Science Mapping Research on Educational Leadership and Management in Turkey:

A Bibliometric Review of International Publications

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Abstract

Over the past two decades, there have been significant efforts to investigate knowledge production in the field of educational leadership and management (EDLM) in non-Western contexts. Consistent with this effort, the present paper aims to identify the contribution of Turkish scholars to the international EDLM literature. More specifically, the review examined the volume, journals, authors, types of papers, most frequently used keywords, citation impact, and co-citation networks of papers associated with Turkish EDLM scholars. Bibliometric methods were employed to examine 313 papers published by Turkish scholars in internationally recognized journals. The results show that while Turkish EDLM scholars have predominantly published in Turkey-based journals, there has also been a substantial increase in the number of papers published in international journals in recent years. This literature is largely empirical with topical foci concentrated on issues surrounding school leadership and organizational behavior. Author co-citation analysis identified three main Schools of Thought in the Turkish literature: Leadership for Learning, Leading Teachers, Administrative Behavior and Effects in Turkey. Several recommendations are made in order to further develop EDLM field in both Turkey and other emerging countries.

Key words: Systematic review, administration, educational leadership, management, Turkey

Introduction

Educational leadership and management (EDLM) scholars have expressed concerns that the current knowledge in the field is based primarily on research produced in English-speaking Western societies (Bajunid 1996; Clarke and O'Donoghue 2017; Oplatka 2004). Consequently, there has been an increase in the number of research reviews focusing on EDLM in non-Western contexts in recent years (e.g., Flessa et al. 2018; Ng et al. 2015; Oplatka 2004; Pan, Nyeu, and Chen 2015; Walker and Qian 2015). These 'national and regional reviews of research in EDLM' are, for the first time, consolidating research trends located outside of Anglo-American societies and contributing towards the development a global knowledge base in EDLM (Author In press).

Located at the crossroads between East and West, Turkey has historically occupied a pivotal place in terms of knowledge exchange. Indeed, in the field of educational administration, Hallinger and Chen (2015) identified it as second only to Israel in terms of contributions to EDLM research in West Asia. While there have been several prior reviews of EDLM research in Turkey (e.g., Aydın and Uysal 2014; Balcı and Apaydın 2009; Turan et al. 2014), none have examined the full knowledge base consisting of articles published in Turkish and international journals. Nor have prior reviews employed the most recent bibliometric tools used in mapping knowledge production. In order to address these gaps, the present study systematically reviewed papers published by Turkish scholars in core international EDLM journals as well as journals indexed by the Web of Science (WoS), also referred to as the Social Sciences Citation Index (SSCI).

This review addressed the following research questions:

1. How has the Turkish EDLM literature evolved over time with respect to publication volume, journal outlets, and types of papers published?

2. What are patterns of authorship and author citation impact have emerged in the Turkish EDLM literature?

3. What have been the most influential articles published in the Turkish EDLM literature?

4. What are the most frequently studied topics in Turkish EDLM research?

The review employed bibliometric analysis (Zupic and Čater, 2015) in order to document and synthesize relevant features of the Turkish literature in EDLM. The authors developed a database comprised of 313 journal articles authored by Turkish scholars, published between 1994 and 2018. The review seeks to provide a bibliometric profile of EDLM research in Turkey and identify how scholars in this developing nation are contributing to the global knowledge base.

Method

This review employed 'bibliometric methods' to examine meta-data and content associated with a body of EDLM research published by Turkish scholars. Bibliometric reviews use quantitative methods to analyze clearly defined bodies of knowledge (White and McCain 1998; Zupic and Čater 2015). In this section, we describe the methods used to construct our review database, extract information from individual documents, and analyze data drawn from the database.

Identification of Sources

There have already been several recent reviews of the EDLM knowledge base in Turkey based on Turkish language publications, such as national journals, conference proceedings, and thesis (Aydın and Uysal 2014; Balcı and Apaydın 2009; Turan et al. 2014; Yılmaz 2018). Therefore, we decided to focus on papers published in internationally recognized journals. However, due to the multi-faceted goals of this review and existing constraints in bibliometric databases and software, we used an unorthodox but systematic strategy in our search for documents, as detailed below.

Our search was guided by the 'Preferred Reporting Items for Systematic Reviews and Meta-Analyses' (Moher et al. 2009), which provides clear guidelines for communicating the procedures used in identifying sources for a review (see Figure 1). In constructing our search strategy, we began with the choice of where to seek for sources. Scholars frequently rely on repositories of documents such as Google Scholar, Scopus and the WoS when conducting systematic reviews of research. In Turkey, the Council of Higher Education (CoHE) has emphasized scholarly publication in WoS-indexed journals, thereby heightening its relevance for this review. At the same time, however, the WoS has been criticized for its lack of coverage of both management (Mongeon and Paul-Hus 2016) and EDLM journals (Author In press). For this reason, prior reviews of EDLM research have often employed hybrid search strategies that also include specialized EDLM journals that are not indexed in the WoS (e.g., Hallinger 2018a; Oplatka and Arar 2017). In this review, we followed a two-stage 'hybrid' strategy.

In stage one, we chose eight journals frequently used in EDLM reviews and previously labeled as 'core international EDLM journals' (e.g., Cherkowski, Currie, and Hilton 2012; Hallinger 2018c; Hallinger and Bryant 2013; Oplatka and Arar 2017). These included the *Journal of Educational Administration (JEA); International Journal of Leadership in Education (IJLE)*; *International Journal of Educational Management (IJEM); Leadership and Policy in Schools (LPS); School Leadership and Management (SLAM), School Effectiveness and School Improvement (SESI)*; *Educational Administration Quarterly (EAQ); Educational Management, Administration and Leadership (EMAL)*. These journals all specialize in EDLM, publish in English, and employ double-blind review procedures.

We reviewed the titles and abstracts of every volume of all eight journals in order to identify relevant articles. From a content perspective, all of the articles published in these journals

were deemed topically relevant. Thus, the search focused on identifying articles authored or co-authored by Turkish scholars. This search yielded relevant 49 articles that had been published as of November 2018. Upon completion of the stage-one search, we moved to a search conducted in the Web of Science.

The most common search strategy used in the identification of sources within an index such as the Web of Science is a keyword search. The goal in our keyword search was to identify as many relevant articles as possible on the subject of educational leadership and management in K-12 and higher education authored by Turkish scholars. We used the following keyword string in the Web of Science without any time limit.

> TI=(administration OR management OR leader* OR policy OR governance OR reform OR finance OR supervision OR inspection OR principal* OR administrator* OR manager* OR supervisor* OR inspector* OR "school change" OR "school effect*" OR "school improvement" OR organization* OR superintendent* OR district) AND CU=Turkey (Refined by: Web of Science Categories: (Education & Educational Research) And Document Types: (Article OR Review) Timespan: All Years. Indexes: SSCI.)

This search yielded 421 (352 English-language and 69 Turkish-language) articles. Next we determined the eligibility of the 421 articles for our review. We wished to keep all articles related to management, organizational behavior, leadership, educational supervision, and system level educational policies/reforms either at K-12 or higher education level in our dataset. Exclusion criteria focused on articles that were primarily focused on another discipline, such as science education, early childhood education, ICT education, school counseling, and teacher education.

Two researchers scanned the titles and abstracts of the 421 articles in order to identify their relevance. Comparison of their results yielded a 95% agreement on the inclusion/exclusion of articles. Articles on which there was disagreement were reviewed by a third researcher in or-

der to arrive at a final decision. These steps resulted in the exclusion of 140 articles. In addition, eight articles from other countries that had been incorrectly classified by the WoS were also excluded.

This left a database consisting of 273 eligible EDLM publications (217 English-language and 56 Turkish-language) drawn from the Web of Science and 49 articles identified in the core international EDLM journals. It should also be noted that nine articles appeared in both searches due to the overlap of three journals (SESI, EAQ, and EMAL) across the two databases. After eliminating this duplication, there were 313 articles in the final database.

Insert Figure 1 Here

Data Extraction and Analysis

This review employed both descriptive and bibliometric analyses. The descriptive analyses were conducted in Excel and the bibliometric analyses in VOSviewer. Due to the limitations of VOSviewer, we were unable to combine all of the articles into a single database for bibliometric analyses. Therefore, we worked with two separate databases.

The first database was comprised of meta-data associated with the 273 articles identified in the WoS and downloaded into an Excel file. Data in this Excel file included title, journal, author affiliation, date, citations for each of the 273 articles etc. This datafile was subsequently uploaded into the bibliometric software (VOSviewer) and used for conducting bibliometric analysis and visualization mapping (VOS). The bibliometric analyses used in this study included co-authorship, citation, co-citation, and co-word analyses. Citation analyses calculated the number of times an author/document in the reviewer's dataset has been cited in the Web of Science. Co-citation analysis aims to identify the 'similarity' of two items by measuring the frequency of which they are cited together in the reference lists of documents in the reviewer's dataset (Small,

1973). Co-citation analysis can be applied to authors, journals, or documents. Co-authorship analysis identifies the collaboration between authors, countries and organizations. Keyword co-occurrence analysis, or co-word analysis, examines the frequency with which words 'co-occur' in the titles, keywords and indexes of documents included in the review dataset. Co-word analysis offers insight into the most studied topics and concepts (Zupic and Čater 2015).

Next these data were copied into a new editable excel file and combined with data from the 49 articles identified in the supplementary search. After eliminating duplications, data related to all articles (n=313) drawn from the two different databases were rationalized and coded in order to prepare for descriptive analyses conducted in Excel.

Results

In this section of the paper we present the findings related to each of the research questions posed at the outset.

Size, Evolution, and Composition of the Turkish Knowledge Base in EDLM

Among the 313 articles in our database, 214 were published in Turkey-based journals and 99 in international journals. The first two articles in our database were published by Şimşek (Şimşek 1997; Şimşek and Louis 1994). As indicated in Figure 2, 96% of the Turkish literature in our database has been published since 2006. In terms of journal distribution, until recently the majority of Turkish EDLM scholarship featured in Turkey-based journals. However, Turkey's contribution to international EDLM literature has increased over the past 10 years.

Insert Figure 2 Here

Next, we investigated the distribution of journals featuring Turkish publications (see Figure 3). Four Turkey-based journals (i.e., Education and Science (EAS), Educational Sciences: Theory and Practice (ESTP), Eurasian Journal of Educational Research (EJER), Hacettepe Uni-

versity Journal of Education (HUJE)) have published the most EDLM articles from Turkey. In addition, four of the eight core EDLM journals, EMAL, IJEM, IJLE, and JEA, included six or more articles from Turkey.

Insert Figure 3 Here

We also investigated the distribution of the Turkish literature from the perspective of 'types of papers'. We employed a four-category rubric, which divided the literature by conceptual, commentary, empirical and research review articles (Bridges 1982; Hallinger 2018a, 2018c). Articles were categorized as empirical if the author collected and analyzed primary data or systematically analyzed a secondary data set. An article was classified as a review of research if the author framed the paper as the systematic synthesis of a body of literature. Conceptual papers were defined as articles that proposed a conceptual or theoretical model of an EDLM construct or process. Commentary was treated as a broad category encompassing prescriptive, critical and overview papers.

Insert Figure 4 Here

According to Figure 4, the published journal literature on EDLM from Turkey is almost entirely empirical (93%). Among the 313 articles, only 22 were classified as non-empirical. Three articles were classified as commentary (Akşit 2007; Gür, Çelik, and Özoğlu 2012; Nir, Kondakçı, and Emil 2018) and three as conceptual (Balcı 2011; Beycioğlu 2012; Sağnak 2012). Among the 16 reviews of research 10 were meta-analyses (e.g., Altınkurt, Yılmaz, and Karaman 2015; Kalkan 2017; Kış and Konan 2014) and six bibliometric reviews (e.g., Aydın and Uysal, 2011; Aypay et. al. 2010; Gümüş, et. al. 2018).

Influential Authors and Intellectual Structure of the Turkish EDLM Literature

In order to identify the most influential authors, we first investigated authorship patterns in Turkish EDLM literature using VOS. Figure 5 shows the collaboration networks among authors based on publications in SSCI journals. According to the analysis, 273 SSCI-indexed EDLM articles from Turkey were written by 323 different authors. Among those, 12 scholars have published more than five articles, while 79 scholars published at least two articles.

There are several networks established around the most productive authors (the size of the nodes represent productivity), as seen in Figure 5. This map suggests that collaboration positively impact scholarly productivity. A low level of international collaboration is also evident, with only a few scholars working outside of Turkey located in co-authorship map.

Insert Figure 5 Here

Next we employed co-citation analyses of authors based on our WoS database (n=273). It should be emphasized that our author co-citation analysis not only included Turkish scholars, but also 'international scholars' whose names appeared in the reference lists of the 273 articles comprising our WoS-sourced dataset. Size of the nodes on a co-citation map reflects the frequency of a given author's 'co-citations'. The VOSviewer software locates authors on the co-citation map according to the frequency with which they have been 'co-cited' together. Scholars who share a common intellectual tradition or topical focus tend to be closer together and may be included in the same colored 'cluster'.

Insert Figure 6 Here

Scholars have used author co-citation analysis as means of revealing the 'intellectual structure' or key intellectual traditions that make up a knowledge (White and McCain, 1998).

Drawing upon an author co-citation network comprised of 6,697 authors, we used a threshold of at least 15 citations and set VOSviewer to display 82 authors on the co-citation map (see Figure 6). The map also reveals three large, discrete, but densely inter-linked clusters or 'Schools of Thought' within the Turkish EDLM literature (White and McCain 1998; Zupic and Cater 2015). The representation and location of Turkish and international scholars within and across these clusters suggests that the Turkish EDLM scholarship is well integrated with the global literature. The location of Bass, an international leadership scholar, at the center of map suggests his theoretical influence on Turkish EDLM scholarship.

As noted above, the clustering of authors also indicates Schools of Thought comprised of authors who share commonalities in lines of empirical inquiry and/or theoretical or topical emphases. The blue cluster can be termed the 'Leadership for Learning' School. This School is comprised primarily of international EDLM scholars such as P. Hallinger, K. Leithwood, A. Harris, R. Heck, J. Spillane, T. Bush, M. Fullan, etc., and two Turkish scholars M. Özdemir and N. Can. Turkish articles that suggest the theme of this School include Can (2006, 2009), Özdemir (2012), and Özdemir and Demircioğlu (2015).

The green cluster is the 'Leading Teachers' School. The knowledge base represented in this School comes from international management scholars (e.g., D. Organ, J. Greenberg, P. Podsakoff), international EDLM scholars (e.g., W. Hoy, M. Tschanen-Moran) and Turkish EDLM scholars (e.g., K. Yılmaz, S. Polat, Y. Cerit, E. Yılmaz, B. Buluç, and A. Aydın). Exemplars of this school include Aydın, Sarıer, and Uysal (2013), Buluç and Güneş (2014), Cerit (2009, 2010), Polat and Celep (2008), Yılmaz (2008), and Yılmaz and Taşdan (2009).

The red cluster is both the largest and the most densely populated of the three clusters. Although this cluster encompasses a variety of topics, its dominant theme suggests that is be la-

belled the 'the School of Administrative Behavior and Effects in Turkey'. This School is comprised of several generations of Turkish EDLM scholars: first generation scholars (e.g., Z. Bursalıoğlu, H. Taymaz, M. Aydın), second generation scholars (e.g., A. Balcı, A. Gümüşeli, C. Celep, H. Şimşek, M. Korkmaz, M. Şişman, S. Özdemir, V. Çelik), and third generation scholars (e.g., A. Aypay, A. Bakioğlu, E. Karadağ, E. Karip, H. Memduhoğlu, İ. Aydın, M. Çelikten, N. Cemaloğlu, R. Balay, S. Turan). Articles that exemplify the foci contained within this School of Thought include Aydın and Karaman-Kepenekçi (2008), Balcı (1988), Çelikten (2001), Cemaloğlu (2011), Korkmaz (2007), Özdemir (2002), Turan and Bektaş (2013), and Şişman (2002).

Influential Documents in the Turkish EDLM Literature

For the third research question we further analyzed the most influential documents on Turkish EDLM research using a citation analysis. Citation analysis was conducted on the full sample of 313 studies using Google Scholar citations. The full dataset of 313 articles yielded 5,234 citations, with a mean citation of 16.7 citations per paper (see Table 1). This suggests a moderate citation impact for this literature. For example, as shown in Table 2, only three articles achieved 200+ citations (Akşit 2007; Cerit 2009; Yılmaz and Taştan 2009) and five articles 100 to 200 citations (Aydın, Sarıer, and Uysal 2013; Çalık et. al. 2012; Çelikten 2005; Sağnak 2010; Şimşek and Louis 1994).

When citation impact was disaggregated by the type of journal, we found that the total citations for papers published in Turkey-based (2,676) and international journals were similar (2,558). However, citations per documents were twice as high for papers published in the international journals (see Table 1). This suggests that Turkish scholars seeking to increase the im-

pact of their research may wish to seek publication in international journals, which appeal to a larger audience.

Insert Table 1 Here

Further analysis of the 20 most highly-cited papers found that more than half were published during the last eight years, suggesting the increasing strength of Turkish EDLM research. Sixteen of the top 20 top-cited articles were empirical again reinforcing the empirical nature of this literature. Moreover, as indicated in Table 2, the three most highly-cited articles in this literature were published in international journals.

Insert Table 2 Here

Topical Foci of the Turkish EDLM Literature

Scholars have employed 'keyword co-occurrence analysis' (co-word analysis) as another mean of revealing topical themes within in a field (Zupic and Čater 2015). In this review, we applied co-word to the articles in our WoS data (n=273). We set our search to All Keywords with a threshold of at least 3 co-occurrences and displayed 121 keywords on the co-word map (see Figure 7). Interpretation of the co-word map follows a similar approach as described above for the co-citation map.

The co-word map revealed four clusters. The red cluster is focused on principals, teachers, student achievement and school improvement. The green cluster embodies a 'relational' focus on organizational behaviors and attitudes (e.g., commitment, job satisfaction, trust, citizenship). A smaller blue cluster, focusing on school leadership, performance, and behavior, is situat-

ed between these two larger clusters. The yellow cluster is dominated by school culture and higher education.

The most frequently co-occurring keywords in this literature were School Management, Teachers, Principal, Commitment, Satisfaction, School Leadership, Performance, Achievement, and Workplace. The location of the triad of School Leadership, Workplace and Performance in the map suggests their centrality as organizing concepts in the Turkish literature. Together with the three-cluster structure of the map, they cohere into an image of a literature that is primarily concerned with how school leadership shapes the workplace to improve performance.

Insert Figure 7 Here

Discussion

Rapid growth in EDLM research produced in non-Western societies (Author In press) has encouraged researchers to conduct systematic reviews of EDLM literature with a national or regional focus in recent years (e.g., Hallinger 2018a, 2018c; Ng et al. 2015; Oplatka and Arar 2017; Pan et al. 2015; Walker and Qian 2015). With the aim of contributing to efforts to the development of a more diverse knowledge base, this paper documented and analyzed features of the Turkish literature in educational leadership and management. In this section, we highlight limitations of the review, interpret the main findings of the review, and discuss several implications.

Limitations

The extent of any review's contribution begins with the scope of the database of sources. While this review analyzed a substantial database of 313 journal articles, it did not include

books, graduate theses, or conference proceedings. Moreover, our search strategy did not include all possible journal articles. Therefore, we cannot confirm the extent to which the results of this review are representative of the full Turkish EDLM literature.

A second limitation accrued from our dual aims of including relevant articles covered in the Web of Science as well as in core international EDLM journals. More specifically, limited coverage of the Web of Science and data requirements of our analysis software led the authors to develop and work with a dual database structure. We believe this was defensible in light of our goals and sought to be explicit throughout our presentation of results concerning which database was being analyzed. Nonetheless, it meant that we were unable to include all 313 articles in every analysis.

Finally, this review employed a bibliometric or science mapping approach to review the literature (McCain 1990; Zupic and Cater 2015). This review methodology allowed us to work with a large dataset and develop a broad picture of the field's evolution in Turkey. However, it neither incorporated a low inference inspection of the studies nor consideration of their substantive findings. With this limitation in mind, we note that the review's findings offer a useful complement to the findings of studies that have examined the Turkish literature form other perspectives (e.g., Aydın and Uysal 2014; Balcı and Apaydın 2009; Aypay et al. 2010; Gümüş et al. 2018; Turan et al. 2014).

Interpretation of the Findings

This review found that the Turkish EDLM literature contained is quite large for a developing society, growing rapidly, and gaining increased exposure in international journals. Our findings related to the size of the Turkish knowledge base in EDLM elaborate on findings reported in prior reviews of EDLM scholarship in Asia (e.g., Author In press; Hallinger and Bryant

2013; Hallinger and Chen 2015). Moreover, if we benchmark Turkey's growth trend against data presented in reviews of research from the Arab world (Hallinger and Hammad 2019; Oplatka and Arar 2017), Latin America (Castillo and Hallinger 2018; Flessa et al. 2018), and Africa (Hallinger 2018c), the results are remarkably similar. Finally, we believe that these growth trends affirm the potential of Turkish scholars for making substantive contributions to the global EDLM knowledge base in years to come.

Author analysis expanded on these findings by revealing that more than 300 Turkish authors contributed to the journal articles included in our database. Indeed, 79 Turkish scholars had published multiple articles, and 12 scholars had authored five or more articles in the SSCI-indexed journals. These patterns suggest a surprisingly high level of scholarly capacity for a society located outside of traditional Anglo-American-European centers of EDLM scholarship (Author, In press-a). Indeed, our findings concerning both the breadth of productive scholars and scope of international publications from Turkey compare favorably with other 'non-Western' nations located in Asia (Hallinger and Bryant, 2013; Hallinger and Hammad, 2019; Oplatka and Arar, 2017), Africa (Author, In press-b; Hallinger, 2018a), and Latin America (Castillo and Hallinger, 2018; Flessa et al. 2018).

Based on these the findings we conclude that EDLM research capacity in Turkey is reasonably strong and quite diversified. The dispersion of research capacity across such a large group of scholars is one indicator of a healthy research culture in a scholarly discipline. This bodes well for future EDLM knowledge production in Turkey since it does not depend on a few highly productive scholars.

Although the overall impact of the Turkish EDLM literature was modest, this comes as no surprise given its recent vintage. For example, citation analyses found that more than half of

the most highly-cited articles published had been during the last eight years. Therefore, if the current trend of increasing publication of Turkish scholarship in international journals continues, we expect the impact of the literature to increase commensurately.

Notably, this pattern of modest citation impact among Turkish EDLM scholars mirrors a trend reported in Hallinger's (2018a) review of research on EDLM in South Africa where the Department of Higher Education and Training (DHET) also privileged publication in Web of Science journals. Hallinger concluded that the South African DHET's pressure for scholars to publish in SSCI journals had actually contributed to the low international visibility and citation impact of South Africa's EDLM scholarship. This was due to the fact that SSCI omits many of the core international EDLM journals such as SLAM, JEA, IJLE, IJEM, and until recently EM-AL. This pattern has only begun to change since South Africa's DHET decided to include Scopus-indexed journals in its incentive scheme in 2016. Scopus includes all of the core international EDLM journals in its index.

However, the authors note that Turkey and South Africa are not the only nations where Higher Education Authorities base their incentive schemes on publication in ISI/SSCI journals (e.g., Chile, Iran, Thailand etc.). This 'default' standard may make sense in the natural sciences where most of the important journals are covered in the Web of Science. However, several empirical comparisons have demonstrated that Scopus offers superior coverage of social science, management and education journals without sacrificing quality (Author In press; Falagas et al. 2008; Mongeon and Paul-Hus 2016).

Thus, as happened in South Africa, there is a recent international policy trend towards broadening 'the standard' for academic publication beyond journals indexed in the Web of Science. Similarly, incentives for publishing in journals covered by several international educational

indexes (e.g., Australian Education Index, ERIC, etc.,) have been increased in Turkey during the last several years. Since these indexes also include most of the international EDLM journals, this trend might encourage Turkish EDLM scholars in their efforts to contribute to the global EDLM literature and maximize the impact of their scholarship.

Content analysis of the Turkish EDLM literature found that 93% of the published articles consisted of empirical studies, thereby indicating an imbalance in types of scholarship. Conceptual articles were conspicuous by their absence, accounting for only 1% of the 313 articles. This trend is placed in further perspective if we benchmark the Turkish proportion of empirical publications against the EDLM literatures in Asia (65%), Africa (77%) and Latin America (78%).[i]

The paucity of conceptual articles suggests that Turkish scholars 'may' be overly reliant on Western conceptual models in their empirical research. We make this assertion because it is common for scholars to ground their empirical research in previously published conceptual papers (Author, In press-c). Nonetheless, it was not within the scope of this review to assess either the extent to which empirical studies from Turkey have employed 'imported' or indigenous conceptual models. This suggests an important focus for a future review of the Turkish literature using review methods such as content analysis. More fundamentally, such a review would examine the extent to which Turkish scholars are contextualizing their research in a way that reveals the impact of Turkish institutional structures and social culture on leadership practice (Clarke and O'Donoghue 2017; Hallinger 2018b).

Author co-citation analysis identified three Schools of Thought within the Turkish EDLM literature: Leadership for Learning, Leading Teachers, Administrative Behavior and Effects in Turkey. These Schools resonate with global trends identified in other bibliometric reviews of EDLM research (e.g., Author In press). Although Turkish scholars were represented in

all three Schools of Thought, they were most highly concentrated in the third cluster. This cluster can be considered the 'intellectual home' of Turkish EDLM scholarship and seems worthy of low inference review using research synthesis. Such a review would also be able to examine the extent to which Turkish scholarship has surfaced indigenous practices and perspectives.

Citation analysis also identified the most influential documents authored by Turkish scholars, several of which had gained more than 100 citations. In addition, document citation analyses highlighted in Table 3 reinforce our conclusions about the impact of journal choice on citation impact. More specifically, despite the relatively low number of articles published in core international EDLM journals (i.e., JEA, IJEM, IJLE), these articles were conspicuous in the list of top-cited articles.

Co-word analysis highlighted topical trends of interest among Turkish scholars. Moreover, since we established that Turkish scholarship in EDLM is largely of recent vintage, we can conclude that the reported trends remain relevant today. The co-word analysis identified School Leadership, Workplace and Performance as a key set of organizing concepts in the Turkish literature. Other frequently co-occurring keywords that elaborate on this triadic relationship included teachers, principals, organizational commitment, organizational citizenship, job satisfaction, trust, and student achievement. These keywords, based on content analysis of article titles and abstracts, complement the perspective offered by author co-citation analysis, which identified several Schools of Thought in the Turkish literature. Taken together these analyses portray a Turkish EDLM literature that is concerned with how school leaders organize and motivate teachers to achieve results for student learning.

Implications

While supporting the conclusion that Turkish scholars should publish more of their research in international journals, we are also aware of the constraints that come with this suggestion. For instance, language can be a considerable obstacle for some Turkish scholars as well as scholars from other non-English speaking countries to publish in international journals (Hallinger and Hammad 2019; Karadağ 2018; Mertkan et al. 2016; Oplatka and Arar 2017). Therefore, we suggest higher education institutions in non-English speaking countries provide necessary support (translation, editing, etc.) for scholars who have potential to publish in high impact international journals.

It is, however, also the case that publication is a two-way street. While some of the core EDLM journals have started to publish more articles from non-Western contexts in recent years, others have lagged in this respect (Author In press). Of course, each journal's editors have their own perception of key stakeholders. However, we suggest that during this period of transition of EDLM into a global field of study, editors and editorial boards need to revisit their journal's mission. More specifically, they must re-examine and define the extent to which they want their journal to be 'international' in scope. For example, a stronger international orientation in a journal's mission could result in adding more non-Western and developing society scholars to their editorial boards, sourcing more reviews from such societies, creating new sections and theme issues for papers less represented contexts, and providing language support services to authors.

Another issue arises from the Turkish emphasis on empirical publications. Since our analyses do not include detailed content analyses, we cannot assess the quality of theoretical/conceptual bases of the existing empirical publications. It is possible that some of these publications consist of strong conceptual discussions. However, the dearth of conceptual papers poses a considerable challenge to producing the type of knowledge that better fits the policy and

practice related to EDLM in local context (Clarke and O'Donoghue 2017; Hallinger 2018; Mertkan et al. 2016). Thus, we recommend that Turkish scholars initiate a scholarly agenda that focuses more explicitly on how the national culture and institutional context shape school leadership and management practices. In addition, future review studies can specifically focus on the conceptual and methodological bases of current EDLM research in order to provide more in depth knowledge on Turkish EDLM field.

Finally, our results yield broader implications in terms of international research productivity in the field of EDLM for both Turkey and other non-Western societies. Although the quality and quantity of international publications from non-Western societies is growing in the recent years (Author In press; Esen, Bellibaş and Gümüş 2018; Hallinger and Bryant 2013; Hallinger 2018; Oplatka and Arar 2017), there remains an urgent need for 'strategic capacity development' in these societies.

We assert that 'strategic capacity development' implies planned efforts that link scholars in developing societies with human and financial resources beyond their borders. For example, we noticed that relatively few of the Turkish studies in our database had received funding (see also Örücü and Şimşek 2011). Similarly, educational leadership departments in Turkey often lack senior scholars with sufficient experience in international publication to mentor their junior colleagues. This human factor is another major impediment to progress in improving research quality and successful international publication. Experience tells us that this is quite common across developing societies.

These challenges to the broader development of scholarship in educational leadership and management can be solved once they are acknowledged. Indeed, most signs pointing towards the

development of a global knowledge base in our field are positive. Thus, we hope EDLM scholars in other societies will read this review as an affirmation of progress in our field.

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[i] These figures are based on a paper written by the author that is under review.