# A systematic review of conceptual models and methodologies in research on school principals in Iran

Research on school principals in

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#### Abstract

**Purpose** – This study aims to present a review of topics, conceptual models and methodologies in research on Iranian school principals over the past four decades.

**Design/methodology/approach** – The study adopted a descriptive quantitative form of a systematic review of research to analyze topics, conceptual models and methodologies employed in 565 studies published by Iranian scholars in the national and international databases.

**Findings** – The content analysis of the studies revealed the increasing interest of the Iranian scholars in the two topical foci, namely, the school leadership models and principal profile, with a focus on the direct-effects (Model B) and the antecedent-effects (Model A). The evidence also suggests the disinclination of the researchers to study leadership concerning student learning outcomes. The most frequently used school leadership model in the Iranian schools has been transformational leadership, while the distributive/collaborative and instructional leadership studies were few. The scholars have mostly relied on a survey-based quantitative research approach, using correlation analysis techniques.

**Practical implications** – The findings suggest that despite the increasing global acceptance of school leadership, its implementation in practice is inevitably shaped by the institutional policies and cultural values of different societies.

**Social implications** – The findings of this study strengthen the supposition that the differences in school leadership across societies are influenced by various cultural and contextual factors.

**Originality/value** – This paper is the first systematic review of the empirical studies that present insight into topics, conceptual models and methodologies in research on school principals in Iran.

**Keywords** Educational administration and leadership, School principalship, Publications, Iran **Paper type** Literature review

## Introduction

Interest in understanding effective school leadership has become a priority in education policy agendas across different societies (Pont *et al.*, 2008). It is worth noting that a significant body of knowledge on educational management, administration and leadership (EMAL) and principalship comes from a limited set of Western socio-cultural and geographical contexts such as the USA, Canada, Australia and the UK (Hallinger, 2018; Walker and Hallinger, 2015), while the structure of educational systems differs widely across countries (Oplatka, 2004). In addition to these differences, it has been argued that the interpretation and application of the core leadership practices do vary across different contexts (Hallinger, 2011; Hammad and Hallinger, 2017).



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Over the past 20 years, the literature has witnessed an emerging trend in the EMAL research in the developing societies to generate the contextualized descriptions of school leadership practices (e.g. Bajunid, 1996; Hallinger and Chen, 2015; Pan and Chen, 2011; Szeto et al., 2015; Walker and Hallinger, 2015). The findings of the vast majority of the systematic reviews across the world widely lead to the conclusion that the nature of effective leadership practices is shaped by the cultural and institutional contexts in which they are enacted (e.g. Bellibas and Gümüş, 2019; Hallinger and Bryant, 2013; Hallinger and Kovačević, 2019; Ng et al., 2015; Oplatka and Arar, 2017). According to Oplatka (2004), we need to consider principalship as an organizational function that is generated and applied within the specific and unique social context of a country. In this way, several scholars in the Asian societies have been encouraged to explore the indigenous perspectives and practices associated with successful leadership to generate the local and global knowledge base in EMAL (e.g. Ng et al., 2015; Oplatka and Arar, 2017: Szeto et al., 2015: Walker and Hallinger, 2015), Despite this evidence, scholars have recently claimed that the differences in school leadership across national contexts are not necessarily due to personal and contextual influences (Hallinger and Kovačević, 2019), but they might be owing to the different mechanisms and theories of action applied in school leadership (Bowers, 2020).

In line with the systematic reviews conducted in other Asian countries (e.g. China, India, Indonesia, Malaysia, Philippines, Pakistan, Taiwan, Turkey and Thailand), we believe that a substantial number of the research papers on school principalship written by the Iranian scholars are inaccessible to an international audience due to the language of the papers, so this review will be of great help in uncovering the Iranian knowledge base focusing on school principals. Several scholars point out that this corpus of the domestic studies, largely written in indigenous languages, might be a "covert or hidden literature" (Hallinger and Bryant, 2013; Szeto *et al.*, 2015; Walker and Hallinger, 2015; Wang and Bowers, 2016). Thus, given the tremendous cultural diversity concerning school principal leadership in different national contexts (like that of Iran), the purpose of the current study is to review the relevant empirical evidence on school principals in Iran over the past four decades. The following research questions guided the review:

- RQ1. What are the most common research topics in the school principal leadership literature in Iran?
- RQ2. What conceptual models have been used by the Iranian scholars to conduct their studies?
- RQ3. What are the most common methodologies employed in the studies on school principals?
- RQ4. How do the findings of the literature on the school principals in Iran illuminate the practice patterns and the leadership models/styles of the Iranian schools?
- RQ5. At what level of the school were most of the studies conducted?

## An overview of the school leadership in Iran

Education in Iran enjoys a highly centralized political and ideological system, and the key policies and decisions are made by the government central authority (Hallinger et al., 2017). Although the duties and role responsibilities of school principals are delineated in the regulations and the policy documents written and monitored by the Ministry of Education (2021), the education policymakers have recently embarked on employing the emerging trends toward school leadership so that the principals can more effectively lead teachers to improve learning and teaching processes. As an example, *Tadbir* and *Taali* are the two

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programs that are led by principals to enhance the quality of teaching and learning processes at primary and secondary schools. Even though the Iranian principals work in a low-accountability context and experience the tension between managerial and instructional matters, improving teaching and learning remains integral to their work (Hallinger and Hosseingholizadeh, 2019). Emerging evidence in recent decades shows that the Iranian principals struggle to fulfill the new roles/styles that are expected of them such as instructional leadership and transformational leadership (Hallinger *et al.*, 2017).

Recently, the principalship under school reform has become a high priority among the Iranian policymakers; however, there is no link between the knowledge production on educational administration (EA) at the universities and the policy and practice at the schools. Though a wide range of research on school leadership has been conducted in Iran, its potential has not yet been adequately addressed and exploited (Rastemogadam, 2019). It should be noted that, for the first time, the MA degree in EA was offered in 1969, and currently, more than 23 state-run universities offer MA programs and about 12 universities offer PhD programs in EA. In line with the literature in other Asian countries, much of the research conducted by Iranian scholars have concentrated on testing the borrowed conceptual models. According to Rastemogadam (2019), on the one hand, academic scholars are less aware of the conditions of the educational system and its problems; on the other hand, the policymakers are unaware of the research trends in the EA field. It could be argued that the main reasons for the existence of such situations are the lack of dialogue between the researchers and policymakers as well as the weakness in criticizing the borrowed conceptual frameworks among the scholars at the universities. Therefore, like many scholars in other countries, the Iranian scholars should become more accountable and involved in the school performance and policy issues in Iran (see Oplatka and Arar, 2016).

## Review of the literature

In this section, we discuss how the conceptual structure and methodological approaches on school principals have been analyzed in the literature. The first dimension of the conceptual structure concerns the main overarching topics as well as common sub-topics addressed in the reviewed studies. Given the interdisciplinary nature of EMAL, the review of the literature suggests the research on principalship is characterized by diverse topical categories, including leadership preparation and development (e.g. Kılınç and Gümüş, 2020; Murphy, 2019; Walker and Qian, 2015; Wang et al., 2017), leadership roles/practices (e.g. Hammad and Alazmi, 2020; Walker and Qian, 2015; Wang et al., 2017), leadership antecedents (e.g. Walker and Qian, 2015), reforms and change (e.g. Hammad and Hallinger, 2017; Murphy, 2019; Oplatka and Arar, 2017), school improvement (Hammad and Hallinger, 2017; Kılınç and Gümüş, 2020), equality and social justice (e.g. Wang et al., 2017), cultural contexts (e.g. Hammad and Hallinger, 2017; Murphy, 2019) and human resources (Hammad and Alazmi, 2020; Hammad and Hallinger, 2017).

The second dimension of the conceptual structure, in this review, concerns the conceptual models that provide a wide-angle lens for viewing the contribution that leadership makes to school improvement and student learning (Hallinger, 2011) based on the relationships among the variables in the studied domains (Hammad and Hallinger, 2017). This framework highlights four models, including context and personal antecedents (Model A), leadership/management roles and actions (Model B), the features of school organization, teachers and curriculum and instruction (Model C), and school performance outcomes (Model D) (Hallinger, 2018).

Finally, according to the conceptual models, the outcomes of school leadership can be conceptualized in terms of the impact of principal leadership on the teacher-related outcomes

(e.g. teacher attitudes and capacity, organizational citizenship behaviors, school climate, school culture) as well as the school-related outcomes (e.g. student achievement, school improvement, school effectiveness) that are distinguished in this framework by the assignment of designators "C" and "D," respectively (Hallinger, 2018). A mediated-effects model (C) refers to the variables that mediate leadership effects on school performance (e.g. organizational justice, citizenship, commitment, trust, performance, culture, climate and decision-making strategy). A fourth conceptual approach to understanding leader effects is a reciprocal-effects model (D), including studies that examined the reciprocal relationship between school leaders and school effectiveness. This model, in contrast with the other models (A, B and C), assumes leadership as an interactive process in which the leader simultaneously acts on and responds to the features of the school and its environment (Hallinger and Heck, 1996).

The findings of the various studies suggest that the investigation of the direct effects of leaders (Model B) and context and personal antecedents (Model A) was consistently strong over the past four decades (Hallinger, 2011; Hallinger and Chen, 2015). The evidence from the non-Western societies also provides support in that scholars have largely ignored school outcomes and the influence of leadership and organization on student learning (Bellibaş and Gümüş, 2019), and they are most interested in understanding the leadership models and roles in schools. This suggests that principals' leadership roles and practices are inevitably influenced by the institutional policies and cultural values of different societies (Agasisti et al., 2019). Despite the context-sensitive approach to school leadership, some studies criticized leadership models (e.g. instructional leadership, transformational leadership and distributed leadership) as being overly vague and lacking strong linkages to how to shift teachers and school leaders' practices to improve school outcomes (e.g. Bowers, 2020; Rodrigues and Ávila de Lima, 2021).

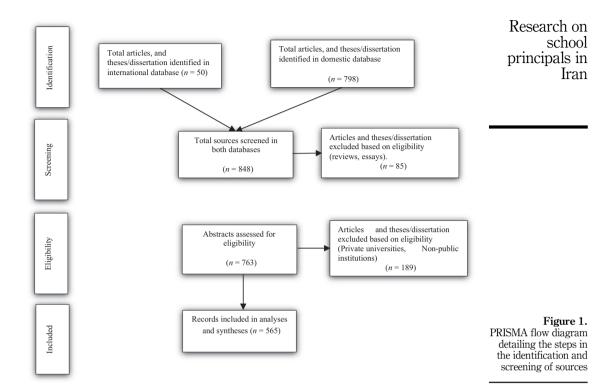
#### Methodology

Reviewing the studies on school principals in Iran, we employed a descriptive quantitative form of a systematic review of research (Hallinger and Chen, 2015) to comprehensively identify, appraise and synthesize all the relevant studies published by the Iranian scholars. In this section, we present the methods used to construct our review database, the information extracted from individual documents and the analyzed data drawn from the database.

## Identifying the sources for the review

We conducted an "exhaustive search" strategy to identify all the English- and Persianlanguage sources relevant to school principals in Iran, using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (Moher *et al.*, 2015). The review selection process is indicated in the PRISMA flowchart in Figure 1. Our search contains a body of research on school principals, including peer-reviewed articles as well as theses/dissertations located in the local and international collections.

The keywords including "school leadership/administration," "school administrator," "school leader," "school principal," "school manager," "educational administration," "educational management," "educational leadership," "school leadership," "school management," "school administration," "instructional leadership" and "principal leadership" were searched in international English-language journals and national Persian databases. This technique is the most commonly preferred strategy to identify relevant sources within a database. At the international level, the review employed the Google Scholar, Eric ProQuest, EBSCOhost, Emerald Insight and Elsevier research databases because of their wide and comprehensive coverage of the relevant peer-reviewed documents in education.



At the local level, the Islamic World Science Citation Center (ISC), Iranian Research Institute for Information Science and Technology (IranDoc), Journals Information Databases (Magiran.com) and Scientific Information (SID) were utilized. These databases covered all the peer-reviewed documents approved by the Ministry of Science, Research and Technology of Iran. Besides, several searches were performed in university libraries' online public access catalogs and digital libraries to cover all the related studies.

Our search for sources was guided by the following criteria: (1) articles focusing on school principals, (2) theses/dissertations conducted in the state-run universities that were accessible in digital formats and excluding the ones conducted in the private universities because of their lower quality compared with those of the state-run universities, (3) studies with accessible full papers and excluding the ones we did not have access to; (4) research-based studies and excluding any irrelevant studies (e.g. book chapters, conference proceedings, book reviews, etc.) and (5) an open-ended search without any time restrictions. We started our analysis with a total of 565 literature records, including articles and theses/dissertations published in the scope of EMAL, focusing on school principals.

#### Data extraction

To collect and summarize the information concerning the features of each study (e.g. research focus, variables, research questions, conceptual model, research method, sample, data analysis methods, findings, authors' universities, location of the universities, etc.), the data extracted from the articles were inserted into a research analysis template designed in an MS Excel spreadsheet (Hallinger and Bryant, 2013).

## Data analysis

Our analysis consisted of both qualitative and quantitative inquiries. First, descriptive statistics were used to describe the basic features of the dataset by identifying the "size" and "time" distribution of the studies to track the changes of research published over time (e.g. the frequency of publications by period, journal type, research methods, etc.). Second, the content analysis method was employed to extract and explore the methods, purposes, key topics, as well as the theoretical models of school leadership in the reviewed documents, and more to obtain an in-depth understanding of the related research trends.

#### Results

This section describes the general trends of the studies on school principals in Iran by examining the volume of the published research, the conceptual models and topics employed, the leadership models and the research methods over time.

First, our search identified 565 empirical studies published from 1981 to early 2019. The search strategy was heuristic. The analysis of "the year of publication" indicates a sharp and consistent uptick in the number of publications from 1981 to 2018. In our search, the first published article appeared in 1981, and most studies were published from 2012 to 2018 (Figure 2).

## Journal analysis

Among the 565 empirical studies in our dataset, 276 were articles (49%) and 291 were theses/ dissertations (51%). The majority of the articles were published in national journals (92%), and the rest were published in international journals (8%). The articles have been dispersed across the different journals with various subjects, including general education (32.25%), social sciences (3.58%), EMAL (34.4%), behavioral sciences (19.35%) and general management (5.37%) (Figure 3). The distribution of the articles in the international journals reveals that only three papers in our dataset were published in a specialized journal, namely, the Educational Management Administration and Leadership Journal, and other core international EMAL journals were absent in the datasets.

## The research methods used in Iran's school principals' studies

Our analysis also sought to track the research methods employed by the scholars authoring the empirical papers within the dataset. We classified the 565 empirical studies as quantitative, qualitative and mixed methods. Surprisingly, 88.14% of the studies had employed qualitative methods, 6.37% quantitative methods and 5.48% mixed methods. The review papers were less than 2% of the total number of papers. Two of them used the meta-

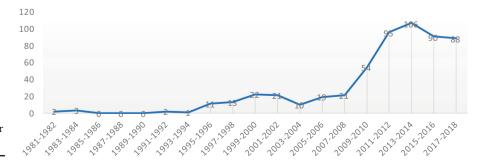
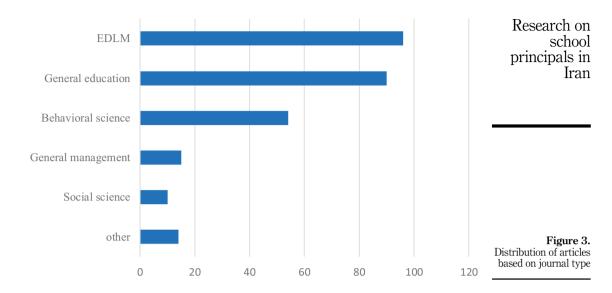


Figure 2.
The volume of publication of the research on school leadership in Iran over time, 1981–2018



analysis method examining the relationship between transformational leadership and teachers' organizational citizenship behavior (Abbasian *et al.*, 2018), and the factors affecting the performance of school principals (Rezaee and Tarin, 2017). Other papers applied the comparative research methods (Mohammadi *et al.*, 2017). The results showed that the Iranian scholars mostly relied on a survey-based quantitative research approach, employing advanced statistical techniques to analyze the data. Out of 565 empirical publications, quantitative research methods ranked the highest in the frequency of use. The distribution of the research methods over time strongly demonstrated a preference for employing quantitative methods among Iranian scholars (Figure 4). The majority of these studies examined how principals' different leadership styles/practices have shaped teachers' organizational behavior and resulted in increasing school efficiency (e.g. Dehghanipoor *et al.*,

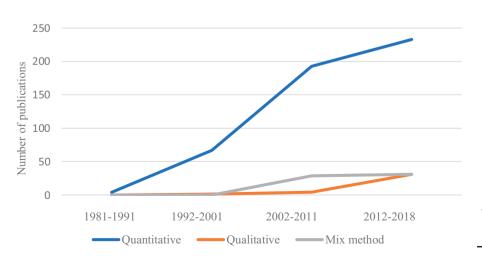


Figure 4.
Breakdown of empirical studies over time by research approach

2020; Hosseini-Nasab *et al.*, 2013). It is worthy of note that the surveyed participants were mainly the principals who delivered the data to the researchers via self-report questionnaires. The obtained patterns of higher self-perception might be due to the nature of the principals' self-reported data (e.g. Shirbagi *et al.*, 2013), and this is in line with the findings of the previous reports from Iran (e.g. Hallinger and Hosseingholizadeh, 2019; Hallinger *et al.*, 2017).

Based on this pattern of knowledge production, it sounds that positivism was the dominant methodological paradigm in the area of school principalship in Iran in the past 37 years. However, using qualitative and mixed methods was more prevalent during 2002–2011. These methods were observed in only 67 of the selected studies, and the main focuses of these studies were the lived experiences of the successful principals as well as the principals' professional competencies and professional development process (e.g. Farahbakhsh *et al.*, 2017; Ghanbari and Mohammadi, 2017).

We analyzed the statistical tests used in the quantitative studies of the dataset based on the four levels of statistical methods as follows: Level 1 refers to the statistical tests that generate descriptive statistics (e.g. mean, standard deviation). Level 2 refers to the statistical tests that examine the correlation between two variables (e.g. *t*-test, Pearson's correlation). Level 3 refers to the correlational tests with single controls (e.g. one-way analysis of variance). Level 4 refers to the multivariate statistical tests (e.g. multiple regression, structural equation modeling and factor analysis). As shown in Table 1, almost half of the empirical publications that had employed quantitative methods can be classified in Level 2, which ranked the highest in the frequency of use (51.17%). The scholars who applied the principals' direct-effects model typically used correlational tests (Level 3) to analyze the data.

## Conceptual models and focal topics of research on school principals in Iran

We analyzed the content of each paper to provide an insight into the conceptual models and topics that have attracted the attention of Iranian scholars. First, according to the main research trends of leadership effects, this review classified the conceptual relationships employed in the studies of principals' effects on student outcomes as follows: antecedent effects (Model A), direct effects (Model B), mediated effects (Model C) and reciprocal effects (Model D). The most common conceptual model used in the selected studies was model B (52%). A direct-effects model (Model B) hypothesizes that leaders achieve their direct effects on school outcomes, including teacher-related outcomes (e.g. job satisfaction, organizational commitment, occupational burnout, empowerment, innovation and trust) or school-related outcomes (e.g. student achievement, organizational health, organizational learning, improvement, organizational climate and quality of work–life). As mentioned earlier, the methods of analysis used to investigate direct-effects models were mainly bivariate. Somewhat surprisingly, few studies were conducted with Model C, and none was specifically designed to model reciprocal effects.

With 257 articles, the antecedent-effects model (Model A) emerged as the second most studied conceptual model in the literature. This model aims at describing both personal and contextual "antecedent" features that are conceptualized to shape leadership behavior. As seen in Table 2, this body of research also focused on a variety of antecedent effects on

**Table 1.**Distribution of quantitative studies analyzed by data analysis techniques

Type of statistical analysis	No. of studies %
Descriptive statistics	20 (4.28%)
Single causal factor – correlational	239 (51.17%)
Single causal factor – correlational with controls	82 (17.55%)
Multivariate statistical tests	126 (26.98%)

principals. The most frequent approach has been to study how the different personal characteristics of the principals influence their school leadership. The various studied personal antecedents included personality (15.84%), intelligence (e.g. emotional, cognitive, social, cultural, moral: 20.21%), self (e. g, self-concept, self-efficacy, self-esteem, self-awareness, self-alienation: 6.55%), cognitive—emotional processes (e.g. thinking, attitude, beliefs: 33.33%), values and ethics (1.63%), mental health (7.65%), social skills (13.66%) and administrative knowledge and experience (1.63%). Notably, when it comes to the analyses of the conceptual models and methods, the leadership studies were dominated by the bivariate rather than explanatory studies.

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We classified the topics into six categories as follows: principal profile with the highest rank (39%), school leadership (27%), leader development (21%), school effectiveness (10%), school improvement (2%) and information and communication technology (1%) (Figure 5).

*Principal profile.* The majority of the reviewed papers concerned the principal's characteristics and personality traits, experience and the competencies of an effective and successful principal. The findings of these studies revealed that extroversion, agreeableness and emotional stability were positively related to the principals' person-centered behavior and leadership styles/practices (e.g. Mehrabani, 2012). Other studies focused on the specific aspects of personal characteristics such as emotional intelligence and its relationship with administration and leadership styles (e.g. Salimi *et al.*, 2016), the principals' mental health and organizational health (e.g. Farahbakhsh, 2012) and the principal's self-efficacy (Faraji, 2015; Hallinger *et al.*, 2017).

School leadership. The topic of leadership roles/styles/practices was the key focus of 155studies. Concerning the variety of leadership models, the most frequently used model in Iran was transformational leadership (37%) as followed by the task vs people-oriented leadership (27%), distributive/collaborative leadership (9%), ethical/moral leadership (13.5%) and instructional leadership (7%). Analyzing Table 3 in detail shows that the

Model		Total
A B C D	Personal and contextual antecedents of principal leadership Direct effects of principal leadership on school outcomes Mediated effects of principal leadership on school outcomes Reciprocal effects of principal leadership on school outcomes	257 292 16 0 565

Table 2.
Distribution of conceptual models guiding Iranian scholarship on principal leadership

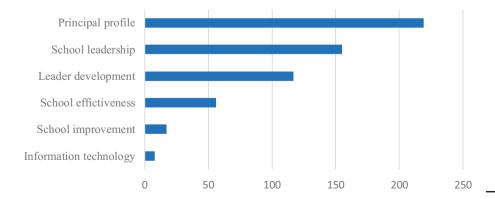


Figure 5.
Distribution of research on school leadership by topics

transformational leadership model dominated the field from 2002 to 2018. The most frequently studied topics in this literature were leadership models such as transformational, shared and people-oriented leadership. As shown, interest in the distributed leadership has increased gradually since 2012. As stated by Dehghanipoor *et al.* (2018), it seems that the Iranian schools have inclined toward distributed leadership, especially over the past five years. Nonetheless, fortunately, over the past 18 years, scholars have extensively examined both transformational and distributed leadership. The reviewed studies revealed that the proportion of the instructional leadership studies to total studies on new leadership models (e.g. transformational and distributive leadership) in Iran is quite small (7%).

Generally speaking, most studies conducted on transformational leadership in Iran (n = 57) indicated that perceived transformational leadership was above average. It is worthy of note that most studies were analyzed based on the principals' self-reported data. This pattern of higher self-perception by the principals aligns with the findings of the previous reports (e.g. Hallinger *et al.*, 2017). The findings also showed there is a significant relationship between transformational leadership and the variables associated with the organizational behavior of teachers, including creativity, organizational citizenship behavior, organizational commitment, work engagement, job satisfaction, motivation, multiple intelligence and workplace spirituality (e.g. Abedi, 2006; Samadi, 2012). Moreover, transformational leadership does have positive effects on the school-related outcomes, including learning organization, organizational climate and culture and organizational health (e.g. Amjad Zabardast *et al.*, 2017; Khalkhali, 2016) as well as the principal's self-efficacy and empowerment, and spiritual intelligence (e.g. Mirali Akbari, 2014; Raeesi, 2015).

The studies that have focused on distributive/collaborative leadership highlighted a statistically significant relationship between the distributive/collaborative leadership and teacher-related outcomes (e.g. job performance, organizational commitment and organizational citizenship behavior) by mediating self-esteem, motivation and academic optimism. Moreover, distributive/collaborative leadership was found to have a significantly positive correlation with school effectiveness and the principals' personality traits such as extraversion, openness and psychotic experiences. More specifically, the teachers' views on the dimensions of distributive/collaborative leadership indicated that the teacher professional development, leadership team, trust and democracy and support were the most important components (e.g. Gholami et al., 2015; Yasini et al., 2013). Meanwhile, a few studies highlighted the influence of the principals on the teachers' self-efficacy, commitment and professional learning (Hallinger et al., 2017). Moreover, most studies highlighted the role of the instructional supervision of the principals (e.g. Kiani Paykani, 2001; Sobhaninejad and Aghahosseini, 2006). It was found that the principals who had non-directive and collective

Models	1981–1991	1992–2001	2002-2011	2012-2018	Total
Transformational leadership	0	1	18	38	57
Task vs people-oriented leadership	1	10	15	16	42
Ethical/moral leadership	0	0	3	18	21
Distributive/collaborative leadership	0	2	2	10	14
Instructional leadership	0	0	1	10	11
Servant leadership	0	0	1	5	6
Thoughtful leadership	0	0	0	1	1
Empowering leadership	0	0	0	1	1
Teacher leadership	0	0	0	1	1
Balanced leadership	0	0	0	1	1
Total	1	13	40	101	155

Table 3.
Distribution of studies by school leadership models/styles (from 1981 to 2018)

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supervisory beliefs, their teachers had a higher level of empowerment (e.g. Sobhaninejad et al., 2013).

Several studies conducted on ethical/moral leadership demonstrated that there was a significantly positive correlation between ethical/moral leadership and teacher-related outcomes (e.g. social capital, psychological capital, organizational commitment, organizational citizenship behavior, teacher creativity and teacher job satisfaction) and school-related outcomes (organizational learning, trust, justice, virtue, well-being and health).

*Leader development.* The studies categorized under this topic variously targeted the training needs of school principals, principals' professional competencies, the criteria for principals' selection and appointment and principals' performance standards (e.g. Arefnezahd *et al.*, 2017; Shabani *et al.*, 2018).

School effectiveness. Numerous scholars have described the aspects of school outputs aimed at improving students' academic success. These studies targeted the role of the principal's leadership in improving student achievement through monitoring instruction (e.g. Ahmadi and Mirmoeini, 2012). However, most scholars highlighted the administrative/executive and supervisorial roles of principals in schools. Importantly, principals were often considered to be responsible for making changes toward improving school climate and culture, trust-building, teachers' quality of work–life, job satisfaction, commitment (e.g. Farahbakhsh, 2012; Sayadi, 2016), enhancing organizational learning and teacher empowering (e.g. Khalkhali, 2016; Salimi et al., 2016).

School improvement. As shown in Table 4, concurrent with the education reforms of Iran such as the Fundamental Reform Document of Education (FRDE) (2002) and National curriculum reforms (2011), the policy priorities related to school improvement started in 2002. The most frequently observed policy priorities were school-based management (e.g. Moradi et al., 2012), total quality management (Ahanchian, 2013; Pourrajab et al., 2015) and recently, school performance excellence (e.g. Baniasad et al., 2018). These studies have primarily focused on the principals' awareness, attitude and skills toward change and innovation (e.g. Niknami et al., 2009) as well as creating a culture of change and innovation in school by principals (Hedarifard et al., 2016).

*Information technology.* Finally, the most frequently conducted studies in this regard have focused on the acceptance of information technology in schools and recently smart schools (e.g. Afsari *et al.*, 2008; Dayodnia, 2014; Mohammadi *et al.*, 2015).

We also analyzed the grade levels of schools (Table 4). It should be noted that up until 2012, the education system of Iran was divided into three main levels including primary school (Grades 1 to 5), middle school (Grades 6 to 8) and high school (Grades 9 to 12). The distribution of the Iranian studies on school leadership showed that the most frequently studied schools were high schools (49.3%) and then primary schools (15.42%). However, it is worth mentioning that 21.26% of the studies investigated all three levels (primary, secondary and high schools) simultaneously.

School level	No. of studies $\%$
Preschool	3 (0.53%)
Primary school	(15.42%) 87
Middle school	50 (8.86)
High school	278 (49.29%)
Multiple levels	120 (21.26%)
Special/gifted school	5 (0.88%)
Other	18
Total	564

**Table 4.** Distribution of studies by school level

## Discussion

This study aimed at reviewing the empirical knowledge about school leadership which is created through the interplay of the theoretical models, methodology and method (Heck and Hallinger, 1999). The content analysis revealed that the most popular leadership conceptual models in the reviewed studies were the direct-effects (Model B) and antecedent-effects (Model A). This finding is consistent with the results of the previous review studies in which Models B and A were the dominant models regarding their frequency of use (e.g. Hallinger, 2011; Hallinger and Chen, 2015). It is also important to acknowledge that quantitative research methods were used more frequently to examine the specific effects of leadership on school outcomes. Consistent with the scholars in the developing societies, most of the Iranian scholars employed the correlational or descriptive design with a focus on surveys as the instruments of data collection to investigate the associations between principal leadership and school outcomes (Tomlinson, 2013). Moreover, the techniques of data analysis used to study direct-effects models were mainly bivariate. Researchers typically employed correlation, chi-square and t-tests to analyze principal effects (Tomlinson, 2013). Therefore, in line with the literature in developing societies, the Iranian literature on school principalship suffers from conceptual and methodological weaknesses, especially a lack of utilizing multivariate designs (Hammad and Alazmi, 2020; Hammad and Hallinger, 2017). The concern about the use of the mediated and reciprocal effects models was highlighted by scholars to conduct studies in which the contribution of leadership to teacher and student learning to be examined (e.g. Bellibas and Gümüs, 2019; Hallinger, 2011; Walker and Hallinger, 2015). Since leadership is enacted in complex organizational settings, we suggest that scholars conduct future studies with a culturally appropriate conceptualization of school leadership. This may be gained most effectively through the use of qualitative methods that stress the inductive generation of culturally grounded theory. We also suggest that scholars employ models that can portray these multivariate relationships (Hallinger, 2011; Hallinger and Heck, 1996).

Regarding methodology, our analyses sought to track the research methods employed by Iranian scholars. Similar to the international literature on school principals (Bellibaş and Gümüş, 2019; Hallinger, 2011; Hallinger and Chen, 2015; Hammad and Hallinger, 2017), the Iranian studies employed quantitative, qualitative and mixed-methods designs. Our results showed that, among the three methods, the quantitative method with the use of surveys was the most popular one in the related literature. The observed phenomenon implies the dominance of the positivism paradigm in the field of principalship in Iran over the past four decades. Consistent with Bellibaş and Gümüş's study (2019), this pattern shows a considerably greater reliance on quantitative research methods than what was reported for the Asian EMAL literature (Hallinger and Chen, 2015). This suggests that the scholars in Iran employ qualitative and mixed methods in their studies. Qualitative studies are especially useful in elaborating on the social structures or cultural norms that shape school principal leadership and challenges in adapting to the constantly changing policies and programs in the context of Iran. However, the qualitative and mixed research methods were the gradually used methods in research after 2002, but these have not significantly increased over time.

The same as some developing countries, the review on the school leadership literature in Iran has reflected on the perceived need to develop leadership capacities for school improvement and effectiveness (e.g. Kılınç and Gümüş, 2020; Murphy, 2019; Szeto et al., 2015; Oplatka and Arar, 2017; Walker and Qian, 2015). Consistent with the findings of Hammad and Alazmi (2020), our results revealed that few studies have focused on topical foci such as preparation and development, school improvement, equality, social justice and cultural contexts. The results of this study are in line with those of other studies in the developing societies and imply that the Iranian scholars did not pay any attention to the impact of school leaders on students' learning (Bellibaş and Gümüş, 2019; Hammad and Alazmi, 2020; Hammad and Hallinger, 2017). The disinclination to study the influence of leadership on student learning

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outcomes might be due to the less frequent use of the comprehensive conceptual models and quantitative methods in this literature (Hallinger, 2018). Overall, the study highlights the gaps in the existing research compared to the Western literature on school leadership.

Similar to other regional literature in Asia (e.g. in Singapore, Turkey, Malaysia, Hong Kong), this study provides the empirical evidence of a growing interest in studying the Western school leadership models (e.g. transformational leadership, school-based management, instructional leadership, distributed leadership) among the Iranian scholars since 2008 onwards. It can be argued that this interest might have been influenced more by the policy reforms undertaken since 2000 that have encouraged the Iranian principals to embrace an expanded role encompassing both leadership and management responsibilities. This concern seems to have received more attention on the part of the researchers during 2012–2018. It might be caused by implementing the school improvement programs called Tadbir in Iran's primary schools and Tadbir in high schools according to FRDE since 2013. The reforms specifically focused on school leaders' roles in teaching and learning processes. In terms of the specific leadership models, our analyses showed that transformational leadership is the most studied leadership model in educational research, although it is a relatively new model. The transformational leadership studies mostly emerged after 2008, peaked in early 2012 and then started to decline. Subsequently, the classical and neoclassical approaches to management, which are the oldest educational leadership models, have received more attention on the part of researchers. The third most studied model was found to be ethical/moral leadership. Our findings showed that the proportion of the instructional leadership studies to all studies on the new leadership models was indeed small. A prominent feature of principalship in Iran between 1981 and 2018 was the principals' role as managerial leaders. We speculated that the organizational expectations and the principal's job duties caused them to spend more of their time on the administrative/executive and supervisorial roles and to be less engaged in the instructional leadership functions. This implies that principals view themselves to be strong on organizational management skills and weak on instructional leadership. Consistent with Oplatka's (2004) review in the Asian countries, instructional leadership functions are relatively rare in schools, and principals are likely to adopt a stance in favor of management and administration. It might be mainly because the educational system in these countries is highly centralized and principals' power is limited by the rules of the system (Oplatka, 2004). Therefore, there seems to be a gap between school leadership in the developed Western societies and the reality of Iranian society. Most of the scholars in developing societies face serious issues in the indigenization of the borrowed outof-context conceptual frameworks. Transplanting the US/UK/Canada/Aus/NZ leadership models/styles without a critical review may distort the local interpretation of principals' behaviors and actions (e.g. Bowers, 2020; Rodrigues and Ávila de Lima, 2021).

Finally, our findings showed that the number of the published research papers on school principals by Iranian scholars in international journals was very small. This implies that Iranian scholars have little contribution to global knowledge production. However, considering the world universities' rankings and journal rankings, it is expected that the knowledge production pattern of Iranian scholars moves toward publishing in international journals with a focus on a cultural approach.

#### Conclusion

This review provides an empirically based perspective on the evolution of the research on school principals over around four decades in Iran. The authors identified a dataset of 565 empirical studies published in both English- and local-language databases between 1981 and 2018. The review found that the Iranian scholars have focused on a wide range of topics and theoretical and conceptual models of school leadership borrowed from the developed Western societies. However, they widely employed the positivist quantitative methods.

This study has useful implications for redirecting knowledge production in Iran. We wish the Iranian scholars to add value in this regard through using more sophisticated experimental studies as well as employing the qualitative and mixed-method designs to understand the practices of principals and teachers in schools along with taking into account certain cultural features of Iran education, According to Dimmock and Walker (2005), we need the manifold conceptualizations of principalship that are more strongly contextual-bound than many researchers and policy-makers in the Anglo-American world have acknowledged (Oplatka, 2004). More specifically, doctoral dissertations have the potential to conceptualize principalship grounded in context. In this respect, research in EMAL ought to be aligned with the implementation of educational policies and relevant to identifying, analyzing and solving significant educational problems. We recommend that Iranian scholars employ a variety of research methods to understand the relationship between leadership and learning, and largely to move toward the critique of the prior empirical findings and provide directions for future scholarship (Hallinger and Kovačević, 2019). Furthermore, we encourage other scholars to analyze the scientific evolution of EMAL using the bibliometric mapping tools to affirm the complimentary review. Finally, we suggest that policymakers take into consideration the findings of the research review in decision-making processes in the field of education.

This study has several limitations. The first one arises from a lack of coverage of domestic journals in the international databases (e.g. Scopus and Web of Science) to create bibliometric network visualization and to analyze the patterns of the domain using bibliometric analysis software (e.g. VOS viewer). Therefore, this paper did not employ co-citation analysis and bibliographic coupling techniques to analyze the domestic publications dataset. The aggregation of the different sources, including the peer-reviewed articles and the dissertations/theses in this review, is the third limitation. Equating the various sources appears to compromise the validity of the analysis since the review processes of the publications in the major international journals due to the role of the journals' editorial board and reviewers might differ from those of the dissertations/theses and even those of the publications in the national journals (see Ayala, 2018).

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