DECISION SCIENCES JOURNAL OF INNOVATIVE EDUCATION

Decision Sciences Journal of Innovative Education Volume 15 Number 3 July 2017 Printed in the U.S.A.

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# **EMPIRICAL RESEARCH**

# **Key Authors in Business and Management Education Research: Productivity, Topics, and Future Directions**

# J. B. Arbaugh<sup>†</sup> 🛈

University of Wisconsin Oshkosh, College of Business, 800 Algoma Blvd, Oshkosh, WI 54901, e-mail: arbaugh@uwosh.edu

# Carlos J. Asarta

Center for Economic Education & Entrepreneurship, Lerner College of Business, University of Delaware, 102 Alfred Lerner Hall, Newark, DE 19716-2725, e-mail: asarta@udel.edu

# Alvin Hwang

Lubin School of Business, Pace University, One Pace Plaza (W431), New York, NY 10038, e-mail: ahwang@pace.edu

# Charles J. Fornaciari

LaSalle University, School of Business, 1900 West Olney Avenue, Philadelphia, PA 19141, e-mail: fornaciari@lasalle.edu

Regina F. Bento University of Baltimore, Merrick School of Business, Baltimore, MD, e-mail: rbento@ubalt.edu

Kathy Lund Dean Gustavas Adolphus College, 800 West College Avenue, Saint Peter, MN 56082, e-mail: lunddean@gustavus.edu

# ABSTRACT

Previous studies of author productivity in business and management education (BME) research have focused on single disciplinary areas, and even single journals. This study is the first to examine the productivity of BME scholars across multiple disciplinary areas (i.e., accounting, economics, finance, information systems, management, marketing, and operations/supply chain management). We analyzed a pool of 17 BME journals with the highest *hg*-index, by including the top three journals in the accounting and information systems areas, the top two journals in each of the other disciplinary areas, and an interdisciplinary BME journal. This examination covered a 10-year period (2005-2014), 4,464 articles and 9,617 article co-authors. We identified 7,209 unique authors in this pool and ranked their productivity to create a "Key Authors" list. Each of the top 99 authors had five or more articles in our database. Our findings indicate the potential for cross-disciplinary dissemination of research ideas and opportunities for scholars to

<sup>&</sup>lt;sup>†</sup>Corresponding Author.

#### Arbaugh et al.

enhance their research profile, because even a small increase in productivity can lead to substantial movement in the BME rankings of authors.

# Subject Areas: Business and Management Education (BME) Research, BME Author Productivity, Cross-Disciplinary Research, BME Journal Quality, Co-Authorship, BME Topic Areas.

Business and management education (BME) research is evolving from an aspiring community to a full-fledged academic field (Hambrick & Chen, 2008). This article seeks to help the maturation of BME research as a field by identifying key authors and topics across BME disciplines and highlighting the potential for mutual support and cross-fertilization of ideas.

BME research encompasses educational issues in individual disciplinary areas, as well as topics that address the business school in its entirety, such as critiques of practices of business schools (Gioia & Corley, 2002; Adler & Harzing, 2009), MBA curricular issues (Rubin & Dierdorff, 2013), technology-mediated learning (Alavi & Leidner, 2001; Arbaugh & Duray, 2002), and experiential learning (Boyatzis, Stubbs, & Taylor, 2002; Kayes, 2002). BME research has the potential to greatly benefit educational practice in business schools and offers promising directions for scholars to answer the growing calls for "research that matters" (Gioia & Corley, 2002; Rynes, 2007; Corley & Gioia, 2011).

Educational research in business schools has seen a surge of activity over the past decade (Mixon & Upadhyaya, 2008; Bernardi & Zamojcin, 2013; Arbaugh & Hwang, 2015), and prominent new journals sponsored by distinguished professional organizations such as the Decision Sciences Institute and the Academy of Management have raised the profile of this emergent field. Previous efforts to identify the most prominent authors in BME research have typically examined articles published in the 1980s and 1990s, and tended to focus on either a single journal or a single business discipline (McIntyre & Tanner Jr., 2004; Holderness, Myers, Summers, & Wood, 2014). Recent author-tracking efforts (e.g., Urbancic, 2009; Abernethy & Padgett, 2011; Kruck, Mathieu, & Mitri, 2013; Holderness Jr. et al., 2014; Lo, Wong, Mixon & Asarta, 2015) still focus largely on single domains, thereby limiting the extent to which their findings could help promote cross-disciplinary work.

This article identifies key BME authors across different business disciplinary areas and therefore, avoided the silo-based approach of studying BME research within a single disciplinary area. BME researchers will benefit from the discovery of common BME tropical interests across disciplines. The study covers a recent 10-year timeframe (2005-2014), an important period considering recent research findings suggest that nearly 60 percent of the most cited articles in BME research have been published since 2000 (Arbaugh & Hwang, 2015).

Hambrick and Chen (2008) identified three elements—differentiation, mobilization, and legitimacy building (pp. 35-38)—that influenced the likelihood and speed of acceptance of an academic field. We believe that an important task underlying these three elements in the maturation of a field is the identification and nurturing of its key "scholarly conversation" (Huff, 1999, 2009; Kemp, 2005). Our study is a step in this direction with a holistic view of the BME field, as it examines the "scholarly conversation" that has been taking place in its various disciplinary sub-areas from 2005 to 2014, to identify the field's key interlocutors (i.e., authors, in Huff's analogy) and topics.

Established fields, such as strategic management, have periodic review studies and meta-analyses to identify key research questions, major research themes, important findings across studies, and so on. BME research is still young and, to date, has no such studies. Accordingly, we are making a first attempt to uncover its major journals across different business disciplinary areas, the most highly cited authors across these BME areas, and their major topical areas of research. Here we have done this by using citation metrics to identify highly cited works, authors, and topics. Our hope in developing the first cross-disciplinary database of key journals, authors, and topics in BME research is that a holistic view of the field will benefit both current and prospective contributors, as pointed out in the implications section of this article. Moreover, findings from studies like ours should help retain and attract more scholars to BME research, by providing the field with the same metrics that are used to assess scholarly productivity in other disciplinary research with implications for decisions about merit pay, promotion, and tenure.

The following section offers a brief review of prior BME research author studies, and describes how we developed a pool of journals containing 4,464 articles written by 9,617 co-authors with 7,209 unique authors. Next, we explore a methodological advancement that allowed us to go beyond simple article counts and enabled us to consider journal quality when ranking authors. We then present the results of our effort to develop a ranked list of the most active BME scholars over a recent 10-year period (2005-2014), as well as the topical areas that have been examined most commonly by these highly productive scholars. The last section discusses the findings and explores their limitations and potential implications for the BME research field.

# AUTHOR STUDIES IN BME RESEARCH

To date, studies of BME scholarly productivity have been discipline-specific, with uneven levels of inquiry. Because these studies employed small journal pools, relative journal quality has not been considered in their research designs. Accounting, economics, and marketing have relatively well-developed histories of studying BME scholarly productivity (Clark & Hanna, 1986; Urbancic, 1995; McIntyre & Tanner, 2004; Lo et al., 2015); whereas information systems and finance have fewer studies (Chan & Thapa, 2006; Kruck et al., 2013). At the other end of the spectrum, we found no studies of BME scholarly productivity in management. This was surprising given that management has a sustained history of publishing educationally oriented journals for more than 40 years (beginning with what are now known as *Management Learning* and the *Journal of Management Education*) and creating the BME journal with the highest scholarly impact (*Academy of Management Learning & Education*).

Why is it that accounting, economics, and marketing have a betterdefined history of examining their educational research? We believe one possible reason stems from the fact that each of these disciplines has longstanding norms of tracking author rankings and scholarly productivity in their traditional non-education-focused topics. Consequently, the tracking norm carries over into their respective education inquiries.

In contrast, although there have been some author-tracking studies in management (e.g., Podsakoff, MacKenzie, Podsakoff, & Bachrach, 2008; Aguinis, Suarez-Gonzalez, Lannelongue, & Joo, 2012), such studies have not included every major stream in the area (e.g., strategy, human resource management, organizational behavior, ethics, etc.) due to the diversity of theories and frameworks across these large streams and the subsequent difficulty of comparing relatively dissimilar works. Thus, there is no norm of tracking author and comparison studies across the wide management research area, with a consequent lack of interest to do so also in BME research overall.

When we examined accounting's tracking activity on BME research, we found many single-journal studies (Urbancic, 1995), which grew into multi-journal studies of accounting educational outlets (Urbancic, 2009), and then toward multi-journal studies of both solely educational and discipline-based journals that publish educational research (Holderness et al., 2014). Many of these studies have identified authors and measured productivity on the basis of simple (unweighted) article counts. Some recent studies have considered co-authored weights and the type of article (Holderness et al., 2014), and some have explored how co-authoring relates to productivity (Rutledge & Karim, 2009).

Author studies in marketing education research showed a similar trajectory, with author counts based primarily on unweighted articles (McIntyre & Tanner, 2004; Gray, Peltier, & Schibrowsky, 2012) and recent work considering weighted contributions and article types and topics (Abernethy & Padgett, 2011; Gray et al., 2012).

Economics also has a history of ranking influential authors (Palacios-Huerta & Volij, 2004; Mixon & Upadhyaya, 2008; Bao, Lo, & Mixon, 2010). The rankings presented in those studies have adopted or improved the methodologies suggested by Liebowitz and Palmer (1984) and Laband and Piette (1994) by incorporating citation-based measures of journal quality and influence. A recent paper examining economics teaching-focused research productivity showed rankings that considered citation-based influence of articles as well as total number of publications published by authors in high-quality economics journals (Lo et al., 2015). Using *EconLit* to collect data on articles published between 1991 and 2011, Lo et al. (2015) showed that publishing eight unweighted articles during their 20-year review period would place an economic education author in the top 10 ranking, while publishing four unweighted articles would place an educator in the top 20 ranking.

### **METHOD**

#### **Journal Selection**

The process of determining which journals should be included in this study followed several steps. First, we examined a compilation of journals from previous author and institution studies as a possible starting point for the sample (Mixon Jr. & Upadhyaya, 2008; Urbancic, 2011; Currie & Pandher, 2013). The examination of these studies led us to focus on Currie and Pandher's (2013) work, supplemented by journals included in the BME Influence Index (Arbaugh & Bielinska-Kwapisz, 2016), because this approach provided recent and comprehensive listings and ratings of BME research journals based upon both expert assessments and scholarly metrics. Second, we selected the study's timeframe. To capture recent scholarly activity, we chose the 2005-2014 decade as the study period because ten-year timeframes were used in previous BME disciplinary author studies (Urbancic, 2009; Abernethy & Padgett, 2011; Gray et al., 2012).

After we finalized the initial journal pool and the timeframe for the study, we conducted an analysis of the contents of each journal during the 10-year review period using Harzing, 2013. PoP compiles citation counts from Google Scholar and generates metrics for journals and authors based upon citation activity, thereby making it easier for scholars to examine data from Google Scholar (Soutar & Murphy, 2009; Haley, 2014). Although there are concerns about using Google Scholar for bibliometric studies (Cothran, 2011; Aguillo, 2012; Haley, 2014), recent studies have found Google Scholar to yield comparable stability of coverage for publications and citations relative to Scopus and the Web of Science (Harzing & Alakangas, 2016). Additionally, other scholars have found it to be more informative for analyzing educational research than more restrictive databases such as Scopus or Journal Citation Reports (JCR) (Van Aalst, 2010; Cothran, 2011; Rynes & Brown, 2011).

One of the benefits of using PoP is that it allows for quick calculations of commonly used scholarly metrics. Two of the more prominent indices spurring this activity are the *h*-index, which indicates the *h*-number of articles published by an author or journal with at least *h*-number of citations (Hirsch, 2005), and the *g*-index, which indicates the unique largest number of articles published by an author or journal such that the top *g* articles received together at least *g*-squared number of citations (Egghe, 2006). These tools have captured aspects of research visibility more comprehensively than have impact factors, citations per paper, or journal ranking indices for various business disciplines (Serenko & Bontis, 2009; Mingers, Macri, & Petrovici, 2012).

However, each index has notable limitations. The *h*-index has been criticized for ignoring less-cited articles, understating the impact of extremely highly-cited articles, and not discriminating influence based on the length of a scholar's career (Burrell, 2007; Mingers et al., 2012; Schreiber, 2013). Conversely, the *g*-index has been criticized for being weighted toward highly cited publications and understating the value of the influence of a scholar's collective body of work (Van Eck & Waltman, 2008; Alonso, Cabrerizo, Herrera-Viedma, & Herrara, 2010). In short, many of the advantages of the *h*-index are disadvantages of the *g*-index, and vice versa. Therefore, we used the *hg*-index (Alonso et al., 2010) to select our final journal pool. The *hg*-index combines the *h*-index (Hirsch, 2005) and the *g*-index (Egghe, 2006) in a way that keeps the advantages of both indices while minimizing their disadvantages. The *hg*-index is widely used and calculated as the geometric mean of the *h* and *g* indices (in other words, *hg* is the square root of  $h \times g$ ). We used the *h*- and *g*-indexes generated by PoP to calculate each journal's *hg*-index.

We selected the ten BME journals with the highest hg-index scores (Arbaugh & Bielinska-Kwapisz, 2016) as the base of our final journal pool. To address critiques offered by previous studies about insufficient journal or disciplinary

area representation (Rynes & Brown, 2011; Urbancic, 2011; Kruck et al., 2013), we then included additional journals to ensure that our sampling pool encompassed at least two of the top BME journals for each of the seven major disciplinary areas (accounting, economics, finance, information systems, management, marketing, and operations/ supply chain management). These additional journals were determined by their ranking metrics in their respective disciplinary areas: *Marketing Education Review (MER)*, the *Journal of Financial Education (JFEd)*, *International Review of Economics Education (IREE)*, the *Journal of Economics and Finance Education (JEFE)*, and the *International Journal of Information and Operations Management Education (IJIOME)*. We were cognizant of the fact that impact scores of the top two disciplinary journals would vary across disciplines. However, given that our goal was to approach the BME research field in a holistic way, cutting across traditional disciplinary silos, we decided that it was important to include at least two journals per discipline, even though this implied a broader range of impact scores in the overall pool.

In two of the seven disciplines—accounting and information systems—we found the need to include three top journals, rather than two. The top two accounting education journals, *Issues in Accounting Education (IAE)* and *Accounting Education: An International Journal (AE)*, were part of our base pool of top 10 overall BME journals; however, the *hg*-index scores of a third publication in the area, the *Journal of Accounting Education (JAED)*, placed it as the 11th highest rated BME journal overall, higher than any of the other journals that had been added to our initial listing. We tested the relative quality of *JAED* both by querying prominent accounting education scholars and reviewing indicators from earlier accounting education (Holderness et al., 2014). Therefore, we believed this warranted the inclusion of *JAED*.

In the area of information systems education, a different issue necessitated the inclusion of three, rather than two, top journals. Its second ranked education journal, the *Journal of Information Technology Education (JITE)*, split into three separate publications during our study period: the *Journal of Information Technology Education: Research* and the *Journal of Information Technology Education: Innovations in Practice* in 2008, followed by a further split to a third journal, *Journal of Information Technology Education: Discussion Cases*, in 2012. After much thought, and to prevent the over representation of information systems journals in our pool, we decided to add the first two *JITE* journals in this study (*JITE: Research* and *JITE: Innovations in Practice*), but not the third one (*JITE: Discussion Cases*). The first two of the three *JITE* journals have a longer publication history, and their articles more closely resemble those found in our other BME journals: they include literature reviews, theoretical developments and empirical findings, in contrast to the third journal's main focus on cases for classroom usage.

Having increased from two to three the number of top education journals for accounting and information systems in our list, we then considered whether we should do the same for the other disciplinary areas. However, we had to abandon this alternative because the choice of a third journal did not turn out to be as straightforward in those other areas. For example, in the management area, we

Journal	Academic Discipline Represented	2005-2014 <i>hg</i> -Index
Academy of Management Learning & Education	Management	114.15
Journal of Education for Business	Multidisciplinary	70.63
Journal of Information Systems Education	Information Systems	60.40
Journal of Marketing Education	Marketing	60.62
Journal of Management Education	Management	58.15
Issues in Accounting Education	Accounting	55.00
Journal of Information Technology Education: Research	Information Systems	52.54
Journal of Economic Education	Economics	48.28
Decision Sciences Journal of Innovative Education	Operations/Supply Chain Management	47.33
Accounting Education: An International Journal	Accounting	42.85
Journal of Accounting Education	Accounting	33.44
Marketing Education Review	Marketing	32.62
International Review of Economics Education	Economics	20.78
Journal of Financial Education	Finance	13.42
Journal of Economics and Finance Education	Finance	10.58
Journal of Information Technology Education: Innovations in Practice	Information Systems	9.17
International Journal of Information and Operations Management Education	Operations/Supply Chain Management	9.00

**Table 1:** Journals used to develop author sample

Note: hg-indices calculated as of April 5, 2017.

considered including *Management Learning* as a third journal, but we decided not to do so because it devotes only about 20 percent of its content to educational research (Arbaugh & Bielinska-Kwapisz, 2016). Marketing had only two education journals (*JMD* and *MER*), and only recently has developed a third one (*Journal for Advancement of Marketing Education*). In economic education, the *American Economist* or the *Southern Economic Journal* could have been included as a third journal, according to a recent study by Lo and colleagues (2015). Those journals, however, devote a small amount of space to economic education relative to general economics: from 1991 to 2011, the *American Economist* published a total of 52 articles focused on economic education (about 2.5 per year), while the *Southern Economic Journal*'s economic education output over the same time period was 49 articles (about 2.5 per year). It is our assessment that going to three top educational journals per disciplinary area likely will be more viable in another five to ten years as the BME discipline further matures and newer journals produce more articles with the passage of time.

The final pool of 17 journals is presented in Table 1 by discipline and hg-index score. These 17 journals include: 14 that represent the top two education journals in each of the seven major BME disciplinary areas (accounting, economics, finance,

information systems, management, marketing, and operations/supply chain management); 2 that represent the third top journals in accounting and in information system; and 1 that is a multidisciplinary journal.

The process to decide which journals to include in this final pool of 17 journals tried to strike a balance between under- and over-representation of BME disciplinary areas. On the one hand, it could be argued that the final pool did not include enough journals, leaving out publications that some readers would have preferred to see included here. On the other hand, it could be argued that the goal of having at least two journals for each of the BME disciplinary areas led to the inclusion of too many journals, because the journals from certain areas have *hg*-index scores considerably lower than those in other areas. Ultimately, judgment calls have to be made in a work of this nature, and the lessons learned will serve to inspire future studies, as discussed later.

### **Article and Author Identification**

#### Coding

We coded every article published from 2005 to 2014 in each journal in our pool. Consistent with other BME author studies, we did not include non-peer reviewed pieces such as editors' introductions or book/resource reviews in our coding schema listing (McIntyre & Tanner, 2004; Abernethy & Padgett, 2011). We created a separate coding for each article's co-authors that included author institutional affiliation, article title, journal acronym, journal volume, page numbers, article year, and co-author weighting. The coding was conducted by five of the six co-authors of this study, with co-authors having different disciplinary backgrounds. The resulting schema identified 4,464 articles with 9,617 article co-authors.

Previous multi-journal BME author studies have taken an "all journals are equal" approach, and used simple un-weighted single author and/or weighted co-author counts when assessing scholarly productivity (Urbancic, 2009; Abernethy & Padgett, 2011; Kruck et al., 2013). For our study, we provided an unweighted co-author score for each article, but we also used a weighted author score to account for the number of co-authors in an article (sole authors were weighted as 1, two co-authors were each weighted as 0.5, etc.). We also calculated a third score that accounted for each author's contribution as a function of journal quality. This was achieved by multiplying Currie and Pandher's (2013) journal quality rating with each weighted co-author score for each article to calculate a weighted author/journal quality score. By considering journal quality in the scoring process, we help to identify authors that are more likely to have ideas that are cited and drawn upon by others in the building of a research topic.

Next, we examined our dataset to determine the number of unique authors who had contributed to the article pool. We found 7,209 unique authors, of which 5,774 (80.09 percent) had been a sole author or co-author of only one article. This percentage of "one and done" authors in BME research is consistent with results found in previous studies (Urbancic, 2009; Abernethy & Padgett, 2011). Table 2 provides the distribution of unique authors by number of un-weighted articles published.

Number of Articles Published	Number of Authors
1	5774
2	941
3	271
4	124
5	52
6	19
7	8
8	2
9	3
10	6
11	3
12	2
13	1
14	2
15	1

**Table 2:** Number of business and management education authors by article count,2005-2014

# **Categorization Schema**

We took the cumulative number of times an author appeared in our database as our measure of author scholarly productivity. Consistent with previous disciplinespecific BME author studies, we considered any author with five or more unweighted articles during our study period to be a highly productive scholar (Urbancic, 2009; Abernethy & Padgett, 2011; Gray et al., 2012). This criterion gave us a pool of 99 highly productive BME authors.

# **Categorization of Common Topical Areas**

To determine areas of common topical/article type interest across the articles included in our final author listing, we reviewed the titles and abstracts of the 646 articles that were attributed to these top 99 authors. We identified 20 distinct topical areas that drew attention from at least ten authors.

# RESULTS

Our listing of the top BME scholars is shown in Table 3. Our author listings of rank and representation among the disciplines are consistent with results from recent author studies in accounting (Holderness et al., 2014), economics (Lo et al., 2015), and marketing (Abernethy & Padgett, 2011). Fifteen scholars published 10 or more un-weighted articles during the timeframe of the study. Although 30 scholars published in three or more of our sample journals, seven of these authors (six accounting authors and one information systems author) published within their three disciplinary journals and did not cross disciplinary-journal boundaries, leaving 23 authors who crossed disciplinary boundaries. Particularly noteworthy are the eight authors who published in four or more journals across disciplinary areas.

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Arbaugh et al.

277

Jumulative Journal Quality X Weight-Adjusted Articles	27.35	25.28	16.46	11 62	11.0/	8.02		22.17	12.50			12.22		12.22	10.79		10.13		continued
C Weight- Adjusted Articles	8	6.5	4.16	200	<i>ee.c</i>	2.35		6.5	3.33			4		3.58	3.16		3.16		
Number of Articles	6	6	6	c	0	8		L	7			7		7	7		7		
Years Published	5	5	9	-	4	8		S	5			S		9	9		5		
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Institutional Affiliation	Canisius College	Bentley U.	Idaho State U./Gustavus	Adolphus College	U. OI KICHIHOHO	U. of Wisconsin -	w mewaler	Aurora U./U. of Pittsburgh - Bradford	LSU - Shreveport/U. of	Tennessee -	Chattanooga	U. of Massachusetts -	Dartmouth	Seattle Pacific U.	California State U	Northridge	U. of Nebraska -	Lincoln/U. of Delaware	
Home Discipline	Operations Management	Accounting	Management		Finance	Marketing		Marketing	Management			Information	Systems	Marketing	Marketing		Economics		
Author	Lynn A. Fish	Mahendra R Gujarathi	Kathy Lund Dean	L1	10III AFII0I0	James W. Peltier		Brian A. Vander Schee	Lisa A. Burke-Smalley			Shouhong Wang		Regina P. Schlee	David S. Ackerman		Carlos J. Asarta		
Rank	16	17	18	01	19	20		21	22			23		24	25		26		

278

 Table 3: continued

# Key Authors in Business

Table	<b>3:</b> continued							
Rank	Author	Home Discipline	Institutional Affiliation	Number of Journals	Years Published	Number of Articles	Weight- Adjusted Articles	Cumulative Journal Quality X Weight-Adjusted Articles
27	Satoshi Sugahara	Accounting	Hiroshima Shudo U., Ianan	1	5	7	2.91	9.89
28	William E. Becker	Economics	U. of South Australia/Indiana U Bloomington	7	Ś	L	2.82	9.43
29	Martin Stuebs	Accounting	U. of Alabama at Birmingham/Bavlor U.	ŝ	4	9	3.83	13.60
30	Charles K. Davis	Information Svstems	U. of St. Thomas, TX/U. of Limerick. Ireland	1	7	9	4.50	13.18
31	Donald R. Bacon	Marketing	U. of Denver	2	S	9	3.50	12.49
32	Gregory N. Stoner	Accounting	U. of Glasgow, UK	б	9	9	3.03	11.02
33	Charles J. Fornaciari	Management	Florida Gulf Coast U./LaSalle U.	1	б	9	2.75	10.87
34	Alan Sangster	Accounting	The Robert Gordon U., UK	ω	5	9	2.78	06.6
35	Stephen A. Coetzee	Accounting	U. of Pretoria, South Africa	7	5	9	2.67	9.78
36	Faye A. Borthick	Accounting	Georgia State U.	1	5	9	2.33	9.14
37	Hope B. Corrigan	Marketing	Loyola College in Maryland	0	9	9	2.66	9.07
38	Iwona Miliszewska	Information Systems	Victoria U., Australia	0	S	9	2.91	8.55
								continued

Cumulative Journal Quality X Weight-Adjusted Articles	8.23	7.92	7.37	7.36	7.30	6.45	5.98	5.68	5.33	14.50	13.01	12.79	11.29	11.20	continued
Weight- Adjusted Articles	2.41	2.03	2.16	2.16	2.49	2.15	1.75	1.66	1.56	4.25	3.33	3.83	2.83	3.83	
Number of Articles	6	9	9	9	9	9	9	9	9	S	S	5	5	5	
Years Published	5	9	5	S	5	б	9	Ś	4	4	4	4	4	5	
Number of Journals	3	ω	4	4	ω	7	1	0	ς	0	ŝ	2	1	1	
Institutional Affiliation	California State U., Fullerton	Appalachian State U.	Boston College	U. of Memphis	Claremont Graduate U.	Western Kentucky U.	Indiana U.	Louisiana State U./West Virginia U.	California State U., Northridge	Ramapo College of New Jersey	Bond U., Australia	Middlebury College	Louisiana State U.	U. of Maryland	
Home Discipline	Marketing	Management	Marketing	Accounting/ Finance	Information Systems	Finance	Accounting	Accounting	Marketing	Marketing	Management	Economics	Management	Accounting	
Author	Katrin R. Harich	James W. Westerman	Victoria L. Crittenden	Charles D. Bailey	Lorne Olfman	Kam C. Chan	John M. Hassell	Barbara Apostolou	Mary T. Curren	Ed Petkus, Jr.	Amy L. Kenworthy	David Colander	Arthur G. Bedeian	Susan White	
Rank	39	40	41	42	43	44	45	46	47	48	49	50	51	52	

280

 Table 3: continued

continued								
8.23	2.41	5	5	3	Dalton State College	Management	Marilyn M. Helms	67
8.78	3.00	S	S	1	Baylor U.	Finance	John T. Rose	66
9.07	2.66	S	S	7	Texas Tech U.	Marketing	Debra A. Laverie	65
9.08	2.66	S	4	2	DePaul U.	Marketing	Stephen K. Koernig	64
9.12	2.50	S	4	ω	The U. of Vermont	Accounting	Susan B. Hughes	63
9.27	3.00	S	S	2	Brock U., Canada	Finance	Ernest N. Biktimirov	62
9.65	2.83	S	4	7	Rider U.	Accounting	Donald E. Wygal	61
					Lake	Systems		
9.74	3.33	S	4	1	U. of Houston - Clear	Information	Kwok-Bun Yue	60
9.88	2.50	S	4	1	Hofstra U.	Management	Debra R. Comer	59
					Lake	Systems	Lehmann	
10.36	2.83	S	S	ω	U. of Houston - Clear	Information	Constance M.	58
10.49	2.64	S	Ś	2	DePaul U.	Management	Robert S. Rubin	57
					Association/Arizona State U.			
10.61	2.70	S	4	1	American Accounting	Accounting	Philip M. J. Reckers	56
10.72	3.00	S	4	2	John Carroll U.	Accounting	Robert Bloom	55
11.13	2.83	5	5	-	Florida Atlantic U.	Accounting	Mark J. Kohlbeck	54
11.20	3.33	S	4	4	Southeast Missouri State U.	Accounting	Deborah F. Beard	53
Cumulative Journal Quality X Weight-Adjusted Articles	Weight- Adjusted Articles	Number of Articles	Years Published	Number of Journals	Institutional Affiliation	Home Discipline	Author	Rank

Arbaugh et al.

 Table 3:
 continueds

281

Cumulative JournalWeight-AdjustedArticlesArticles	2.33 7.94	2.33 7.94	2.33 7.69	2.50 7.57		2.99 7.38	2.16 7.37	2.16 7.37	2.16 7.34	2.16 7.22		2.08 7.09	2.41 7.08		2.08 7.07	continued
Number of Articles	5	Ś	S	5		5	S	S	S	5	1	S	S		5	
Years Published	5	5	б	4		4	б	б	4	4	ı	S	4		4	
Number of Journals	1	6	7	ю		7	б	0	1	2		7	7		1	
Institutional Affiliation	U. of Wisconsin - Whitewater/U. of Wisconsin - Fau Claire	Queen's U., Belfast/U. of Ulster, Northern Ireland, UK	U. of Nebraska - Lincoln	Saint Mary's U., Canada		Eastern Washington U.	Bradley U.	Georgia Southern U.	U. of Canberra, Australia	Auburn U.		James Madison U.	Stockholm U./Cape Town 11 of Technology S	Africa	Florida Atlantic U.	
Home Discipline	Marketing	Accounting	Economics	Information	Systems	Operations/ Finance	Marketing	Marketing	Accounting	Information	Systems	Marketing	Information Systems	emmede	Economics	
Author	Scott B. Swanson	Joan Ballantine	Roger B. Butters	Hai Wang		Brian Grinder	Rajesh Iyer	Jacqueline K Eastman	Gregory Boland	Casey G. Cegielski		Irvine Clarke III	Matti Tedre		William Bosshardt	
Rank	68	69	70	71		72	73	74	75	76	ļ	LL	78		<i>4</i>	

282

 Table 3: continued

Table .	<b>3:</b> continued							
Rank	Author	Home Discipline	Institutional Affiliation	Number of Journals	Years Published	Number of Articles	Weight- Adjusted Articles	Cumulative Journal Quality X Weight-Adjusted Articles
80 81	Robert H. Stretcher Chuck Tomokovick*	Finance Marketing	Sam Houston State U. U. of Wisconsin - Eau Claire	0 0	4 4	w w	2.33 2.03	7.06 7.03
82	William L. Kuechler	Information Svstems	U. of Nevada - Reno	б	4	S	1.99	6.64
83 84	Kenneth G. Brown James P. Downey	Management Information	U. of Iowa U. of Central Arkansas	00	ω4	n n	1.66 2.24	6.61 6.57
85 86	Milind M. Shrikhande Mark D. Griffiths	Systems Finance Finance	Georgia State U. Miami U.	2 2	<i>i</i> 0 4	w w	1.99 1.91	6.31 6.20
87 88	Alan Reinstein Avan R. Jassawalla	Accounting Management	Wayne State U. SUNY - Geneseo	0 m	4 v	n n	1.58 1.65	5.88 5.83
90 90	Hemant Sashittal Phil Hancock	Management Accounting	St. John Fisher College U. of Western Australia, Australia	n n	S S	N N	1.65 1.66	5.83 5.75
91	Lori Baker-Eveleth	Information Systems	U. of Idaho	$\mathfrak{S}$	5	S	1.74	5.66
92	Darlene Bay	Accounting	Brock U., Canada	2	4	5	1.61	5.58
								continued

Arbaugh et al.

Table .	3: continued							
Rank	Author	Home Discipline	Institutional Affiliation	Number of Journals	Years Published	Number of Articles	Weight- Adjusted Articles	Cumulative Journal Quality X Weight-Adjusted Articles
93	Herman Aguinis	Management	U. of Colorado at Denver/Indiana U Bloominoton	2	5	S	1.36	5.41
94	David A. Wood	Accounting	Indiana U./Brigham Young U.	1	5	5	1.33	5.24
95	W. G. Mangold	Marketing	Murray State U.	7	4	S	1.52	5.18
96	H. Shelton Weeks	Finance	Florida Gulf Coast U.	7	4	S	1.65	5.15
76	Harm-Jan Steenhuis	Operations Management	Eastern Washington U.	1	7	S	2.49	4.98
98	Cheryl L. Aasheim	Information Systems	Georgia Southern U.	0	4	S	1.66	4.87
66	Kim Watty	Accounting	Deakin U., Australia	1	б	5	1.41	4.78
*Decea	sed.							

284

Academic Discipline	Number of Highly Productive Authors
Accounting	28
Marketing	19
Information Systems	15
Management	14
Economics	10
Finance	9
Multidisciplinary/Other	2
Operations/Supply Chain Management	2

**Table 4:** Distribution of highly productive authors by primary academic discipline

Some of the more diverse interdisciplinary combinations included operationsinformation systems-accounting (Mark Simkin), operations-management-marketing (Dennis Clayson), operations-information systems (Shouhong Wang), operations-management (Lisa Burke-Smalley), operations-marketing (Victoria Crittenden), operations-economics-finance (Carlos Asarta), and financeaccounting-marketing (Charles Bailey). One of the three-journal authors provided a surprising management-accounting combination (Amy Kenworthy). One factor that is common to most of these multi-journal authors is that they have published in the *Journal of Education for Business (JEB*).

Table 4 shows the distribution of highly productive authors by primary discipline. Partly reflective of their more extensive histories of tracking educational scholarship productivity, accounting and marketing have relatively larger representation in the author pool. Although including three accounting education journals may have increased their representation, such concerns are diminished by the fact that only six accounting education scholars published articles in all three accounting education journals. The inclusion of three information systems journals did not result in marked increases in information systems scholars, with only two authors publishing in all three IS journals. Generally, IS scholars tended to publish in either *JISE* or the *JITE* journals, but not both.

Considering that *AMLE* had the highest *hg*-index in the pool (114.15), it may seem surprising that the management discipline was not more strongly represented in the author pool. However, some of the disparity can be explained by the presence of luminaries in the management field writing one or two very highly-cited articles, but otherwise not being active contributors in the BME research field (Arbaugh & Hwang, 2015).

Table 5 presents BME topic areas receiving attention from 10 or more scholars in our sample pool, with a breakout of those scholars by discipline. Article titles and abstracts were examined by two of our co-authors for classification into topical areas. This was an iterative process with differences in classification of an article resolved through further review and final agreement. Arising from this process, we had all examined articles classified in 20 different topical areas as seen in Table 5. Out of the 400 studies, the top five topical areas were studies on efficacy of classroom exercises (12.3 percent), student characteristics (9.5 percent), faculty career development (7.3 percent), curriculum issues (6.8 percent), and course design (6.5 percent). With almost 40 percent of the authors addressing

Table 5: Common topics addressed	by highly p	roductive bme	e authors and	by discipline				
	Number of			Authors in				
Topic Area	Total Authors	Authors in Accounting	Authors in Marketing	Information Systems	Authors in Management	Authors in Economics	Authors in Finance	Other Authors
Classroom Exercises	49	11	11	10	8	5	5.5	1.5
Student Characteristics, Attitudes, and/or Behaviors	38	13	8	9	8	1	7	0
Faculty Career Development	29	8.5	4	0	5	9	5.5	0
Curriculum Issues	27	8	10	L	0	2	0	0
Course Design	26	б	6	8	5	1	0	0
Pedagogy/Andragogy	24	10	4	5	б	2	0	0
Teaching with Technology	22	7	7	б	2	0	2.5	.5
Student Professional Development	19	8	б	4	0	2	2	0
Case Studies	17	8.5	1	б	1	0	3.5	0
Knowledge/Skill Acquisition	17	7	9	2	1	1		0
Assessment	17	4	1	4	2	4	1.5	.S
<b>Online/Blended Education</b>	16	1	4	5	4	1	1	0
International/Cross-cultural education	15	5	б	б	2	2	0	0
Undergraduate Programs	14	1	1	9	0	9	0	0
Career Issues of Journal Editors	13	5.5	7	0	ŝ	0	2.5	0
Instructor Characteristics, Attitudes,	12	2	S	1	ę	1	0	0
and/or Behaviors								
Student Groups or Teams	12	2	б	ω	4	0	0	0
Experiential Learning	12	0	4	m	4	1	0	0
Ethics	11	5.5	1	1	ę	0	i,	0
MBA/Graduate Education	10	1	0	0	4	S	0	0

286

Note: Multiple authors wrote on more than one topic.

students, the issue of student characteristics, attitudes, and/or behaviors appears to be an important topical area of study. Studies in this area tend to focus on predictors of student performance, such as demographic/cognitive characteristics (Arbaugh & Duray, 2002; Zhao, Seibert, & Hills, 2005; Hawk & Shah, 2007), attitudes toward classroom approaches/delivery formats (Alavi, 1994; Lage, Platt, & Tegalia, 2000; Martins & Kellermanns, 2004), or classroom behaviors (Fiecthner & Davis, 1984; Boyatzis et al., 2002; Aviv, Erlich, Ravid, & Geva, 2003; McCabe, Butterfield, & Trevino, 2006). Other top research topical areas include pedagogy/andragogy, teaching and technology, student professional development, case studies, knowledge/skill acquisition, assessment, online/blended education, career issues of journal editors, international/cross-cultural education, undergraduate programs, instructor characteristics, attitudes and behaviors, student groups, ethics, experiential learning, and MBA/graduate education.

A closer look at Table 5 suggests several areas of disciplinary emphasis. Accounting education scholars are relatively broad-based, with relative emphases in studying classroom exercises, student characteristics, pedagogical issues, curriculum issues, case studies, and faculty and student professional development. Marketing, information systems, and management share accounting's interest in classroom exercises, student characteristics, and curriculum issues, with divergence into other areas. Each of these three disciplines gives relatively high attention to online and blended education. Both marketing and information systems authors write extensively on course design issues, marketing gives relatively high attention to instructor characteristics, both economics and finance give relatively high attention to faculty career development, economics also gives attention to both graduate and undergraduate education, and finance also emphasizes classroom exercises.

### DISCUSSION

Building on previous BME research, this study was the first to take a crossdisciplinary approach to the field as a whole and introduced several distinctive features. First, we added co-author weighted averages as a consideration in addition to raw article counts in counting the number of author publications, going beyond simple counts that are based on the idea that "a hit is a hit" (Boal, 1999) regardless of the number of co-authors in each article. Second, with the exception of some work in economics, prior studies have assumed equal quality of articles across journals, whereas our study explicitly factors journal quality. Third, except for very recent work in accounting (Holderness et al., 2014), no attention has been given to topic areas or article types in BME research. We identified 20 different BME research topics. These combined contributions in the first cross-disciplinary study of BME research suggest that our findings could advance our understanding of the entire BME landscape from which scholars could also identify topics that have relevance across disciplines.

There have been repeated calls for business schools to "de-silo" their learning environments and instructional content (Cheit, 1985; Barclay, 1995; Navarro, 2008; Podolny, 2009), with the business community requesting functionally prepared yet well-rounded graduates capable of eventually assuming organizational leadership roles (Rynes, Trank, Lawson, & Illes, 2003). This call has relevance for BME

scholarship efforts, as research on classroom pedagogy and learning content from different business disciplinary areas could benefit multiple areas. Unfortunately, few scholars, and even fewer journals, have taken this route to cross disciplinary lines. The *Decision Sciences Journal of Innovative Education* and the *Journal of Education for Business* are publications that buck this trend. The current "silo" state likely arose because each discipline has its own set of educational research journals, and BME scholars unsurprisingly publish within their home discipline's recognized outlets. In disciplines with multiple education outlets, individual scholars also tend to publish only in one journal (McIntyre & Tanner, 2004; Abernethy & Padgett, 2011). This "silo-based" approach to BME research does not encourage authors to do work across disciplines; in fact, the current system of discipline-specific journals, professional associations, and historical departmental norms discourages such behavior.

In this study, we moved beyond traditional discipline-based approaches to the measurement of BME scholar productivity by examining research productivity across different business disciplinary areas and even further by identifying topical areas of interest of highly productive scholars. These topics could become initial starting points for cross-disciplinary dialogue among BME scholars. We also introduced a mechanism for evaluating scholarly productivity based upon journal quality and metrics that distinguish between authors through co-author weighted publications. We hope that this profile will motivate other scholars to further investigate BME research productivity and consider how new scholars may best enter this area of inquiry. In the following paragraphs, we further discuss our findings, identify some of the study's limitations, and present potential implications for established BME scholars, those considering entering or expanding their presence in this emerging field, and schools in developing regions that may house emerging BME scholars.

First, the list of BME journals in Table 1 showed our sample of BME journals to vary in citation impact during the 2005-2014 period, with Academy of Management Learning & Education leading the pack having the highest hg-index of 114.15. This is followed by Journal of Education for Business (70.63 hg-index), and the Journal of Information Systems Education (60.40 hg-index). Given that management, information systems, marketing, accounting, economics, and operations/supply chain management have BME journals in the top half of this set of 17 BME journals, with hg-indexes of at least 47, nearly all the business disciplinary education areas have reasonably good, impactful journal outlets for BME researchers. The exception is finance education whose outlets have relatively lower impact scores (13.42 and 10.58 hg-indexes, respectively). This could be traced to finance education having the third lowest number of disciplinary education articles in our sample (90). Compared with 313 accounting education articles, the more limited number of finance education articles did lead to a lower citation impact. This comparative difference is consistent with findings by Arbaugh et al. (2009) about the uneven advances in BME research across different business disciplinary areas. Equipped with the knowledge of the top BME publication areas presented in Table 5, finance faculty members who are interested in breaking into BME research have the potential of starting fruitful conversations with other BME researchers from disciplines other than finance. This process could lead to more

cross-fertilization and sharing of ideas across disciplinary journals—a call that still has potential for fulfillment (Hilton & Phillips, 2010; Eisenberg, Hartel, & Stahl, 2013; Rubin & Dierdorff, 2013).

The sharing of *JEFE* (*Journal of Economics and Finance Education*) by economics and finance might be an indication that their scholars could interact across their two disciplinary areas better than those in other areas. Economics and finance have quite a bit in common, with finance being considered by many as being "applied microeconomics." Yet, each discipline tends to publish in separate journals devoted to either economics (e.g., *American Economic Review*) or Finance (e.g., *Journal of Finance*). The *Journal of Economics and Finance Education* is an anomaly within the BME field, but one that can be explained given the relative "proximity" of the fields.

Second, 90 out of our 99 highly productive BME scholars are based in U.S. institutions. This points to the potential of further engaging BME scholars from other parts of the world. With the United States leading BME research, the benefit from learning outside of this largely single-culture environment is clearly present here. Some journal editors already have recognized the need to tap into business educational practices and research of other countries by actively seeking manuscripts from other parts of the world (Eden & Rynes, 2003; Gray et al., 2012; Lund Dean & Forray, 2015). Their efforts should enrich BME research in the coming years as U.S. researchers begin to accommodate different views and practices of researchers from other countries.

Third, a review of details in our database showed a lack of crossdissemination of authors' works across journals, as only 32 of the top researchers published works in more than two journals. This practice of publishing in education journals within one's disciplinary area is not unexpected, as readers of someone's educational research should rightly include other scholars in one's disciplinary area. However, solely limiting one's BME publication activity to within one's disciplinary area has been shown to cause the "silo" effect (Cheit, 1985; Barclay, 1995; Navarro, 2008; Podolny, 2009) that business educators have long been called to combat. Thus, it is important for top BME researchers to continue publishing their works in journals within and outside of their disciplinary areas and also to draw on ideas from works outside their business disciplinary areas. In this way, they could create a path for their colleagues to follow in building an integrated BME literature where journals both within and outside one's home discipline could be used to draw useful ideas that will benefit BME research and the classroom needs of our students.

# Limitations

Although our work advances the BME rankings literature by considering BME research across all disciplines and adjusting rankings to reflect relative journal quality, it has limitations that may be addressed in future research. First, although we used a weighted co-author approach along with journal quality to rank scholars with the same number of un-weighted publications, this process does not allow us to address the issue that not all co-authors likely contribute equally. This limitation would be difficult to address outside of contacting authors directly and asking them

to weight the relative contributions of these works. Even by doing so, the prospect of dealing with retrospective accounts may confound such findings (Golden, 1992; Miller, Cardinal, & Glick, 1997). Perhaps a more efficient and unbiased way to address this issue is to track subsequent co-author activity with the idea that the higher contributing co-authors will continue to publish work in the area in the future.

Second, because accounting and information systems had more than two journals in our sampling pool, our ranking may over-represent scholars in those two education areas. Also, because economic scholars share a journal with finance (*Journal of Economics and Finance Education*), there is the possibility that they, too, are overrepresented here. However, considering that scholars based in these three disciplines did not occupy all the top 10 author positions in our study, but only 8 of the top 10 positions, such concerns may be alleviated to some extent. We also note that once we move beyond the top 10 author ranking, representation across all business disciplines becomes very well distributed across all disciplinary areas. Future studies might examine either more stringent criteria for allowing journals into the sample pool or whether the other disciplines warrant inclusion of a third journal for the sample pool.

Third, despite our pioneering effort to enlarge the study pool of journals by including all business disciplines, there is the likelihood that we have not captured the full range of BME scholar productivity. For example, our sampling frame penalizes authors who may have published BME research in high quality outlets outside this pool, such as in discipline-based journals or mainstream educational research journals (Halverson, Graham, Spring, & Drysdale, 2012; Holderness et al., 2014). Considering that, although we have included highly regarded educational journals from each BME discipline, this journal pool has published only about one-third of the 100 most cited articles in BME research (Arbaugh & Hwang, 2015), it is likely that we are not capturing the entirety of BME scholarly activity. Future projects could examine this study's scholars list to determine the full breadth of each author's BME activity, regardless of the journal outlets.

A fourth limitation of the author rankings presented in this study is the equal quality weighting assigned to all articles published within a given journal. As shown in the study by Lo and colleagues (2015), the intellectual influence of articles published within a given journal (e.g., *Journal of Economic Educa-tion*) varies widely when using a ranking method that accounts for the influence of journals citing particular articles and the reference intensity among journals. As such, it is conceivable that our ranking of authors within a given level of published articles (i.e., five articles) could change if the quality of the authors' work is based on the intellectual influence of the articles themselves and not on the quality of the journals in which the articles appear. This suggests that future scholars might broaden our work by incorporating indicators of article impact to assess BME scholarly productivity, perhaps by using tools such as Google Scholar and Harzing's (2013) *Publish or Perish* (Adler & Harzing, 2009; Van Aalst, 2010).

Another limitation regarding our more detailed analysis of author activity is the reactive rather than *a priori* topic classification schema. Future work in this area should consider adopting general classifications of topic areas, such as that used by Holderness and colleagues (2014), or more detailed *a priori* categorizations, such as the one used by Gray and colleagues (2012).

Finally, our first-layer ranking considers only the number of articles published by each author within our 10-year timeframe. To date, we have not considered the scholarly or educational impact of these works. If such impact were to be assessed in future studies, there might be an opportunity to examine the extent to which domain restriction issues that influence citation patterns in the business disciplines also extend to educational research (Haley, 2013). Considering recent calls on ways to broaden how we interpret the impact of research (Aguinis, Shapiro, Antonacopoulou, & Cummings, 2014), we encourage future scholars to examine the work of the authors we have identified here for additional insights on influence of their works.

### Implications

Regardless of the limitations presented above, we believe our findings offer several potential implications for a range of business and management scholars, from those who already are highly productive, to those with a smaller footprint in the field, or to prospective new entrants.

We hope to accelerate cross-disciplinary inquiry by identifying leading BME scholars across various business and management disciplines, thus providing current and prospective BME scholars with a searchable list of authors and topics that can help them identify research opportunities or even potential collaborators. We also hope to make it easier for business educators to become referred to as scholarly management educators (Dehler, Beatty, & Leigh, 2010), or business school faculty whose instructional practices are grounded in the scholarship of teaching and learning (SOTL). After all, if we heed the "de-siloing" call to strengthen the links between different disciplines and implement holistic business education and management practices, it also behooves us to do the same in our own work as educators (Pearce & Huang, 2012).

Our study may contribute also in several ways to the scholarly educational research community. First, BME research reviews indicate that advances on common topics are uneven across disciplines, and best practices are not shared across domains (Arbaugh et al., 2009). However, some exceptions do exist in certain research topics, such as online and blended learning (Anstine & Skidmore, 2005; Alshare, Freeze, Lane, & Wen, 2011; Chen, Jones, & Moreland, 2013) and experiential learning (e.g., articles published in the *Journal of Marketing Education* and the *Journal of Management Education*). We hope that our exploration of prominent BME authors and topics will help expand such cross-disciplinary sharing and contribute to the holistic advancement of BME research and practice.

Second, by producing lists of leading BME scholars via number of publications and the most common research topics, we hope to help these same scholars identify key topics in the field and the extent of scholarly interest in different areas. This process could help them develop research agendas for which each thought leader has relative strategic advantages or unique resources and encourage other scholars who are interested in the topic.

Finally, by identifying the topics that have attracted the most attention from highly productive scholars, this study helps to flag promising areas for deeper development with other researchers and possibly researchers from different areas through cross-disciplinary dialogue, thus producing cross-benefits for school-wide learning opportunities.

Highly productive BME scholars may not be aware of how they rank in their own silos, and they are likely to be even less aware of their relative position in the field, given that ours is the first study to analyze BME author productivity across disciplinary areas. We congratulate the authors in our listing for being highly productive, as uncovered from our still exploratory criteria, and encourage them to continue their important BME research work in environments that often do not reward or even value their efforts (Schmidt-Wilk, 2007; Arbaugh, DeArmond, & Rau, 2013; Holderness et al., 2014). We hope that being identified among this exclusive group of scholars will bring encouragement and recognition.

We also hope that by helping highly productive BME scholars become aware of each other's work and the topics they are engaged in as shown here, we will facilitate collaboration across disciplinary boundaries and move towards a synergistic critical mass that may be hard to develop within individual disciplines.

We found that the interdisciplinary publication *JEB* was a strong predictor of whether a highly productive scholar crossed disciplinary boundaries in his or her work. Of our eight 4+ journal authors, six published at least one work in *JEB*. This population of authors suggests that *JEB* could become a journal of choice for those interested in making BME a more unified field. We see this situation being mutually beneficial to both authors and that journal. Our listing of authors has identified a group of scholars that *JEB* may want to cultivate further for their author pool, and our identifying of *JEB* and its potential role in BME research could make it an even more attractive outlet for scholars interested in seeing BME as a cross-disciplinary entity. We also see opportunities for other cross-disciplinaryoriented publications such as *DSJIE* to develop approaches for attracting these highly productive authors to their journals, especially given the strong emphasis of this author pool on classroom exercises and *DSJIE's* well-regarded Teaching Briefs section.

The BME field could benefit significantly from such cross-pollination. There appears to be a general disconnect between scholarly productivity and scholarly impact. Of the authors identified in this study, only three (J. B. Arbaugh, Donald Bacon, and Jacqueline Eastman) have works included in recent studies identifying highly cited BME articles (Arbaugh & Hwang, 2015; Arbaugh, Fornaciari, & Hwang, 2016). Although there have been multiple attempts to examine and explain why BME research might not lend itself to citation (Schmidt-Wilk, 2008; Rynes & Brown, 2011; Bourrie, Cegielski, Jones-Farmer, & Sankar, 2014; Lund Dean & Foray, 2014), we believe the more important work to be done here is to move the field forward by encouraging leading authors to take steps in looking across disciplines and drive more collaboration and research activity. Although we understand that studies of classroom exercises may experience limited citation counts (Schmidt-Wilk, 2008), we probably can do more in the many areas listed in the rest of the 20 identified topical areas than we have done to date. Even efforts to initiate dialogue among leading case study and exercise writers may lead to some scholarly discussion of such articles, and probably improvements in classroom exercise articles (Bourrie et al., 2014).

How might scholars in less cited disciplines position their work so that it draws more attention from those outside their home discipline? Could there be cross-disciplinary studies of classroom exercises and/or pedagogical approaches where perspectives from these respective disciplines might inform each other? These are important questions that need more exploration. In addition to increasing the scholarly impact of such work, one would hope that excellent educational practices would be disseminated further across business disciplines (Dehler et al., 2010). A more integrated approach to conducting BME research also might encourage more scholars to examine not only how we teach, but also 'the central questions of what is taught and why' (Pearce, 2007).

Our findings also have encouraging implications for those who have a limited publication record in BME research. We found that, in our 10-year study period, fewer than 50 authors published 6 or more unweighted articles in the journals we analyzed. Therefore, those who are among the other 1,300 moderately active BME scholars (i.e., those who have published two to four articles in the sampled journals during the 2005-2014 decade) could dramatically increase their profile and influence with just a bit more focus and attention.

Even for those who are brand new to BME research, our findings suggest that barriers to entry are rather low, and this is a field that may be ripe for disruption (Christensen, 2006; Christensen & Carlile, 2009). As established BME scholars continue to introduce approaches through which prospective scholars can apply their disciplinary training to engage in BME research (Alavi & Leidner, 2001; Arbaugh et al., 2013), enterprising scholars could use these tools to accelerate their development as BME researchers. Having found enormous meaning and enjoyment in our work in BME research, we heartily invite others to engage in this field.

Because this study is an initial snapshot of highly productive BME scholars, regardless of where they are in their careers, our research team is conducting a follow-up project where we do a "deep dive" to examine the career trajectories of these authors. In that study we will explore whether their BME work tends to be clustered earlier or later in their careers or spaced more or less evenly throughout.

Finally, our findings suggest opportunities not only for a whole range of scholars, but also for schools, especially those in developing regions (Nkomo, 2015). For schools seeking to raise their global profile, the path to prominence would appear to be more attainable via this "road less traveled." Rather than try to allocate disproportionate resources toward ascending traditional measures of school rankings that apparently do not change much over time (Morgeson & Nahrgang, 2008), why not invest resources into developing world-class BME scholars and areas of BME institutional competency? For resource-strapped schools, this approach typically does not require as much expense, subjects generally are readily available, and faculty usually do not have to travel beyond their regular duties other than presenting papers at conferences they previously may not have considered attending. This approach could be a time-efficient way to have a substantial impact on how the world considers business educational practices. In addition to increasing the likelihood of developing a reputation in the scholarly community relatively quickly, such an emphasis can help new BME authors make the case to other political and industry external stakeholders that schools do have a commitment to enhancing business students' learning and producing quality graduates, especially if those BME scholars apply their findings to improve courses and curricula.

Although BME research likely informs the educational practices of those who are highly involved in such research, there is not much evidence to suggest that this research influences educational practice at the institutional level. We feel that schools may be missing a great opportunity, both to improve their practices and generate compelling narratives for external stakeholders regarding how research informs our practice. How can we ask practitioners to incorporate our research in their practice, when schools do not take full advantage of BME research in our education practice?

Our hope is that scholars increasingly will engage in BME research, that schools increasingly will use such work to inform their educational practices, and that BME active schools will articulate to their external stakeholders how such research informs and improves their educational practices, thereby presenting highly compelling cases for why parents, employers, and other stakeholders might want to send prospective students to these schools.

### CONCLUSION

This study is the first to take a cross-disciplinary approach in examining BME research to identify highly productive scholars and their topical interest areas. In doing so, we have pointed to dialogue opportunities that can promote engagement between productive BME scholars and prospective scholars who are interested in pursuing BME research. The potential to draw ideas from different business education areas is also an important point here as it is the basis to leverage implications of BME findings across disciplinary areas.

Several motivations inspired us to take this holistic approach to the BME field. First, we want to encourage people doing educational research in business schools to see themselves as part of a larger community than their respective disciplinary silos, a community that has evolved enough to be considered as a field. Second, we believe that seeing these BME scholars as belonging to a common field, rather than a collection of different disciplines, is critically important. This unification will help us attain greater consistency in our use of terminology and practice as we conduct our classes and manage our degree programs. We also hope that this process will help better disseminate instructional "best practices" across business disciplines wherever appropriate. In short, we see this as part of a process by which we can better serve our students and other constituents. Third, we want to help BME scholars who are highly active in their respective business disciplinary areas to become more aware of their counterparts in other business disciplines. Fourth, we hope that by helping BME scholars become aware of the larger community of education scholars in business schools, we might help accelerate the development of more and higher quality BME research.

Although our study did not attempt to examine the drivers of productivity, we believe that the identification of the key interlocutors and topics in BME scholarly conversations is of particular importance in a field like BME because of its emerging nature. This importance can be appreciated more fully if we consider Ryazanova and McNamara's (2016) study of research productivity drivers

in business schools that showed both professional socialization and collaboration behavior to influence such productivity. We also hope that, by identifying key authors and topics in BME research, this study will further stimulate scholarly conversations and productivity in the field.

Benjamin Franklin famously said, at the signing of the Declaration of Independence, that "we must, indeed, all hang together, or, most assuredly, we shall all hang separately" (Franklin, 1840). Mindful of Franklin's advice, we encourage our BME colleagues to move away from traditional disciplinary silos and toward a more holistic, collaborative model of BME scholarship.

# ACKNOWLEDGMENTS

The research to develop this article was supported in part by a grant from the UW Oshkosh Faculty Development Program.

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**J. B. (Ben) Arbaugh** is a distinguished Professor of Management at the University of Wisconsin Oshkosh. He received his Ph.D. from the Ohio State University. Ben is a former Editor of *Academy of Management Learning and Education* and is a past chair of the Academy of Management's Management Education and Development Division. His current research interests are in drivers of author and institutional educational research productivity in business schools, the impact of management education. He can be reached at arbaugh@uwosh.edu.

**Carlos J. Asarta** is Director of the Center for Economic Education and Entrepreneurship and Associate Professor in the Department of Economics at the University of Delaware. He holds Masters and Ph.D. degrees in economics from the University of Nebraska-Lincoln. His scholarly work focuses on the areas of economic and financial education, technology in the classroom, and assessment. His research has been published in academic journals such as the *Journal of Economic Education, Internet and Higher Education*, and *Decision Sciences Journal of Innovative Education*.

Alvin Hwang is Professor of Management and Chair of International Business Programs at Pace University. He received his Ph.D. from UCLA. Alvin is a former Associate Editor of *Academy of Management Learning and Education* and is a past Chair of the Academy of Management's Management Education and Development Division. His research covers management development, technology and learning, cross cultural differences, leadership and organizational learning with publications in the *Academy of Management Learning and Education, Journal of Cross-Cultural Psychology, Human Relations, Journal of Management Education*, and others. He can be reached at ahwang@pace.edu.

**Charles J. Fornaciari** is a Professor of Management in the School of Business at La Salle University in Philadelphia, PA. He received an MBA in finance and a Ph.D. in strategic management from Florida State University. Dr. Fornaciari's primary teaching interests are strategy and ethics. His research interests include spirituality and religion in management, business ethics education, effective teaching practices, and the business of business schools. He can be reached at fornaciari@lasalle.edu.

**Regina F. Bento** (Ph.D. MIT, 1990; M.D., Federal University of Rio de Janeiro, 1977) is the BGE Distinguished Chair of Business and Professor of Management at the Merrick School of Business, University of Baltimore. During sabbaticals and leaves-of-absence, she served as Visiting Professor at the Sloan School of Management (MIT) and as Associate Director of the Christensen Center at Harvard Business School. Her research explores bounded rationality, information technology and management education. She has served in leadership roles (Academy of Management, Organizational Behavior Teaching Society), and on numerous editorial boards.

Kathy Lund Dean holds the Board of Trustees Distinguished Chair in Leadership and Ethics at Gustavus Adolphus College. She earned her Ph.D. in organizational behavior and ethics from Saint Louis University. For over fifteen years she has been in leadership roles in the OBTS Teaching Society for Management Educators and the Academy of Management. Kathy has served as an editor for the *Journal of Management Education* since 2002, and as co-Editor-in-Chief since 2014. Her research interests include exploring ethical decision-making among new and midlevel managers, examining how religious and spiritual disputes in the workplace get resolved, and student disengagement issues.