2019

Higher Education Publication and Institutional and National Diversity

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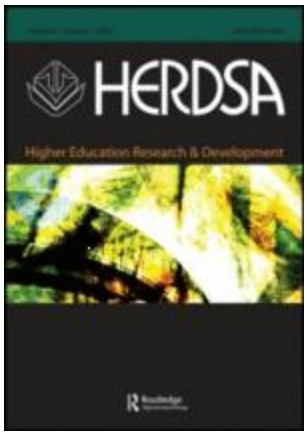
Recommended Citation

Fitzgerald, Sarah and Jiang, Zhehan, "Higher Education Publication and Institutional and National Diversity" (2019). *Higher Education Research & Development*. 81.
https://doi.org/10.1080/07294360.2019.1699031



Higher Education Publication and Institutional and National Diversity

Journal:	*Higher Education Research & Development*
Manuscript ID	Draft
Manuscript Type:	Article
Keywords:	Academic Publishing, faculty work, scholarly communication, educational research, bibliometric analysis

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Educational scholarship is used by practitioners, policy makers, and scholars to shape educational practices. Since education takes place across the globe and incorporates students from a wide variety of backgrounds, educational scholarship should incorporate diverse perspectives. This study examines how institutionally and internationally diverse five leading journals of higher education are. Twelve years of publications are examined to determine the level of diversity among top higher education journals and compare diversity among these publications over time. Maps displaying the distribution of authors across the world are provided to illustrate the findings that higher education scholarship tends to be U.S. centric and to show the differences in distribution between leading journals.

Keywords: academic publishing, bibliometric analysis, educational research, faculty work, scholarly communication

Introduction

Since diverse voices are necessary to the advancement of knowledge, scholarly publications should reflect a diverse set of authors, not just authors from a few elite institutions or countries. Diversity in publishing can be defined in a variety of ways, but tackling all of them is beyond the scope of any one study. This study examines how institutional and national affiliations relate to publishing productivity in five leading journals of higher education. It examines trends in affiliations over time. Publication frequency by country is compared with citation frequency by country to examine whether the most published countries are also the countries providing the articles with the highest value to citing readers.

Wellmon and Piper (2017) examined four top publications in the humanities to discover how institutional affiliations related to publishing productivity of faculty members. They showed that authors employed with the top ten institutions account for 29.9% of the articles studied. This study seeks to determine whether a similar pattern

exists for the field of higher education. Because higher education is a field aimed at diminishing inequalities and promoting the experiences of diverse thinkers, our field ought to publish work by scholars from diverse nationalities and institutional affiliations. As a newer academic field of study, it may not have become as entrenched in the traditions and hierarchies of academia as the humanities. On the other hand, as a field with less historical precedent, its scholars may strive for prestige through the markers valued by long established disciplines.

Inequality in who applies to, is admitted to, and therefore completes doctoral study is an undeniable part of academia (Griffin & Muñiz, 2015; Most, 2008). The educational backgrounds of PhDs who also attain tenure track faculty positions after achieving their degrees are also limited. In fact, Clauset, Arbesman, & Larremore (2015) found that in three different disciplines (computer science, history, and business) 71-86% of tenure track faculty members come from only 25% of North American doctoral granting institutions. They also proved that the prestige gap is increasingly worse as institutional ranking falls. However, faculty judgments of quality differ from discipline to discipline (Clark, 1989). Therefore, hierarchies and stratification differ by discipline as well. This study investigates the difference institutional affiliation makes in publishing in the top tier journals of the field of higher education. This topic is particularly important in the current unstable academic publishing market in which there is a movement to shift the burden of costs of publishing from all the institutions where research is read to only those institutions where research is published.

Literature Review

The question of the institutional affiliations of scholars who publish in prestigious journals of higher education has previously been investigated by Johnson, Wagner, and

Reusch (2016), but while they were interested only in the institutions of the first authors in the United States, this study investigates coauthor affiliations and the nationality of affiliations. This addition is important because higher education takes place internationally and institutions outside the historically dominant western nations are playing increasingly important roles in higher education. It is also important to recognize the significant contribution of co-authors. Johnson, Wagner, and Reusch found that 59.3% of authors in the four journals they examined worked at Very High Research institutions. Their data set included 587 articles from 2008 to 2012. They did not investigate differences in affiliations over time. The journals they examined were *The Journal of Higher Education, The Review of Higher Education, Research in Higher Education,* and *Journal of College Student Development.* The current study excludes the *Journal of College Student Development* as focused on a subfield, and includes two international journals of higher education, *Higher Education,* and *Studies in Higher Education.*

In addition to examining the affiliations of authors who publish in prestigious higher education publications, this study also examines the nationalities of the institutions authors are affiliated with. In a study of educational leadership publications, Mertkan, Arsan, Cavlan, and Aliusta (2016) found that 66% of articles published between 2008 and 2012 by OECD member countries were produced by authors from the UK, the USA, Canada, Australia and New Zealand (p. 52). They argue that this pattern, as well as a hierarchy of publication frequency among nations outside the core English speaking countries, marginalizes important non-Western voices in education. They also point out that in non-Anglophone countries, publications tend to come from a very limited number of institutions. The authors report that editorial boards of educational leadership journals also tend to be comprised mainly of scholars from

OECD countries, with 90.1% being from core Anglophone countries (p.56). The current study examines national affiliations for publications in 5 higher education journals for similar patterns.

Malcolm Tight has done considerable work on the trends of higher education publication. Tight (2012) noted that the amount of higher education articles published outside the United States increased from 2000 to 2010. Tight found that while the U.S. focused journals, *Journal of Higher Education*, *Research in Higher Education*, and *Review of Higher Education* tend to have a quantitative focus, the international journals, *Studies in Higher Education* and *Higher Education*, tend to be mixed or qualitative in focus. This may reflect the fact that different countries tend to have different standards for training doctoral students in research methodologies (Rhoads, Zheng, & Sun, 2017). Tight also found that based on one year of citation data from six leading higher education publications, while the three top American journals publish mostly American authors and their articles cite mostly American authors, the three top non-American journals include articles and citations from more diverse nationalities (Tight, 2014). The current study investigates the representation of international institutions in top higher education publications longitudinally from 2005 to 2017. It also adds a proxy measure for value, namely average citation frequency for articles from each country.

Conceptual framework:

This study examines diversity in publication in two ways: diversity of nationality and diversity of institution. Diversity of nationality is important to scholarly knowledge because cultural differences worldwide result in different needs for scholarly research on higher education. In an age when higher education is increasingly globalized, scholars in one nation cannot ignore the perspectives of scholars elsewhere. The number

of international students worldwide rose from 2.8 million in 2005 to 4.1 million in 2013 (UNESCO, 2018). Scholars, educators, and policy makers who work abroad and those who study, teach, or work with students who travel for education require research from scholars with different global perspectives. It is important for higher education scholars to understand the global economy for education and be informed global citizens, especially in an age when technology is eroding the boundaries of distance.

Different cultures hold different values, neither inherently good nor bad, but adapted for different strengths. Each of these values has pros and cons. For instance, examining Hofstede's (1984) cultural dimensions, it is easy to see that large power distances between tiers in a social hierarchy can be either beneficial by expediting decision making and placing those with the most information resources in positions of leadership, or detrimental by suppressing dissenting voices and oppressing those with the fewest resources. Taking uncertainty avoidance as a second example, there is the obvious benefit of avoiding risk, but there is also the obvious drawback of missing out on large gains by resisting experimentation. When one country or a limited handful of countries dominates research in a topic, the values of those regions dominate that topic. All of these values deserve consideration and when prestigious scholarship marginalizes cultures that esteem some while elevating cultures that esteem others, the scholarly body of knowledge becomes an unbalanced description of reality. For education scholarship, which seeks to serve the needs of diverse stakeholders, the strengths contributed by diverse voices are more valuable than the strengths provided by giving voice to only the most powerful of scholars.

As Shahjahan and Kezar (2013) point out, higher education research suffers when the boundaries of countries are assumed to be the natural boundaries for scholarship. Thus, it is important to give space for value differences within countries as

well as between countries in higher education scholarship. Diversity of institution is important to scholarly knowledge because institutions develop unique cultures and organizational perspectives on educational practices (Tierney, 1988). For example, the difference in institutional mission between historically black colleges and universities, religious institutions, liberal arts institutions, and high intensity research institutions reflects and affects the values of the scholars affiliated with those institutions (Clark, 1989). Geographic cultural differences also influence institutions within countries.

Methods:

Data for this study was gathered from five respected journals in the field of higher education, namely, *Higher Education* (JIF 1.571), *Studies in Higher Education* (JIF 1.527), *Research in Higher Education* (JIF 1.5), *Review of Higher Education* (1.028), and *Journal of Higher Education* (JIF 1.883). Google Scholar (2018) lists *Higher Education*, *Studies in Higher Education*, and *Research in Higher Education* as the top three journals in the field by H-index. Literature investigating the top tier journals in higher education has focused on *The Journal of Higher Education*, *Research in Higher Education*, and *Review of Higher Education* (Hutchinson & Lovell, 2004; Wells et al., 2015; Budd & Magnuson, 2010). Despite the occasional inclusion of the *Journal of College Student Development* in lists of the top journals in higher education (Johnson, Wagner, and Reusch, 2016; Bray & Major, 2011), Tight (2017) argues that such topic specific journals constitute another category of scholarly literature separate from more general higher education journals, so it is not investigated here. Although there are a significant number of academic publications in French, Spanish, Portuguese, Japanese, and Chinese, the majority of academic publications from each continent are in English and all of the top ranked journals in higher education are in English.

For each of these journals, metadata was gathered on articles from 2005 to 2017. This metadata included journal title, digital object identifiers (DOIs), article title, article type, publication year, number of authors, author names, author affiliations, and number of references. The strength of this study comes from the large, longitudinal data set it employs. While Tight (2014) used one year of data and Johnson, Wagner, and Reusch (2016) five, this study builds on their work, employing 12 years of data and comparing data across years to identify trends over time. The data set includes 3,710 articles.

Elsevier provides an application programming interface (API) for users to obtain programmatic access to metadata for journal articles, including the journal titles, authorships, and affiliations that were analyzed in this paper. Without the API, such a large data set would have been more burdensome to compile. The API is free to the public, however, to obtain broader metadata for most publications and citation records, a user must be affiliated with an Elsevier subscriber (e.g., university libraries). The capacity of the API determined the time period examined. Additional author affiliations not retrieved by the API were inserted manually. A considerable amount of data cleanup was needed to normalize institution names and author names as much as possible. For some articles, author affiliations were not listed and therefore not included in the dataset. A bibliometric analysis was conducted to determine the institutional diversity of higher education publications and which higher education journals had the greatest diversity of countries, authors, and institutional affiliations. Average citation rates for each country were calculated to compare value of articles to citing readers with frequency of publication from each country in these top tier journals.

To map the locations of institutions affiliated with authors in the dataset, map coordinate data were extracted from Google Maps via the 'placement' package (Darves, 2016) in the R environment (R Development Core Team, 2018). Tableau was used to

visualize this location data.

Results:

Overview

The total number of countries represented in the sample is 91. The average number of authors per article has increased over the time period from 2.5 to 3.8. Table 1 presents the number of countries and institutions represented in each of the five journals. The number of articles published per year has been growing, from 209 in 2005 to 322 in 2017. This growth has come from the internationally representative journals, *Higher Education* and *Studies in Higher Education*. The United States contributed the most institutions, 408 (33%), with the United Kingdom second at 126 (10%), and Germany third at 63 (5%). The United States also contributed the most authors (46%), the United Kingdom was second (15%), and Australia was third (10%). While publication in these prestigious journals of higher education is dominated by the United States, the United Kingdom, Australia, and Canada, the average number of citations per article published in these journals is not dominated by these countries. This demonstrates that readers are interested in citing articles written by scholars outside these dominant publishing countries. Table 2 provides the average number of citations per article for the top 25 published countries. Figure 1 contrasts publication counts by continent with average citations per article by continent.

	Articles	Institutional Affiliations	Countries	Authors	Average # Authors per Article
Higher Education	977	702	74	1254	3.4
Studies in Higher Education	826	548	59	1179	3.7
Research in Higher Education	525	352	29	839	3.3
Review of Higher Education	783	317	22	720	2.2
Journal of Higher Education	599	256	14	579	3.3

Table 1. Number of countries and institutions represented by journal

Affiliation Country	**Average Citations per Article**	**Articles**
Norway	20	36
Netherlands	19	59
United States	18	1819
Italy	17	29
Hong Kong	14	19
New Zealand	13	26
United Kingdom	12	287
Australia	12	196
Canada	12	81
Germany	9	53
Israel	9	15
Spain	8	54
Finland	8	30
Belgium	8	26
China	7	70
Ireland	7	18
Sweden	6	37
South Korea	6	25
Portugal	6	24
Denmark	5	23
South Africa	4	56
Taiwan	4	24
Malaysia	3	18
Chile	3	12

Table 2. Average number of citations to articles from the top published 25 countries

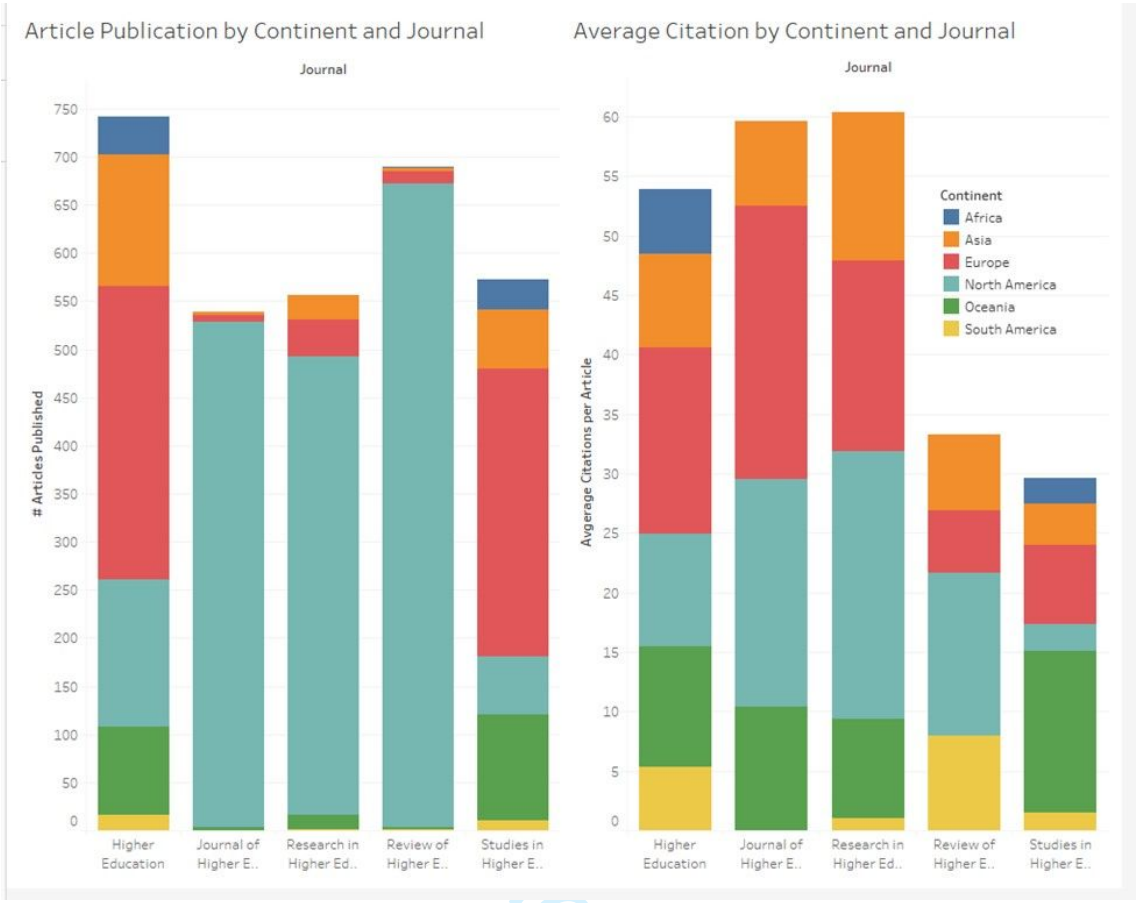

Figure 1. Article Publication and Citation by Continent

The articles from all five journals contained 1,440 different institutional affiliations. The most common institutional affiliations were Indiana University (79), the University of Michigan (76), the University of Southern California (74), the University of Iowa (68), and the University of Georgia (61). These are also the institutions with the highest average number of citations per article. The most prolific authors include Matthew J. Mayhew (Ohio State University), Ernest T. Pascarella (University of Iowa), Adrianna J. Kezar (University of Southern California), Nicholas A. Bowman (University of Iowa), and Gary R. Pike (IUPUI). No author published in all five journals, but 13 published in four out of five. The top ten institutions contribute 17% of all articles in the five journals. This contrasts with Wellmon and Piper's (2017) findings that the top 10 institutions in the humanities contribute 30% of articles in the

top four humanities journals. In other words, higher education publication represents a more diverse variety of institutions than humanities publication. In higher education, the top producing 60 institutions publish 50% of the articles in these five prestigious journals. Just as Bradford (1985) pointed out that journals have exponentially diminishing returns for scholarly topics and Lotka (1926) pointed out that the publication frequency of authors in a field follows a diminishing exponential curve, the publication productivity of institutions in a given field also follows a diminishing exponential curve.

One might argue that credit for the publication of an article should not be distributed equally to authors who have single authored a paper and authors who have coauthored a paper, since they made different levels of contribution. Coauthors also contribute differently than one another. It is possible to consider authorship rank in any number of ways. Any assignment of weight to co-authorship rank is imperfect, since the level of contribution from each author varies from article to article. However, it is customary in higher education for authors to be listed in order of their contributions to an article. Therefore, we chose to do analysis assigning authors 100% for single authorship, 60% for first authorship on a two author paper, and 40% for second authorship on a two author paper. For papers with three or more authors, we assigned the first author 50% credit, the second author 30%, and the any subsequent authors split the rest of the credit evenly. Considering author credit in this way drops Adrianna Kezar, Nicholas Bowman, and Gary Pike down the list. It also boosts David Boud (Deakin University), George D. Kuh (Indiana University), and Tricia A. Seifiert (Montana State University) into the top 5 most prolific authors. Individuals who tend to be first author benefit from this method of weighted measurement of scholarly productivity. Individuals who tend not to be first author suffer from measuring scholarly

productivity in this way. This method of counting contributions yields the University of Iowa, Indiana University, University of Michigan, University of California, Los Angeles, and New York University as the most productive universities. By this method of measurement, only 11% of all contributions to the five journals come from the top ten institutions.

Results by Individual Journals

Higher Education was one of the more institutionally and internationally diverse journals in the sample. Most institutions represented in the sample were in English speaking countries, with 463 affiliations from the United States, 388 from Australia, and 384 from the United Kingdom. Note that these numbers total more than the total number of articles in the sample because more than one author can contribute to each article. This is a more balanced distribution of national origins than is exhibited by some of the other journals in the sample. This diversity may relate to the fact that *Higher Education* is edited in Australia, with an editorial board representing a diverse collection of countries. *Higher Education* aims to be an international journal (Springer Nature, 2018a). The articles came from a pool of 1,254 authors, some of whom repeated up to 6 times (Ernest Pascarella). The top three institutional affiliations were the University of Melbourne, the University of Sydney, and The University of Toronto. The number of countries represented by authors in *Higher Education* increased from 19 to 31 between 2005 and 2017. The number of institutions represented has also increased dramatically over time, from 52 to 126. The highest percent of authors came from the United States with 20% of affiliations.

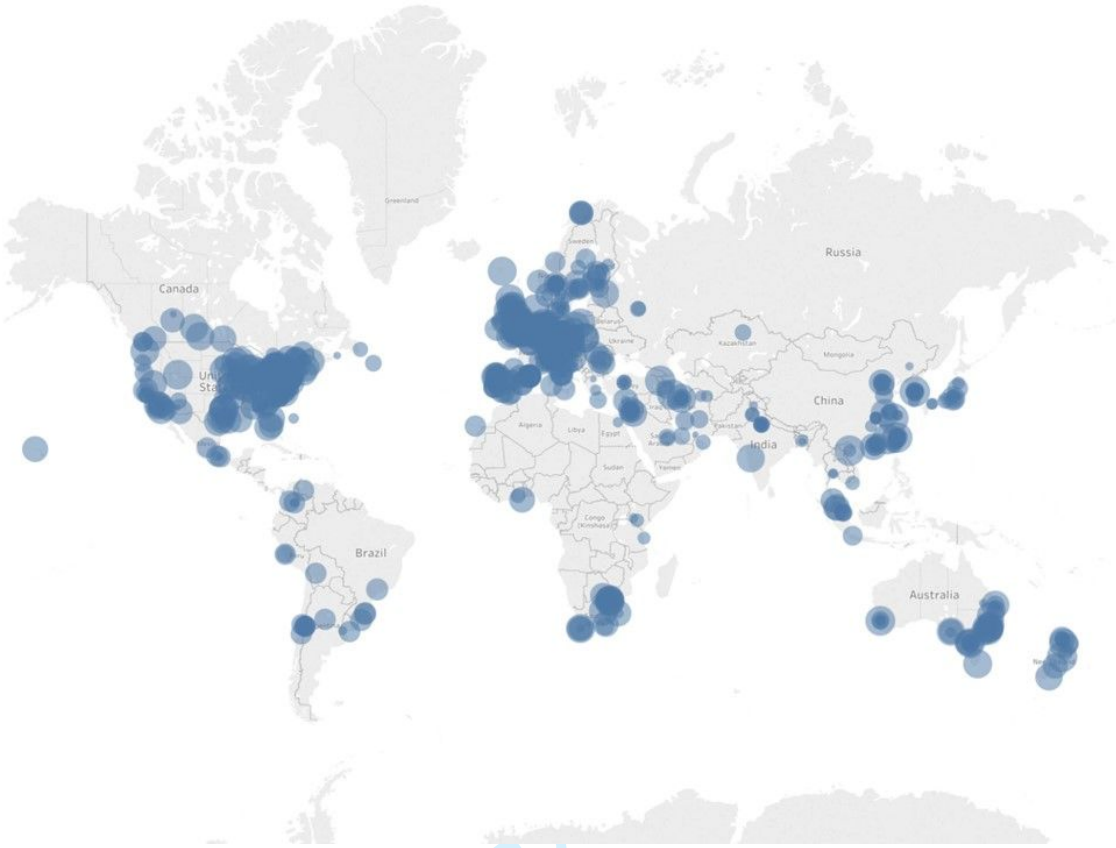

Figure 2. Distribution of affiliations in *Higher Education*

Studies in Higher Education was also one of the more diverse journals in the sample. Most institutions represented in the sample were in English speaking countries, with 812 affiliations from the United Kingdom, 423 from Australia, and 249 from the United States. Again, this is a more balanced distribution than those of some of the more United States centric journals. *Studies in Higher Education* is edited and published out of the United Kingdom, with an editorial board representing a diverse collection of countries (Informa UK Unlimited, 2018b). It is sponsored by the Society for Research into Higher Education, a United Kingdom based society. 33% of authors were affiliated with a U.K. institution. The articles came from a pool of 1,179 authors, some of whom repeated up to 9 times (Malcolm Tight). The top three institutional affiliations were The University of Sydney, the Australian National University, and Helsingin Yliopisto. The number of countries represented in *Studies in Higher Education* increased dramatically

from 10 to 39 between 2005 and 2017. Institutions represented rose dramatically from 21 to 177.

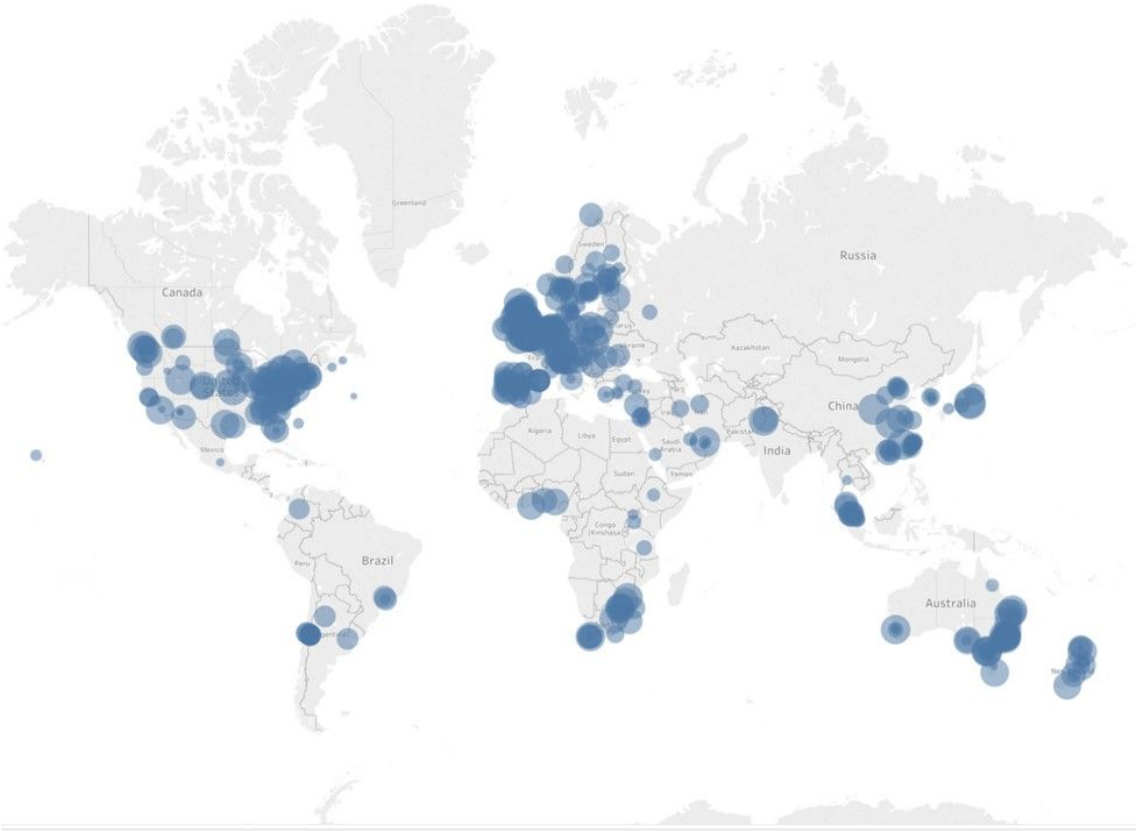

Figure 3. Distribution of affiliations in *Studies in Higher Education*

Most institutions represented in the *Research in Higher Education* sample were in English speaking countries, with 2,027 affiliations from the United States and 64 from Canada. 84% of authors were from a U.S. institution. *Research in Higher Education* is published in the United States with an editorial board consisting of mostly scholars from the United States (Springer Nature, 2018b). It is sponsored by the Association for Institutional Research. The articles came from a pool of 839 authors, some of whom repeated up to 17 times (Matthew Mayhew). The top three institutional affiliations were University of Iowa, Indiana University, and the University of Michigan. The number of countries represented in a year never rose above 11.

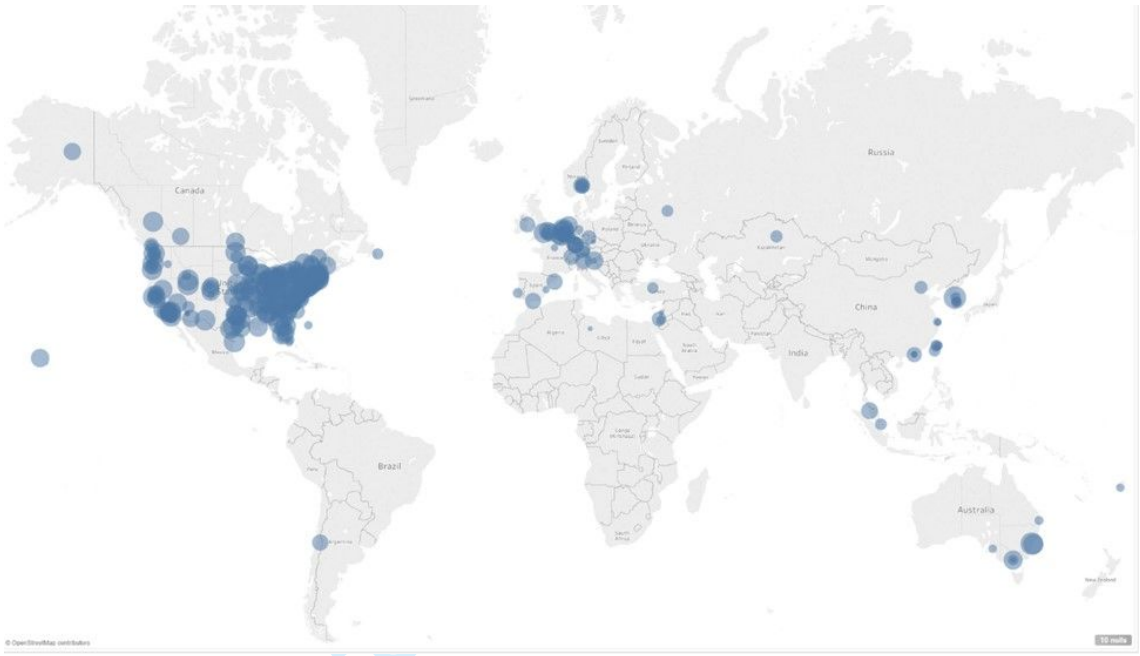

Figure 4. Distribution of affiliations in *Research in Higher Education*

Most institutions represented in the *Review of Higher Education* sample were in English speaking countries, with 1,269 affiliations from the United States and 13 from Canada. 97% of authors were from a U.S. institution. *Review of Higher Education* is published in the United States with an editorial board consisting mostly of scholars from the United States (Johns Hopkins University Press, 2018). It is sponsored by the Association for the Study of Higher Education and is published quarterly by John Hopkins University Press. The articles came from a pool of 720 authors, some of whom repeated up to 10 times (Todd C. Ream). The top three institutional affiliations were Indiana University, the University of Southern California, and the University of Michigan. The number of countries represented in a year has never exceeded 6.

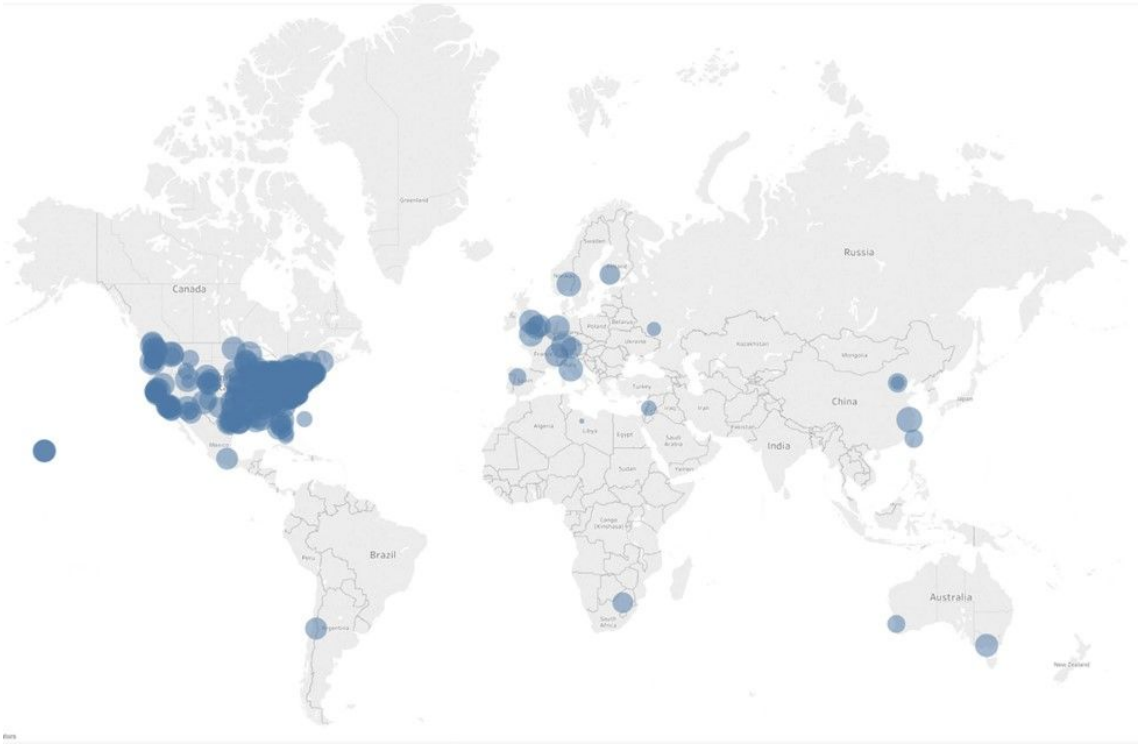

Figure 5. Distribution of affiliations in *Review of Higher Education*

The Journal of Higher Education was one of the least diverse journals in the sample. 98% of authors were from a U.S. institution. This is not surprising, considering their aims specify "Comparative and international scholarship should make clear connections to the U.S. context" (Informa UK Limited, 2018a). Most institutions represented in the sample were in English speaking countries, with 1,826 affiliations from the United States, 29 from Canada, and 10 from Australia. *Journal of Higher Education* is published bi-monthly in the United States by Taylor & Francis with an editorial board consisting of scholars mostly from the United States. The articles came from a pool of only 579 authors, some of whom repeated up to 13 times (Adrianna Kezar). The top three institutional affiliations were the University of Georgia, the University of Iowa, and the University of Southern California. The number of countries represented in *Journal of Higher Education* between 2005 and 2017 never rose above 5. The number of institutions represented has not changed much over the period.

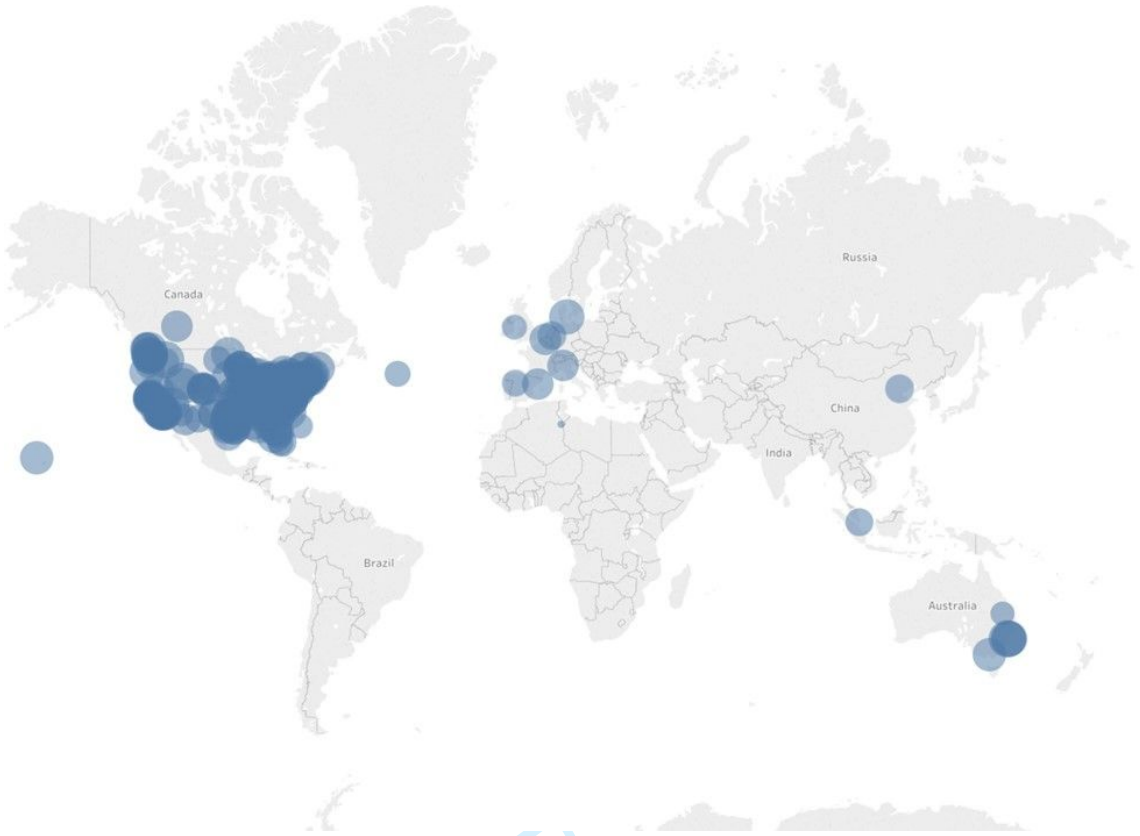

Figure 6. Distribution of affiliations in *Journal of Higher Education*

Discussion:

An awareness of the institutional and national affiliations of scholars who publish in the respected journals in the field of higher education can help scholars and prospective scholars understand the hierarchy of the field's institutions and journals. Given that the institutional and national affiliations of the authors who publish in a journal reflect the institutional and national affiliations of the readers who follow research in a journal, these findings can also help scholars make publication choices based on the audience they wish to reach. Scholars and editors in the field of higher education should consider why U.S. higher education journals tend to be U.S. centric, while journals edited elsewhere tend to be international in scope.

This study showed that publication in top higher education journals is under-representative of countries in the global south (Africa, Latin America, South Asia)

despite many English speakers living in these areas. One reason for this may be reviewer and editor bias toward scholarship that reflects the norms of the geographical regions they live in. The findings can help scholars see the potentially limited scope of the journals they are reading. Citation of translated works can help disperse scholarship from marginalized countries. Reading and citing open access publications which may not have been subject to peer review can also help scholars listen to voices that might otherwise be suppressed by western norms of epistemology (Larson, 2017). It is important for scholars to monitor publications which reflect more than western norms. Though countries outside the global north may use other publications outlets, the scholarly publications read in the global north should still reflect knowledge from throughout the world.

One reason that scholarship from non-western countries is underrepresented may be brain drain. As Altbach (2004) points out, many academics migrate from developing countries to industrialized countries. Because countries such as the U.S., the U.K., Canada, and Australia, have so many resources, they attract talented scholars from developing countries. These scholars become affiliated with universities in western countries instead of in their home countries. One way to allow scholars to work from their native countries and for the interests of their native countries is to make resources such as scholarly publications more financially accessible to non-western institutions. This can include making scholarship open access.

There is growing pressure for scholars to make their work open access and publishers are responding with more options for how to fund this move. ROARMAP listed 779 open access mandates and policies in 2018 (ROARMAP, 2018). One way publishers allow open access to research is by asking institutions to pay a fee to make all work published by their scholars available open access (referred to as Read and

Publish agreements) instead of asking scholars to pay article by article (Article Processing Charges). As the number of institutions paying publishers to make the work of all their scholars open access rises, it will be important to know how many institutions contribute to the bulk of research. It will be important to know that 50% of publication in the top tier journals in higher education comes from 60 institutions. There may come a day when the universities who publish the most articles are paying for access to those articles for everyone, instead of all readers paying for access to articles produced mostly at research intensive universities.

Diversity in publishing can be defined in a variety of ways. For example, Williams, Kolek, Saunders, Remaly, and Wells (2017) examined gender diversity in articles in leading higher education journals from 2006 to 2010 and found that women are underrepresented in those journals as compared to their representation in the field. They tie this problem to the gender differences in production of qualitative and quantitative research. Further research on diversity in publication could investigate publication diversity in terms beyond institution and nationality. Racial diversity is another area which warrants further investigation. Chakravartty, Kuo, Grubbs, and McIlwain (2018) found that non-white scholars are underrepresented in publication rates, citation rates, and editorial positions in communication studies. Such a study should be undertaken in the field of education as well.

Further research could also compare what percent of articles in prestigious higher education journals are published by scholars holding PhDs from the top ten publishing universities to contrast that number with Wellmon and Piper's (2017) findings about humanities publication. They showed that those holding PhDs from the top 10 (top 3 percent of) universities published 51.3% of the articles studied. Moreover, just the authors with PhDs from Yale and Harvard accounted for 20.1% of all the

articles in the journals studied. Prospective students of higher education programs could benefit from knowing how steep the prestige differences in programs are for future publication prospects.

Future research on scholarly publication would be greatly facilitated by improved authority records and other metadata on the part of database vendors. Universities pay vendors too much to tolerate the poor state of metadata available through subscription access to research, especially as data mining research explodes and database vendor profit margins are astronomical.

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Disclosure statement:

The authors have no conflicts of interest to report.