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Review of research publications on educational leadership and management in Asia: a comparative analysis of three regions

Philip Hallinger* and Darren A. Bryant

Hong Kong Institute of Education

The purpose of this paper is to examine the extent to which calls over the past 15 years for increased empirical research on educational leadership and management in Asia have yielded increased knowledge production. The study analyses trends in research about and/or from Asia published in eight core educational leadership journals between 2000 and 2011. We provide an overall picture of the volume and impact of knowledge production in the region, as well as insights into change in the rate of knowledge production from the region over time. The study employs a comparative lens, specifically analysing differences in knowledge production capacity and impact across West, South and East Asia. These comparative analyses extend further to understanding variations in the contributions of different societies and universities across Asia. Although the research identified a disappointing level of overall publication in the region, interesting patterns were revealed with respect to the distribution of publications both across and within the three regions of Asia. Taken together the results suggest that progress in developing an ‘Asian knowledge base’ in this field remains stunted, and that regional capacity to produce empirical knowledge continues to be limited to selected societies and universities.

Keywords: *Asia; research and development; knowledge base; leadership; management; administration*

Introduction

We argue that globalisation tends to ignore societal culture, the latter tending to act as a mediator or filter to the spread of ideas and practices across the globe, resulting in their adoption, adaptation or even rejection. Thus in a globalising world, the recognition of societal culture and cross-cultural similarities and differences becomes more,

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not less, important. Consequently, the inclusion of societal culture as a factor in investigations covering such themes as the curriculum, teaching and learning, leadership and school-based management is seen as an imperative for the future development of the field. (Dimmock, 2000, p. 2)

A decade ago, Dimmock (2000) asserted that it was an imperative for scholars to take account of cultural differences when conducting research related to policy and practice in schools. Other researchers studying educational leadership and change in Asia had already echoed a similar sentiment as they witnessed the often dysfunctional results of ‘policy borrowing’ (Ball, 1998) from the West (e.g., Bajunid, 1996; Cheng, 1995; Hallinger, 1995; Hallinger & Leithwood, 1996). However, in the absence of a critical mass of empirical research generated from within the region, policymakers were left with no choice other than to rely on findings from research conducted in Western contexts. The Western ‘knowledge base’ in educational leadership and management (e.g., Donmoyer, Imber, & Scheurich, 1995) represented the only formal knowledge that was widely accessible. Consequently, over the past decade, it became increasingly common for both policymakers and scholars to issue calls for the development of a truly international knowledge base in educational leadership and management, one that was grounded in regional and national contexts of schooling (Belchetz & Leithwood, 2007; Bush, 2002; Day & Leithwood, 2007; Dimmock & Walker, 2005; Hallinger, 2011b; Hallinger, Walker, & Bajunid, 2005; MacBeath & Cheng, 2008; Riley, 2000; Walker & Dimmock, 2002).

This paper examines the extent to which these calls for empirical research in Asia yielded a substantial increase in knowledge production. The study analyses trends in the publication of articles *about* and/or *from* Asia in eight core educational leadership journals over the past decade. This report addresses the following research questions:

- (1) To what extent has the volume of publication of articles about educational leadership and management in Asia changed since 2000 in the field’s core journals?
- (2) How does the pattern of authorship of articles about educational leadership and management in these journals vary with respect to the major regions and societies that comprise Asia?
- (3) How does the pattern of authorship of articles about educational leadership and management in these journals vary with respect to scholars and universities within Asia?
- (4) To what extent has research on educational leadership and management in Asia published over the past decade had an impact on scholarship in the field, and how has the source of impact varied with respect to societies, universities and scholars?

The main contribution of this research lies in providing an empirically-based picture of recent changes in the volume and impact of knowledge production in Asia.

By employing a comparative lens, the study is also able to highlight variations in the distribution of scholarship as it has emerged from different societies and universities across Asia. These trends in knowledge production should be of interest for both scholars and policymakers as Asia's universities seek to increase their research capacity and output in the coming decade (Gooch, 2012; Gopinathan & Lee, 2011; Hallinger, 2011b; Hallinger & Bryant, 2013a, 2013b; Hien, 2010; Knight, 1997; Kehm & Stansaker, 2009; Mok & Cheung, 2011; Ng & Tan, 2010).

Method

The method employed in this study was a descriptive, quantitative form of systematic review of research (Gough, 2007; Gough, Oliver, & Thomas, 2012; Hallinger, 2012, 2013). We identified a clearly delimited body of literature on educational leadership and management in Asia, employed a systematic search within that literature, downloaded relevant publications, extracted information from the articles, analysed trends across the studies and synthesised the results (Cooper & Hedges, 2009; Gough, 2007; Light & Pillemer, 1984). This allowed us to analyse patterns of change in the international publication of research on educational leadership and management in Asia over the past decade.

Data collection

The review strategy employed in this study entailed a systematic search of eight 'core journals' in educational leadership and management (Gough, 2007; Hallinger, 2012, 2013).¹ The journals were *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), *Leadership and Policy in Schools* (LPS) and *School Leadership and Management* (SLAM). While no list of journals can be considered definitive, this subset was well suited to our goal of understanding characteristics of the formal knowledge base generated about educational leadership and management in Asia. Each of the journals espouses an internationally-oriented mission of publishing research, employs blind review procedures, publishes in English, and has achieved a desired standard of quality and influence as measured by citation impact (Hallinger & Bryant, 2013b; Leithwood & Jantzi, 2005).²

In order to establish the latter criterion, we used the *Publish or Perish* tool (Harzing, 2007) to calculate the current *h-index* for these, as well as other potentially relevant journals. The *h-index* statistic aims to measure the cumulative impact of a researcher's or journal's output by analysing the number of citations received (Harzing, 2007).³ The *h-index* for these journals ranged from a low of 23 for *Leadership and Policy in Schools*, to a high of 94 for *Educational Administration Quarterly*. The mean *h-index* of the journals was 45.⁴ This approach to journal selection was designed to ensure that the journals, as a group, would provide a

broad representation of moderately to highly selective, internationally relevant articles sharing theoretical and empirical knowledge on educational leadership and management.⁵

At the same time, however, we should note what this selective search strategy (Hallinger, 2012, 2013) did *not* incorporate. This mode search did *not* include articles on education management published in either business or public sector management journals. This decision was based on findings from prior reviews of the literature which found that scholars in educational leadership and management tend *not* to publish in general management journals with great frequency (e.g., Bridges, 1982; Campbell, 1979; Hass, Wilson, Cobb, Hyle, & Kearney, 2007; Murphy, Vriesenga, & Storey, 2007; Richardson & McLeod, 2009).

Moreover, this search strategy did *not* capture research articles published in national language journals and/or stored in 'local' repositories (e.g., doctoral dissertations in university libraries).⁶ Although understanding the nature and scope of knowledge located in these sources represents a high priority objective, the task of searching national language journals and repositories located in university libraries in a large number of Asian countries was deemed impractical for this study. This limitation has potentially important implications for the interpretation of our findings, which we address in the concluding section of the paper. Nonetheless, we assert that focusing on the internationally published literature alone offers useful, if incomplete, perspective on knowledge production from and about educational leadership and management in Asia. Findings from an analysis of the internationally published literature are relevant both to sketching an initial map of the terrain of regional knowledge in our field (Hallinger & Bryant, 2013b; Hallinger et al., 2005; Walker & Dimmock, 2002) and to understanding issues concerned with the research capacity of the region's universities (Gopinathan & Lee, 2011; Hallinger, 2011b, 2013a; Hien, 2010; Knight, 1997; Mok & Cheung, 2011; Ng & Tan, 2010).

We narrowed our search of the eight journals to a 12-year period from 2000 through to the end of 2011. Our rationale for choosing this particular period was both historical and pragmatic. Globally, the development of educational leadership and management as a field of scholarly inquiry emerged in the United States during the early 1960s (e.g., see Briner & Campbell, 1964; Campbell & Faber, 1961; Donmoyer et al., 1995; Erickson, 1967). However, commentary on the need for more research on educational leadership and management in Asia only began to appear in the published literature during the mid-1990s (e.g., Bajunid, 1996; Cheng, 1995; Hallinger, 1995; Hallinger & Leithwood, 1996). It was during this period that scholars began to highlight the paucity of regionally-grounded, empirical research and theorising. Given the time lag between launching and publishing research, it would have taken several years for new research stimulated by these mid-1990s publications to appear in journals. Thus, we located our search for relevant articles from 2000 up to the present.

The third criterion was to search specifically for articles that focused on educational leadership and management issues in Asia. For the purposes of this study we

defined 'Asia' as a geographic region bounded by Japan on the East and Israel on the West. To facilitate sub-regional analyses, we used a broad geo-political definition that resulted in four groups of countries: 1) *West Asia* comprised of countries from Turkey south to the Arabian peninsula and east to Iran; 2) Central Asia comprised of republics that lay roughly between Russia and Afghanistan; 3) *South Asia*, inclusive of Afghanistan, Nepal, Bhutan, and the Indian Subcontinent; and 4) *East Asia*, inclusive of Greater China, the Koreas and Japan, and South East Asia.

Our search found no studies either from or about educational leadership and management in the Central Asian societies. We found publications related to nine societies in West Asia (Iran, Israel, Jordan, Kuwait, Lebanon, Qatar, Saudi Arabia, Turkey and the United Arab Emirates), three societies in South Asia (India, Nepal and Pakistan), and 13 societies in East Asia (Brunei, China, Hong Kong, Indonesia, Japan, Macau, Malaysia, Papua New Guinea, The Philippines, Singapore, South Korea, Taiwan and Thailand). Thus, we focus on the latter three regions in the subsequent analyses. We are cognisant, however, that there are vast socio-economic, cultural and political differences among countries within Asia. Moreover, these differences will carry over into the maturity of their higher education systems and their levels of research productivity (e.g., see Gibbons, Limoges, Nowotny, Schwartzman, Scott, & Trow, 1994; Hien, 2010; van Raan, 1997). We will come back to this issue when we interpret the findings of the study.

Rather than using a search engine to identify studies, we employed a more labour-intensive but reliable search method. We searched the websites for each of the eight educational leadership and management journals identified above. We went year by year through each volume and issue of each journal. We read the abstracts of all articles published in these journals in order to identify articles about and/or from Asia.⁷ When an article was deemed to fit this basic search criterion, 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 in Asia in these eight core journals over this 12-year period.

Next, we scanned each article with the goal of extracting information relevant to a variety of questions related to the production of knowledge about educational leadership and management in Asia. The nature of data extracted from the studies was informed by prior reviews of the literature conducted in other parts of the world (e.g., Bridges, 1982; Campbell, 1979; Hallinger, 2011a; Leithwood & Jantzi, 2005; Murphy *et al.*, 2007). Data extracted from the articles included the author(s), title of the article, journal, regional location of the authors and data source, authors' universities, location of the universities, nature of the report (i.e., empirical, theoretical, review), research method (i.e., qualitative, quantitative, mixed method), presence of funding, and topic addressed. These data were then entered into a spreadsheet. It should be noted, however, that due to space limitations only selected data are incorporated into the analysis reported in this paper. That is, the scope of issues addressed by the data extracted from the articles was too large to report in a single report.

Where appropriate, these 'data' were also coded (Gough, 2007). Coding the data facilitated the quantitative analysis of publication trends across studies. For example, each country and university was given a code number so that we could more easily compare trends quantitatively. Similarly, research methods, nature of the research, funding, and topics were assigned codes. The code numbers were entered into the excel spreadsheet in adjacent columns.

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 each row describing the articles in the spreadsheet. These included, for example, the *h-index* of each specific article, the annual citation rate of each 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 Asia. This represented the corpus of knowledge that we employed in order to address the questions posed at the outset of this paper.

Data analysis

The primary goal of this exploratory review of research (Hallinger, 2012, 2013) was to describe trends in Asian research on educational leadership and management conducted between 2000 and 2012. Given this purpose, the methods of data analysis employed in this study were limited to the use of descriptive statistics and graphing of trends. We analysed the data with an eye towards examining the mean level of knowledge production across the sub-regions and individual societies that comprise Asia, changes in publication patterns over time, and finally the distribution of knowledge production in educational leadership and management across Asia.

Results

The presentation of results is organised around the research foci presented in the opening section of this article. These 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 and university of origin, and the pattern of citation impact.

Volume of research production in Asia

Our first approach to examining research production involved the calculation of regional articles as a proportion of the total number of articles published in the eight core journals. Of the grand total of 2,610 articles, 346 were either written by authors based in Asian societies, or were about education in these societies. Thus, the Asian literature in educational leadership and management represented 13.26% of all articles published in these journals. This yielded a mean annual publication rate of 3.6 papers per journal per year.

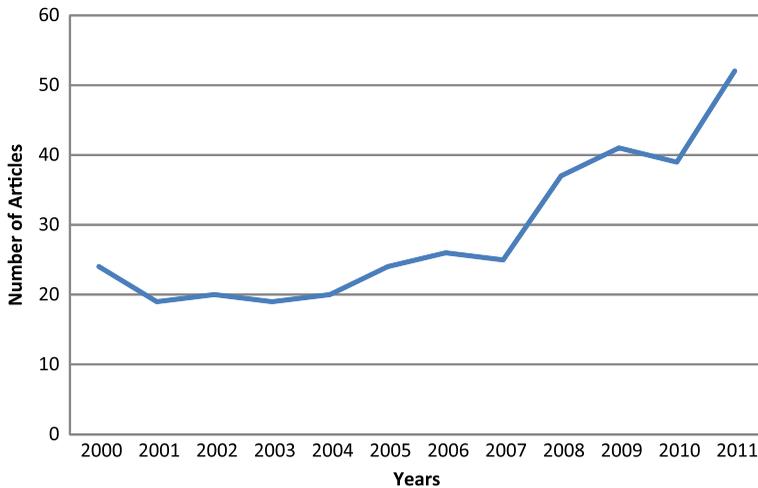


Figure 1. Volume of Asian publications in eight Educational Leadership and Management journals, 2000–2011

Analysis of change in the rate of Asian publications over the 12-year period showed an increase in publications over the last third of this time period (see Figure 1). For most of the first eight years, the total annual publication rate held close to the 12-year mean of 28.8 publications per year (mode 24, median 24.5). However, this rate more than doubled from 25 papers in 2007 to 52 in 2011. The 12-year low was in 2001 when only 19 Asia-related papers were published. Thus, we can characterise the overall Asian publication volume as low, but showing evidence of a steady increase over the past five years. Although the rate of increase is encouraging, it is not yet yielding a level of knowledge production sufficient to fill the gaps in our understanding of educational leadership and management in the region.

Although it was not the focus of our research question, we could not help but notice that there was unexpectedly large variation in the volume of publication of Asian literature among the different journals. *IJEM* and *JEA* published by far the largest number of Asia-focused articles ($n=136$ and $n=70$, respectively). These are the only two journals whose publication rate exceeded the mean of 43.25 articles per year. At the lower end of the spectrum, *LPS*, *EAQ* and *SESI* published 10, 16 and 17 papers respectively. An alternative perspective on the distribution of articles among the eight journals is offered by examining the number of Asian articles as a percentage of total articles published in each journal over the 12-year period. Using this metric, the rank order of the journals was: *IJEM* (42.77%), *JEA* (14.03%), *SLAM* (9.66%), *EMAL* (8.93), *IJLE* (8.86), *SESI* (6.69), *LPS* (5.95) and *EAQ* (5.14). We conclude that *IJEM* has demonstrated the most active publication of Asian research, and two North American journals the least (i.e., *EAQ* and *LPS*).⁸

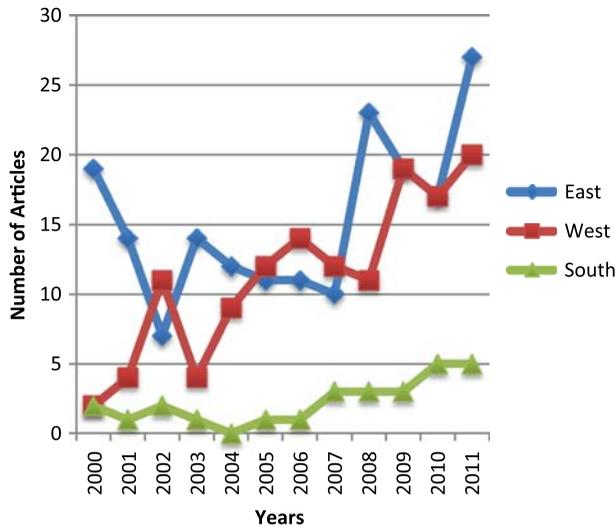


Figure 2. Total number of articles by region of Asia and year of publication

Sub-regional comparisons

Next, we refine these initial conclusions by drilling down into the data to examine the extent to which these findings were consistent across three geographic sub-regions of Asia and their composite societies. These analyses offer insight into the heterogeneity of knowledge production in Asia. This information is potentially relevant for policymakers engaged in capacity development at the university, national and regional levels (e.g., see Hallinger, 2011b; Hallinger & Bryant, 2013a).

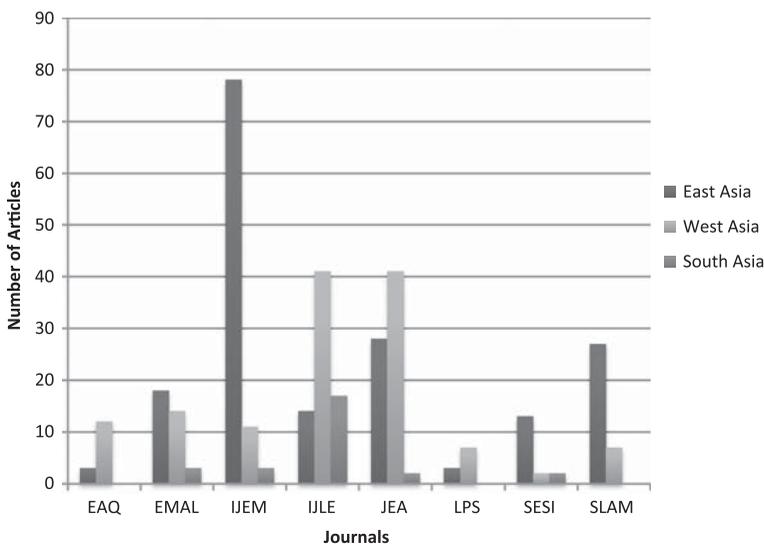


Figure 3. Number of articles by journal and Asian sub-region

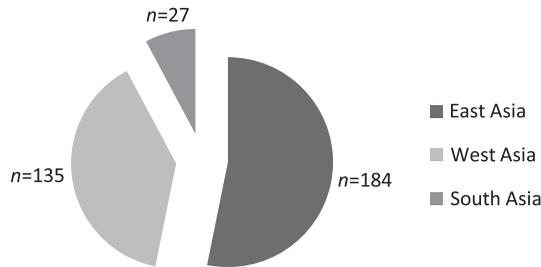


Figure 4. Total production of articles by region

With 184 articles, publications from East Asia comprised the largest portion (53%) of the total Asian corpus; this was followed by West Asia (39%) and South Asia (8%). Figure 2 shows pattern of change in regional output over the 12-year period. The trajectories suggest that the overall increase in Asian publication observed over the last five years is based entirely on increases from East and West Asia where there has been a longer-term pattern of growth in research output. South Asian publications have remained relatively low and stable, contributing relatively little to the overall growth.

Somewhat unexpectedly we also noted clear associations in terms of the regional distribution of publications across the eight journals (see Figure 3). About 85% of IJEM's noticeably large proportion of Asian publications comes from East Asia. JEA and SLAM have published similar numbers (28 and 27) of manuscripts from East Asia. The plurality (57%) of IJLE and JEA's Asian articles are from West Asia ($n=41$). Only IJLE has published more than three papers from South Asia ($n=17$). These findings suggest that the knowledge base for each region tends to be built around one or two of the core journals. Only four journals have published more than 20 manuscripts from any of the three sub-regions, and only JEA has published more than 20 articles from two different sub-regions (East and West Asia).

The data on regional comparisons elaborates usefully on the broad finding of low but increasing volume of research publication on educational leadership and management in Asia. It suggests that the publication landscape within Asia is anything but 'flat'. Instead we find a bi-modal distribution among the three regions. More specifically, the terrain is comprised of 'peaks' of research productivity in East and West Asia, straddling a low valley in South Asia (see Figure 4). We re-emphasise that the 'peaks' only appeared high in relation to the low output from South Asia. In an absolute sense, the peaks were not indicators of high research output. Further corroboration and elaboration of these findings was achieved by exploring societal variation in sources of research publication across Asia.

Source of publications by societies

We began by examining the average publication level across the 25 societies that contributed to the Asian knowledge base. The mean number of publications

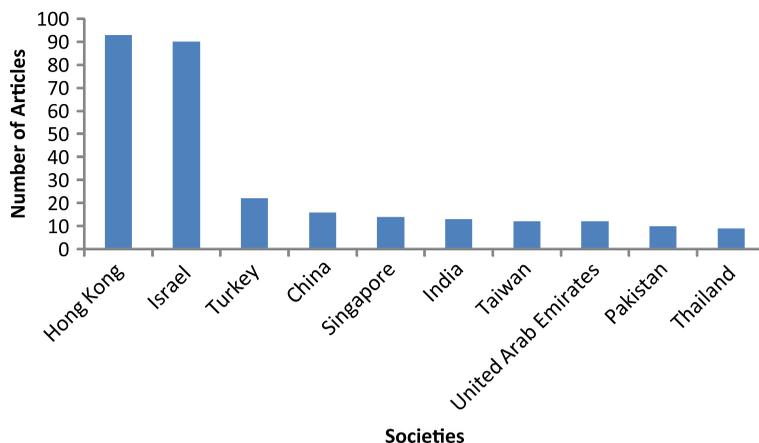


Figure 5. Number of articles produced from the most productive societies

produced *per country* over the 12-year period was 9.2 articles.⁹ This was less than one paper (0.77) per year per society. When viewing the Asian landscape from this broad perspective, it further reinforces the finding of low research productivity from Asia.

However, this picture of the ‘average’ level of research publication offers little insight into how the ‘density’ of research capacity and empirical knowledge *about* educational leadership and management varies across different societies in Asia. An even distribution would imply that there is some (even if small) capacity throughout Asia’s societies. A lopsided distribution would suggest that research capacity and empirically-informed knowledge are centred in specific societies. Indeed, the sub-regional comparisons also hinted at the likelihood of an uneven distribution of production capacity. Figure 5 displays the top ten centres of published research by society of origin.

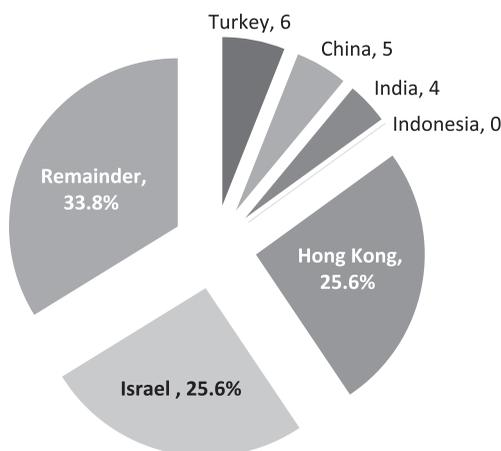


Figure 6. Comparison of knowledge production by Israel and Hong Kong compared with four of Asia’s largest societies

Table 1. Distribution of institutions by number of articles

Number of papers	$n \geq 5$	$n=4$	$n=3$	$n=2$	$n=1$
Institutions in Asia	10	2	4	18	85
Institutions outside Asia	0	1	3	2	20

This figure, and its implications, are striking. Regional research capacity appears to be concentrated in two societies: Hong Kong and Israel. Together, two of the smallest societies in the entire continent accounted for more than half of Asia's entire research output in educational leadership and management. Geographically located on the East–West poles of the continent, we note that the research published from these two societies focused mostly—albeit not entirely—on educational leadership and management as practised within their respective political boundaries.

We contrast the research productivity of Israel and Hong Kong with four of the largest countries in Asia by landmass and population: Turkey, China, India and Indonesia. As displayed in Figure 6, these four countries share a much smaller proportion of the rather small Asian publication 'pie' than Israel and Hong Kong. Similarly, we wish to highlight the anomalies of Korea and Japan, economically advanced countries with highly developed systems of higher education. Neither of these countries has made significant contributions to the international knowledge base in educational leadership and management. This contrasts with research that has found relatively strong research output from these two nations in the natural sciences (Hien, 2010). It may be that language, historical traditions, and the relative emphasis and resources devoted to the study of educational leadership and management can explain the pattern of results. However, that is beyond the scope of the present descriptive study.

Table 2. Research productivity by institution

Rank	University	N
1	HK Institute of Education	40
2	Chinese University of HK	35
3	Ben Gurion University	22
3	Hebrew University	22
5	University of Haifa	21
6	HKU	19
7	Bar Ilan University	17
8	National Institute of Education - Nanyang Technological University	16
8	Tel Aviv University	16
10	United Arab Emirates Uni	5
	Sum Total	213

Source of publication by universities

Our interest in understanding the sources of regional knowledge production led to further analyses focusing on the role of specific universities. Looking at the locations of universities and their contributions to the knowledge base can deepen our understanding of research capacity in the region. Among universities located within Asia, only ten institutions contributed five or more articles to this corpus. A large majority of universities contributed only a single article over the entire 12-year period. Noticeably absent from this calculation are the many Asian universities that contributed none at all.

Of the ten universities that contributed five or more papers, all but two are located in either Hong Kong or Israel. The exceptions are the National Institute of Education in Singapore and the United Arab Emirates University (see Table 2). To find a South Asian institution, one must look to the 15th ranked University of Education, Pakistan, with three papers published during the 12 years. This distribution mirrors the sub-regional landscape discussed earlier.

It is notable that only ten universities are responsible for over half (61.6%) of all Asian articles in this database of educational leadership and management publications. In East Asia, three Hong Kong institutions (HKIEd, CUHK, HKU) and NIE in Singapore were the most prolific centres of research production. The next most productive institutions were Mahidol University in Thailand (5), Beijing Normal University (4) and Shenyang Normal University China (3). In West Asia, the top five knowledge base producers were all located in Israel (see Table 2). These were followed by marginal producers such as the UAE University (5), Ankara University (4) the British University in Dubai (3), Hashemite University in Jordan (3), and the University of Haifa (3).

These comparisons of societal and university data for East and West Asia reprise similar themes. Only a small number of societies in each sub-region are active sustained producers of knowledge in this field. Similarly, a small cluster of productive universities are producing knowledge within these societies.

It is difficult to make any meaningful comparison when examining South Asia. Here only India and Pakistan have produced more than one paper ($n=13$ and 10 respectively). Of 22 contributing institutions in South Asia, only two produced more than two papers. Thus, we found no active centres actively disseminating knowledge about educational leadership and management in South Asia.

Impact of publications

The volume of published research serves as a viable, but limited indicator of research capacity and strength of the knowledge base. However, this metric treats all research output as equal in quality, even though it is commonly accepted that the quality and impact of research can vary widely (Hien, 2010; Smith & Caulley, 1981; van Raan, 1997). We considered using journal ranking as a proxy measure

for research quality, but this would introduce too many problems related to consensus of our rankings (Amin & Mabe, 2007). Therefore, we decided to use citation impact associated with the articles comprising the corpus to develop additional insights into the impact of knowledge generated from and about educational leadership and management in Asia.

Citations are frequently used as indicators of the influence or impact of research publications (Bridges, 1982; Hallinger, 2011a; Smith & Caulley, 1981; van Raan, 1997). Relative frequency of article citation is one type of indicator of the influence of a particular research study on the larger knowledge base. In this section, we look first at Asia-wide trends in citation and then compare citation impact across the three regions of Asia. The intention is to develop our understanding of the extent of influence of research being disseminated from the various knowledge centres in Asia. In these analyses, we also comment on the extent to which highly cited articles are being cited within or outside of this corpus. This offers still another perspective on the knowledge accumulation.

Citation impact across societies

Analysis of the Asia-wide corpus revealed a total of 3,718 citations for all articles over all 12 years. This was an average of 310 citations per year with a mean of 10.75 citations per article. This finding, however, obscures the fact that 64 articles have yet to be cited at all. Using a total of the 282 articles that were actually cited yields a mean total of 13.18 citations per article.

There was, however, wide variation in the number of citations per article. For example, one paper on transformational leadership in Hong Kong accounted for 343 citations, or 9.2% of all citations. Eight papers were cited 50 or more times, 47 papers were cited from 20 to 49 times, 56 were cited from 10 to 19 times, and 171 articles between 0 and 9 times.

Using the metric of total citations per article does, however, advantage older publications. Therefore, we also considered the annual rate of citations using $n=10$ citations per year as a benchmark for influential papers in the field. Only four papers, two from Hong Kong and two from Thailand, met this standard. To place this figure in perspective there was a total of 84 papers in the eight journals published during this time period with an annual citation rate greater than or equal to ten citations per year. Thus, it appears that on the whole, not only is the volume of regional research low, but so is its impact.

In order to assess the contributions of specific knowledge centres in Asia, we can also examine the sources of citations. These findings mirror the results related to the sources of articles. Enumerating the top ten sources of citations, Hong Kong tops the tally with a total of 1,568 citations, followed by Israel (777), Thailand (218), Turkey (110), Malaysia (101), UAE (92) India (79), Taiwan (70) and Mainland China (62). Furthermore, these data demonstrate that only a few centres are contributing in impactful ways to the knowledge base. Considering the number of citations as percentages of the grand total reveals that Hong Kong's

contributions account for 42% of total citations and Israel 21%. Although the two centres have published approximately the same number of publications, the difference in number of citations probably reflects that much of the Israeli research outputs have been published more recently than Hong Kong's. Thus we note that the topography of citation impact is quite similar to that of publication volume, with large peaks in East and West Asia followed by quick drop offs.

Citation impact across universities

We also analysed citation trends in terms of institutional contributions to outputs. Within East Asia, the universities that accounted for the largest number of citations were located in Hong Kong (Hong Kong Institute of Education, 25%; Chinese University of Hong Kong, 16.7%; Hong Kong University, 15.3%), Thailand (Mahidol University, 5.7%, Chiang Mai University, 2.5%), Singapore (National Institute of Education, 1.9%), and City University of Hong Kong (1.5%). All remaining East Asian universities had far less than 1.5% of the total citations.

In West Asia, most of Israel's 77% of regional citations are distributed among seven universities, each in the top ten by percentage of total citations in the sub-region: Ben-Gurion, 22.%; Haifa, 15.1%; Bar Ilan, 13%; Hebrew, 12.5%; Tel-Aviv, 5.3%; Israel Institute for Technology, 3.4%, and Open University of Israel, 2.4%. The only non-Israeli universities in the top 10 are from the UAE (the fifth ranked UAE University, 5.3% and the eighth ranked College of Technology in Education, 2.6%). The next three positions are held by Turkish universities with 2.3, 2.0 and 1.7 percent of citations. All remaining universities had less than 1.5% of citations. Given the small number of South Asian publications, it is not meaningful to analyse number of citations across institutions.

Conclusion

This paper sought to describe and evaluate recent trends in knowledge production on educational leadership and management in Asia. We reviewed a corpus comprised of articles published in eight international journals between 2000 and 2011. Analyses focused on the overall volume of research publication, changes in publication trends over time, and citation impact of the articles. We further examined the distribution of contributions from three sub-regions of Asia. Finally, we analysed the distribution of knowledge production emerging from different societies and institutions of higher education across Asia. In this concluding section of the paper, we discuss limitations of our approach to this review, offer possible interpretations of key findings, and suggest implications for policy and research.

Limitations

We wish to highlight several limitations of the quantitative approach to reviewing the literature that we employed in this review. First, an implicit limitation follows from our decision to focus on *patterns of knowledge production* rather than the *con-*

tent of research findings embedded in this corpus of articles. The analyses presented in this paper neither examined topics studied by scholars nor specific research findings. We did not attempt to characterise *what has been learned* from studies conducted in Asia over the past decade. Instead, we assumed that a pre-requisite for building a regional knowledge base is the publication of a corpus of relevant publications. Although we assume that the influence of important findings should be reflected in the citation analyses presented in the paper, we cannot verify this. Moreover, although a descriptive analysis of publication trends served the purpose of *this* report, it is not intended to replace a *substantive review* of the research.

Second, we made a conscious decision to limit our definition of the corpus of knowledge to a specific set of international refereed journals. This ignores the potential contributions of conference papers, books, book chapters, domestic journals, and even articles published in other international journals. For example, the patterns of knowledge production *might* look very different if we had included papers authored for national language journals published in Asian societies. We will return to this limitation in our discussion of implications of the review.

Our rationale for not including these sources was based on two criteria. The first was the logistical and linguistic feasibility of accessing articles from domestic journals and graduate theses written in national languages. The second was grounded in a 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 affirm that international publication is increasingly expected from academics in universities globally (Dill, 2009; Gooch, 2012; Hallinger, 2011b; Hazelkorn, 2008; Hien, 2010; Kehm & Stansaker, 2009) as well as in Asia (Gopinathan & Lee, 2011; Hien, 2010; Knight, 1997; Mok & Cheung, 2011; Ng & Tan, 2010). Nonetheless, we are unable to discount the possibility that quality research is being produced in the region, but failing to reach international publication venues due to inexperience with the publication process, English language competency or other barriers (Hallinger, 2011b; Hallinger & Bryant, 2013a; Hien, 2010; Walker, Hu, & Qian, 2012). This frames a caveat for the findings of this study; specifically, the findings are delimited by our definition of the regional knowledge base as exemplified in these international refereed journals whose language of communication is English.

Moreover, we acknowledge that the particular set of journals included in this study does not represent the full set of 'international journals' that publish research relevant to educational leadership and management. Other well respected education, educational leadership, and general management journals also contain potentially relevant contributions to the regional knowledge base. Therefore, we emphasise that this study only examined a portion of the 'regionally-grounded knowledge base'.

Summary and interpretation of findings

The overall volume of Asian research on educational leadership and management that appeared in these international journals was low, but increasing steadily in

recent years. The low volume is highly disproportionate to the region's massive population and rapidly growing higher education sector (Cheng, 2010; Hallinger & Bryant, 2013a; Mok & Cheung, 2011). Analyses of regional and societal variation in contributions to the Asian knowledge base revealed striking patterns that elaborate on this general conclusion. Sub-regional comparisons found a bi-modal distribution, with East and West Asia contributing the bulk of the literature on educational leadership and management in Asia. More detailed analyses identified two small outlier societies that have made unusually large contributions to the region's knowledge base: Israel and Hong Kong. These analyses further indicate that increases in regional knowledge production observed over the past five years do not represent a broadly distributed improvement in research capacity.

Our analysis of the distribution of knowledge production across Asia also highlighted the extent of major gaps in the knowledge landscape of educational leadership and management in Asia. For example, the findings indicate that we know far more about educational leadership and management in Hong Kong and Israel than we do about any or all of the much larger societies in the region (e.g., China, India, Indonesia). Moreover, the results further suggest that the higher education systems in these two societies have developed substantially greater research capacity in the field of educational leadership and management.

This conclusion was supported by additional analyses that focused on the contributions of specific institutions of higher education. Not surprisingly, the results mirrored the trend of societal contributions. However, it was interesting to note that within both Israel and Hong Kong, knowledge production emerged from clusters of universities rather than a single dominant institution. Thus, we suggest that Hong Kong and Israel represent key regional knowledge centres in the study of educational leadership and management in Asia.

Analyses of the impact of this corpus of knowledge reinforced our earlier finding that the scope and depth of the Asian knowledge base appear to be highly constrained. Overall citation impact of the corpus was relatively low, and most of the impact was accounted for by a relatively small number of articles. The incidence of high or even moderate impact articles was rather low when compared with trends identified in the broader literature. These findings enhanced the picture of limited regional research capacity that had emerged from analyses of publication volume and distribution. Only 11 universities in two societies accounted for the majority of publications and citations for the entire corpus.

Overall these findings affirm that formal knowledge about educational leadership and management in Asia remains, at best, primitive. Even baseline descriptions of management structures, norms and practices are currently lacking. Thus, the data provide empirical support for prior assertions that the 'global knowledge base' in educational leadership and management is highly distorted (Bajunid, 1996; Cheng, 1995; Dimmock & Walker, 2005; Hallinger, 1995, 2011b; Hallinger & Leithwood, 1996; Hallinger *et al.* 2005; Walker & Dimmock, 2002). These findings further suggest that the region's policymakers and school leaders are largely 'flying blind' when it comes to making decisions that are informed by regional data on

educational leadership and management. While we do not mean to suggest that the Western knowledge base is irrelevant in Asia, it is limited by the extent to which theories and practices align with the cultural norms and system structures of these societies (Belchetz & Leithwood, 2007; Cheng, 1995; Dimmock & Walker, 2005; Goldring, Huff, May, & Camburn, 2008; Hallinger *et al.*, 2005). Moreover, as suggested by Dimmock (2000) at the outset of this article, empirically informed analysis of how administrative policies and practices align with regional cultures and education structures remains a largely unaddressed 'imperative' throughout all of Asia.

Surprisingly, the results of this study of research production in educational leadership and management in Asia yielded a different pattern of findings from the natural sciences. For example, in a study of research productivity in East Asia, Hien (2010) found that Singapore, Taiwan, Hong Kong, South Korea and Japan all represented centres of substantial knowledge production in the natural sciences. The main contrasting findings with the results of the current study lie in South Korea and Japan, which lagged far behind in the production of international research in educational leadership and management. This could be due to a variety of historical factors related to the development of educational leadership and management as a field of study in these societies, English language competency in the discipline of education, or other reasons. This is a subject for future investigation.

Implications

The results yield a number of quite specific implications for research and policy. Over the past decade, economists have linked a nation's capacity to educate its citizens with the rate of socio-economic development (Carnoy, 2003; Levin, 2009; Psacharopoulos & Patrinos, 2002). This has led to increased government investments in the region's systems of K-12 and higher education. Indeed, in no region of the world have higher education systems expanded more rapidly over the past two decades than Asia (Altbach, 2004; Altbach & Umakoshi, 2004; Cheng, 2010; Gooch, 2012; Mok & Cheung, 2010). Yet, our results suggest that capacity development in Asia's higher education sector remains highly uneven, if the literature produced in educational leadership and management is any indication. This calls for verification of these findings through analysis of the research literature in other disciplines. To the extent that the findings are supported more widely, it suggests a need for strategic collaborative action on the part of higher education systems, universities, foundations, regional organisations, publishers and scholars. Only systemic action will enable more rapid progress on this front.

On its face, the volume of research on educational leadership and management in Asia is not only small, but also highly disproportionate to the large population and rapidly growing higher education sector in the region. We view the highly uneven distribution of knowledge production across Asia as a somewhat unexpected and fascinating finding. The bi-modal distribution across regions, and fur-

ther identification of Israel and Hong Kong as centres of knowledge production, lead to interesting speculation as we search for capacity-building strategies. The finding points towards existing models of strategic research and development employed by states and nations whereby they concentrate resources in particular knowledge centres (e.g., Silicon Valley in the USA, the Multimedia Super Corridor in Malaysia). Although we can envision many political and cultural obstacles to intra-regional cooperation, in an ideal world it would be possible to utilise the existing capacity in these knowledge centres for the collective benefit.

At a minimum, the outlier status of Israel and Hong Kong with respect to knowledge production implies the possibility of learning from their experience. What strategies have they employed in order to develop such dramatically higher R & D capacity in this field than their neighbours? What lessons could be learned to benefit other regional societies? It seems to us that system and university leaders might learn more from examining the evolution of these higher education systems than from copying the systems and processes of MIT, Harvard and Oxford where cultural, financial, infrastructure and human resources are so different.

The results also revealed a large variation in levels of publication of Asian articles across the eight journals included in our study. We suggest that the observed level of variation cannot be explained adequately by reference to quality of manuscripts or English language capability of contributing scholars (Walker & Qian, 2012). High quality articles were published in several of the most selective journals.

Thus, we suggest that levels of Asian publications may be influenced by the priority and commitment ascribed by editors and editorial boards to international publication. We further suggest that this represents an important social justice issue that all international journals must face squarely in this era of globalisation. How is it possible for the major outlets of global knowledge to ignore issues emerging from such geographically large and socio-economically important region of the world? The policy implications of this finding are also significant in that Asian universities increasingly require their scholars to publish in 'international refereed journals'. Although this issue was not an intended focus of analysis in this study, it certainly warrants more detailed analysis and exploration.

It was noted above that this study did *not* examine the content and findings of this Asian literature on educational leadership and management. Nonetheless, this study *did* identify a 'knowledge base' in the form of a set of research articles. Review of the content of this knowledge base should be a high priority for regional scholars. Reviewers would examine trends of topics studied as well as findings across studies. Findings should be analysed in terms of results for specific societies as well as synthesised across the region.

Finally, one of the limitations noted above concerned our decision to exclude 'local language' publications from domestic journals and graduate theses from Asia. We suggest that high quality reviews of the local literatures across societies in the region represent a high priority in understanding more of the contours in the regional landscape of knowledge production. These literature reviews should be

written in the national language as well as in English in order to maximise rapid access among scholars and practitioners, locally, regionally and internationally.

In conclusion, this effort to describe and evaluate trends in knowledge production in Asia opened our eyes to the scope of challenges that remain ahead. The past two decades first witnessed calls from scholars and practitioners in Asia for the development of a regionally-grounded knowledge base. More recently, we have observed the rapid expansion of higher education systems and rising system-level expectations for knowledge production in the region. Yet, the results of this study suggest that progress in developing a regional knowledge base remains slow, and that the capacity to meet these challenges in the future remains thinly distributed. These findings should be cause for concern and reflection among the region's system and university leaders.

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Notes

1. Note that we characterised 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 focused list of educational leadership journals.
2. It should be noted that Leithwood and Jantzi's (2005) review of research on transformational school leadership employed essentially the same set of journals as the basis for their data collection (i.e., seven of the same journals out of eight).
3. 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 29 Sep 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.
4. This is based on analysis using the *Publish or Perish* tool on 19 May 2012.
5. We considered two other well known journals: *Leading and Managing* and *Journal of School Leadership*. 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.
6. 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.
7. 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.
8. In fact, *IJEM* is also currently published in the USA. However, its mission is more explicitly international than *EAQ* or *LPS*. It is interesting to note that *IJLE*, which is also published in the USA and espouses an explicitly international mission, has published such a low percentage of articles from Asia.

9. It should be emphasised that this 'average number of articles per society' does not even include all societies within Asia. Societies such as Laos, Cambodia, Myanmar etc. that did not produce any publications were not even included in the calculation. Thus, 'real average' is even lower.

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