeholders such as deans, promotion and tenure committees, or external reviewers outside the discipline (Lowery, Moody, Gaskin, Galletta, Humpherys, Barlow, & Wilson, 2013).

It should be noted that top business journals do not guarantee top articles nor do these journals represent a proxy for guaranteed quality of the articles they publish (Chow, Haddad, Singh, & Wu, 2007; Smith, 2004). Often the top journals have published articles that are infrequently cited in the literature and vice versa, relatively obscure journals have published articles that are cited frequently in the literature. Singh, Haddad, and Chow (2007) found that “top” articles and “non-top articles” were too often misclassified in the management literature for any journal to be a proxy for quality and, vice versa. Despite the drawbacks of inferring lesser quality to articles not published in top journals, researchers are still confirming that top journals exist. Mason, Steagall, and Jeffrey (1997) examined economic journal ratings and rankings based on a survey of economics department chairs’ perceptions. They found, when data were stratified according to the degree of research versus teaching orientation of institution, remarkable symmetry occurred across school types, although significant variations occurred in a few journals. Department chairs’ rankings were significantly correlated to rankings reported in previous studies, including quality-adjusted rankings. They concluded department chairs tended to rank journals, both consistently and in accordance, with generally accepted measures of quality.

Reinstein and Calderon (2006) found rankings used by both doctoral-granting and non-doctoral-granting accounting programs to confirm the existence of a set of top journals whose rankings were invariant to school type, faculty size, resource base, or mission.

Top Ranked Journals in Various Business Disciplines

Only a handful of journals frequently appears as top journals in each of the business fields (Alexander, Scherer, & Lecoutre, 2007; Bell, 2013; Fei, Chong, & Bell (2015); Singh, Haddad, & Chow, 2007). The top journals in management, economics, finance, marketing, accounting, business ethics, entrepreneurship, and business communication are presented below.

Management Top Journals

<table>
<thead>
<tr>
<th>Year</th>
<th>Authors</th>
<th>Title</th>
</tr>
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<tbody>
<tr>
<td>2007</td>
<td>Azar</td>
<td>Behavioral economics and socio-economics journals: a citation-based ranking.</td>
</tr>
<tr>
<td>2007</td>
<td>Chow, Haddad, Singh, &amp; Wu</td>
<td>On using journal rank to proxy an article’s contribution or value.</td>
</tr>
<tr>
<td>2007</td>
<td>Rogers, Campbell, Louhiala-Salminen, Rentz, &amp; Suchan</td>
<td>The impact of perceptions of journal quality on business and management communication academics.</td>
</tr>
<tr>
<td>2007</td>
<td>Singh, Haddad, &amp; Chow</td>
<td>Are articles in “top” management journals necessarily of higher quality?</td>
</tr>
<tr>
<td>2006</td>
<td>Bonner, Hesford, Van Der Stede, &amp; Young</td>
<td>The most influential journals in academic accounting.</td>
</tr>
<tr>
<td>2006</td>
<td>Marsh &amp; Hunt</td>
<td>Not quite as simple as A-B-C: Reflections on one department’s experiences with publication ranking.</td>
</tr>
<tr>
<td>2005</td>
<td>Katerattanakul, Razi, Han, &amp; Kam</td>
<td>Consistency and concern on IS journal rankings.</td>
</tr>
<tr>
<td>2005</td>
<td>Polonsky &amp; Whitelaw</td>
<td>What are we measuring when we evaluate journals?</td>
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</table>
Podsakoff, Mackenzie, Bachrach, and Podsakoff (2005) studied the most influential management journals of the 1980s and 1990s and found seven journals accounted for 61 percent of the citations of 28 leading business journals over two decades, and that the three journals that showed the greatest increase in influence over the past 20 years were the Academy of Management Journal, the Academy of Management Review, and the Strategic Management Journal. In another study, The Academy of Management Review, Academy of Management Journal, Administrative Science Quarterly, and Journal of Management were top among 50 other management journals (Yuyuenyongwatana & Carraher, 2008). This fact is reiterated by a recent survey of the members of the Association for Business Communication who selected six journals (three of which are management journals) most related to their professional career advancement: The journals ABC members chose included Academy of Management Journal, Academy of Management Review, Administrative Science Quarterly, Journal of Business and Technical Communication, Journal of Business Communication, and Management Communication Quarterly (Martin, Davis, & Krapels, 2012).

Economic Top Journals

Card and DellaVigna (2013) reviewed publishing trends from 1970 to 2012 in the top five economics journals. The journals they considered the top-five economics journals were the American Economic Review, Econometrica, the Journal of Political Economy, the Quarterly Journal of Economics, and the Review of Economic Studies. While in their study, Kalaitzidakis, Mamuneas, & Stengos (2011) found over a period of 2003-2008 that American Economic Review, ranked first in all years except 2003, the Quarterly Journal of Economics came in second overall and the Journal of Political Economy, Econometrica, and the Review of Economic Studies followed, which seemed to align with the previously mentioned study. However, none of these journals were found to be top by Azar (2007), who stated the top three economics journals were: 1) Journal of Economic Behavior and Organization, 2) Journal of Economic Psychology, and 3) Journal of Socio-Economics ranked third.

Finance Top Journals

Typically, the Journal of Finance, the Journal of Financial Economics, and the Review of Financial Studies have appeared at the top of most finance journal ranking lists and have dominated the field in terms of citations (Borokhovich, Bricker, and Simkins, 2000). Historically, the Journal of Business and the Journal of Financial and Quantitative Analysis have rounded out the set of top tier finance journals (Danielson & Heck, 2014). In studies published before the Review of Financial Studies had firmly established its reputation, the Journal of Business and the Journal of Financial and Quantitative Analysis typically were ranked in the top four journals specializing in financial research (Alexander and Mabry, 1994; Zivney and Reichenstein, 1994). In later studies (Oltheten, Theoharakis, and Travlos, 2005), found that the Journal of Business and the Journal of Financial and Quantitative Analysis were listed just behind the top three finance journals.

Based upon 862 survey responses of worldwide finance faculty, the top journal from a faculty member’s perspective was the Journal of Finance, and Journal of Financial Economics, and Review of Financial Studies followed behind (Oltheten, Theoharakis, & Travlos, 2005). Chan, Chang, and Chang (2013) found the five top finance journals to be the Journal of Finance, Journal of Financial Economics, Review of Financial Studies, Journal of Financial and Quantitative Analysis and Journal of Financial Markets. Over several years, it appears that researchers have consistently found these journals to be the most cited journals in finance.
Marketing Top Journals

In their study of 50 marketing journals for the years of 2001 and 2003, Haddad, Singh, Sciglimpaglia & Chan (2014) found some shifts in rankings between the two years. In 2001, the top four marketing journals were Journal of Marketing, Journal of Marketing Research, Journal of Consumer Research, and Journal of Retailing. In 2003, the Journal of Marketing retained its first place ranking, but Journal of Consumer Research moved to the second highest ranked journal while two different journals moved into the third and fourth positions. In third place was Marketing Science and in fourth place was the Journal of Academy Marketing Science.

Mort, McColl-Kennedy, Kiel, and Soutar (2004) derived a list of top-tier marketing journals: 1) Journal of Consumer Research, 2) Journal of Marketing, 3) Journal of Marketing Research, 4) Journal of the Academy of Marketing Science, and 5) International Journal of Research in Marketing. Similarly, Bauerly and Johnson (2005) determined there were five journals cited mostly in marketing syllabi for doctoral programs. These were 1) Journal of Marketing, 2) Journal of Consumer Research, 3) Journal of Marketing Research, 4) Marketing Science, and 5) Journal of the Academy of Marketing Science. Among these, they accounted for 66.5 percent of citations in syllabi analyzed from 109 doctoral programs accredited by AACSBB. Clearly, the Journal of Marketing and Journal of Consumer Research have been within the top five journals across several years.

Accounting Top Journals

The Australian Business Dean’s Council (ABDC) journal ranking list had these accounting journals ranked as A+ journals: The Accounting Review, Accounting, Organizations & Society, Contemporary Accounting Research, Journal of Accounting and Economics, Journal of Accounting Research, Review of Accounting Studies, and ABACUS (Chan, Tong, & Zhang, 2012). Across the years, three accounting journals, The Accounting Review, the Journal of Accounting Research, and the Journal of Accounting and Economics have ranked as the most desired outlets in accounting. These journals typically have dominated the rankings (Fogarty, T. J., & Jonas, G. A. (2013). Bonner, Hesford, Van Der Stede, and Young (2006) also found similar results with Accounting, Organizations and Society, Contemporary Accounting Research, Journal of Accounting and Economics, and Journal of Accounting Research being ranked the top four journals.

Business Ethics Top Journals

Business ethics scholars have searched for the top journals in their field and found two dominant academic communities: one in Europe and one in North America. Because the Social Issues in Management Division of the Academy of Management, the International Association for Business and Society, the European Academy for Business in Society, and the European Business Ethics Network were perceived to have a good representation of the business ethics academic community, researched surveyed these groups to determine journal quality. The results showed that the following journals were considered the top ten in which to publish in the field of business ethics: Academy of Management Review, Journal of Business Ethics, Business Ethics Quarterly, Academy of Management Journal, Business and Society, Administrative Science Quarterly, Organization Science, Business Ethics: A European Review, Strategic Management Journal, and Harvard Business Review (Albrecht, Thompson, Hoopes, & Rodrigo, 2010). Business and Society was first published in 1961, and because of its age, it was often cited frequently (Cahn, S. 2011) Journal of Business Ethics, Business Ethics Quarterly and Business Ethics: A
European Review have also been found by others researchers to be cited frequently (Chan, Fung, & Yau, J. (2013) and provided broad-based primary outlets for business ethics research (Paul 2004).

Entrepreneurship Top Journals

Pearce (2012) noted six prestigious academic journals in the field of entrepreneurship, which had missions that emphasized the advancement of the field. Those journals were Entrepreneurship and Regional Development, Entrepreneurship Theory and Practice, Journal of Business Venturing, Small Business Economics, Journal of Small Business Management, and Strategic Entrepreneurship Journal.

Carraher and Paridon (2008) found similar results naming four journals to be top in the field of entrepreneurship: 1) Entrepreneurship: Theory & Practice, 2) the Journal of Business Venturing, 3) the Journal of Small Business Strategy, and 4) the Journal of Small Business Management.

According to the Social Science Citation Index, Journal of Business Venturing and entrepreneurship Theory and Practice have factor impact scores of 1.846 and 1.537, respectively, which made them the highest ranked U.S. entrepreneurship journals, while Small Business Economics had a factor impact score of 0.526 and International Small Business Journal was rated at 0.273, which indicated that these journals are well regarded European-based entrepreneurship journals (Brush, Manolova, & Edelman, 2008).

Business Communication Top Journals

Business communication has just recently joined in on journal quality rating research fray, citing the Journal of Business Communication, Business Communication Quarterly, and Journal of Business and Technical Communication as top journals (Bell, 2012; Rogers, et al. 2007). While Lowry, Humphreys, Malwitz, and Nix (2007) found the top three international Business and Technical Communication journals were the Journal of Business and Technical Communication, Journal of Business Communication, and IEEE Transactions on Professional Communication. In both of these studies, it is important to note that the Journal of Business Communication and Journal of Business and Technical Communication were cited as top journals.

Challenges of Creating Journal Lists

Each field appears to have been dominated by a handful of journals that were rated as top journals. In addition, the literature confirmed there was academic agreement on the top journals in each of the business fields, including business communication (Lowry et al., 2007; Rogers et al. 2007; Beed & Beed, 1996).

Among 50 management journals compared, a suggestion of consensus of rankings based on survey research occurred (Yuyuenyongwatana & Carraher, 2008). Given there was so much agreement on the top management journals, business faculty and administrators could create lists of journals and rank those journals by tiers (Marsh & Hunt, 2006), and it seems many colleges and universities have created such lists to evaluate faculty scholarship.

Another challenge is collated journal ranking lists. Two prominent lists are the ABS Journal Quality Guide (ABS, 2015) and Harzing’s Journal Quality List (Harzing, 2015). The rankings might be based on anything from a large-scale worldwide survey of academics to a small group of individuals with decision-making power, but all lists contain some element of subjectivity (Harzing, & Van Der Wal, 2009). Although publication patterns did exist among the 25 top economics departments (Rupp & McKinney, 2002)
attempting to create a universally accepted list adoptable to every school or department would be difficult (Polonsky, 2004; Polonsky & Whitelaw, 2005). Davis (1998) provided evidence of the inconsistency in rating journals in economics and warned economists about using results derived from the Social Sciences Citation Index (SSCI) when ranking journals to evaluate scholarly productivity and economics departments. Among the economics disciplines, little consistency has been found empirically on quality rating of the hundreds of economics journals. Beed and Beed (1996) determined the citation method measured influence rather than excellence and the correlation between influence and quality was uncertain. However, they found some consistency in the literature when rating the top four or five economics journals.

In an intriguing study, Smith (2004) compared the rankings of 15 leading finance journals by the average number of Social Sciences Citation Index cites per article for articles published in 1996. A "top article," was compared to an "article in a top journal." They examined Type I errors (a "top" article is rejected by a particular decision rule, e.g., in top three journals) and the Type II errors (a "non-top" article is accepted as a top article) for each journal and combinations of the journals. Due to the high error rates, Smith found the results suggested that identifying top articles required looking beyond the Top 3 finance journals, as well as examining each article more carefully for its intrinsic qualities.

In a similar study in accounting, Chow, Haddad, Singh, & Wu, (2007) stressed empirical research is rife with evidence that discounting an article, as not being a top quality article because it did not appear in one of the top accounting journals, was faulty thinking. Too many articles that should have been rated as top articles were too often discounted as not being so merely because they had not been published in one of the three top accounting journals; and there are other business fields producing empirical results on the journal quality questions.

Polonsky and Whitelaw (2004) developed a weighted multi-dimensional perceptual ranking based on respondents' evaluation of a journal's prestige, contribution to theory, contribution to practice, and contribution to teaching. Then they argued that it might not be possible to develop a universal set of criteria that is applicable to a set of journal rankings Polonsky and Whitelaw, 2005).

Accounting, finance, marketing, MIS, organizational behavior, human resources, operations management, and related fields such as economics or business communication resolve disciplinary issues from somewhat esoteric approaches. Therefore, it seems that different disciplines may require different methods for judging journal rankings.

Very little consistency in criterion for rating the quality of a scholarly business journal, beyond the popularity of four or five journals in each of the academic business fields can be found. Despite the fact, there is an apparent inconsistency of judging the quality of hundreds of scholarly business journals, a handful of journals consistently appeared as top journals named in various empirical studies. Therefore, for this study's purpose, the authors assumed top journals do exist, as top journal existence was continually substantiated in the literature.

Google Metrics and Citation Statistics

Researchers have noted problems with using the ISI Web of Knowledge as a data source (Seglen, 1997; Cameron, 2005). Issues included the lack of coverage of citations in books, conference, and working papers as well as citations in journals not included in ISI; the lack of inclusion of journals in languages
other than English in the ISI database; and the US bias in the journals included in the database (Harzing & Van Der Wal, 2008; Kousha & Thelwall, 2007; Sanderson, 2008).

Many scholars now perceive that Google Scholar as a worthy alternative for citation data and was a reliable and valid alternative to the traditional indexes when measuring a journal’s impact (Delgado-López-Cózar & Cabezas-Clavijo, 2013; Harzing, & Van Der Wal, 2009). It does have some disadvantages, which include its inclusion of non-scholarly citations, double counting of citations, less frequent updating, uneven coverage across disciplines, and less comprehensive coverage of older publications/citations (Harzing & Van Der Wal, 2008). The problem of non-scholarly citations and double counting have been found to be fairly limited and attenuated by the use of robust citation metrics such as the h-index (Meho & Yang, 2007; Harzing & Van Der Wal, 2008; Vaughan and Shaw, 2008). Hirsch (2005) created the citation metric called h-index, which was defined as “A scientist h has index h if h of his/her Np papers have at least h citations each, and the other (Np-h) papers have no more than h citations each.” Therefore, the h-index provides a combination of both quantitative (number of papers) and qualitative (impact, or citations to these papers) (Glänzel, 2006).

Since its creation, the h-index has resulted in a numerous articles in journals such as Scientometrics and Journal of the American Society for Information Science and Technology, where some articles have suggested ways to refine or improve it (Bornmann, Mutz & Daniel, 2008). However, the h-index has generally received a positive reception and has addressed some of the statistical limitations underlying the ISI. Harzing and Van Der Wall (2009) found it more suitable to measure a journal’s wider economic or social impact rather than its impact on an academic audience only. Google Scholar h-index provided a more accurate and comprehensive measure of a journal impact and should be considered as a supplement to ISI-based impact analyses (Harzing, & Van Der Wal, 2009).

We, therefore, make the following hypotheses:

Ho1: Means for articles published in the two ABC journals do not differ from articles published by related, but unaffiliated journals when compared on the number of citations per article found in Google Scholar Metrics, using a one-factor model.

Ho2: Means for articles published in the two ABC journals do not differ from articles published by related, but unaffiliated journals when compared on the number of citations per article found in Google Scholar Metrics, using a two-factor model.

Ho3: Means between two time periods (2009-2010 to 2011-2012) do not differ scientifically when compared on the number of citations per article found in Google Scholar Metrics, using a two-factor model.

Ho4: Means for articles published in the two ABC journals do not differ from articles published by related, but unaffiliated journals compared between two time periods (2009-2010 to 2011-2012) when compared on the number of citations per article found in Google Scholar Metrics, using a two-factor model.

Data Analysis

Therefore, Google Scholar and the Hirsch “h5-index” citation metric were used to study the two ABC journals International Journal of Business Communication(IJBC) and Business and Professional
Communication Quarterly (BPCQ) and 10 related, but unaffiliated journals, which included Journal of Business and Technical Communication (JBTC), Journal of Technical Writing Communication, (JTWC), Journal of Communication Management (JOCM), Managerial Communication Quarterly (MCQ), Communication and Strategies (CS), IEEE Transactions on Professional Communication (IEEE-TPC), Technical Communication Quarterly (TCCQ), Technical Communication (TC), Corporate Communications: An International Journal (CCIJ), and Journal of Management Education (JME).

Only the articles that were reported in the Google Metrics database for the 5-year period 2009-2013 were used, thus, the group sizes were necessarily uneven. Google Metrics reported the journals that had published 100 or more articles in a 5-year window, and all 12 journals used in this study had published 100 or more articles for the 5-year period 2009-2013.

The h5-index was the measure accounting for the number of articles equal to and exceeding the h5-index for that journal. For example, an h5-index of 14 for IEEE-TPC was an indication that the journal had published 14 articles with 14 or more citations each within a 5-year period of measure. The h5-index of 20 for IJBC was an indication IJBC had published 20 articles with 20 or more citations for each article. We chose these metrics to accommodate the criticisms voiced concerning the use of the ISI Web of Knowledge as a data source.

Taking a first glance of the data, there appeared to be a meaningful difference between the frequencies of ABC journals and related, but not affiliated journals. Most of the journals in Table 2 are shown to be valued and read often by business communication scholars and professionals (Rogers et al, 2007). The most cited article in each journal was included based on the 2009-2013 range, from Google Metrics as of June 2014. The majority of the most cited articles were published in 2009. The IJBC had the top article with 112 citations. Table 2 shows in footnote single, double, triple and quadruple asterisks as an indication that the article is a low, moderate, high or very high impact article according to a criterion for impact developed by Walters (2011).

The 12 journals published 172 articles from 2009 to 2013, which were included in the Google Metrics cutoff. The CCIJ had the highest h5-index of 23, which indicated 23 of its articles published from 2009 to 2013 had 23 or more citations. During that period, Schultz and Wehmeier (2010) had 81 citations, which is a moderate impact article, but was the highest number for CCIJ. This particular article was on track for 506 citations in 25 years [81/4 * 25-years = 506 citations] transforming it from a moderate impact to a very high impact article in a 25-year period. The JTWC had the lowest h5-index of six, which indicated six of its articles published from 2009 to 2013 had only six or more citations. During that period, Ford, Bracken, and Wilson (2009) had a low impact article, which was on track for 40 citations in 25-years [8/5 * 25-years = 40 citations] transforming it from a low impact to a moderate impact article in a 25-year period. Table 2 footnotes explain h5-index and h5-median.
Table 2: Google Metrics for Top ABC Journal Articles, vis-à-vis Related Journal Articles, from 2009 to 2013

<table>
<thead>
<tr>
<th>Journal</th>
<th>H5-index</th>
<th>Top Articles</th>
<th>Abbr.</th>
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<tbody>
<tr>
<td>IJE</td>
<td>24</td>
<td>17</td>
<td>IJE</td>
</tr>
<tr>
<td>CCI</td>
<td>23</td>
<td>12</td>
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<tr>
<td>TC</td>
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<td>13</td>
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<tr>
<td>CS</td>
<td>8*</td>
<td>8</td>
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<tr>
<td>MCG</td>
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<td>16</td>
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<tr>
<td>JOMM</td>
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<tr>
<td>JTWM</td>
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<td>BPCQ</td>
</tr>
<tr>
<td>JUCE</td>
<td>26</td>
<td>20</td>
<td>JUCE</td>
</tr>
</tbody>
</table>

Figure 1 illustrates a line graph of the raw data for the ABC Journal articles, vis-à-vis related journal articles, for the years 2009 to 2013. The ABC journals had fewer citations of 1199 for the ABC journals, which were only two ABC journals compared to 10 outside journals. The 10 combined outside journals, which were related to business communication, had 3425 citations. The 10 combined outside journals, which were related to business communication, had 3425 citations.
were published, in the aggregate more articles, and thus had more citations taken together. Nevertheless, this raw data did not state what the citation averages were for the 12 journals.

Figure 1
Cited by for ABC Journals and Related Journals Compared between Two Periods

Figure 2 illustrates a line graph of the raw data citation averages for the two ABC journals compared to 10 related, but not affiliated, journals for two periods, 2009-2010 compared to 2011-2012. Clearly, the ABC period of 2009-2010 had a higher average than the related journal average for both periods 2009-2010 and related journal average for period 2011-2012. The plots mirror each other for ABC affiliated journals vis-à-vis the non-affiliated journals in direction of documents found across time. One important fact was that averages for ABC journals were higher for both periods than the averages for both periods for non-affiliated outside but related journals. Figure 2 data indicated that differences between ABC journals and related journals, concerning citations of articles published in these journals, might differ significantly in an ANOVA test. The averages indicated that two ABC journal articles were apparently more influential than the 10 unaffiliated journal articles. The best way to know for sure if these differences were significant was to test the means between the 2 ABC journals and the 10 related journals, and to test the means further across time (two periods representing 24 months each) testing for an interaction effect.

Figure 2
Averages for ABC Journals and Related Journals Compared between Two Periods

Figure 1 ranges
Frequency counts for the independent variables are shown in Table 3. Nevertheless, frequency and percent counts did not show mean differences. The best way to know if the ABC journals were significantly different from the 10 other journals that publish business communication articles was to test the means of the citations of published articles. The influence the journal has on the field was based on its impact factor or the citations of its articles in a 5-year time window. Again, demonstrating why citations were the best indication of a journal’s influence of a field.

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Affiliation</td>
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<td></td>
<td></td>
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<tr>
<td>ABC Journals</td>
<td>36</td>
<td>20.9</td>
<td>20.9</td>
</tr>
<tr>
<td>Related Journals</td>
<td>136</td>
<td>79.1</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>172</td>
<td>100.0</td>
<td></td>
</tr>
<tr>
<td>Period</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2009-2010</td>
<td>141</td>
<td>82.0</td>
<td>82.0</td>
</tr>
<tr>
<td>2011-2012</td>
<td>31</td>
<td>18.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>172</td>
<td>100.0</td>
<td></td>
</tr>
<tr>
<td>Year</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td>93</td>
<td>54.1</td>
<td>54.1</td>
</tr>
<tr>
<td>2010</td>
<td>48</td>
<td>27.9</td>
<td>82.0</td>
</tr>
<tr>
<td>2011</td>
<td>24</td>
<td>14.0</td>
<td>95.9</td>
</tr>
<tr>
<td>2012</td>
<td>7</td>
<td>4.1</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>172</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

One-Way ANOVA, Citations * Affiliation

We rejected Ho1. Means for the 36 articles published in the two ABC journals differed from the 136 articles published by related, but unaffiliated journals when compared on the number of citations per article found in Google Scholar Metrics, using a one-factor model. We rejected Ho1, with F (1,170) = 8.604, p = .004, which indicated that affiliation has a small, but significant effect on articles’ citations. The Cohen (1988) rule stated that values between η² .01 to .06 ~ small, η² higher than .06 to .14 ~ medium, and η² higher than .14 ~ large. Partial Eta squared was small, accounting for only 4.8% of the variance in the dependent variable (citations) when using η² = estimates of effect size. Table 4 shows the ABC mean of 33 citations per article was significantly larger than the related journal mean of 25 citations per article. In other words, the 36 ABC articles included in the Google Metrics was significantly higher, with p=.004, than the 136 articles published by related, but unaffiliated journals.

Determining whether time influenced the significance of affiliation would help us to understand the true influence of the ABC articles on the field of business communication, using citations as a gauge for that
influence. A two factor model, or two-way ANOVA was a good way to determine the influence of one factor on another and whether or not there was any interaction happening which decreased or increased the level of significance on the dependent variable.

<table>
<thead>
<tr>
<th>Table 4</th>
<th>Descriptive Statistics &amp; Test of Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dependent Variable: Citations</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
</tr>
<tr>
<td>ABC Journal Articles</td>
<td>36</td>
</tr>
<tr>
<td>Related Journal Articles</td>
<td>136</td>
</tr>
<tr>
<td>Total</td>
<td>172</td>
</tr>
<tr>
<td><strong>One-Way ANOVA Table</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sum of Squares</td>
</tr>
<tr>
<td>Citations * Affiliation</td>
<td>Between Groups</td>
</tr>
<tr>
<td></td>
<td>Within Groups</td>
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<tr>
<td></td>
<td>Total</td>
</tr>
<tr>
<td><strong>Measure of Association</strong></td>
<td>Eta</td>
</tr>
<tr>
<td>Cited by * Affiliation</td>
<td>.219</td>
</tr>
<tr>
<td><strong>Denotes p&lt;.01</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Two-Way ANOVA, Affiliation * Period**

We rejected Ho2. Means for the 36 articles published in the two ABC journals differed from the 136 articles published by related, but unaffiliated journals when compared on the number of citations per article found in Google Scholar Metrics, using a two-factor model. We rejected Ho2, with F (1, 168) = 3.807, p = .053, which indicated that affiliation had a significant main effect on the number of citations. This probability is much reduced from the earlier one-factor model which produced a p=.004. Adding the second factor (time) resulted in probability p=.053. Partial Eta squared was also smaller, going from 4.8% to accounting for only 2.2% of the variance in the dependent variable (citations) when using $\eta^2$ = estimates of effect size. Table 5 illustrates the means and standard deviations for periods 2009-2010 to 2011-2012 compared between ABC and related journals.

We could not reject Ho3. Means between two time periods (2009-2010 to 2011-2012) did not differ scientifically when compared with the number of citations per article found in Google Scholar Metrics, using a two-factor model. The main effect was not significant. The two time periods did not differ significantly. We could not reject Ho3, with F (1, 168) = 2.716, p = .101, which suggested that the time period had no effect on the citation differences among the 12 journals. Partial Eta squared was very small, accounting for a meager 1.6% of the variance in the dependent variable.

We could not reject Ho4. Means for articles published in the two ABC journals did not differ from articles published by related, but unaffiliated journals when compared between two time periods (2009-2010 to 2011-2012) and when compared with the number of citations per article found in Google Scholar Metrics, using a two-factor model. There was no two-way interaction effect. We could not reject Ho4, with F (1, 168) = .129, p = .720, which suggested that affiliation had no effect on citation magnitudes when the time period was added as a factor in the model. Partial Eta squared was very small, accounting for a scanty 0.1% of the variance in the dependent variable.
Table 5
Descriptive Statistics & Tests of Between-Subjects Effects

<table>
<thead>
<tr>
<th>Dependent Variable: Citations</th>
<th>Affiliation</th>
<th>Period</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABC Journals</td>
<td>2009-2010</td>
<td>34.533</td>
<td>20.9774</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2011-2012</td>
<td>27.167</td>
<td>11.1250</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>33.306</td>
<td>19.7496</td>
<td>36</td>
<td></td>
</tr>
<tr>
<td>Related Journals</td>
<td>2009-2010</td>
<td>26.054</td>
<td>14.0310</td>
<td>111</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2011-2012</td>
<td>21.320</td>
<td>7.4539</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>25.184</td>
<td>13.1787</td>
<td>136</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>27.858</td>
<td>16.0613</td>
<td>141</td>
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<tr>
<td>Related Journals</td>
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<td>22.452</td>
<td>8.4017</td>
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<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>26.884</td>
<td>15.0973</td>
<td>172</td>
<td></td>
</tr>
</tbody>
</table>

Tests of Between-Subjects Effects

<table>
<thead>
<tr>
<th>Dependent Variable: Cited by</th>
<th>Source</th>
<th>Type III Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
<th>Partial Eta Squared</th>
</tr>
</thead>
<tbody>
<tr>
<td>Affiliation</td>
<td>824.198 a</td>
<td>1</td>
<td>824.198</td>
<td>3.807</td>
<td>*.053</td>
<td>.022</td>
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<tr>
<td>Period</td>
<td>588.041</td>
<td>1</td>
<td>588.041</td>
<td>2.716</td>
<td>.101</td>
<td>.016</td>
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</tr>
<tr>
<td>Affiliation * Period</td>
<td>27.833</td>
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<td>27.833</td>
<td>.129</td>
<td>.720</td>
<td>.001</td>
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<tr>
<td>Error</td>
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<td>168</td>
<td>216.485</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Total</td>
<td>163286.000</td>
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</tr>
</tbody>
</table>

* a. R Squared = .067 (Adjusted R Squared = .050)

Discussion

We analyzed the data for this study and presented the results, therefore, the answer to our aforementioned research question should be evident. The earlier question asked:

**Question 1:** Do articles published from 2009-2013 by the Association of Business Communication differ from articles published in journals related to business communication, but not affiliated directly with ABC, in terms of citation counts found in Google Metrics?

**Answer 1:** Yes, and no. Articles published from 2009-2013 by the Association for Business Communication differ from articles published in unaffiliated journals related to business communication in terms of citations counts, but only when compared on a one factor model. There is no scientific difference between ABC journals and unaffiliated journals, regarding citation counts, when time is added as a factor to the model, in a two-way factorial ANOVA test.

The main effect of affiliation as a single factor is significant, in both the one-way and two-way models using ANOVA to compare means. Of the examined 172 articles published between 2009 and 2013, we found the 36 articles published by ABC’s two journals are having the most influence on the literature when they are compared based on citations found on Google Metric’s to 136 articles published in 10 unaffiliated journals.

Using 2x2 factorial ANOVA, differences do exist between the means of affiliated and unaffiliated journals representative of business communication as a field. The examination of 172 articles published from 2009 to 2013 found ABC journals do have the most influence on the literature when they are compared based on Google Metric’s “Cited by” citations to journals published by organizations not directly
affiliated with the ABC, \( p = .004 \) and \( p = .053 \), respective to the models. The main effect of time alone is insignificant, \( p = .101 \). However, time when added to the model suggests that the main effect of affiliation over time is insignificant, and that outside, but related to business communication journals are gaining on citations of the two journals (IJB and BPCQ) over time. This is a clear indication that the outside organizations that publish business communication content are catching up to the citations of ABC journals—in terms of mean differences of citation magnitudes.

Figure 3 is the best way to illustrate the differences among the estimated marginal means for documents found in the Google Scholar search. The plot indicates ABC articles are cited more often than non-affiliated journal articles are cited. Nevertheless, the difference between the means of ABC journals and the unaffiliated journals over time is not significant.

The results of the two factor models clearly indicates that ABC’s mean citations of 34.533 for the period 2009-2010 is the same as unaffiliated journals’ mean of 26.054 for period 2009-2010. The same is true for the period 2011-2012, where ABC’s mean citations of 27.167 are the same as unaffiliated journals’ mean of 21.320. Time has neutralized the advantage that ABC had in the one factor model using a one-way ANOVA. The two-way ANOVA using two factors also shows a meager Adjusted R-squared, which indicates that only 5% of the variance in the model is accounted for by the two factors: Affiliation and time period.

**Conclusion and Future Study**

A perusal of the top papers for the 12 journals examined in this study shows that the topics discussed are germane to established management areas. In other words, the top cited articles for the 12 articles are applicable to management and its sub areas such as communication. Such topics as corporate social responsibility, human resources management, trust, and leadership cannot be discussed without
touching upon the effect or role of communication. Therefore, communication journals often cover management and leadership topics.

This article provides important insight and understanding into the status of the ABC journals. Such knowledge will allow ABC’s Executive Committee, Board of Directors, Publication Board, Journal Editors, and members as well as academic scholars understand where the *International Journal of Business Communication* and *Business and Professional Communication Quarterly* rank in comparison to peer journals. Having this information will further allow the ABC journal editors to benchmark and review their journals against those with which they compete. Then, the editors and their editorial review boards can make decisions to ensure these two journals remain of high quality, that the members chose to read them, and that scholars seek to publish in these journals.

To increase the citations of both ABC journals, in general, and specifically within the management field, we recommend that ABC continue to expand the publication quality of both journals. For example, some topics to consider include rapid publication and reduction of wait time between acceptance and publication. Having been members of ABC for some time, colleagues have shared with us that they have had to wait one to two years after their articles were accepted to see those articles in print. What may help shorten the length of time between acceptance and publication would be to increase the number of issues each year or increase the number of pages allowed in each issue. Another possibility might be to add a third journal such as what the Academy of Management (i.e., Academy of Management Learning and Education) and the Organizational Behavior Teaching Society (i.e., Management Teaching Review) have done. Currently, the *International Journal of Business Communication* concentrates upon empirical research and the *Business and Professional Communication Quarterly* focuses on the scholarship of teaching. Maybe a third alternative is needed such as a practitioner-oriented journal that could include articles for consultants, case studies, teaching ideas, or teaching tips and practices that both practitioners within organizations as well as educators could implement. For example, the My Favorite Assignment articles then could be published more than once a year.

If ABC’s journals are to stand out from the unaffiliated journals, clearly ABC may need to consider some of these recommendations to increase citations and to encourage other disciplines to publish within the ABC journals. At a minimum, the top cited articles for both *IJBC* and *BPCQ*, their themes and methods, and the fields of management they made applicable to communication deserves a more thorough examination by the leaders of the ABC. More articles akin to the ones in Table 1 of this study need to be published by both journals if the ABC wishes to remain the most influential association for business communication in terms of its citations counts.
References


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