



Mapping the terrain of educational leadership and management in East Asia

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Abstract

Purpose – The purpose of this paper is to gain perspective on the extent to which the vision for knowledge production in East Asia set forth by Bajunid, Cheng, Hallinger, Walker, Dimmock and others almost 20 years ago has been fulfilled. The authors undertook an effort to map the terrain of knowledge production in educational leadership and management in East Asia since the year 2000. Their method of mapping this terrain involves the analysis of trends in publication of articles about and/or from East Asia in eight core educational leadership and management journals.

Design/methodology/approach – The authors' methodology employed a descriptive, quantitative form of literature review. They identified a clearly delimited body of literature, comprised of all articles published about or from East Asia between 2000 and 2011 in eight core educational leadership and management journals. Then they employed a systematic search for information within that literature and analyzed trends across the studies. This allowed them to map the terrain of recent research on educational leadership and management within East Asia.

Findings – The volume of knowledge production from East Asia between 2000 and 2011 consisted of less than 6 per cent of total output in the relevant journals. Although there was a discernible increase in the annual rate of publication over the course of the 12-year period, the authors treat the increase as relatively unimportant given the small volume. A substantial majority of the publications not only came from a few societies, but from a small number of universities. Citation analyses were highly consistent with all of the above trends, and reinforced a picture of limited impact.

Research limitations/implications – The authors' study focused on a clearly delimited region, East Asia. Although they believe that the study may have implications for other regions of the developing world, they do not speculate on the extent of relevance. The authors intentionally limited their definition of the corpus of knowledge to a specific set of international refereed journals that are published in English. This ignores the potential contributions of conference papers, books, book chapters, research handbooks, domestic journals, and even other international journals in which educational leadership scholars publish.

Originality/value – To the authors' knowledge, there have been no efforts undertaken to understand the nature of knowledge production in educational leadership and management in East Asia. When approaching this review in 2012, the authors were not under the illusion that the regional knowledge base would be either overly dense in terms of the concentration of studies within particular areas or broad in scope. However, future scholarship may be aided by this systematic assessment of the current knowledge base on educational leadership in the region.

Keywords Research and development, Educational management, Educational leadership, Asia, Knowledge base, Asian studies, Educational administration, Knowledge management

Paper type Research paper



The rising economic and political fortunes of Asia-Pacific countries are, however, fostering greater interest and confidence among scholars in their own intellectual traditions. Notably, the current mood is not one of reaction. Instead, these scholars are searching for the best of past and present practice, from East and West, as their societies work to reform themselves economically while maintaining cohesion socially, culturally and politically (Bajunid, 1994). The resulting effort has the potential to enrich the occidental knowledge base in educational administration as well as their own. It will cause us both to question key assumptions about education and administration, and to consider alternative theoretical perspectives towards administrative practice (Bajunid, 1994; Habana, 1994; Hallinger *et al.*, 1994; Ribbons, 1994) (Hallinger, 1995, p. 4).

Almost 20 years have passed since scholars first began to explore limitations of the knowledge base underlying the practice of school leadership and management in East Asia (Bajunid, 1996; Cheng, 1995; Habana, 1994; Hallinger, 1995; Hallinger and Leithwood, 1998; Hallinger *et al.*, 2005; Ribbons, 1994; Walker and Dimmock, 2002). As suggested above, the region's scholars of that period approached the dearth of empirical research and theorizing on school leadership and management practice outside of a relatively narrow set of "western" cultural contexts (e.g. USA, Canada, UK, Australia) with a sense of opportunity. Their optimism was further fuelled by the emergence of global research findings supporting the importance of leadership to successful education reform and school quality (e.g. Bell *et al.*, 2003; Hallinger, 2011c; Hallinger and Heck, 1996; Leithwood *et al.*, 2006; Robinson, 2008).

The ensuing years have witnessed dramatic growth in East Asia's higher education sector, whether measured by growth in the number of institutions, graduate degree programs, faculty members, or students (Bajunid, 2011; Cheng, 2010; Gopinathan and Lee, 2011; Mok and Cheung, 2011). More specific to the focus of this paper, we note the large increase in the number of graduate programs in educational leadership and management (i.e. MEd, MA, MPhil, EdD, PhD) offered by universities in East Asia. This has had the concomitant effect of increasing the volume of empirical research conducted in the region by a growing array of graduate students and faculty members. These convergent trends suggested new possibilities for contributing to the development of regionally grounded scholarship in our field[1].

The purpose of this paper is to gain perspective on the extent to which the vision for knowledge production in East Asia set forth by scholars such as Bajunid, Cheng, Hallinger, Walker, and Dimmock in the mid-1990s has been fulfilled. In addressing this challenge, we launched a research project designed to map the terrain of knowledge production in educational leadership and management in East Asia[2]. The project analyzes trends in the publication of articles about and/or from East Asia in eight core educational leadership and management journals from 2000 to the present. The study is organized to answer the following research questions:

- (1) What was the volume of articles from and about the East Asia region published in core educational leadership and management journals between 2000 and 2011?
- (2) To what extent has the annual rate of regional publication changed over the course of this period?
- (3) How does the contribution of scholarly publications to the regional knowledge base vary across the 17 East Asian societies covered in this study?
- (4) How does the contribution of scholarly publications to the regional knowledge base vary with respect to the authors' universities?

- (5) What has been the impact of the studies encompassed in this corpus on the accumulation of regionally relevant knowledge?

This study seeks to fill a gap in the general educational leadership and management literature by mapping the terrain in an important, but largely uncharted region of the world. From a practical perspective, the study provides empirical grounding for ongoing strategic efforts to strengthen research and development on educational leadership and management in East Asia. For almost two decades, scholars and policymakers have decried the need to rely on western literature in the design of policies and training programs for school leadership and change in East Asia (e.g. Bajunid, 1996; Cheng, 1995; Hallinger, 1995, 2011b; Hallinger *et al.*, 2005; Walker and Dimmock, 2002). This study provides evidence of the extent to which scholarship in the region has made progress in addressing this need. As the region's education systems develop R and D strategies designed to strengthen the knowledge base in educational leadership and management, they will require a clear understanding of the current status. Thus, our effort to map this terrain also serves as a status report on the region's capacity to produce knowledge that is capable of informing policy and practice.

Knowledge production in educational leadership and management

The subject of knowledge production has long been of interest to scholars generally (e.g. Kuhn, 1996; Landry and Amara, 1998; Wilson, 1998) as well as in the field of educational administration (e.g. Bates, 1980; Bridges, 1982; Donmoyer *et al.*, 1995; Eidel and Kitchel, 1968; Griffiths, 1979; Haller, 1979; Kiley, 1973; Moore, 1974; Ogawa *et al.*, 2000; Oplatka, 2010; Popper, 1982). Knowledge production refers to the processes by which formal knowledge advances in a field of scholarly inquiry (Bridges, 1982; Kiley, 1973; Moore, 1974). These processes revolve around the normative and instrumental conditions by which scholars organize and work, both individually and collectively (Kuhn, 1996). Scholars have noted that these processes are subject to both organic and strategic change (Donmoyer *et al.*, 1995; Hallinger, 2011b; Kuhn, 1996; Landry and Amara, 1998; Ogawa *et al.*, 2000; Oplatka, 2010; Wilson, 1998).

The knowledge base underlying professional practice in educational leadership and management encompasses the development and testing of theory, as well as the description, codification, and validation of administrative practices (Donmoyer *et al.*, 1995; Griffiths, 1979; Sergiovanni, 1989). Throughout academia the process of knowledge development has generally proceeded in a highly "decentralized" fashion (Kuhn, 1996; Ogawa *et al.*, 2000; Wilson, 1998). Scholars within a discipline form a loose community that shares values concerning the nature of academic inquiry, even while members hold diverse perspectives, values, interests, and goals concerning both research foci and methods of inquiry (Kuhn, 1996; Wilson, 1998).

In educational leadership and management, different theoretical and methodological approaches have been applied to knowledge production with varying degrees of success as judged by knowledge accumulation (Bates, 1980; Bridges, 1982; Donmoyer *et al.*, 1995; Hallinger and Heck, 1996; Hallinger, 2011a; Oplatka, 2010). Over the past 50 years, scholars have critiqued the rate, density, scope, validity, and utility of knowledge accumulation in educational leadership and management (Bates, 1980; Boyan, 1988a, b; Bridges, 1982; Eidel and Kitchel, 1968; Erickson, 1967; Griffiths, 1979; Haller, 1979; Hallinger, 2011a; Hallinger and Heck, 1996; Leithwood *et al.*, 2006; Lipham, 1964; Sergiovanni, 1989). While these reviews typically characterize progress as slower than

expected, evidence of progress has also been identified in selected domains (e.g. see Hallinger, 2011b; Hallinger and Heck, 1996; Leithwood *et al.*, 2006).

During the 1990s, the University Council for Educational Administration (UCEA) in the USA undertook a systematic effort to understand the boundaries of the formal knowledge base in educational leadership and management (Donmoyer *et al.*, 1995; Ogawa *et al.*, 2000). A task force of scholars from various UCEA institutions examined different domains comprising the field as a whole (e.g. school organization, leadership, law, finance, etc.). The UCEA project built upon a longer term attempt by scholars to document the accumulation of knowledge through published reviews of research (e.g. Bossert *et al.*, 1982; Boyan, 1988a; Bridges, 1982; Erickson, 1967; Haller, 1979; Hallinger and Heck, 1996; Leithwood *et al.*, 1990; Leithwood and Montgomery, 1982; Lipham, 1964; March, 1978; Murphy, 1988; Murphy *et al.*, 1983), as well as research handbooks (e.g. Boyan, 1988b; Leithwood *et al.*, 1996). An underlying assumption of this multi-year, large-scale project was that a corpus of knowledge comprised of published research existed, and could be mined for useful findings. The project resulted in the identification of boundaries of the knowledge base in educational administration in the USA[3], and yielded recommendations for productive lines of future inquiry (Donmoyer *et al.*, 1995).

To our knowledge, there have been no similar efforts undertaken to date either in East Asia or in other regions of the world. Unlike the USA, the knowledge base in educational leadership and management in our region has lacked the level of maturity required for such an undertaking (Hallinger, 2003, 2011b; Walker and Dimmock, 2002). Indeed even in 2012 we approached this review with a sense of cautious optimism. Nonetheless, we believed that future scholarship would be aided by a systematic assessment of the current knowledge base as well as a more fine-grained understanding of patterns of knowledge production in educational leadership and management in the region. This paper is one of series that seeks to provide such an empirical assessment.

Method

Our methodology employed a descriptive, quantitative form of literature review. We identified a clearly delimited body of literature, employed a systematic search within that literature, and analyzed trends across the studies. This allowed us to map the terrain of recent research on educational leadership and management within East Asia.

When conducting reviews of research in our field, scholars have identified a variety of possible sources from which to choose. These include published journal articles, doctoral dissertations, papers from refereed conferences, and books and book chapters (e.g. Bridges, 1982; Erickson, 1967; Haller, 1979; Hallinger, 2011a; Hallinger and Heck, 1996; Robinson, 2008). Each approach has strengths and limitations (see Hallinger, 2011a).

The strategy employed in this study entailed a systematic search of eight “core journals” in educational leadership and management[4]. These included *Educational Administration Quarterly (EAQ)*, *Journal of Educational Administration (JEA)*, *School Effectiveness and School Improvement (SESI)*, *Educational Management Administration and Leadership (EMAL)*, *International Journal of Leadership in Education (IJLE)*, *International Journal of Educational Management (IJEM)*, *School Leadership and Management (SLAM)*, and *Leadership and Policy in Schools (LPS)*. The strengths of this strategy lie in the ease of accessibility to digital archives, clarity of the search boundaries, and assurance of identifying sources that met minimum quality standards. The key limitation of this strategy was its inability to capture knowledge

from outside this particular set of international journals. Thus, for example, it does not incorporate research communicated in national languages and/or stored in local repositories (e.g. doctoral dissertations in university libraries), or articles on relevant topics published in general education or general management journals[5].

While no list of journals can be considered definitive, this subset of educational leadership and management journals met the following criteria. The journals have an espoused mission of publishing research, employ blind review procedures, publish international as well as domestic research in English, and meet a minimum standard of citation impact. In order to establish the latter criterion, we employed the h-index. This statistic aims to measure the cumulative impact of a researcher's or journal's output by looking at the number of citations received (Harzing, 2007)[6]. The h-index for these journals ranged from a low of 23 for *LPS*, to a high of 94 for *EAQ*. The mean h-index of the journals was 45[7]. Our approach to journal selection was, therefore, designed to ensure that the journals as a group would provide a broad representation of moderate- to high-quality theoretical and empirical knowledge specifically focussed on core issues in educational leadership and management[8].

We narrowed our search to a 12-year period starting in 2000 and extending through to the end of 2011. Our rationale for choosing this particular period was both historical and pragmatic. Early commentary on the need for more research on educational leadership and management from non-western cultural contexts first emerged and gathered headway during the mid-1990s. For example, in addition to individual contributions (e.g. Bajunid, 1996; Cheng, 1995; Hallinger, 1995), special journal issues on this topic were published in the *JEA* in 1996 (edited by Hallinger and Heck, 1996) and the *Peabody Journal of Education* in 1998 (edited by Hallinger and Leithwood, 1998). However, it would take several years for research stimulated by this commentary to appear in journals. Thus, we felt that there was reasonable justification for beginning our search in 2000.

Not only did we wish to gain a broad perspective on the knowledge base, but we also wanted to understand the extent to which the contours of this terrain may have changed over the past decade. Thus, we were interested in establishing search criteria that would enable us to describe both the nature of the overall knowledge base represented in these journals, as well as patterns of evolution over time. Thus, we included the entire corpus for the period from 2000 through to the end of 2011[9].

The third criterion was to search within this set of journals specifically for articles that focussed on East Asia. For the purposes of this study, we defined "East Asia" as a region comprised of 17 societies: Myanmar, Thailand, Malaysia, Singapore, Vietnam, Laos, Cambodia, Hong Kong, Macau, Philippines, Brunei, Papua New Guinea, Indonesia, Taiwan, mainland China, South Korea, and Japan. We have three main reasons for selecting this particular set of societies for our analysis. The first, is their geographic proximity. Second, despite large differences in levels of national economic development, there are numerous overlapping political and economic organizations that include all or a substantial portion of these societies (e.g. Association of Southeast Asian Nations (ASEAN), Asia Free Trade Area (AFTA), Southeast Asia Ministers of Education Organization (SEAMEO), AEC)[10]. Third, even though these societies evidence cultural differences, they also share important cultural values and norms to a degree that it is common for scholars to refer to "Asian values" when discussing the geographic region. Thus, policymakers and scholars often treat these societies as a recognizable group and develop regional strategies to foster their collective development (Ohmae, 1995; Rohwer, 1996).

Rather than using a search engine to identify studies, we employed a more labor intensive but comprehensive and reliable search method. We searched the web sites for each of the eight educational leadership and management journals identified above. We went year by year through each volume of the eight journals. We read the abstracts of all articles published in these journals in order to identify those that were either about or from the East Asia region[11]. When an article fit our search criteria, we downloaded a soft file copy of the article. Thus, the downloaded articles comprised the full corpus of articles published from or about educational leadership and management East Asia in these eight core journals over this 12-year period.

Next, we scanned each article with the goal of extracting information relevant to the questions posed in the study. Data extracted from the articles included the following: journal name, title of article, date, volume and issue number, research topic, author(s), university(ies) of the author(s), location of the university(s), location of the data if data were collected, type of paper (conceptual, empirical, review, other), research method (quantitative, qualitative, mixed method), and funded research (yes/no). These data were then entered into a spreadsheet.

In order to facilitate the analysis of trends across studies, we then coded the data where appropriate. For example, each country and university was given a code number. Similarly, research types and methods were coded (e.g. conceptual paper = 1, empirical papers = 2, review papers = 3, other = 4).

Following coding of the data, it became apparent that other complementary data might be useful for informing our analyses. So we added data on other relevant “variables” to the spreadsheet. These included, for example, the total citation count for the article, the annual citation rate of the article, and the h-index for each of the eight journals. The resulting spreadsheet contained a wealth of information about the nature of research conducted on educational leadership and management in East Asia. This represented the corpus of knowledge that we employed in order to address the questions posed at the outset of this paper. It should be noted, however, that the current study only analyzes a portion of the data included in the corpus. Given the purpose of this study, the data analysis methods employed in this study were limited to the use of descriptive statistics and graphing of trends.

Results

The presentation of results is organized around the research questions presented in the opening section of this paper. The foci included the overall volume of articles published from the region since 2000, change in the rate of publication over time, the distribution of articles by society of origin, the distribution of articles by the authors’ universities, and the pattern of citation impact.

Volume of research

The first query concerned the volume of published research on educational leadership and management in East Asia from 2000 to 2011. Our search of these eight journals identified 184 relevant articles. This represented about 6 percent of the total of 2,910 articles published in the eight journals during this period. By any criterion, this is a small contribution to the global literature on educational leadership and management.

When analyzed from the perspective of a corpus of knowledge contained in eight journals over a 12-year period, the total of 184 articles is disappointing at best. This yields a mean publication rate of less than two articles per journal per year or 23 articles per journal over the 12-year period. It is, however, notable that there was

substantial variation in the volume of publication of regional articles across the different journals. At the low end, two journals, *LPS* and *EAQ* each published a total of three articles from the region. At the other extreme, was *IJEM* which published 78 articles (see Figure 1). Although the journals differ in the quality standard applied to submissions, we suggest that this pattern of variation may also reflect different levels of commitment among these “international” journals to their role in a global community of scholarship.

Next we examined the rate of publication over the 12-year period in order to determine if there had been any change the pattern over time. We expected to find a substantial increase in recent years in response to policies that require annual publication in international refereed journals from faculty members in an increasing number of regional societies. The data suggested a modest increase during the recent past. More specifically, there was a mean of 15.3 articles published per year, ranging from a low seven in 2002 to a high of 27 in 2011 (see Figure 2). When comparing publication rates during the first half and second half of the 12-year period, we found a 30 percent increase during the latter period. The mean number of articles published per year from 2000 to 2005 was 12.8; from 2006 to 2011 the mean was 17.8.

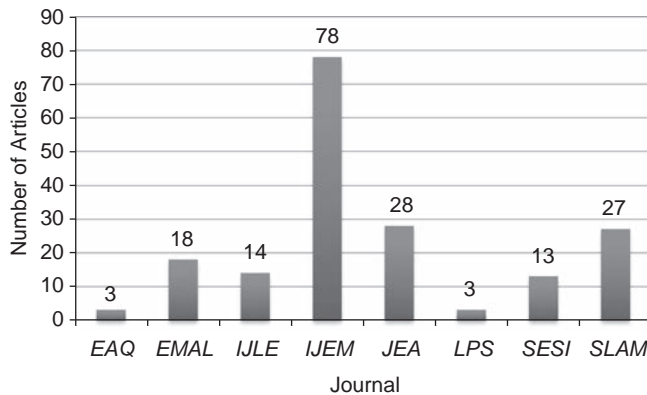


Figure 1.
Total number of articles published by the eight core journals (2000-2011)

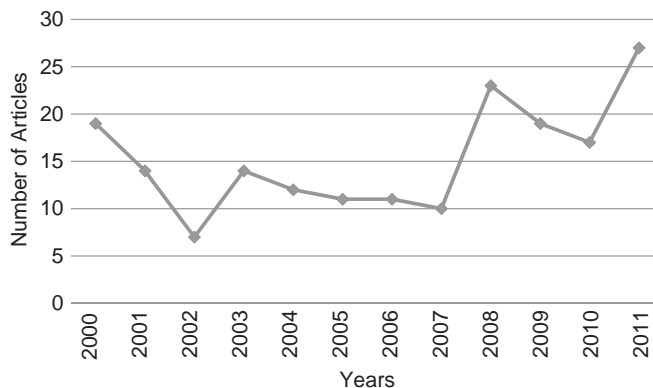


Figure 2.
Change in annual publication output in eight core journals (2000-2011)

Nonetheless, this increase should be interpreted in light of the relatively small number of total publications involved. That is, although the rate of increase appears large, the total volume rate achieved during the latter period is still extremely small. This is especially the case when one considers that it represents the total contribution of scholars from 17 different societies. Moreover, when interpreted in light of the large size of the higher education sector in East Asia, the contribution appears even less substantial. On the face of it, this level of volume does not fulfill the requirements for a regional knowledge base. In the following analyses, we examine the nature of the regional knowledge from other perspectives.

Sources of publication

This set of analyses sought to portray peaks, plateaus, and valleys in terms of the sources of journal publication. More specifically, we focussed on understanding whether there were differences in patterns of publication emerging from these 17 societies and their university programs in educational leadership and management. These analyses offer insight in the extent to which the sources of the “regional knowledge base” were widely distributed, or concentrated in selected societies and universities. Analysis of societal distribution of articles was especially important given the relatively small number of articles that represented the region’s overall research output during this decade. Analysis of publication output by university could further inform our understanding of regional capacity for conducting and publishing high-quality research in international journals. Analysis of publication patterns by university was also of interest in light of the trend of publication requirements increasingly put into place by universities and ministries of higher education in the region (Figure 3).

The mean number of publications among the 17 societies was 9.4 articles over the entire 12-year period, or less than one article per society per year. This result adds further perspective with respect to the total volume of publications (i.e. 184 articles). Less than one article per year per society is hardly sufficient to generate a sound knowledge base for policy, research, or practice in educational leadership and management across the region.

Moreover, the data revealed a highly skewed distribution of journal publication across the societies that comprise East Asia. More specifically, the special

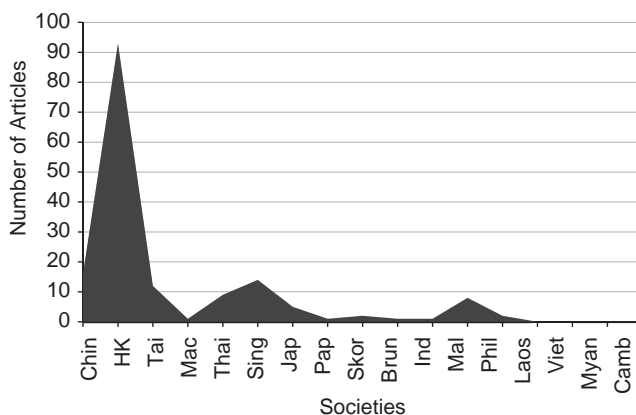


Figure 3.
Total publication output in
eight core educational
leadership journals by
17 East Asian societies
(2000-2011)

administrative region of Hong Kong alone contributed 93 articles, half (50.5 percent) of East Asia's entire published research output in educational leadership and management during this period. Following well behind Hong Kong were China (18), Singapore (14), Taiwan (12), Malaysia (8), and Thailand (7). Together these five societies accounted for 76 percent of the region's publication output. Japan contributed five articles, and the Philippines and South Korea two each. Macau, Papua New Guinea, Brunei, and Indonesia each contributed one article. Vietnam, Laos, Cambodia, and Myanmar did not contribute any publications. We find it interesting to note that although Hong Kong and Singapore were among the most productive centers of scholarship, they are also two of the smallest societies included in this study.

Thus the data reveal a dramatic level of variation across the regional terrain with one major peak, several relatively low plateaus, and most societies at or below sea level (i.e. opaque to our view). These data suggest that if the field wishes to gain insight into educational leadership and management as practiced in these societies there is surprisingly little regionally grounded theory or empirical research to guide us.

We next turned to examine the source of publication with respect to the universities associated with the authors of these articles. The 184 articles were contributed by authors from 43 different regional universities[12]. Consistent with the pattern of publication by society, the distribution of publications by universities was highly skewed towards institutions of higher education located in Hong Kong. The degree of distortion in the distribution can be observed when comparing the average number of articles per university (mean = 3.84, median = 1, mode = 1) to the totals from the most productive institutions. The top contributors of scholarship were the Hong Kong Institute of Education (40 articles), Chinese University of Hong Kong (35), Hong Kong University (19), and the National Institute of Education – Singapore (16). The next most productive group consisted of Mahidol University – Thailand (5), Beijing Normal University – China (4), and Shenyang Normal University – China (3). The other 36 universities in our database contributed either one or two articles each to the total of 184 articles (Figure 4).

These data indicate that despite a dramatic increase in the number of faculty and graduate students in the region's universities since 2000 (Cheng, 2010), this growth has not been matched by a concomitant increase in research production for publication in international journals. This suggests that the region's universities are lagging behind in their development of faculty (and student) capacity for international research publication. This pattern of regional research productivity should be of

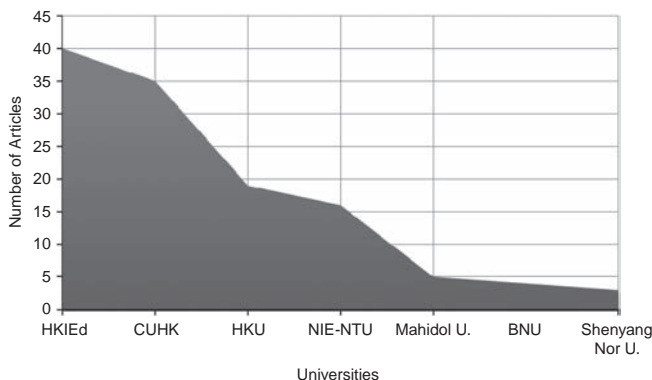


Figure 4.
Number of articles
authored in the eight
core journals from the
seven most productive
East Asian universities
(2000-2011)

concern to national policymakers, university administrators, and individual faculty members.

This map of the regional terrain of knowledge production in educational leadership and management provides useful elaboration on the first set of analyses that focussed on volume of publication. The second set of analyses suggests that not only is the overall production of regional knowledge in educational leadership small in volume, but is also produced from a very limited set of societies and universities. In sum, the knowledge that is being generated by regional universities cannot provide a valid representation of problems, policies, or practices in educational leadership and management across the region. We will return to these issues in the concluding section of the paper.

Citation impact

Citation impact metrics are increasingly employed for the purpose of assessing knowledge accumulation in academic disciplines, and have been used in education for several decades (e.g. see Bridges, 1982; Hallinger, 2011a; Smith and Caulley, 1981). The rationale lies in the concept that knowledge accumulation is a product of building upon the theories and findings disseminated among a community of scholars working in diverse settings (Kuhn, 1996). Citations rates of papers, therefore, provide insight into the extent to which propositions and findings generated by scholars are “taken up” by other scholars (Smith and Caulley, 1981). Highly cited work, therefore, reflects the interconnectedness of knowledge and can be used as an indicator of knowledge accumulation.

As of May 2012, the 184 journal articles included in this corpus had a total citation count of 2,553 citations, with a mean of 13.9 citations per article. It is difficult to characterize the total as “a lot” or “a little”. Any large body of publications will demonstrate high variability in terms of citation impact. The most highly cited article, a study of transformational leadership in Hong Kong, had 343 citations, eight articles had more than 50 citations, and 36 of the articles had more than 20 citations. However, 24 of the 184 articles evidenced no citations at all.

Of course, since we were examining citations over the most recent 12-year period, using a metric of total citations advantages older articles. Therefore, we also examined the annual rate of citations across the corpus. We consider ten citations per year as the minimum standard needed to be considered a moderately high-impact paper in our field. Only four papers met this standard. In contrast, the mean annual citation rate for the full set of papers was 1.64 citations per year. Again, we take note that even this annual rate of citation metric disadvantages newer articles. Newer articles may achieve higher citation rates over time once they become known by scholars in the field.

On the positive side, we note that some high-quality, regionally focussed scholarship has emerged during this decade. However, there is a notable lack of “density” with respect to high-impact articles within the corpus. Moreover, the scope of contributions within the corpus that are building citation impact (e.g. citations per year) is also limited. In statistical terms, the distribution has a very long tail at the low end. This suggests that relatively few of the articles are achieving an impact in terms of influencing the thinking of other scholars. This further supports the discouraging picture of research volume by suggesting that the relatively low volume was complemented by relatively low impact.

As noted earlier, most higher education quality indices employ citation metrics in article impact calculations. Therefore, considering data that relate the frequency of

citation to geographic distribution provides another useful perspective on the state of this regional corpus of knowledge. These data amplify the concerns noted above. Articles originating in Hong Kong, for instance, accounted for 61 percent of the total citations ($n = 1,568$ of 2,553 citations). Other contributors lag far behind. Articles originating in Thailand were the next most frequently cited, accounting for 8.5 percent ($n = 218$) of citations. Singapore scholars published more papers than Thailand, but its share of citations ($n = 54$) was only 2.1 percent of the total.

Although 77 of Hong Kong's 93 papers accounted for its citations, in countries with fewer outputs, publications by one or two scholars can impact citation rates. In other words, citation rates in countries with small outputs may not prove an accurate indicator of a country's scope for knowledge building. For example, Thailand's moderately high citation impact (i.e. within this sample) was an anomaly due to a single (non-Thai) author. Thus, in these settings the citation impact metric does not serve as an accurate indicator of local capacity[13].

We should also note that a substantial number of cited papers were written, or co-authored, by scholars located outside of the region. For example, the scholars in the USA contributed to publication of the third largest proportion of cited papers (7.3 percent) and Australia the fifth (3.4 percent). The extent to which this translates into capacity building in local universities and research centers through collaboration with local scholars requires further study.

Given our interest in the related issues of university capacity and productivity, we also analyzed citation trends in terms of universities. The three most productive institutions in educational leadership and management, as measured by citation impact, were the Hong Kong Institute of Education (25 percent of total citations), Chinese University of Hong Kong (16 percent), and Hong Kong University (15 percent). Mahidol and Chiang Mai Universities in Thailand accounted for 5 and 2 percent, respectively, with Singapore's National Institute of Education contributing 1.8 percent of citations. All of the remaining institutions accounted for just 35 percent of the total citations. It is significant that over half of the citations are accounted for by three universities in Hong Kong, adding fuel to the argument that the source of regional knowledge is extremely limited, poorly distributed across societies, and concentrated within a small number of universities.

Discussion

The purpose of this paper was to examine the response of scholars to calls for more regionally grounded theory and empirical research on educational leadership and management in East Asia during the mid-1990s. We assessed the response to this challenge through an empirical examination of knowledge production in the region over a 12-year period from 2000 to 2011. Our analyses sought to "map the terrain of regional knowledge production" by analyzing trends on several criteria:

- the volume and rate of publication regional research in eight core educational leadership and management journals;
- the source of research publication by regional societies;
- the source of research publication by universities; and
- the citation impact of articles contained within this corpus.

In this concluding section we highlight limitations of our study, summarize and interpret the findings, and discuss implications of our results.

Limitations

We wish to highlight several limitations that pertain to this empirical effort to understand patterns of knowledge production in East Asia. First, our study focussed on a clearly delimited region, East Asia. Although we believe that the study may have implications for other regions of the developing world, we do not speculate on the extent of relevance.

Second, we made a conscious decision to limit our definition of the corpus of knowledge to a specific set of international refereed journals that are published in English. This ignores the potential contributions of conference papers, books, book chapters, research handbooks, domestic journals, and even other international journals. For example, the patterns of knowledge production would undoubtedly look very different if we had included papers from national language journals published in these societies.

Our rationale for not including them was based on two criteria. The first was the practical and linguistic feasibility of accessing articles from domestic journals written in national languages. The second was grounded in a broad global trend in which English has become the language of international scientific communication. While this disadvantages scholars whose native language is other than English, policy trends in the region affirm that this approach to publication is the reality for national higher education systems, universities, and faculty. The key implication arising from this limitation is that we are unable to discount the possibility that quality research is being produced in the region, but failing to reach international publication due to language. This frames a caveat for the findings from this study. Specifically, the findings are delimited by our definition of the regional knowledge base as exemplified in these internationally accessible journals whose language of communication is English.

Moreover, we acknowledge that the set of journals included in this study do not even represent the full set of “international journals” in which educational leadership scholars publish. Other well-respected general education, educational leadership, and general management journals also contain potentially relevant contributions to the regional knowledge base. Therefore, our characterization that these journals represent the regionally grounded knowledge base in our field, though justified, may overstate the case somewhat.

Another limitation concerns our decision to focus on patterns of knowledge production rather than the content of research findings. This paper neither discussed research topics nor findings. We did not attempt to characterize what has been learned from these studies conducted over the past decade. Although, we assume that the practical significance and influence of important findings would be reflected in our citation analysis, this awaits verification through a content review of the research. Therefore, our future efforts will directly examine the pattern of research findings from these studies.

Finally, we note that this study was limited to research publication in educational leadership and management journals. Therefore, we cannot assess the extent to which the findings characterize knowledge production in other disciplines, either within or outside of education. If other scholars find our approach salient, they may wish to produce similar reviews for other disciplines.

Summary and interpretation of findings

We begin by highlighting the main findings of the study:

- The overall volume of knowledge production from East Asia between 2000 and 2011 was quite low, or <6 percent of total output in the relevant journals.

This represented a mean of 15.3 articles published per year from the region during the 12-year period.

- Although there was a discernible increase in the annual rate of publication over the course of the 12-year period, we treat the increase as relatively unimportant given the small volume attained even during the latter period.
- Our map of the publication terrain across the 17 societies found a very uneven distribution with respect to contributions to the regional knowledge base. We identified Hong Kong as a “peak” with extremely high productivity at one end, and most of the societies located in a long low “valley” with few or no contributions at the other end. This means that we have little or no knowledge of policy and practice in most of the countries in the region!
- Analyses of contributions by universities mirrored the societal pattern with one useful elaboration. A substantial majority of the publications not only came from a few societies, but from a small number of universities within them.
- Citation analyses performed on the body of articles in this corpus were highly consistent with these trends, and reinforced a picture of limited impact.

These findings lead us to conclude that the vision of building a new corpus of regionally focussed knowledge in educational leadership and management has yet to be fulfilled. The pattern of results reported in this study suggests that the corpus of knowledge on educational leadership and management in East Asia is still in a very early stage of development. As such it cannot meet the needs of policymakers and practitioners. Furthermore, it appears to be making only limited contributions to scholarship more broadly. This conclusion was applicable across the entire region, with the possible exception of Hong Kong.

We noted that this study did not examine findings from this body of studies, thereby limiting our insights into specific contributions to knowledge. In order to explore this issue, albeit briefly, we revisited our coding of topics investigated by researchers. The coding had yielded 28 discrete topical areas (e.g. leadership, finance, principals, theory, higher education management, teacher effects, marketing). Given this diversity of topics, it seems unlikely that the “density” of articles within any given topic would be sufficient to gain traction on an important issue of theory, policy, or practice. That is, the pattern of knowledge production revealed in our data does not suggest the emergence of any specific longitudinal programs of research.

The distribution of knowledge production across the 17 societies comprising East Asia leads to interesting speculation concerning factors that impact knowledge production in general, and faculty publication in international research journals in particular. As noted several times in this paper, the latter represents an increasingly influential metric in the eyes of higher education policymakers and administrators. We find the results interesting in that publication volume by society does not appear to be associated either with level of national economic development or maturity of the system of higher education.

Laos, Vietnam, Indonesia, and Myanmar would rank towards the bottom on these criteria and their lack of contribution to this knowledge base reflects that lack of capacity. However, Japan and Korea are among the highest ranked on both of these criteria. Yet their scholars have made only very limited contributions to the international literature in our field. Nor does language capacity alone offer insight into the pattern of knowledge production. Although the Philippines has a moderately

mature system of higher education and high capability in English, their production of international publications is similarly low. This suggests that development of research capacity and conversion of research findings into publication requires more complex multivariate explanatory frameworks.

Implications

In our view, factors that are impeding development of a regionally grounded knowledge base include: lack of a research culture, low capacity for research, lack of research structures and coordinating mechanisms, rapid expansion of graduate programs, language barriers, uneven access to global information databases, and rewards and bias journal publication. Although space does not permit exploration of these factors in this paper, we suggest that they may hold the keys to understanding some of the patterns reported in this study and should be examined in future research.

This pattern of regional productivity by society and university is a significant finding with respect to research policy and practice. The current higher education environment in East Asia is characterized by heightened pressures for quality improvement in general and research productivity in particular (Gopinathan and Lee, 2011; Hallinger, 2011a; Kennedy, 2011; Mok and Cheung, 2011). Ministries of education as well as individual universities across the region (e.g. Hong Kong, Singapore, Malaysia, Taiwan, China) have formulated new policies that require faculty to publish annually in international refereed journals. The data reported in this study call into question the feasibility of these policies, at least in the field of educational leadership and management.

For example, we are aware of education systems (e.g. Taiwan) as well as individual universities in multiple countries (e.g. Korea, Thailand, Malaysia) that encourage or even require publication in journals in the SSCI/ISI database. Of the journals covered in this paper, only three (*EAQ*, *SESI*, *EMAL*) qualify. Thus, based on our data covering the prior decade, it would appear that very few of the region's scholars have demonstrated the capacity to meet the requirements of this new decade. This finding squares with Oplatka's (2010) assessment that leading publishing-active scholars in the field are predominantly western. Indeed, although it was not a focus of this paper, we could not help but notice that the East Asian knowledge base is infused with contributions by western academics.

The most powerful forces driving policy and practice in higher education in this region today emanate from economic competition and competition for world university rankings. For example, Malaysia has a national goal of having at least one university in the top 50 on world university rankings by 2020. This goal is being translated into specific strategies for faculty selection, evaluation and reward at the university, faculty, and department levels[14]. All of these strategies target research productivity as the key performance indicator. We assert that the trend towards raising research performance in order to achieve higher university rankings may be counterproductive in this region of the world. Indeed, we regard knowledge production for the purpose of informing policy and practice as addressing more useful, meaningful, motivating, and important societal goal.

A second implication follows from the uneven distribution of knowledge disseminated in journals about educational leadership and management in East Asia. As noted, Hong Kong represented the sole "peak" of knowledge production in the regional landscape, even though it is one of the smallest societies and employs a relatively small number of educational leadership faculty (about 25 in total).

Yet, its productivity provides a benchmark of what is possible. A case study of how Hong Kong's higher education system has developed this capacity could be useful as we search for relevant capacity development strategies for the region more generally.

Contrast Hong Kong's production of knowledge, for example, with Thailand. Thailand's higher education system has 97 graduate programs in educational leadership and management housing about 500 educational administration faculty members. Yet, Thailand contributed only seven papers to this corpus; of these only two came from faculty in educational leadership departments[15]. This clearly indicates a lack of capacity and leaves administrative practice in its education system an unmapped portion of the regional terrain. Even economically developed countries such as Japan and South Korea appeared as "sink holes" in the knowledge base. It is astonishing that in our global society educational leadership practice in such an important part of the world remains largely outside of our scope of view.

An unexpected but interesting corollary finding in this study was the wide variation in publication of papers from East Asia in the eight educational leadership and management journals. Recent conversations with editors of these journals surfaced a perception that it is often difficult to obtain high-quality articles from the region. However, the "quality" explanation simply does not square with the data.

Some of the higher ranked journals do appear to find high-quality papers from the region. Although space constraints limited our ability to conduct follow-up analyses for this paper, we hypothesize that the journals place varying degree of priority on international publication. We frame this as a social responsibility issue whereby journals must take more proactive steps to source quality articles from beyond mainstream English speaking societies. Otherwise, the journals will become increasingly irrelevant to the consumers of knowledge in a global society.

The purpose of this paper was to lay the empirical groundwork necessary for formulating a strategy for advancing knowledge development in educational leadership and management in East Asia. Given the pattern of research performance portrayed in this paper, we assert that strategies grounded in cooperation and collaboration will produce more collective benefits than competition. We suggest that effective strategies for accelerating the development of a regional knowledge base should be grounded in capacity building among the region's scholars. This would make local knowledge from the region's societies accessible to each other as well as to international scholars.

Capacity building strategies should include both instrumental activities as well as those that can shape more productive research cultures in universities over time. This has implications for faculty selection, evaluation and reward, course load assignments, inter-institutional research collaboration, faculty mentoring, and provision of advanced training to faculty at all ranks. Perhaps the key constraint that impacts institutions in the region, with respect to this leverage point for improvement, is the lack of senior faculty capable of modeling expectations, sharing knowledge, and mentoring junior faculty. This implies the need for regional universities intent on the development of research productivity to reach out beyond their local area for faculty recruitment as well as high-impact exchange schemes. It also suggests the importance of forming regional and international alliances that can connect local faculty members with productive researchers on a continuous basis.

One of the limitations noted above concerned our decision not to explore the literature in educational leadership and management contained within national journals and graduate theses. We suggest that an important step forward will be

facilitated when local scholars conduct systematic reviews of these literatures, and publish those results in international journals. Although we are not overly optimistic about the overall quality of this knowledge base, this is a timely, necessary, and feasible strategy will contribute towards providing initial lines of latitude and longitude on our map of regional research in educational leadership and management.

Research coordination refers to structural strategies that create incentives, offer funding, and encourage high-quality research. Several societies in the region have national research organizations (e.g. Taiwan, China, Thailand, Hong Kong, Singapore) designed for this purpose. However, we note that education as a field of study often receives a low proportion of funding. Moreover, there are no organizations in East Asia that either coordinate or fund research across countries within the region. Similarly, there are no funded regional research and development centers designed to coordinate or support research in educational leadership and management in the region.

Space limitations do not permit us to go into greater detail on these strategies for fostering quality research and development in this region. However, this was not the purpose of the current study. Instead, this effort was designed to provide an empirical foundation for the development of these strategies. That effort will occupy our attention in a future paper.

Notes

1. For example, in Malaysia alone, graduate programs in education have accounted for more than 5,000 new Master's degrees in educational leadership and management since the mid-1990s. We note that the tradition followed by most universities in East Asian countries requires graduate students to conduct a research thesis. This growth in student numbers has been accompanied by a similar pattern of growth in the number of university faculty members employed to teach, supervise student theses, and produce research in these programs. Taken together, these growth trends would suggest increased capacity for conducting research, and consequently an increasing volume of knowledge production in the region over the past decade.
2. This project will examine knowledge production in all of Asia from multiple perspectives. This paper is the first empirical paper to be written from this project. Other papers will focus on different regions and analyze different types of data about the knowledge base.
3. It should be noted that this project was focussed on the USA.
4. Note that we characterized these as "eight core international research journals" rather than "the eight core international research journals [...]". Although any selection of "the core journals" is disputable, we assert that this set is a reasonably comprehensive yet focussed list of educational leadership journals.
5. It should be noted that unlike in the USA where most doctoral dissertations are stored in digital format by UMI and made available through Proquest, in Asia such systems are not yet in place. Thus, doctoral dissertations are generally stored in print format at single universities. This makes them largely inaccessible for the purposes of international research.
6. The h-index was proposed by J.E. Hirsch in his paper "An index to quantify an individual's scientific research output", arXiv:physics/0508025 v5, September 29, 2005. It is defined as follows: a scientist has index h if h of his/her N_p papers have at least h citations each, and the other $(N_p - h)$ papers have no more than h citations each.
7. This is based on analysis using the Publish or Perish tool on May 19, 2012.
8. We considered two other well-known journals: *Leading and Managing* published in Australia and the *Journal of School Leadership* published in the USA. However, the former

had a much lower h-index (15), and the latter failed to meet our criterion of having a mission of including international research.

9. Thus, it should be noted that the actual search was conducted during January and February of 2012.
10. The ASEAN, AFTA, and SEAMEO each include 90 percent of the 17 societies as either full or associate members. This reflects the substantial cooperation in social and economic development activities that characterizes this group of societies.
11. It should be noted that, given the diverse foci of our research questions, we decided to include all studies that either investigated about educational leadership and management in these societies or were written about educational issues more generally but produced by scholars operating within the region.
12. We should note that the above analyses included the institutions of all co-authors. In some cases co-authors came from more than one institution in the region, or in others they may have collaborated with colleagues from institutions from outside of the region. For the purposes of this paper we were not interested in the role of international collaborators or their institutions. Therefore, they were not included in our institutional count, though they were included in the total of 185 papers. In total, 15 papers were contributed by scholars from outside the region for which there was not a regional co-author.
13. We do not mean to suggest that citations from expat academics should not be taken into account. Indeed, Hong Kong's impressive citation impact is partly but not largely due to its employment of expat scholars. However, in the case of Thailand, the citation total was completely skewed due to the influence of a single expat scholar.
14. It is beyond the scope of this paper to go into detail on this issue. However, conversations with deans and two vice chancellors from different Malaysian universities confirm the accuracy of this assertion.
15. The others came from faculty in business and management schools, or from scholars outside of Thailand.

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