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Meng Tian

Distributed Leadership in Finnish and Shanghai Schools

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ABSTRACT

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The present research employed mixed-methods approach to further theorise distributed leadership and to investigate its manifestations in Finnish and Shanghai schools. The whole research comprised two phases. The first phase contained a meta-analysis (Sub-study I), which systematically reviewed 85 key distributed leadership articles published between 2002 and 2013. The meta-analysis identified two main research paradigms: the descriptive-analytical paradigm and the prescriptive-normative paradigm. It also yielded a resource–agency duality model of distributed leadership. In this model, distributed leadership is seen as a process with both organisational and individual perspectives. From the organisational perspective, leadership as a resource is distributed in different tiers of the school hierarchy to serve organisational goals. From the individual perspective, leadership as an agency is distributed in various actions and interactions of the school members to obtain individual goals. Leadership, both as a resource and as an agency, operates within certain socio-cultural context. In addition, multidirectional power relations are created by school members' exercises of agency. The resource–agency duality model of distributed leadership was subsequently used as a theoretical and analytical framework in the second phase of the research. Sub-studies II (N = 327) and III (N = 203) reported the quantitative survey results, mapping the resource and agency distributions from the Shanghai and Finnish teachers' viewpoints, respectively. The results showed that the power distance in school was structure-dependant. Both Shanghai and Finnish teachers regarded themselves an untapped leadership resource. The teachers' agency was predominantly confined to leading students' learning, but weakly presented in leading school administration and strategic development. Receiving principals' support, trust, and sufficient time greatly enhanced the teachers' willingness to lead. By contrast, offering leadership titles or extra salaries were the least effective motivators for promoting distributed leadership. Sub-study IV employed the phenomenography method to analyse 55 interviews conducted in the three Finnish and five Shanghai schools. The analysis revealed three types of administrative structures, inside of which altogether nine structure-specific distributed leadership conceptions were synthesised. In four Shanghai schools, a four-tier vertical structure had been built to distribute leadership through *positions, empowerment, competition,* and *collaboration*. As a special case, one Shanghai school had built a two-tier vertical structure in which leadership was distributed through *expertise* and *mentoring*. In the three Finnish schools, leadership was distributed in a two-tier horizontal structure through *equity, professional autonomy,* and *trust*. In all the three types of structures, power was pervasive in distributed leadership, and it took the forms of both legitimate and discursive power. The present research has both theoretical and practical implications. Theoretically, it proposes the resource–agency duality model as a theoretical and analytical framework for future distributed leadership research. Practically, the research provides recommendations to school practitioners, policy makers, and educational administrators. The evidence suggests that distributed leadership should be enacted with caution. Especially, close attention should be paid to examine the complex power relations created during the distributed leadership process. Also, building a coherent and supportive operational environment is crucial for distributed leadership.

Keywords: distributed leadership, resource–agency duality model, Finnish schools, Shanghai schools

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Jyväskylä 05.11.2016
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ORIGINAL PAPERS

This compilation is based on the following four publications, referred to as sub-studies I, II, III and IV in this thesis compilation:

Article I

Tian, M., Risku, M., & Collin, K. (2016). A meta-analysis of distributed leadership from 2002 to 2013: Theory development, empirical evidence and future research focus. *Educational Management Administration and Leadership*, *44* (1), 146-164. doi:10.1177/1741143214558576

Article II

Tian, M., & Virtanen, T. Shanghai teachers' perceptions of distributed leadership. Manuscript under review.

Article III

Tian, M. (2015). Finnish teachers' perceptions of distributed leadership. *Contemporary Educational Leadership, 2*(2), 50-73.

Article IV

Tian, M., & Collin, K. Reconceptualising distributed leadership in Shanghai and Finnish schools. Manuscript under review.

These articles are reprinted with permission of the publishers. Copies of the articles are appended to this thesis.

The author of this doctoral thesis is the leading author of all the four articles included in the thesis. She collected all the research data, and played the leading role in conducting the literature review, methodological selection, data analyses, results interpretation and reporting.

FIGURE

TABLE

CONTENTS

1 INTRODUCTION

The notion of leadership has traditionally been associated with 'heroic' individuals. Whether by nature or nurture, they wield enormous power and irresistible charisma to obtain goals, resolve crises, and even change the courses of organisations' and individuals' lives. This romance of leadership has enchanted us for centuries (Meindl, Ehrlich, & Dukerich, 1985). When leadership became the subject of scientific inquiries in the early 20th century, individual leaders' personalities, skills, behaviours, and aristocratic backgrounds were examined to yield a large variety of leadership theories, such as the great man theory, trait theory, and behavioural theory (Blake & Mouton, 1964; McCall & Lombardo, 1983; Merton, 1957; Pfeffer & Salancik, 1975; Stogdill, 1974). Later, scholars discovered that some leaders are more successful in certain situations but less effective in other settings. This observation gave birth to the theories of situational leadership and contingency leadership, which introduced new factors to leadership research such as role clarity, organisational resources, leader–follower relations, positional power, and task structure (Fiedler, 1964; Yukl, 1989). The leader–follower relation was further explored, yielding, for example, the transactional and transformational leadership theories: the former advocates leading with rewards and punishment, whereas the latter emphasises leading with vision, enthusiasm, and trust (Bass, 1990).

Although the above mentioned classic leadership theories have gradually expanded their research foci from the leader's innate traits to include situations, task structure, and relations with followers, all these theories have built on a romanticised concept of leadership (Meindl et al., 1985). That is, they concentrate on the leadership exercised by individuals, especially those with formal leadership positions.

The last two decades have witnessed a growing trend towards examining leadership through interactions, challenging the earlier romanticised concept of leadership. One of the most popular theories of the new trend is distributed leadership. Regarding distributed leadership, Gronn (2002) points out that when leadership is extended to multiple people in an organisation, the synergy created by the interactions of the different leaders in the organisation is far

more powerful than the sum of the separate individual leadership actions. Furthermore, Spillane (2006) proposes that leadership is not only bound to formal leadership positions but also emerges from the interactions among leaders, followers, and situations. The focus of leadership studies, therefore, should be shifted from the individual leader to the interactions of the members of the organisation. To date, although the phenomenon of distributed leadership has been wide-spread, its conceptualisation and application remain controversial (Bolden, 2011; Tian, Risku, & Collin, 2016). The present research project attempted to contribute a new theoretical model and empirical evidence of distributed leadership to the existing literature.

This Introduction comprises four sections. The first section reviews some existing definitions and research frameworks of distributed leadership. In addition, the contributions and limitations of these definitions and research frameworks are evaluated. The second section introduces the present research project, including its research aims, research questions, and the arrangement of the four sub-studies. In the third section, the four key concepts, distributed leadership, agency, socio-cultural context, and power, are defined. Lastly, the fourth section presents the two research contexts, Finnish and Shanghai schools.

1.1 A review of distributed leadership definitions and frameworks

In order to create a status report on distributed leadership research from 2002 to 2013, the present project started with a meta-analysis reviewing the theoretical development and empirical evidence of distributed leadership. This meta-analysis revealed some major contributions and limitations of earlier distributed leadership studies. Particularly, it pointed out that some leading theorists had established a significant knowledge base of distributed leadership by defining the concept and constructing different research frameworks for its empirical investigation. In this section, some key definitions and research frameworks are reviewed to illuminate the evolvement of distributed leadership during the past 15 years.

Spillane (2006) defines distributed leadership as the interaction among leaders, followers, and situations. The roles of leader and follower often emerge from practice and are sometimes exchanged according to the situation. In addition to formal leaders, other organisational members and even artefacts can exert influence on leadership work. Leithwood, Mascall, and Strauss (2009, xvii) labelled distributed leadership as an 'unheroic' leadership approach with a growing appreciation of informal leadership. Gradually, more and more scholars added tags to the distributed leadership concept. For instance, distributed leadership is fluid rather than stagnant (Harris, 2009; Law, Galton, & Wan, 2010), inclusive rather than exclusive (Spillane & Healey, 2010; Timperley, 2009), and emergent rather than prescribed (Gronn, 2009).

Some critics claim that the expansion of the definition of distributed leadership led it to become a catch-all notion that is often used interchangeably with shared, collaborative, dispersed, collective, or democratic leadership (Bennett, Wise, Woods, & Harvey, 2003; Bolden, 2011; Harris, 2008; Hartley, 2007; Torrance, 2009). Different definitions of distributed leadership also raise controversies, for instance, about whether distributed leadership always implies multiple leaders or consists of both solo and collective forms of leadership (Gronn, 2008); whether distributed leadership is an umbrella concept or has clear boundaries with other similar concepts (Harris, 2008); and whether distributed leadership is a descriptive tool for understanding leadership dynamics or a normative tool leading to school improvement (Gronn, 2009; Harris, 2009; Youngs, 2009). These heated debates about the definition of distributed leadership have not yet been fully resolved.

Over the past 15 years, researchers have constructed different research frameworks to probe the phenomenon of distributed leadership. Through these research frameworks, many significant discoveries about distributed leadership have been unravelled. However, despite their valuable contribution to the topic, these research frameworks have also had certain limitations that have confined the scope of research. As a result, important issues in distributed leadership have not been fully explored.

First, applying Archer's (1995) structure–agency framework in sociology, Woods, Bennett, Harvey, and Wise (2004) identified six key variables of distributed leadership in their literature review: external and internal contexts, control and autonomy, sources of change and development, dynamics of team working, institutional and spontaneous forms of distributed leadership, and conflict resolution. Their study established one of the first research frameworks to scrutinise both structural and agential dimensions of distributed leadership. Importantly, the framework highlights the constant interaction between organisational structure and individual's agency, even though both structure and agency exert distinct effects on distributed leadership (Woods et al., 2004). This structure-agency analytical dualism sheds light on several distributed leadership studies (e.g. Crawford, 2012; Hatcher, 2005; Mayrowetz, 2008; Woods & Roberts, 2016), including the present research project. The framework emerged from a comprehensive literature review of distributed leadership studies. As Woods et al. (2004) mentioned, the framework did not suggest appropriate methodologies for empirical studies. When searching for the six variables in school leadership practice, distributed leadership seems to embrace a wide range of activities. In practice, it would have been interesting to find more empirical studies using the framework.

A second framework comprises MacBeath's (2005) six stages of distributed leadership, including formal, pragmatic, strategic, incremental, opportunistic, and cultural distribution. According to MacBeath (2005), all six stages form a sequential development process of distributed leadership. As school leaders and teachers mature in their leadership capacities, distributed leadership gradually develops, stage by stage, from a formal to a cultural distribution. Com-

pared to Woods et al.'s (2004) structure–agency framework, MacBeath's (2005) framework seems more applicable to practical diagnoses. Using this framework, school leaders and teachers can easily locate their school's leadership practice in the process. Also, this framework underlines distributed leadership to be an evolving process instead of a stagnant phenomenon. Regarding the limitations of the framework, MacBeath (2005) was aware that distributed leadership in practice was far more complex than the six stages identified in his empirical study. Contextual factors may largely affect the enactment of distributed leadership. Hence, this framework might be an ideal model for studying distributed leadership in a highly stable environment, but it does not discuss in much detail how distributed leadership works in a turbulent environment.

Third, adopting distributed cognition theory, Spillane (2006) proposed a distributed leadership framework comprising the leader-plus aspect and the practice-centred aspect. From the leader-plus aspect, leadership is not a monopoly belonging solely to formally designated leaders. Individuals without formal leadership titles may also assume leadership responsibilities. From the practice-centred aspect, leadership emerges from the interaction among leaders, followers, and situations. Spillane (2006) also explicated three forms of distributed leadership in different situations. Collaborated distribution refers to several leaders co-leading at the same time. Collective distribution means that several leaders are leading separately but interpedently. Finally, coordinated distribution indicates several leaders leading in a sequential order. Spillane's (2006) framework clearly shifted the research focus from the individual leader to interactions.

Later, Hartley (2009) challenged two aspects of Spillane's (2006) framework. First, there was inconsistency between Spillane's theorisation of distributed leadership and empirical studies. When theorising distributed leadership, Spillane (2006) considered leadership practice to be the analytical unit. This implied that only the interaction process amongst the leaders, followers, and situation had an ontological status. In his earlier empirical studies, from which the research framework derived, Spillane, Halverson, and Diamond (2004) appeared to assign the ontological status also to individual agents, such as formally designated leaders. According to Hartley (2009), Spillane et al.'s (2004) empirical analysis did not account for the process, as the research framework emphasised. Furthermore, Hartley (2009) criticised Spillane's (2006) framework for paying little attention to the power issues in distributed leadership.

Fourth, Leithwood, Mascall, Strauss, Sacks, Memon, and Yashkina (2007) established a distributed leadership framework that was highly normative. Using the criterion of how distributed leadership serves organisational goals, Leithwood et al. (2007) identified four patterns of distributed leadership. From most to least preferable, these four patterns are planful alignment, spontaneous alignment, spontaneous misalignment, and anarchic misalignment. Planful alignment indicates that leadership resources are distributed deliberately to achieve long-term organisational goals. Spontaneous alignment, by contrast, lacks thoughtful planning and distributes leadership spontaneously to attain

organisational short-term goals. Both spontaneous and anarchic misalignments appeared to exert negative impact on organisations. The former results in low effectiveness in goal achievement, whereas the latter leads to destructive competition and internal conflicts within the organisation. Leithwood et al.'s (2007) framework seems highly attractive to policy makers and school practitioners because it draws the connection between distributed leadership and school improvement. However, one criticism of this framework is that it presumes organisational goals to prevail over individual goals. Also, this framework appears to overlook the fact that the establishment and implementation of organisational goals in distributed leadership is highly political (Avis, 2007; Hatcher, 2005; Storey, 2004). Endorsing distributed leadership as a normative tool for school improvement, Leithwood et al. (2007) did not probe into the complex power relations in distributed leadership.

A fifth distributed leadership framework was proposed by Murphy, Smylie, Mayrowetz, and Louis (2009), who deepened the structural–agency relations with their restructuring and re-culturing framework of distributed leadership. According to Murphy et al. (2009), distributed leadership could take place through the restructuring process, for instance, reshaping the school administrative structures to liberate teachers' professional autonomy and professional interaction. It could also go deeper to the re-culturing level, for example, changing a traditional privacy-focused isolationist culture into a collegial culture. Importantly, this framework underlines that restructuring the school alone may not make distributed leadership sustainable. The schools also need the reculturing process to overcome cultural barriers impeding distributed leadership. However, one inadequacy of Murphy et al.'s (2009) framework is that when applied to empirical study, the focus has been mostly on the role of the school principal in leading the restructuring and re-culturing processes. The roles of other school members in distributed leadership have not been sufficiently discussed.

A sixth, and probably the most holistic distributed leadership framework of the reviewed ones, is Gronn's (2008) hybrid leadership model. In Gronn's (2002) early studies, he proposed the numerical–concertive framework of distributed leadership, which can be compared to Spillane's (2006) leader-plus and practice-centred framework. From the numerical perspective, leadership is extended to a number of school members, not just to the school's formal leaders. From the concertive perspective, the synergy of individuals' leadership is greater than the sum of individuals' actions because, as a result of the interaction process, more leadership emerges. By revising his own framework, Gronn (2008) later introduced the hybrid leadership model, which views leadership as the configuration of different forms and degrees of focused and distributed leadership. This revision is significant because it explicitly claims that focused and distributed leadership are not mutually exclusive but can interact with one another. When examining these interactions, this framework also seems to shed light on the dynamics of power (Bolden, 2011). Similar to the above five frame-

works, it might be beneficial to further verify Gronn's (2008) hybrid model with more empirical evidence.

In summary, the existing distributed leadership definitions and research frameworks established a knowledge base for the present research project. Also, when reviewing these earlier studies, the researcher noticed some research gaps in distributed leadership studies that called for more investigation. First, there is a lack of consensus on the substance and conceptual boundaries of distributed leadership. Second, most research frameworks focus on the organisational perspective, for instance, on how distributed leadership serves the attainment of organisational goals. In doing so, insufficient attention is paid to the individual perspective, such as how various members of the organisation pursue personal values and goals in distributed leadership. Third, most definitions and research frameworks do not probe into the power issues in distributed leadership. Drawing upon this background, the present research project attempted to fill some of the research gaps by both contributing a new theoretical framework and providing more empirical evidence of distributed leadership.

1.2 Research aims, questions, and sub-studies

The present research project had two aims. The first aim was to further theorise distributed leadership on the basis of the existing literature. The other aim was to provide new empirical evidence on distributed leadership by investigating its manifestations in Finnish and Shanghai schools using the further theorisation. In order to achieve these two research aims, the present research project employed a mixed-methods approach to answer the following five research questions (RQ):

RQ1: In the recent research, what has been studied in terms of the theoretical development and empirical evidence of distributed leadership?
RQ2: What are the manifestations of distributed leadership in terms of resources and agency in Finnish and Shanghai schools?
RQ3: What are the key motivators and demotivators underlying Finnish and Shanghai teachers' participation in distributed leadership?
RQ4: How do Shanghai and Finnish school leaders and teachers understand and enact distributed leadership in practice?
RQ5: How is power manifested in distributed leadership?

The whole research project comprised four sub-studies conducted during 2012 and 2016 (Fig. 1). Each sub-study answered one or two research questions using their own specific research methods.

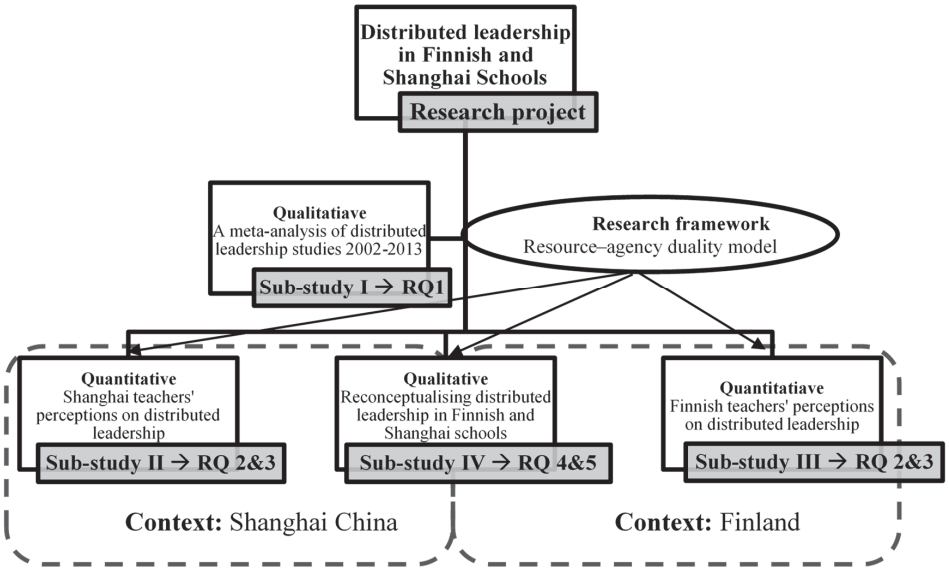

FIGURE 1 Structure of the research project

Corresponding to the two research aims, the present research project was divided into two phases. The first phase produced a meta-analysis, in which a theoretical model of distributed leadership was initiated to guide the second-phase empirical research. These two phases of research were connected sequentially. With respect to the second phase empirical sub-studies, two applied quantitative methods and one was qualitative in nature. Following the concurrent design, both quantitative and qualitative data were collected simultaneously. All four sub-studies were connected through the resource–agency duality model of distributed leadership. This model was thus both a research finding and a research framework.

1.3 Key concepts

Throughout the dissertation, four key concepts are repeatedly mentioned in the analysis, the resource–agency duality model of distributed leadership, agency, power, and the socio-cultural context. Although the resource–agency duality model and power were also findings of the present research project, it is necessary to explicate their meaning already in the Introduction because they are, as stated, used throughout the compilation. This way the reader can have a better understanding of the whole research project.

1.3.1 Resource–agency duality model of distributed leadership

The first key concept to be examined is the resource–agency duality model of distributed leadership. In the theoretical research phase, this model resulted from the meta-analysis to serve as a more explicit research framework for future distributed leadership research. The wish was that this model could overcome some of the inadequacies of the earlier distributed leadership research frameworks. In the empirical research phase, this model was used to create the survey and interview instruments. Later, it was also applied as the analytical framework for the analysis of the interview data. The interview analysis revealed two key factors not included in the original model: the socio-cultural context and power. Thus, after the second-phase empirical research, the model was supplemented by adding these two factors to the framework (Fig. 2).

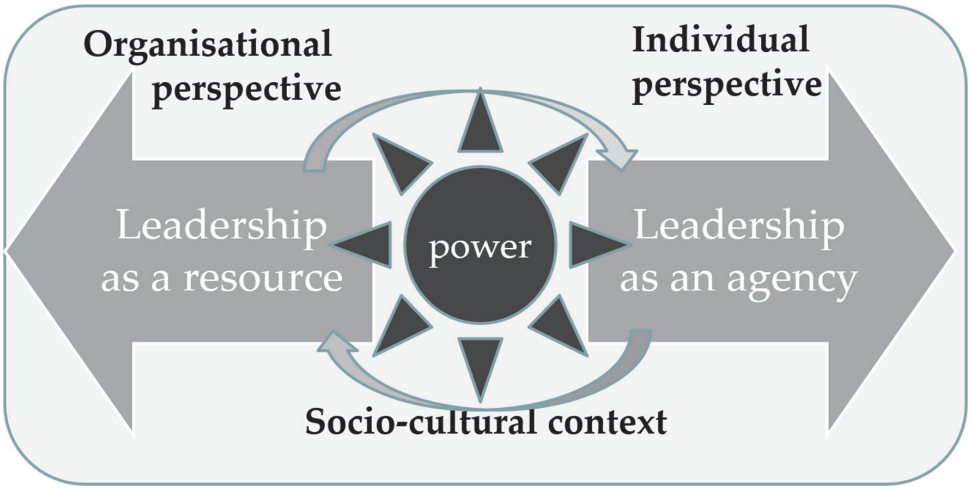

FIGURE 2 Resource-agency duality model of distributed leadership

The resource–agency duality model of distributed leadership views leadership as a process that accounts for both organisational and individual perspectives. From the organisational perspective, leadership as a resource is distributed to the various tiers of the organisational hierarchy, serving organisational goals. From the individual perspective, leadership as an agency is distributed in the organisational members' various actions and interactions, assisting individuals to attain their personal goals. In practice, the organisational and individual perspectives are intertwined. The distribution of organisational resources can facilitate or impede individuals' agency. In return, individuals' exercises of agency can transform into resources for the organisation to use and can simultaneously create multi-directional power relations. Throughout the distributed leadership process, the socio-cultural context of the organisation largely determines the

creation and distribution of resources as well as regulates the socio-cultural boundaries within which individuals can exercise their agency.

It is necessary here to clarify that this resource–agency duality model served as a theoretical lens to examine the phenomenon of distributed leadership in the present research project. It was used to construct the survey as well as to assist the school practitioners in constructing their conceptions of distributed leadership in the interviews. The model was also used as the analytical framework for the interview data analysis.

1.3.2 Agency

In the resource–agency duality model, individuals' agency is a central element. Although it was presented as a singular form in the model, the exercise of agency in the present research project took place at both individual and collective levels. Over a decade ago, Woods et al. (2004) drew the connection between agency and distributed leadership in their structure-agency model. They claimed that institutional, cultural, and social structures could transform into resources for agency. In return, agency, in many ways, also affected and altered structures (Woods et al., 2004). Following this line of thinking, the researcher of the present study regarded agency as one crucial element to theorise distributed leadership. Thus, the leadership as an agency perspective was also empirically investigated in Finnish and Shanghai schools.

In this dissertation, agency is defined as organisational members, either as individuals or as communities, exerting influence, making choices, and taking stances that affect their work and other members (Eteläpelto, Vähäsantanen, Hökkä, & Paloniemi, 2013). Exercising agency in distributed leadership implies that rational agents have the free will to define and pursue the personal goals and values that they regard as important in their particular socio-cultural contexts (Okkolin, 2013; Sen, 1985; Vaughan, 2007). At the same time, organisations provide the opportunities for the agents to act and interact in this way (Ci, 2011). Although free will is an important prerequisite for agency, agency also involves a sense of duty and commitment towards the organisation (Sulkunen, 2010). Exercising one's agency, therefore, requires organisational resources, including material resources and supportive social relations, to make it feasible.

Agency as it connects to distributed leadership has two significant meanings. First, agency is not only exercised by the formal leaders in the organisation but also by other members who do not possess formal leadership positions. When leadership is distributed, all the individuals who are involved in the process can influence its enactment. Thus, researchers should not confine themselves to examining only formal leaders' agency in distributed leadership. Second, exploring the agency dimension of distributed leadership also offers the opportunity to investigate power issues (Woods et al., 2004). Correspondingly, power in distributed leadership should be defined from a broader perspective than will be described in the next section.

1.3.3 Power

The concept of power is defined and discussed in both the Introduction and Findings chapter. Regarding the latter, power was a finding in two ways. First, the meta-analysis study of the research project discovered that power had often been neglected in earlier distributed leadership research. Second, the empirical studies revealed that power was pervasively embedded in distributed leadership. Power became such a key concept that the researcher considered it necessary to examine it in the Introduction chapter. The purpose of this examination is to enable the reader to follow the handling of power in this dissertation in a more explicit manner.

When analysing the interview data, the researcher realised that how the research participants described the operations of power in distributed leadership corresponded to Foucault's conception on power. According to Foucault (1980, 1991), power is a network of social relations that are diffused and embodied in discourses, knowledge, and regimes of truth; thus, 'individuals are not just the objects of power, but they are the locus where the power and the resistance to it are exerted' (Mills, 2003, p. 35). When establishing this conception, Foucault also rejects two traditional conceptions of power, namely the contract-oppression power and the domination-repression power, as the only forms of power (Kelly, 1994). The contract-oppression conception of power views power as sovereign authority bound to legitimate positions such as president and king. Having legitimate positions as the power centres, power flows unidirectionally from the legitimate to the illegitimate. The domination-repression conception of power, on the other hand, sees power to flow back and forth between two opposing groups. Marx describes this form of power as the domination and submission between the opposing social classes. Foucault considers both of these two traditional conceptions of power to fail to capture the richer and more sophisticated operations of power in modern society (ibid).

In analysing Foucault's conception of power, Kelly (2009, pp. 37–38) summarised the following five characteristics of power: impersonality meaning anyone can be the subject of power; relationality referring to power not being possessed but exercised through relations; de-centeredness implying that power is not concentrated on a single individual or social class; multi-directionality, in turn, suggesting that power does not flow only from the powerful to the powerless but has multiple directions; and strategic nature indicating that the exercise of power is intentional.

As earlier stated, the understanding of power in distributed leadership created by the research participants was strongly related to Foucault's conception of power. However, according to the interview data, there seemed to be a clear difference between the power that derived from formal leadership positions and the one that manifested itself in school members' discourses, meaningful actions and interactions drawn by the research participants. In alignment with this division, in the Findings and Discussion, power was labelled to correspond to these two categories. The power relating to the formal positions was labelled as legitimate and the one dealing with the discourses and actions as

discursive to indicate the different sources of the two discovered forms of power.

1.3.4 Socio-cultural context

The last frequently mentioned key concept is the socio-cultural context. As earlier studies point out, distributed leadership does not exist in isolation: it is constantly shaped by the social, cultural, and political environment that encompasses the school (Harris, 2009; Gronn, 2009; Spillane et al., 2004; Woods et al., 2004). From the socio-cultural perspective, distributed leadership in practice is socio-culture sensitive, in the sense that there are social norms, cultural expectations, and political wills determining the distribution of school leadership in one way or another. As the present research project investigated two contexts, Finland and Shanghai, China, the context-related differences in distributed leadership practices became very visible. In the following section, a more detailed description of these two research contexts is given.

1.4 Research contexts: Finnish and Shanghai schools

The present research project examined distributed leadership in the contexts of Finnish and Shanghai comprehensive and secondary schools. Several questions must be answered in relation to this selection. The most essential one, perhaps, is why compare Finland, which is a country, to Shanghai, which is a city.

China is a large country with a huge population. With the available resources, it would have been impossible for the researcher to collect a sufficient amount of data to capture all the diversity within the Chinese education system during the four-year research project.

There were also significant similarities between the local provision of general education in Shanghai and that in Finnish municipalities, which supported the selection. Because of the vast territory and population, the provision of the primary and secondary education in China has been decentralised to local authorities, as it has been in Finland. Shanghai, as one of the four autonomous municipalities that are directly governed by the central government, has a highly autonomous education system. In practice, Shanghai schools follow the municipal curricula rather than the national curricula. Because the Shanghai education system is financed and administrated autonomously, it was possible to treat Shanghai as an independent research context in the present research project. Researching distributed leadership in the selected Shanghai schools was also expected to offer some practical implications with regard to other Shanghai schools. However, severe caution should be taken when generalising the findings contained herein to the entirety of China.

In Finland, the administration of primary and secondary education is also decentralised to the municipalities. Nevertheless, all schools follow the national core curricula, on the basis of which local and school curricula are developed.

Compared to schools in many other countries, the differences in school infrastructure, financial and human resources, teachers' educational backgrounds, and students' academic performance in Finland are relatively small (Sahlberg, 2012). However, this does not mean that all the Finnish schools are the same. In fact, school leaders and teachers are given a great deal of autonomy to develop their school specialities. This also enabled the present study to investigate variation in distributed leadership in Finland through a sample of schools.

1.4.1 Two high-performing systems

Since the 2000s, the Finnish and Shanghai education systems have gained attention and have often been compared with each other based on their students' outstanding performance on international standardised tests. From the perspective of students' academic achievement, taking the 2000 to 2012 Programme for International Student Assessment (PISA) results as one example, both Finland and Shanghai have delivered high quality education. In addition, these two high-performing systems also appear to have well-educated teachers. According to the 2013 Teaching and Learning International Survey (TALIS), in both Finnish and Shanghai schools, over 96% of teachers have completed university or other equivalent higher education and more than 90% of them have received teacher education or training (OECD, 2014a, 2014b).

Along with the above similarities, many contextual differences can also be found between the Finnish and Shanghai education systems. The educational statistics from 2014, the same year the research data of the present study were collected, show interesting disparities. The total number of comprehensive and general upper secondary schools (3041 schools) in Finland was almost double the number in Shanghai (1525 schools) (OSF, 2014a, 2014b; SHMEC, 2015). Nonetheless, the total number of Finnish students (645,132 students) was only half that in Shanghai (1,387,100 students). According to the TALIS 2013 reports, one Finnish teacher taught in a class with an average 18 students, while a Shanghai teacher had 35 students (OECD, 2014a, 2014b). All these data indicated that, in general, the Finnish schools were much smaller than Shanghai schools.

1.4.2 Equity-driven and competitiveness-driven systems

On top of school size, the ideologies underpinning these two education systems also seem to differ. The Shanghai PISA achievement was attributed to the large number of top-performing students, whereas the Finnish success derived from the small gap between the high-performing and low-performing students (OECD, 2014b, p. 5; see also Hargreaves & Shirley, 2009). With respect to the resource distribution, more financial and human resources were given to the socio-economically disadvantaged schools in Finland, whereas an opposing trend was detected in Shanghai (OECD, 2013, pp. 40–45). These findings seem to suggest that Finland has a more equity-driven education system that aims at providing better resources and support to the disadvantaged schools and stu-

dents, whereas Shanghai has a more competitiveness-driven education system that tends to favour top academic performers and the advantaged schools.

1.4.3 Autonomy and accountability

Practices regarding autonomy and accountability also seem to differ in these two contexts. Principals in Shanghai reported that the local education authorities had a high-level involvement in establishing students' assessment policy, choosing text books, determining course content, and deciding courses to offer. By contrast, Finnish principals expressed that the schools had the autonomy to lead in all these areas, while the local authorities mainly participated in determining course content (OECD, 2013).

With respect to accountability, school inspection was abolished in Finland in the early 1990s. Schools' self-evaluation has always been the most important evidence for quality control in Finland and the evaluation results are used to develop school-based pedagogy rather than rewarding or punishing individual students or teachers (Sahlberg, 2011).

By contrast, Shanghai schools receive frequent external inspections and evaluations from both municipal and district level education authorities. According to the newly published Regulations on Educational Inspection Work in Shanghai (SHMEC, 2015), the primary and secondary schools receive a comprehensive inspection every three to five years, which includes the school's self-evaluation. On top of that, schools receive regular inspections at least twice a semester. When local authorities delegate educational tasks to schools, thematic inspections are also organised (SHMEC, 2015). According to the PISA 2012 principals' questionnaire results, low-performing Shanghai schools received even more top-down inspections than the high-performing ones. Local education authorities attempted to hold these low-performing schools accountable by tracking their students' academic performance over time (OECD, 2013, p. 59).

To sum up, despite their remarkable achievements in international league tables, the Finnish and Shanghai education systems seem to operate under different ideologies. Most Finnish schools prioritise equity. Excellence is achieved by narrowing down the achievement gap between the top performers and the poor performers. Autonomy has been given to the Finnish schools to support individualised teaching and learning. In contrast, many Shanghai schools tend to prioritise competitiveness. Excellence is achieved by increasing the number of top performers. Through numerous inspections and evaluations, local education authorities hold schools accountable.

These contextual factors will be mentioned later in the Findings and Discussion chapters as the research participants also regarded these factors as important determinants affecting distributed leadership in their schools.

2 METHODOLOGY

This chapter explains the methodological design of the whole research project and the specific strategies that were applied to connect the four sub-studies. The chapter consists of three sections. The first section explains why mixed methods were employed and how different methods were mixed in the research project. The second part explicates the rationale behind the selection of research participants, the data collection and analyses processes, and the researcher's epistemological and ontological standpoints. The third section scrutinises the validity, reliability, and trustworthiness of the research.

2.1 Mixed-methods research approach

As mentioned in the Introduction, the present research project consisted of four sub-studies, of which two were quantitative and two were qualitative. In addition, the project had two phases; the theoretical phase was conducted prior to the empirical phase. As a whole, the project employed mixed methods as the methodology. To best serve the two research aims of theorising and empirically investigating distributed leadership, the whole research procedure employed two mixed-methods strategies: the sequential transformative strategy and the concurrent triangulation strategy (Creswell, 2009; Creswell & Plano Clark, 2013).

At the initial stage of the research, the researcher discovered that the lack of a clear definition and an explicit research framework made it challenging to explore distributed leadership in practice. In searching for a clear research lens, a theoretical meta-analysis study was conducted in the first phase of the research. The meta-analysis tracked the theoretical development and empirical evidence of distributed leadership for the time period from 2002 to 2013. Regarding future research directions, the resource–agency duality model of distributed leadership was proposed. In the second phase of the research, this model was transformed into a theoretical framework, guiding the design of the empirical sub-studies research questions and the two research instruments, a

quantitative survey and semi-structured interview questions. In the interview analysis, the model was also applied as the analytical framework to analyse the school practitioners' conceptions of distributed leadership. One advantage of using this sequential transformative strategy was that it enhanced the theoretical value of the research (Creswell, 2009). The meta-analysis study presented diverse perspectives of distributed leadership that had been studied while also pointing out some inadequacies of the existing literature. Thus, the empirical studies could probe into these understudied phenomena in distributed leadership.

In the second phase of the research, the quantitative and qualitative data were collected according to the concurrent triangulation strategy. The quantitative survey was launched at the same time that the interviews were conducted at each research site. Similar questions were asked in both survey and interviews for the purpose of triangulating the data. All the teachers who participated in the interviews also answered the survey. Because of this concurrent triangulation strategy, the data collection time was somewhat shortened. Also, as some of the research participants received two opportunities to express their views on distributed leadership, the reliability of the study was enhanced (Creswell, 2009).

Although the present research project investigated distributed leadership in the contexts of Finnish and Shanghai schools, it is important to highlight that the main purpose of the study was not about evaluating which distributed leadership practices were more effective than the others. As described in the Introduction, the Finnish and Shanghai education systems may be similar in terms of students' academic achievements and teachers' education, but regarding school size, educational ideology, autonomy, and accountability, they were also distinct from each other. Putting these two contexts side by side in this research project might reveal the diversity and complexity of distributed leadership in different socio-cultural contexts.

When examining the whole research project against the five principles of mixed methods, *initiation, development, triangulation, expansion,* and *complementarity*, the four sub-studies form a coherent entity (Greene, Caracelli, & Graham, 1989). The *initiation* of the meta-analysis study was based on the need to conduct a status review of the current distributed leadership research and to create an explicit research framework to guide the empirical studies. The empirical sub-studies further *developed* the theoretical research by presenting new empirical evidence of distributed leadership in the Finnish and Shanghai schools. Among the three empirical sub-studies, the quantitative and qualitative data were collected concurrently using the two research instruments with overlapping questions. It was, therefore, possible to *triangulate* different sources of data and to discover whether they converge, diverge, or *complement* each other (Jick, 1979). Regarding the *expansion*, the research questions in the original plan did not probe into the power issues. However, through the lenses of resource and agency, the interview participants frequently mentioned power when describing their distributed leadership experience. These valuable data enabled the

researcher to expand the research scope by adding the fifth research question: how is power manifested in distributed leadership?

Lastly, it is noteworthy that the present research project subscribed to the descriptive-analytical research paradigm. The purposes of the study were to investigate how distributed leadership has been researched as a phenomenon and how it has been practised in schools. This also means that the present research project did not take the prescriptive-normative stance to seek for the best practices of distributed leadership nor to provide a blueprint of distributed leadership that aimed at school improvement.

2.2 The researcher and research participants

As the researcher, reflexively considering one's own life experience is important as this may affect the researcher's choices throughout the research process (Hesse-Biber, 2010). The choice of research contexts, for example, was closely linked to the researcher's personal life experience. When the research project started, the researcher had studied educational leadership and administration first in Shanghai, China, and later in Jyväskylä, Finland, for six years. During the studies, the researcher had good opportunities to learn about these two education systems and to conduct empirical studies in local schools. Therefore, the researcher was aware that distributed leadership had not been thoroughly studied in these two contexts. Also, as the researcher had good access to local schools, choosing Finland and Shanghai as the research contexts was pragmatic. With respect to the choice of the research topic, distributed leadership has always been one of the researcher's interests. After composing both Bachelor's and Master's theses on this topic, doctoral level studies were a natural continuation to further deepen the investigation of distributed leadership.

The opportunities for the data collection developed differently in Finland and in Shanghai, which made it necessary to employ different data collection strategies in the two settings. First of all, the qualitative interviews were conducted in two municipalities, Shanghai, China, and Jyväskylä, Finland. The local education offices of these two municipalities were the liaisons that connected the researcher to the schools. The selection criteria for the research schools were medium-sized comprehensive and secondary schools with medium-level academic performance in the municipalities. Three Finnish and five Shanghai schools were recruited for the qualitative sub-study. Of the three Finnish schools, two were comprehensive schools (Grades 1–9 and G 5–9) and one was a lower secondary school (G 7–9). Because the provision of general upper secondary school was transferred from Jyväskylä municipality to a municipal consortium, participants for interview were not recruited from the Finnish general upper secondary schools. From November to December 2013, a total of 20 qualitative interviews were conducted in these three Finnish schools. The interviewees included school principals, vice-principals, mid-level team leaders, and teachers.

Liaised by the Shanghai education office, the researcher conducted interviews in five schools, four of which met the school selection criteria as medium-sized and medium performing schools. One small-sized high-performing general upper secondary school was recommended by the local authority for the school's unique context. As later shown by the data, the distributed leadership practice in this school was different from that in the four other Shanghai schools. Thus, it was also included in the qualitative sub-study as a special case of distributed leadership. As opposed to the municipality of Jyväskylä, Shanghai municipality was the provider of both comprehensive and general upper secondary level educations. The five Shanghai schools in the qualitative sub-study included two comprehensive schools (G 1–9), one lower secondary school (G 6–9), and two general upper secondary schools (G 10–12). From January to April 2014, 35 interviews were carried out in these schools. As in Finland, the interviewees consisted of school principals, vice-principals, mid-level teacher leaders, and grass-roots teachers from various tiers of the school hierarchy.

The quantitative survey participants were recruited using the following sampling strategies. In Shanghai, due to the huge number of schools, stratification was used to purposively select the schools that were located in both urban and outskirt districts of Shanghai and that provided four different levels of education: comprehensive, lower secondary, upper secondary, and combined lower and upper secondary schools (Babbie, 1990; Fowler, 2002; Miller, 1991). All the teachers in these nine schools received survey invitations, out of which 327 answered the survey. In Finland, the original plan was to use the same purposive sampling strategy as in Shanghai. However, because the data collection time was close to the Christmas holidays in 2013, only 97 Finnish teachers from Jyväskylä municipality answered the survey. Later, the researcher relaunched the survey a couple of times in the region but failed to gain a satisfactory number of respondents. Therefore, the sampling strategy was changed to randomly recruit teachers from the Central, Eastern, Southern, and Western regions of Finland (Creswell, 2009; Fowler, 2002). Several survey distribution channels were used to increase the number of respondents. The invitation to online questionnaire was distributed in several professional development training programmes, at the educational fairs, and through the superintendents and principals who were a part of the professional network of the Institute of Educational Leadership. By autumn 2015, a total of 203 Finnish teachers answered the survey. Because part of the Finnish survey data came much later than the Shanghai data, two separate quantitative sub-studies were composed. In the qualitative study, on the other hand, the interviews conducted in the Finnish and Shanghai schools were analysed at the same time. The weights of the quantitative and qualitative parts of the present research project were equal (Creswell, 2009).

2.3 Epistemology and ontology

Detailed introductions to the research instruments and data analyses procedures were presented in each sub-study enclosed in the dissertation. In this section, the researcher focuses on presenting the ontology and epistemology of the inquiries. Ontology refers to the nature of reality (Hudson & Ozanne, 1988), while epistemology refers to the nature of knowledge (Carson, Gilmore, Perry, & Gronhaug, 2001).

In the present research project, the researcher rejected the positivist ontology that perceives distributed leadership as a single objective reality that exists external to its context. Correspondingly, the researcher also rejected the positivist epistemology that presumes there are absolute truths about distributed leadership regardless of its context.

Instead, the researcher adopted interpretivism as the ontological and epistemological position. More specifically, the researcher believes that distributed leadership, as a complex social phenomenon, is bound to the overall socio-cultural context in which it is practised. Hence, the socio-cultural context of the school is not merely the background but one of the key variables shaping the landscape of distributed leadership.

The researcher viewed the research object (i.e. the phenomenon of distributed leadership) and the research subjects (i.e. Finnish and Shanghai school leaders and teachers) as inseparable and non-dualistic (Marton, 2000). The phenomenon of distributed leadership was neither entirely objective, nor entirely subjective, but simultaneously subjective and objective. On the one hand, there were objective realities of distributed leadership discerned by the school leaders and teachers, which were shaped by, for instance, school structures, educational policies, social expectations and cultural norms. On the other hand, such objective realities also constantly shaped school leaders' and teachers' subjective perceptions and experience of distributed leadership.

Ontologically, the researcher admits that there are multiple and relative realities of distributed leadership that hold different meanings for the research participants (Hudson & Ozanne, 1988). Epistemologically, knowledge about distributed leadership is seen as socially constructed by the school leaders and teachers in their practices (Carson et al., 2001). Subscribing to interpretivism, the researcher's task was to first capture the variation in the participants' experience of distributed leadership, and then to provide interpretations of this variation (Hesse-Biber, 2010; Marton, 2000).

2.4 Validity, reliability, and trustworthiness

In the two quantitative sub-studies, validity was examined based on whether the survey content and construct measured the phenomenon that it was supposed to measure. Reliability, on the other hand, was scrutinized based on whether the

survey data had high internal consistency (Hesse-Biber, 2010). The survey content was reviewed by several educational researchers and pretested by school principals and teachers from both contexts. Both the reviewers and the pretestees confirmed the appropriateness of the survey questions and the accuracy of the translations. More detailed results are reported in the enclosed Sub-studies II and III. With respect to the rigor of the qualitative sub-studies, their trustworthiness was safeguarded by providing rich descriptions of the research settings, pre-testing the interview questions, and examining the researcher's own ontological and epistemological position (Creswell & Miller, 2000; Lincoln & Guba, 2000). Trustworthiness, was also ensured by documenting research procedures in detail and constantly comparing and cross-checking the data codes with other researchers (Gibbs, 2007; Yin, 2003). In the enclosed Sub-studies I and IV, more detailed descriptions of the data selection and analyses procedures are reported.

When examining the whole research project in this section, the researcher assessed the validity, reliability and trustworthiness of this mixed-methods research from a comprehensive methods-centric perspective (Kvale, 1996). More specifically, the validity of the mixed-methods research was viewed as how well the selected methods fitted together to answer the research questions (Hesse-Biber, 2010; Kvale, 1996). Furthermore, following the linkage of problem and methods, the reliability and trustworthiness were measured by whether the quantitative and qualitative sub-studies yielded answers that supported each other (Hesse-Biber, 2010).

Kvale (1996, p. 241) suggested three criteria to check the validity, reliability and trustworthiness of mixed-methods research; these were used to examine the present research project. First, the quality of craftsmanship is assessed in relation to the logic of the whole research process and the coherence of different sub-studies. The present research project was divided into two phases. The theoretical phase of the research was conducted first to serve the second empirical phase of the research. The resource–agency duality model of distributed leadership as the product of the first-phase research was transformed into a research framework for the second phase. Thus, the model connected all four sub-studies to form a coherent entity.

Second, the quality of communication refers to how the researcher presents the findings in relation to each other and to earlier findings (Kvale, 1996). In the present study, this was enhanced by constructing two communication platforms on which various viewpoints of distributed leadership were presented and debated. The first platform was the meta-analysis, in which findings of earlier distributed leadership studies were critically compared and contrasted to map the theoretical development and empirical evidence of distributed leadership. The second platform was this dissertation, in which the four sub-studies were synthesised and discussed as a whole. Particularly, in the Discussion chapter, the key findings of the sub-studies were put side by side to construct a clearer picture of how distributed leadership was practised in the Finnish and Shanghai schools and why. These key findings were also discussed in relation to the most recent distributed leadership literature to reveal whether the present research confirmed, contradicted, or supplemented the earlier studies.

Another aspect of the quality of communication refers to how the researcher succeeds in conducting research across different languages (Squires, 2009). In the present research project, the researcher worked through and between three languages, English, Chinese and Finnish. The researcher was a native Chinese speaker and a proficient user of English. However, with only a basic understanding of Finnish, the researcher was unable to conduct interviews in Finnish. In response to this challenge, a Finnish educational researcher with English linguist credentials was invited to translate the research invitations, survey questionnaire and interview questions from English to Finnish. Similar English-Chinese translation was conducted by the researcher herself. During the translation process, a translation lexicon was developed to ensure the conceptual equivalence in English, Chinese and Finnish (Squires, 2009). All the translations were validated by several Chinese and Finnish school principals and teachers prior to conducting the studies. One advantage of using the online survey platform was that it allowed the respondents to answer the questionnaire in English, Chinese or Finnish. All the quantitative data were later analysed and reported in English.

As to the interviews, in the five Shanghai schools, the Chinese language was used as the communication tool. The interviews were first transcribed in Chinese and were later analysed and coded in English. In the three Finnish schools, however, the researcher used the translated Finnish interview questions as the resource and conducted all the interviews in English. Also, on the first day of each school visit, one Finnish researcher was invited to assist the interviews in case that the interpretation was needed. In practice, however, it turned out that all the Finnish school principals and teachers spoke proficient English and they felt competent to answer the interview questions in English. Later, all the interviews were transcribed, analysed and coded in English.

Third, pragmatic validity refers to whether the research questions are compatible with the values and traditions of the research context (Kvale, 1996). This was realised by modifying the demographics portion of the survey to meet the realities in the Finnish and Shanghai schools. For instance, in the Finnish schools, teachers' positions, such as special education teacher and student counsellor, were added in the list of current positions. A similar change was made in the Chinese survey by adding the positions of Communist Party secretary and class teacher in the list of current positions. Also, in the semi-structured interviews, the researcher asked follow-up questions to further probe into the context-specific phenomena described by the research participants.

Additionally, pragmatic validity also checks whether the research findings can contribute to a wider social context. In response to this requirement, the theoretical and practical implications of the research are included in the Conclusion. Similarly, the advantages and limitations of the studies are underlined in the Discussion to draw attention from policy makers, educational administrators, researchers, and school practitioners who may intend to use the findings of the present research project.

3 FINDINGS

This chapter has two sections. The first section introduces the key findings of the sub-studies in a table. The second section provides a more detailed description of each sub-study. The original sub-studies are enclosed in the Original Paper of the dissertation.

3.1 An introduction to the four sub-studies

In a nutshell, Table 1 encapsulates the key findings of the four sub-studies. It provides the reader with a holistic picture of the entire research project. Corresponding elaboration of each bullet point can be traced in the following summaries of the four sub-studies. The original papers of the sub-studies are also enclosed in this compilation dissertation so that the reader may find more detailed explanations.

TABLE 1 Introduction to the sub-studies' findings

Distributed leadership in Finnish and Shanghai Schools

Sub-study I (Qualitative)

A meta-analysis of distributed leadership studies 2002–2013

- **Research paradigms:** descriptive-analytical paradigm & prescriptive-normative paradigm
- **Conceptualisation:** modelling, conceptual comparison, critiques
- **Application:** favourable conditions, effectiveness, critiques
- **Research gaps:** lack of a universally accepted definition and an explicit research framework; lack of adequate study of the individual's perspective of distributed leadership, power issues, and socio-cultural context
- **Research framework for future studies:** the resource–agency duality model of distributed leadership

Sub-study II (Quantitative)

Shanghai teachers' perceptions of distributed leadership

- **Leadership structures:** pyramid > spider's web > organic community > fountain
- **Power distance:** medium-high
- **Leadership as a resource**
  - **Increase the influence of** teachers, students
  - **Decrease the influence of** test scores, superintendents, principals
- **Leadership as an agency**
  - **Principals lead** school administration, pedagogy
  - **Mid-level team leaders lead** school administration
  - **Teachers lead** pedagogy
- **Key motivators:** principal's support, colleagues' recognition, enough time, trust
- **Key demotivators:** no principal's support, no career opportunities, insufficient financial resources, distraction from teaching

(Continued)

TABLE 1 *(Continued)* Introduction to the sub-studies' findings

Sub-study III (Quantitative)
Finnish teachers' perceptions of distributed leadership

- **Leadership structures:** spider's web > pyramid > organic community > fountain
- **Power distance:** low-medium
- **Leadership as a resource**
  - **Increase the influence of** mid-level team leaders, teachers, students
  - **Decrease the influence of** school budget, educational policies and laws
- **Leadership as an agency**
  - **Principals lead** school administration, strategic development
  - **Mid-level team leaders lead** school administration, relationship building
  - **Teachers lead** pedagogy
- **Key motivators:** democratic culture, enough time, principal's support, task matching expertise, trust, enough financial resources
- **Key demotivators:** no principal's support, insufficient financial resources, no extra pay, no decision-making autonomy, excessive administrative work, distraction from teaching

Sub-study IV (Qualitative)
Reconceptualising distributed leadership in Shanghai and Finnish schools

- **First-phase analysis** identified three administrative structures
  Second-phase analysis yielded in total nine distributed leadership conceptions in the three administrative structures
  - **Four-tier vertical structure:** distributing leadership through positions, empowerment, competition, collaboration
  - **Two-tier vertical structure:** distributing leadership through expertise, mentoring
  - **Two-tier horizontal structure:** distributing leadership through equity, professional autonomy, trust
- **Socio-cultural factors:** bureaucratic and authoritarian mentalities, face-saving culture, testing culture, equity, culture of trust
- **Manifestations of power**
  - **Legitimate power:** position-bound authority
  - **Discursive power:** manipulation, competent authority, rational argumentation

In the first phase of the research, Sub-study I produced a status report of distributed leadership research from 2002 to 2013. This sub-study answered the first research question: *In the recent research, what has been studied in terms of the theoretical development and empirical evidence of distributed leadership?* Meanwhile, the meta-analysis also identified several research gaps in the existing literature. Attempting to make a contribution to fill these gaps, the researcher synthesised key findings of earlier studies and created the resource–agency duality model of distributed leadership for future research. In the meta-analysis, the model was described as follows.

> *Distributed leadership should be defined and studied in terms of leadership as a process that comprises both organisational and individual scopes; the former regards leadership as a resource and the latter as an agency. Both resource and agency are considered to emerge and exist at all organisational levels* (Tian et al., 2016, p. 156).

In the second phase of the research, Sub-studies II and III used the same survey instrument to examine the Shanghai and Finnish teachers' perceptions of distributed leadership, answering the second and third research questions: *What are the manifestations of distributed leadership in terms of resource and agency in Finnish and Shanghai schools? What are the key motivators and demotivators underlying Finnish and Shanghai teachers' participation in distributed leadership?* Sub-study IV analysed 55 interviews to answer the fourth research question: *How do Shanghai and Finnish school leaders and teachers understand and enact distributed leadership in practice?* During the interviews, the research participants brought forward power issues when describing their distributed leadership experience. Thus, a fifth research question was designed to investigate *how power is manifested in distributed leadership.*

The second-phase research applied the original resource–agency duality model of distributed leadership as the framework to design the survey and interview questions. The empirical findings, in return, brought up two key factors that were not included in the original model: the socio-cultural context and power. Throughout the research process, the researcher's understanding of the topic also developed. At the final stage of the research project, the researcher considered it more appropriate to call the resource–agency duality model a research framework rather than a definition because distributed leadership is such a highly context-bound and practice-oriented phenomenon. When defining distributed leadership, it might be more beneficial to conceptualise it from practice rather from pure theory. After adding the socio-cultural context and power into the resource–agency duality model, it was described as follows:

> *The resource–agency duality model of distributed leadership views leadership as a process that accounts for both organisational and individual perspectives. From the organisational perspective, leadership as a resource is distributed to various tiers of the organisational hierarchy, serving organisational goals. From the individual perspective, leadership as an agency is*

distributed in organisational members' various actions and interactions, assisting individuals to attain personal goals and values. The organisational and individual perspectives are intertwined in practice. The distribution of organisational resources can facilitate or impede individual's agency. In return, individuals' exercises of agency can transform into resources for the organisation to use, and simultaneously, create multidirectional power relations. Throughout the entire distributed leadership process, the socio-cultural context of the organisation largely determines the creation and distribution of resources as well as regulates the sociocultural boundaries within which individuals exercise their agency.

3.2 Sub-study I: A meta-analysis of distributed leadership from 2002 to 2013

Applying the meta-analysis approach, this study aimed at investigating the theoretical development and empirical evidence of distributed leadership. On the basis of that, the study also proposed some directions for future research. The data comprised 85 selected academic articles and book chapters published between 2002 and 2013, of which 53 dealt with the conceptualisation of distributed leadership and 32 focused on the application of distributed leadership.

The first key finding of the meta-analysis was the two research paradigms for distributed leadership studies: the *descriptive-analytical paradigm* and the *prescriptive-normative paradigm*. By sorting and comparing the research aims of the 85 publications, the meta-analysis found that some studies mainly focused on examining the manifestations of distributed leadership, including the social interactions among various actors and the influence exerted by different actors and artefacts during the leadership process. These studies were categorised under the *descriptive-analytical paradigm*. One important feature of the *descriptive-analytical paradigm* was that it attempted to have a more neutral view of the effectiveness of distributed leadership without presuming it to be an intrinsically normative approach. By contrast, other studies that searched for the most effective distributed leadership models that contributed to school improvement, students' academic achievement, and teachers' morale were categorised under the *prescriptive-normative paradigm*. Distributed leadership, under this paradigm, was seen as a normative tool for enhancing school effectiveness.

After identifying the two research paradigms, the meta-analysis synthesised the key strategies used by earlier studies to conceptualise distributed leadership and examine its application. Regarding the conceptualisation of distributed leadership, the existing literature provided several important models, such as Spillane's (2006) leader-plus and practice-centred models, Gronn's (2002, 2008) numerical-concertive model, and a hybrid model. However, these models seemed to focus primarily on investigating how leadership was distributed in the service of organisational goals. Little attention was paid to how school leaders and teachers exercised their agency in the leadership process. There seemed

to be a lack of explicit research frameworks comprising both organisational and individual perspectives of distributed leadership. Also, several researchers conceptualised distributed leadership by comparing it with other related concepts, for instance shared, collaborative, and democratic leadership (e.g. Heikka, Waniganayake, & Hujala, 2012; Spillane, 2006; Woods P. & Woods G., 2013). Moreover, criticism was also voiced by those scholars who found the concept of distributed leadership rhetorical. For instance, Torrance (2013) warned that despite the policy drive to promote distributed leadership in schools, Scottish teachers still did not perceive themselves as playing the role of a leader. Woods (2004, 2005, 2011), in turn, criticised distributed leadership research for narrowing the focus on organisational performance while neglecting the holistic wellbeing of school members. Furthermore, Lumby (2013) condemned the existing distributed leadership studies for overlooking power issues.

Regarding the application of distributed leadership, the earlier studies identified four favourable conditions for distributed leadership, which were formal leaders' support, climate of trust, strategic staff policy, and the utilisation of artefacts in leadership. The effectiveness of distributed leadership was measured by students' longitudinal test scores, teachers' professional commitment and job satisfaction, and students' transition between different levels of education (e.g. Anderson, Moore, & Sun, 2009; Heck & Hallinger, 2010; Hulpia & Devos, 2009; Hulpia, Devos, & Van Keer, 2009; Jäppinen & Sarja, 2012). Nevertheless, the lack of a shared understanding of the concept of distributed leadership complicated the empirical studies. Contradictory findings emerged from different studies, leaving the effectiveness of distributed leadership highly questionable. It was equally problematic that in most of the empirical studies, the concept of distributed leadership seemed to be predetermined by the researchers rather than created on the basis of the school leadership practices.

In response to the inadequacies of the earlier distributed leadership studies, the meta-analysis created a new resource–agency duality model for studying distributed leadership on the basis of the extensive literature review. This model accounted for both organisational and individual perspectives of distributed leadership, underlining their interconnectedness. From the organisational perspective, leadership is seen as a resource, whereas from the individual perspective, leadership is seen as an agency. When leadership as a resource is distributed to more members of the organisation, it can be regarded as activating their agency. In return, when school members' agency serves the organisational goals, it becomes a resource for the organisation.

3.3 Sub-study II: Shanghai teachers' perceptions of distributed leadership

In this study, the resource–agency duality model yielded by the meta-analysis was applied to design an online survey instrument titled *Distributed Leadership*

in Finnish and Shanghai Schools (Teacher questionnaire). The survey was first designed in the English language and then translated into Chinese and Finnish. The survey comprised four sections: leadership structure and power distance, leadership as a resource, leadership as an agency, and motivators and demotivators behind teachers' participation in distributed leadership. The survey items were selected from earlier distributed leadership and motivation research findings. Three educational leadership researchers were invited to examine the validity of the survey content. Two Shanghai school principals and five teachers pre-tested the survey and reaffirmed the accuracy of the Chinese translation and the applicability of the survey content. The Cronbach's alpha values of all four sections were above .90, indicating high internal consistency of the results (Wells & Wollack, 2003). The survey was distributed from January to March 2014 in nine purposively selected comprehensive and secondary schools in Shanghai, China. Altogether, 327 Shanghai teachers participated in the survey.

Descriptive statistical analyses were conducted to answer two research questions: *What are the manifestations of distributed leadership in terms of resources and agency in Shanghai schools?* and *What are the key motivators and demotivators underlying Shanghai teachers' participation in distributed leadership?*

The first section of the survey examined the school leadership structures, power distance, and their relationship. Using two criteria, the power source (one vs. multiple power centres) and the structure's stability (fixed vs. flexible), the first section of the survey offered four metaphors of school leadership structure from which the Shanghai teachers were asked to choose (Fig. 3). The formulation of the four metaphors was based on several studies. The metaphor of the *pyramid* can be tracked to Tschannen-Moran (2009) and Yan (1999). In the metaphor, one fixed power centre was set at the zenith of the hierarchy with a high degree of stability, and power and authority flew downward from school top leaders to teachers. The *spider's web* metaphor derived from Minarik, Thornton and Perreault (2003), who used it to symbolise the structure with one power centre at the hub and various function units connected by strands. This metaphor highlighted the interconnectedness of different function units and the resilience and flexibility of the structure. The metaphor of *organic community* was linked to Spillane's (2006) practice-centred distributed leadership model. This metaphor underlined the emergent nature of the structure in which the roles of leaders and followers were determined by the leadership practice in different situations. Thus, the *organic community* structure incorporated multiple power centres and allowed teams to emerge and dissolve flexibly. The *fountain* structure, sometimes also referred as the inverted pyramid, was used by Tschannen-Moran (2009) to depict a professional organisation in which power and authority flew from teachers upward to school leaders. Woods et al.'s (2004) description of the school structure that enabled leaders to adapt their leadership practices to meet teachers' initiatives could also be associated to this metaphor. The *fountain* structure was built upon multiple power centres at the bottom of the hierarchy with a high degree of stability.

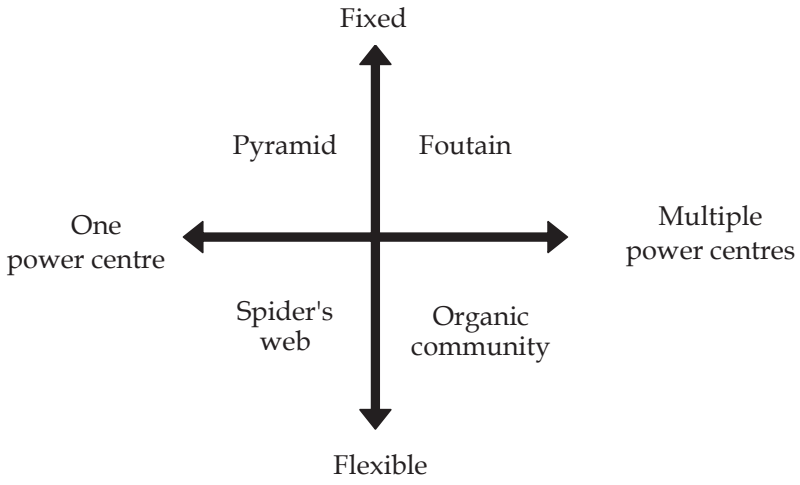

FIGURE 3 Four metaphors of school leadership structures

The results (N = 308) showed that both the *pyramid* (40.5%) and the *spider's web* (37.5%) were the most observed leadership structures in the Shanghai schools. About one-fifth of the teachers identified the *organic community* structure within their school (20.4%). By contrast, less than 2% of the teachers acknowledged the *fountain* structure. Moreover, a vast majority of the Shanghai teachers (81.2%) observed a medium to high power distance between the principal and the teachers. The chi-square tests disclosed the correlations between the *pyramid* structure and a high power distance and the *organic community* structure with a low or medium power distance. The *spider's web* and the *fountain* structures, however, were not associated with any specific range of power distance.

The second section of the survey investigated how much influence the 17 leadership resources (i.e. actors and artefacts derived in previous distributed leadership studies) exerted on school leadership work (Gunter, Hall, & Bragg, 2013; Harris, 2012; Hartley, 2007; Hulpia & Devos, 2009; Jäppinen & Sarja, 2012; Leithwood et al., 2007; Mayrowetz, 2008; Mayrowetz, Murphy, Louis, & Smylie, 2009; Menon, 2005; Murphy et al., 2009; Pederson, Yager S., & Yager R., 2012; Scribner, Sawyer, Watson, & Myers, 2007; Spillane, 2006; Spillane, Camburn, & Pareja, 2007; Spillane et al., 2004; Timperley, 2005). After that, the teachers were asked whether they wanted to increase, decrease, or maintain their levels of influence.

The results corresponded to the hierarchy of the *pyramid* leadership structure identified in the first section. As the highest leaders of the schools and the district-level education authorities, *principals* and *superintendents* played the most decisive roles in leading the school, who were followed by *vice principals* and *mid-level team leaders*. According to the respondents, *teachers, students, parents, external stakeholders*, and *school boards* had only some influence on school

leadership work, far less than the influence exerted by the officially designated school leaders mentioned above. Besides human agents, artefacts such as *school reputation, student test scores, national-level educational laws,* and *local-level educational policies* also exerted a great deal of influence on how schools were led. Furthermore, the survey revealed that the Shanghai teachers were not satisfied with the current resource distribution and expected the following changes to take place. The Spearman's correlation test results showed that the *teachers* wanted to increase their own influence on the school leadership work and at the same time decrease the influence exerted by *student test scores, superintendents,* and *principals*.

In the leadership as an agency section, the mean ranks of Friedman's test disclosed significant differences in the agency exercised by *principals, mid-level team leaders,* and *teachers* in 10 leadership processes. Corresponding to the school hierarchy, at the between-groups level, the higher the leadership position one held, the more agency one exercised. The principals and the mid-level team leaders were more agentic than the teachers in most of the leadership processes except for *leading students' learning*. At the within-group level, *principals'* agency was strongly observed in *delegating tasks, managing administrative work,* and *evaluating school performance*. The *mid-level team leaders'* agency was mostly observed in *delegating tasks, managing administrative work,* and *leading teacher teams*. Along with *leading students' learning, teachers* also considered themselves to have strong agency in *developing school culture*. Notably, the Shanghai teachers perceived that they exercised little agency in the other eight leadership processes, especially in the areas of school strategic development and administration.

In the motivator and demotivator section, 53.9% (N = 151) of the Shanghai teachers reported that their workload was too heavy, whereas 45% (N = 126) felt the workload was just fine, and less than 1% (N = 3) found the workload too light. During the statistical analysis, those teachers whose workload was just fine or too light were combined and compared with the overloaded teacher group.

The chi-square tests failed to detect the systemic correlations between teachers' workload and the effectiveness of the motivators and demotivators. This implied that the overloaded teachers and the non-overloaded teachers shared similar views on the most effective motivators for distributed leadership, which were *principal's support, colleagues' recognition, enough time,* and *trust*. In comparison to the other factors, offering *extra pay* and *official leadership title* were the two least effective motivators. From the perspective of demotivators, both overloaded teachers and teachers with a manageable workload found the absence of *principal's support* to greatly discourage them from assuming extra leadership responsibilities. Following that, *no career opportunities, insufficient financial resources,* and *distraction from teaching* also exerted a powerful negative impact on teachers' willingness to lead. For the teachers who were overloaded, *no decision-making autonomy* and *excessive administrative work* appeared to be highly discouraging.

In conclusion, this study discovered the most common leadership structures in the researched Shanghai schools and their correlations with power distance. The Shanghai teachers considered themselves to be one of the most untapped leadership resources and wanted to exercise stronger agency outside of classroom teaching. According to the Shanghai teachers, the principal played a vital role in nurturing or impeding distributed leadership in a school. Offering extra pay or a leadership title alone did not seem to effectively motivate teachers to take more leadership responsibilities. Neither did teachers want to be burdened with excessive administrative work that distracted them from teaching. In contrast, equipping teachers with sufficient resources such as time, principal's support, colleagues' recognition, and trust seemed to facilitate distributed leadership in Shanghai schools.

3.4 Sub-study III: Finnish teachers' perceptions of distributed leadership

Sub-study III used the same survey instrument as Sub-study II. This study investigated the leadership resource and agency distributions from the viewpoint of the Finnish teachers. Two Finnish principals and five teachers pretested the survey and confirmed the Finnish translation of the survey content. The survey was first distributed to purposively selected, medium-sized, and medium academic performing schools in Jyväskylä during November and December 2013 and received 97 responses. A few more attempts were made to recruit more respondents but the results were unsatisfactory. Therefore, the researcher changed from the purposive sampling to a random sampling strategy and expanded the survey distribution to more schools in Eastern, Southern, and Western Finland during September and October 2015. By the end of 2015, a total of 203 Finnish teachers had participated in the survey. Corresponding to Sub-study II, this study also answered two research questions: *What are the manifestations of distributed leadership in terms of resources and agency in Finnish schools?* and *What are the key motivators and demotivators underlying Finnish teachers' participation in distributed leadership?*

The survey results first showed that the Finnish teachers (N = 198) regarded the *spider's web* (42.42%), with one power centre and a high degree of flexibility, as the most common leadership structure in their schools. The second and third most observed structures were the hierarchical top-down *pyramid* structure (28.28%) with one power centre and a high level of stability and the emergent, flexible *organic community* structure (27.27%) with multiple power centres. By contrast, the *fountain* structure which symbolised bottom-up leadership with multiple power centres, was the least observed structure (1.6%). Moreover, 81.82% of Finnish teachers detected a low to medium power distance between them and their principals. The chi-square tests showed that the *spider's web* and *organic community* structures were linked to a low power distance. The *pyramid*

structure was associated with a high power distance. Statistically, no correlation was found between the *fountain* structure and power distance.

The second section of the survey on leadership as a resource mapped the amount of influence exerted by the 17 actors and artefacts on school leadership work and the Finnish teachers' expectations to increase, decrease, or maintain their influence. The most influential actor was, not surprisingly, the school *principals,* followed by *vice/assistant principals.* Artefacts, including *school culture, budget, curriculum, local educational policies,* and *national educational laws,* also exerted a great deal of impact in the Finnish schools. However, actors such as *mid-level team leaders, teachers, school board,* and *superintendents,* together with the artefacts of *school reputation* and *students' test scores,* exerted only some impact on school leadership work. Among the least influential actors and artefacts, the teachers considered *students, parents, external stakeholders,* and *information sharing platform* to have only small impact on school leadership work. Regarding the second research question, the Finnish teachers wanted to decrease the influence of school *budget, local educational polices,* and *national educational laws*. They also regarded *team leaders, teachers,* and *students* as the most untapped leadership resources, whose influence should be increased in the school.

The third section on leadership as an agency investigated principals,' mid-level team leaders,' and teachers' agency in 10 leadership processes. The 10 leadership processes were categorised into four domains: *administration, pedagogy, strategic development,* and *relationship building*. Nonparametric Friedman's test results revealed that at the between-groups level, principals' agency was significantly stronger than that of the mid-level team leaders and teachers in all the leadership processes except for *leading students' learning*. At the within-group level, Finnish principals' agency was primarily manifested in leading *school administration* (survey items e.g. *managing administrative work* and *delegating tasks*) and *strategic development* (e.g. *making strategic plans*) rather than in leading *pedagogy* or *relationship building*. By contrast, teachers' agency was dominantly presented in the areas of *pedagogy* (e.g. *leading students' learning* and *evaluating school performance*) and *relationship building* (e.g. *developing school culture* and *networking with stakeholders*). Mid-level team leaders, however, seemed to play a pivotal role in leading *relationship building* (e.g. *developing school culture*) and *school administration* (e.g. *leading teacher teams*).

In the last section of motivators and demotivators, a majority of the Finnish teachers (N = 144) reported their workload to be just fine (79.12%) or too light (1.65%), whereas the remaining 19.23% of teachers claimed their workload to be too heavy. Statistically significant differences were found between teachers' perceptions of their workload and two motivators. According to the chi-square test results, *principal's support* and *extra pay* seemed to motivate those teachers who were not overloaded teachers more effectively than the overloaded teachers. Regarding the remaining 10 motivators, no associations were found between teachers' workload and the effectiveness of the motivators. In fact, regardless of their workload, over 90% of the Finnish teachers chose very similar top motivators behind their participation in distributed leadership. These top

motivators were *democratic culture, enough time, principal's support, task matching expertise, trust,* and *enough financial resources.* Notably, compared to the other motivators, offering an *official leadership title* was rated as the least effective motivator. This finding confirmed that distributed leadership is not realised by simply creating and distributing more leadership titles in schools.

No statistically significant correlations were found between Finnish teachers' workload and the effectiveness of the 12 demotivators. This implied that regardless of the teachers' workload, they had similar views on the top demotivators that impeded them from participating in distributed leadership. Over 70% of the teachers from both groups chose the following top demotivators: *no principal's support, insufficient financial resources, no extra pay, no decision-making autonomy, excessive administrative work,* and *distraction from teaching*. Corresponding to the least effective motivator, *no official leadership title* did not seem to weaken the teachers' willingness to lead. In addition, the Finnish teachers did not regard *competition with colleagues* to be a major barrier stopping them from assuming extra leadership responsibilities.

In summary, sub-study III mapped the resource and agency distributions from the Finnish teachers' viewpoint. *Spider's web* structure, associated with a low power distance, was the most observed leadership structure in the Finnish schools. Even though the teachers' agency was primarily enacted in leading school pedagogy, they wished to make a stronger impact beyond the classroom. The principal played a central role to either facilitate or impede teachers' participation in distributed leadership. Distributing more leadership titles in schools did not seem to make a strong impact on the teachers' willingness to lead.

3.5 Sub-study IV: Reconceptualising distributed leadership in Shanghai and Finnish schools

Sub-study IV employed the phenomenography method to answer two research questions: *How do Shanghai and Finnish school leaders and teachers understand and enact distributed leadership in practice?* and *How is power manifested in distributed leadership?* From the autumn of 2013 through the spring of 2014, two sets of qualitative data were collected from three Finnish and five Shanghai schools. The qualitative data included the eight school principals' descriptions of the school administrative structures and 55 individual interviews with purposively selected school leaders and teachers. With the aim of bringing the school practitioners' voices to the centre of the research, the researcher avoided using a predetermined definition of distributed leadership in the interviews. Instead, the resource–agency duality model was used to design semi-structured interview questions that enabled the participants to recall their real-life experiences of distributing or receiving leadership in their schools. The participants were also asked to describe their actions and interactions in the leadership process as well as the resources and agency they had used to achieve school and personal goals.

While the surveys were to map the levels of influence of various resources (i.e. actors and artefacts derived from earlier distributed leadership studies) in the Sub-studies II and III, the interviews of the Sub-study IV were to reveal the interactions amongst the various actors and artefacts in the leadership process.

The eight principals described three aspects of their school's administrative structure: the tiers of the school hierarchy, formal leadership position distribution, and the selection of school formal leaders. In the interviews, the school formal leaders and teachers from various tiers also described the school structures. After synthesising all the answers, three types of administrative structures were identified in these eight schools: *the four-tier vertical structure, the two-tier vertical structure,* and *the two-tier horizontal structure.*

Four out of the five Shanghai schools had *the four-tier vertical structure* and a separated administration of academic and student affairs. The school principal and Communist Party secretary were seen as the highest leaders. They, together with the vice-principals, were located in the top tier of the school hierarchy. Grass-roots teachers without formal leadership titles were often located in Tier 4. In the between, there were grade-level head teachers and subject leaders in Tier 3 as well as the directors of academic and student affairs in Tier 2. Across the four tiers, a vertical career path was paved for the teachers to climb from a lower tier to an upper one.

One newly established Shanghai school, on the other hand, had been given a high level of autonomy from the local education authority. In that school, a *two-tier vertical structure* had been built. The school principal and vice-principal were located in the first tier. The second tier was made up of the 13 teachers, multi-positioned in eight project teams. It was purposefully designed that none of the teachers held a formal leadership position. Although the Tier 1 principal and vice-principal were the superiors to the Tier 2 teachers, more direct collaboration took place between the two tiers. Regarding the school daily operation, the teachers considered themselves to play an active role in both the decision-making and decision enactment processes.

In the three Finnish schools, the principals and teachers described a *two-tier horizontal structure* with multiple power centres. These power centres manifested in the school leadership team and several teacher teams. The Tier 1 school leadership team consisted of the principal, vice-principals and the elected teacher team leaders. The team leaders were elected every one to two years so that the leadership responsibilities were rotated and shared by all the teachers over the years. Because of the leadership rotation, newly elected team leaders joined in the school leadership team, while the former team leaders returned to the teachers' positions. Compared to the two-tier vertical structure, the two-tier horizontal structure had the open boundary between the two tiers. A relatively flat hierarchy and a low power distance between the principal and teachers were depicted in this structure.

The second key finding of the study was the nine distributed leadership conceptions generated from the 55 interviews. Each conception comprised two aspects: the referential aspect entailed the meaning of distributed leadership

discerned by the interview participants, and the structural aspect illustrated the external perceptual boundary and the internal logic of the phenomenon. The external perceptual boundary referred to the background of the experience, whereas the internal logic explained how different meaning units of distributed leadership formed a cohesive conception (Marton & Booth, 1997; Yates, Partridge, & Bruce, 2012).

During the analysis process, it was found that these conceptions of distributed leadership were structure-specific. In the *four-tier vertical structure* shared by the four Shanghai schools, leadership was distributed through *positions, empowerment, competition,* and *collaboration*. Various formal leadership positions were set at the four tiers of the hierarchy to administer school academic and student affairs. Distributed leadership was practised by filling these formal leadership positions with qualified leaders. Concrete job descriptions were designed to regulate the power and responsibilities of these leaders. In addition, temporary empowerment was also used to distribute leadership. One Shanghai principal empowered five senior teachers to enact his teacher evaluation responsibility for the purpose of avoiding conflicts of interest with his teachers. In another Shanghai school, when having a professional disagreement with the principal, one mid-level teacher leader also used teacher empowerment to revoke the principal's decision without openly challenging the principal's authority.

Distributing leadership through competition was the third conception generated from the interviews. By utilising high-stakes standardised tests and the merit pay system, the schools tended to allocate better resources to the teachers whose subjects exerted a stronger impact on the students' test performance. For instance, a History teacher claimed that the students, parents, school leaders, and other teachers perceived the Mathematics teachers as more important than him because the Mathematics test was mandatory for all students whereas the History test was mandatory only for some students in the university entrance exams. Using this privilege, some teachers of certain subjects appeared to be more agentic in influencing school decision-making so that they gained better resources to support their own teaching. However, many of the interviewed Shanghai teachers found the excessive competition demoralising the teaching profession and damaging teachers' professional relationships within the school community. In response to this challenge, two Shanghai schools had modified their four-tier vertical structure. In one of the schools, three grade-level leadership teams were created to enable direct collaboration across the four different tiers. In the other school, the subject teachers were re-grouped into multidisciplinary teams to create new forms of professional collaboration. These modifications of the structure, according to some teachers, resembled a *spider's web* structure that incorporated both vertical and horizontal professional relationships. It was also noted by the teachers that these structural changes only created new leadership and teacher teams to supplement the existing structure, not to replace it. One reason was that abolishing the existing leadership positions would have aroused strong resistance from the leaders who held

the positions. To some extent, the restructuring resulted in more direct collaborations within the school. Nonetheless, some teachers also found the restructuring to be superficial because eventually, the decisions were still made according to the will of the school's top leaders.

The small-sized high-performing Shanghai school that received more autonomy from the local education authority had established a *two-tier vertical structure*. Two conceptions of distributed leadership were extracted from the interviews with the school vice-principal and the 13 teachers: distributing leadership through *expertise* and through *mentoring*. Regarding the former, the 13 teachers were multi-positioned in eight project teams, co-leading the school pedagogical, administrative, and student care work. Their roles in the team were mainly negotiated according to the teachers' expertise. With respect to the second conception, distributing leadership through *mentoring*, the vice-principal played the role of a teacher mentor who guided her teachers to lead various school projects. Artefacts, such as the school year clock, were used for the teachers to practise visionary thinking. Compared to task delegation, the importance of the mentoring was that the teachers were given opportunities to participate in the whole leadership process from task designing, decision-making, and decision implementation to performance evaluation and reflection.

All three Finnish schools shared a similar *two-tier horizontal structure* with multiple power centres and a low power distance. Three conceptions of distributed leadership were synthesised from the interviews: distributing leadership through *equity, professional autonomy,* and *trust*. The first conception implied that how to distribute leadership and to whom was an equity issue. It was highly important to ensure that everyone was treated equally in the process. However, from the interview data, there seemed to be two different interpretations of equity. Some Finnish teachers interpreted equity as the distribution of the same amount of resources and leadership opportunities to different teacher teams, whereas the others interpreted equity as the distribution of better resources and more opportunities to the teams that dealt with more demanding tasks. The discrepancies between these two interpretations sometimes caused internal conflicts.

The second conception illustrated that the Finnish teachers wielded a great amount of professional autonomy when leading the students' learning processes and student evaluation. Little top-down control was used by the local educational authorities or the school principals to monitor the teachers' pedagogical work.

Lastly, distributing leadership through *trust* had a two-fold meaning. It implied that the principals trusted the teachers to exercise their informal leadership to serve the school community. In return, the teachers also trusted the principals to best serve the teachers' work and wellbeing using their formal leadership. This kind of mutual trust was underlined in several interviews in which the teachers described how they resolved disagreements with their principals.

The third key finding of the study confirmed the significance of the socio-cultural context and power in relation to distributed leadership. Some interviewees highlighted that how leadership was distributed, to whom, and why was largely determined by social norms, cultural expectations, and political will. Sometimes these socio-cultural factors were so powerful that they overruled the school's distributed leadership strategies. For instance, even though one Shanghai school had restructured its leadership team by integrating the formal leaders and grass-roots teachers in the same team, the authoritarian mentality tended to prevail over the collective decision-making.

Lastly, power surfaced as a key factor in the present study. According to the interview data, both legitimate and discursive forms of power were used in distributed leadership. The former was linked to formal leadership positions, whereas the latter was embedded in various discourses, meaningful actions, and interactions. Especially from the perspective of leadership as an agency, the more people involved in the leadership process, the more agency they exercised to directly or indirectly influence each other. Thus, power was not only exerted by the formal leaders over the subordinators, it was multi-directional and relational. In addition to legitimate power, the present study also found several forms of discursive power that manifested in manipulation, argumentation, persuasion, and competence-based authority.

In conclusion, Sub-study IV synthesised three distinct administrative structures and nine structure-specific distributed leadership conceptions in the eight Finnish and Shanghai schools. The socio-cultural context was proven a decisive factor that shaped distributed leadership practice. This study also revealed that distributed leadership was not apolitical. Rather, power relations appeared to be pervasive in distributed leadership. The empirical findings suggested that both the socio-cultural context and power should be included in the resource–agency duality model of distributed leadership.

4 DISCUSSION

This Discussion chapter focuses on abridging the research framework, the four key themes of distributed leadership rising from the research project, and the recent academic discussion on distributed leadership. The chapter starts with an evaluation of the research framework, the resource–agency duality model of distributed leadership. The evaluation looks into how the research framework has been applied in the three empirical sub-studies and how the empirical findings have supplemented the research framework. The second part of the chapter synthesises the four key themes of distributed leadership in the Finnish and Shanghai schools on the basis of the sub-study key findings. These are the most central discoveries of the whole research project. Using the resource–agency duality model as a lens and some of the recent research publications as references, these four themes are scrutinised in this chapter.

4.1 An evaluation of the resource–agency duality model

The Introduction presented a systematic review of six key distributed leadership research frameworks. The literature review exposed three inadequacies in these frameworks: a lack of consensus on the substance and conceptual boundaries of distributed leadership, a narrow focus on the pragmatic goals of the organisation, and silence about power issues.

Sub-study I, the meta-analysis, reviewed earlier distributed leadership studies and synthesised the key components of distributed leadership in the resource–agency duality model. This model attempted to avoid some inadequacies of the earlier research frameworks by accounting for both organisational and individual perspectives of distributed leadership. This model was applied twice in the three empirical sub-studies, first to design the two research instruments and second to serve as the analytical framework for analysing the interview data. It turned out that the resource–agency duality model could be used

for both purposes. In addition, based on the model, the empirical studies could produce relevant findings to the research project.

In the first application, the model was used to design two research instruments, a quantitative survey and the semi-structured qualitative interview questions. As a result of the extensive meta-analysis of distributed leadership research, the model provided a theoretical framework for the empirical substudies. In addition, the meta-analysis brought forth research findings (e.g. leadership structures, actors and artefacts identified in distributed leadership practices) that could be used to design the survey and interview questions. In essence, the prime aim of the survey was to reveal the Finnish and Shanghai teachers' perceptions on distributed leadership in terms of the resource and agency distribution. Evidence from the survey identified the most influential actors and artefacts that served as the school leadership resources and ranked the amount of agency exercised by the principals, mid-level team leaders and teachers in various leadership processes. In the interviews, the prime aim fell on capturing the variation in the research participants' distributed leadership experience. The interview questions probed into the leadership actions and interactions, the access to leadership resources, and the exercises of agency.

In the second application, the resource–agency duality model was used as the analytical framework to scrutinise the data from the 55 qualitative interviews. Through the lens of organisational resources and individual agency, the data provided rich empirical evidence illuminating both perspectives of distributed leadership and, more importantly, explicating their interdependence. During the data analysis, socio-cultural context and power repeatedly emerged as two key factors that were both shaping and shaped by the resources and agency. The overarching socio-cultural factors, such as the social norms, cultural expectations, legislations, and national and local educational administration, could not be categorised under the school-level resource–agency duality model. Thus, the socio-cultural context was added to the model as an independent factor.

One unexpected finding was that similar practices of distributed leadership existed in different socio-cultural contexts, although the reasons behind these practices were different. The resource–agency duality model also seemed to shed light on power issues in distributed leadership. Various ways of exercising power were explicated by examining, for example, what types of administrative structures schools were guided to build by the local education authorities, how the school leaders and teachers exercised their agency on each other, and to whom organisational resources were distributed. Thus, power was also included in the model as a key factor.

To sum up, the resource–agency duality model was a useful framework for distributed leadership research. It was applied to illuminate the complex and multifaceted phenomenon of distributed leadership in Finnish and Shanghai schools. Regarding the overall research project, the following four key themes of distributed leadership emerged from the research data.

4.2 Four key themes of distributed leadership

The present research project attempted to theorise distributed leadership and to explore its manifestations in practice. When examining the sub-study findings as a whole, four key themes of distributed leadership emerged: principal's essential role, teachers' confined agency, socio-culturally determined structures, and neglected but pervasive power issues.

4.2.1 Principal's essential role

Across all the three empirical studies, the quantitative and qualitative data recurrently confirmed the principal's essential role in enacting distributed leadership. According to the results from both the Shanghai and the Finnish surveys, the principal was not only the most important human resource but also exercised the strongest agency in leading school administration, relationship building, and strategic development. The survey data further confirmed the principal's support to be the key driving force behind teachers' participation in distributed leadership. The absence of the principal's support, correspondingly, was one of strongest demotivators impeding distributed leadership.

The qualitative sub-study shed additional light on why the principal's role was so significant in distributed leadership. Interestingly, neither the teachers nor the principals considered distributed leadership as a relinquishing of the principal's legitimate power or as a challenge to the principal's status in the school. In fact, many teachers emphasised that especially in the situations when they received leadership opportunities outside of their comfort zone, they were more dependent on the principal to be present and to support and guide their leadership work. It is noteworthy that *support* could even mean that the principal bore the ultimate responsibility for what the teachers were doing in their leadership roles.

Relating to the socio-cultural contexts, in both the Finnish and Shanghai education systems, legislation such as the Finnish Basic Education Act (1998/628, §37) and the Compulsory Education Law of the People's Republic of China (1986, §26) clearly regulates the principal as the ultimate bearer of responsibility within a school. In addition to these pieces of legislation, recent policy documents also strongly endorse distributed leadership through principals. For instance, in Finland, the 2013 Finnish National Board of Education report recommended that principals' job descriptions, qualifications, and education should be designed to promote distributed leadership in schools. In China, the National Standards for Primary and Secondary School Principals clearly state that distributing leadership to teachers and coordinating the school financial and human resources are key tasks for the principals.

It appeared that the Finnish and Shanghai principals were both expected to facilitate distributed leadership at the school level. This finding echoes several studies that have recognised strong political will behind distributed leadership. For example, in Scotland there were several educational policies, legisla-

tion, and school improvement movements driving school principals to locate distributed leadership in the centre of school leadership work (Torrance, 2013). In Belgium, the Flemish government encouraged local schools to form school federations, in which leadership was distributed to several principals. A Belgian study on this topic discovered that principals played a key role in balancing resource distribution and interest conflicts across several schools (Piot & Kelchtermans, 2016). In the meta-analysis sub-study of the present research project, a similar trend of endorsing distributed leadership through principals was found in several other countries such as England, New Zealand, Turkey, and the US (Tian et al., 2016; see also Spillane & Kim, 2012; Timperley, 2005; Woods & Gronn, 2009; Özdemir & Demircioğlu, 2015).

In addition to implementing national and local distributed leadership policies, the principal was also the key person engaging teachers in leadership work and nurturing their leadership capacities (see also Bush & Glover, 2012; Murphy et al., 2009). From the data, the interdependence of resource and agency seemed to form a cycle. The cycle started with the principal's exercise of agency, offering leadership opportunities to the teachers. In doing so, the principal's agency was transformed into resources that activated and supported the teachers' agency. When the teachers' agency was practised to serve the school's overall goals, the teachers also became resources for the school.

An example from the interview data illustrates this cycle. One Shanghai principal empowered the teachers to elect five expert teachers among themselves to act as pedagogical evaluators. As a result, these expert teachers' pedagogical expertise became a new resource for the school. However, the principal's agency did not end there. In order to support these five expert teachers' new role, the principal continued to provide them with necessary resources, including an official endorsement and evaluation tools. The principal arranged a staff meeting during which he openly appointed the five expert teachers as the pedagogical evaluators and explained how they were to use the new evaluation tools. The interview data highlighted that it was crucial for the principal to make the role of the empowered teacher leaders visible to the other teachers. This was because some of the empowered teachers were afraid that their colleagues would not acknowledge their role as leaders if the school principal did not publicly consolidate their authority. From the individual perspective, the principal's agency was the crucial trigger for and the driving force behind the teachers' agency. From the organisational perspective, when the principal's and teachers' agency was used to serve school task fulfilment and goal attainment, they became valuable resources for the school.

The change of the research framework allowed the present study to offer a new perspective from which to probe into the principal–teacher interactions in comparison to many previous studies. For example, one quantitative study conducted in Belgian schools showed that the principal's and the vice principal's support had statistically significant but nearly negligible impact on teachers' organisational commitment. The principals' leadership only contributed 9% of the variance in teachers' organisational commitment, whereas 91% of the var-

iance was determined by the teachers themselves (Hulpia, Devos, & Van Keer, 2011). Using Hulpia et al.'s survey instrument, Özdemir and Demircioğlu (2015) investigated distributed leadership in the Turkish context and reached a similar conclusion. According to them, only 6% of the variance observed in teachers' psychological contracts with the school was explained by the leadership skills of the principals, the head assistants to the principals, and the assistant principals, in contrast to 90% of the variance arising from the teachers' own personal characteristics (Özdemir & Demircioğlu, 2015). These two quantitative studies seemed to suggest that the school principal's direct impact on the teachers' commitment to and psychological relations with the school existed, but that the magnitude of the impact was minimal. According to the present study, however, the dynamics of principal–teacher interactions comprise both principals' direct and indirect impact on teachers. In fact, on the basis of the findings obtained using the resource–agency duality model, one can assume that the principals' indirect impact on teachers may be even more significant than the direct one. Much of the principals' agency appeared to be indirect and was manifested in creating resources that enabled and reinforced teachers' agency in various school leadership, pedagogical, administrative, and management work.

4.2.2 Teachers' confined agency

According to the two quantitative sub-studies conducted in the Finnish and Shanghai schools, teachers exercised the strongest agency in leading students' learning. In other leadership processes, the teachers' agency was significantly weaker than that of the principals, and in the Shanghai context, it was also weaker than that of the mid-level team leaders. Particularly, disparities were observed in the leadership processes that dealt with leading the school administration and strategic development.

The interviews were able to provide some explanations of the survey results. First, resources existed at both the national and school levels that supported the Finnish teachers' agency in leading the school pedagogical work. At the national level, the education system offered teachers high-quality education, professional autonomy, and trust. At the school level, the principals also trusted the teachers' professionalism and did not constantly monitor their work. When leading students' learning, curricula were the most important resources for the teachers. Also, the Finnish national core curricula did not impose upon teachers detailed syllabi that would have regulated their teaching. Instead, the curricula provided the general guidelines and learning objectives, according to which the teachers developed the local and school curricula, created teaching materials, chose pedagogical methods, and evaluated students' learning outcomes. In some cases, the teachers also diagnosed individual students' special needs and tailored personal study plans with them. When the Finnish education system and the schools supported the teachers to use their agency in pedagogical work and equipped them with the essential resources, the teachers felt highly motivated to lead the pedagogy of the school.

In contrast to their strong pedagogical leadership, the Finnish teachers also illustrated instances in which their agency was restrained by excessive school administrative tasks. In all three Finnish schools, the teachers mentioned that the national austerity measures had caused school budget cuts and personnel shortages. More and more commonly, several schools shared a school secretary, social worker, school nurse, and psychologist. In one Finnish school, the number of support staff such as teaching assistants and janitors was also cut. Despite the budget and personnel cuts, the administrative workload had not decreased. Inevitably, some tasks were shifted to the teachers' shoulders. More of the teachers' time and energy was spent on writing funding applications and reports, monitoring school security, and managing school facilities. In the interviews, the Finnish teachers clearly differentiated between fulfilling administrative duties and leading school administration: to them, the former meant using teachers as tools to handle tedious paper work for the school's managerial convenience, whereas the latter meant engaging teachers to re-design the school administration so it would better serve teaching and learning. Unfortunately, due to the scarce time, funding, and human resources, the Finnish teachers seemed to be mostly used to share the administrative workload under the name of distributed leadership.

Similar to their Finnish counterparts, the Shanghai teachers also regarded leading students' learning as their first and foremost responsibility. However, unlike the Finnish teachers, who led their pedagogical work autonomously, the Shanghai teachers seemed to enact their pedagogical leadership in a collective manner. For instance, the teachers' classroom teaching was often observed and evaluated by the school principal. The subject teams were the home bases for co-planning lessons, sharing teaching resources, and co-evaluating students' learning outcomes. Every year, the teachers were obliged to participate in municipal, district, and school level in-service trainings. A big part of the training focused on improving teachers' pedagogical skills. On top of these, the local education authorities also encouraged the teachers to conduct action research on their own teaching. In doing so, the authorities expected the teachers to apply the most cutting-edge educational theories in their daily pedagogical work.

Apparently, the Shanghai teachers devoted most of their time and energy to pedagogical work and pedagogy-related professional development. On the one hand, they found these resources useful. On the other hand, they seemed to be overwhelmed by these unceasing evaluations, professional collaboration, in-service trainings, and research tasks. One teacher put it this way. Every year, new educational theories and pedagogical techniques guided the teachers how to teach. Similarly, each year, the standardised tests decided for the teachers what to teach. More often than not, these theories, techniques, and tests developed so rapidly that the teachers found it very difficult to adapt to the changes. Gradually, the teachers spent more and more time on learning how to teach, but they seemed to lose the ownership of their own work.

Like the Finnish teachers, the Shanghai teachers were also heavily burdened with administrative tasks and had little time to participate in the school-

level leadership work. However, the reasons behind this phenomenon were different from those of the Finnish teachers. According to the Shanghai teachers, it was not a financial or personnel shortage that restrained them from exercising their agency in the school leadership work but the excessive top-down inspections and evaluations. The interviews showed that almost on a monthly basis, the schools underwent some kind of inspection and evaluation, for which the school principals and teachers had to carefully prepare evidence-based reports. Sometimes, based on the same materials, different versions of reports had to be drawn up to meet various requirements. As a result, the teachers became the resources for the schools to pass these inspections and evaluations. Besides teaching, a large amount of the teachers' time was spent documenting all the school activities in detail.

Another side effect of the high-stakes school inspections and evaluations was that they tended to guide the daily operation of the school. Very often, the school principals and teachers had to organise their pedagogical and student activities in certain ways that would fulfil the inspection and evaluation requirements. Eventually, not only the teachers' agency but also that of the principals' was constrained in terms of deciding how the schools should be led.

Relating the interview data to the quantitative survey results, it was easy to understand why, with regard to school leadership work, the Finnish teachers wanted to weaken the impact of the school budget, whereas the Shanghai teachers wanted to decrease the influences of the students' test scores and the local educational administration. These factors, in one way or another, overburdened the teachers with unwanted tasks. This finding resonates with Youngs' (2009, p. 7) conclusion that when distributed leadership equates with work intensification, it eventually becomes 'distributed pain'. Also, the survey results showed that offering leadership titles or financial incentives would not effectively motivate teachers to assume extra leadership responsibilities. According to the interviews, the teachers did not think these two incentives would ease their workload. Instead, what the teachers needed, as the survey results also revealed, was time, principal's support, and trust.

All the empirical data pointed out that the Finnish and Shanghai teachers wanted to be more engaged in school leadership work, not merely as resources but also as active agents who could make a real impact on the school. However, the present study also showed that the organisational perspective of distributed leadership often prevailed over the individual perspective. As the research participants depicted in the interviews, the school administrative structures were constructed primarily to utilise the resources that teachers created to achieve the school overall goals, and only secondarily to support teachers' agency to pursue their own goals (see also Gunter et al., 2013; Hatcher, 2005). When the individual's agency is underemphasised, distributed leadership may become rhetoric, because 'teachers were still waiting for permission to act and then acting within agreed parameters' (Torrance, 2013, p. 57).

4.2.3 Socio-culturally determined structures

The two quantitative sub-studies investigated the school leadership structures and their relationships with power distance. Positive correlations were found in both contexts; in particular, the *pyramid* structure appeared to be associated with a high power distance and the *organic community* structure was linked to a low to medium power distance. These findings suggest that the leadership structures affected the power relations between the principal and the teachers.

Earlier distributed leadership studies have found that the socio-cultural context of the school strongly affects the school administrative structure and the ways of interaction and collaboration (Louis, Mayrowetz, Smiley, & Murphy, 2009; Mascall, Leithwood, Strauss, & Sacks, 2009; Spillane & Coldren, 2011; Torrance, 2013). Through the interviews, the qualitative sub-study confirmed this conclusion and identified three types of tier structures that were used in the research schools.

The four metaphors of school leadership structures investigated in the two quantitative sub-studies and the three types of tier structures identified in the qualitative sub-study did not correspond to each other as such. The metaphors were created on the basis of previous leadership studies to examine the research participants' views on distributed leadership. The tier structures, on the other hand, were empirical findings from the interviews. Thus, both the methods of obtaining the metaphors and the tier structures as well as their roles in the whole research project were different. Because the quantitative and qualitative sub-studies were carried out concurrently, in the interviews some research participants also described their school administrative structures through the metaphors used in the survey. However, their descriptions in the interviews typically comprised the features of several metaphors. No clear and direct connections could be drawn between the metaphors and the tier structures.

With regard to the identification of the three administrative structures, two additional findings are worth discussing here. First, the formations and applications of the three administrative structures were influenced by external socio-cultural factors. Second, with regard to the leadership process, different structures seemed to affect organisational resources and individual agency in different ways.

4.2.3.1 The two-tier horizontal structure

The interviews conducted in the Finnish schools revealed some socio-cultural reasons behind the establishment of the two-tier horizontal structure. First, although the Finnish education system allows schools to build different leadership structures, these structures must follow several pieces of legislation by ensuring, for instance, equality and collaboration in the workplace (e.g. Act on Equality between Women and Men, Act on Co-operation within Finnish and Community-wide Groups of Undertakings, Finnish National Core Curricula). Second, since the 1990s, the educational administration at the national, regional, and local levels has been streamlined. Under this influence, more administrative

tasks have been shifted to the school level (Risku, 2014). In response to this change, Finnish schools tend to construct structures that enable teachers to share administrative tasks. Third, Finnish teachers are seen as a school's most valuable resource (Sahlberg, 2015). Building structures that effectively use teachers' expertise is one of the goals that the schools pursue.

Based on the need to ensure equity and collaboration, to share administrative workload, and to effectively use teachers' expertise, the three Finnish schools had built similar two-tier horizontal structures. In this structure, the school leadership team, consisting of the school principal, assistant principals, and the leaders of the teacher teams, was located in the first tier of the hierarchy. In the second tier, the teachers were grouped in multiple teacher teams. Every one to two years the teacher teams were shuffled and the responsibilities of the team leaders were rotated among the teachers. Over the years, the rotation provided all the teachers an opportunity to lead the teacher teams and participate in the school leadership team. The boundary between the two tiers was blurry. The structure allowed the newly elected team leaders to enter the school leadership team in the first tier, and at the same time, let the ex-team leaders return to the teacher teams in the second tier. In addition to the interactions between the two tiers, the teachers within one teacher team interacted actively with each other. The interactions both between and within the tiers flattened the hierarchy and made the structure horizontal.

Using the resource–agency duality model to examine this structure, the following findings emerged. From the agency perspective, rotating the leadership responsibilities among the teachers created more opportunities for the teachers to exercise their agency. When acting as the team leaders, the teachers could lead beyond their classroom teaching and have a more direct impact on school-level decision-making. After being in both teachers' and team leaders' roles, the teachers were more likely to better understand the dynamics of school leadership work.

Thus, when returning to their teachers' position, they seemed to accept school-level decisions more easily. Similar evidence was found by Lee, Hallinger, and Walker (2012) in a comparative study, according to which switching teachers' positions generated more resources and professional support at all levels of the school. Having new teacher leaders in the school leadership team also meant that the school principals had to intentionally recognise teachers' different needs, nurture their leadership capacities, and provide corresponding support. Because different teachers had divergent professional ambitions, personal dreams, and leadership styles, the principals sometimes encountered competing values and goals that were not always in alignment with the school vision.

From the resource perspective, one pragmatic reason for building the two-tier horizontal structure as mentioned above was to share the administrative tasks among the teachers. Extending leadership opportunities to more teachers also enabled the schools to use teachers' diverse expertise more effectively. In

addition, rotating the leadership responsibilities among the teachers was a strategy to ensure equity in the school.

However, this structure of distributed leadership also faced challenges. As discussed in the previous section, the Finnish teachers were not always equipped with sufficient resources to fully exercise their agency in the school leadership work. In addition to that, leading with this structure was demanding. It required highly motivated teachers, skillful principals, and a lot of trust among the various members of the school. Also, shifting the roles between leaders and teachers sometimes caused role and accountability ambiguity among the teachers. For example, the new team leaders might be held accountable for decisions made by the former team leaders, which could lead to internal conflicts.

4.2.3.2 The four-tier vertical structure

In the qualitative study, four Shanghai schools had built similar four-tier vertical structures. One salient feature of this structure was the separation of the academic and student administration. According to the interview participants, the separation had a socio-cultural background. Traditionally, providing academic education was the main focus of schools. Since the 1980s, education authorities decided to enhance the status of moral education in schools. The 1986 Compulsory Education Law clearly stated that moral education must be given a primary status. In practice, two parallel lines of administration were built to lead academic and moral education separately at the national, municipal, and district levels. Corresponding to that, schools also built their structures by separating the administration of academic and student affairs, of which the latter also included students' moral education. Moreover, the structure contained a steep hierarchy and many formal leadership positions. The reason for this was that different units in the local education authorities required the schools to set corresponding units to enact the top-down tasks. Gradually, more and more units were incorporated, creating the four-tier vertical structure.

From the agency point of view, the teachers' agency was largely defined by and confined to the positions they held in the hierarchy. Attached to each position was a detailed job description elaborating the position holder's authority, duties, and responsibilities. The teachers were expected to exercise their agency within those boundaries. The four-tier vertical structure contained two vertical chains of command. Connecting the formal leaders and teachers in the four tiers, one chain of command led school academic affairs, while another administrated student affairs. This division sometimes caused problems because a leader positioned in one chain had limited authority to lead a teacher positioned in the other chain. The following example illustrates this. The Director of Student Affair wanted to organise a half-day student field trip but encountered resistance from the subject teachers. The teachers considered the academic studies more important and wanted to keep the students in their classrooms. In this situation, the Director of Academic Affair, as the direct superior

to the subject teachers, used her authority to adjust the timetable so that the field trip could be realised.

From the resource point of view, this structure seemed to bring clarity. Because everyone's duties and responsibilities were clearly defined through the job descriptions, it became easier to distribute the corresponding tasks and to hold the person in charge accountable. Also, the structure contained a steep hierarchy. Thus, holding a higher position also meant gaining more subordinates as resources. In this structure, principals could generate more resources from the teachers by creating new positions or enriching teachers' job descriptions. For the teachers, the prerequisite for climbing the school hierarchy was obtaining enough merits in their current positions. The merits were mostly measured by the teachers' contribution to the attainment of school goals. In return, the teachers were rewarded with higher positions in the hierarchy. Because the number of leadership positions decreased as the tiers became higher, it was common for the structure to also create more internal competition.

The shortcomings of this four-tier vertical structure were noteworthy, too. One deficit was that the structure tended to confine teachers' agency to their immediate positions. Exercising one's agency beyond one's position might lead to conflicts. Another limitation was that the structure seemed to create internal competition. Measuring teachers' performance with calculable merits and rewarding good performers with leadership positions was sometimes morally questionable. The third inadequacy was that because most school leaders and teachers were used to the four-tier vertical structure and relied on its stability, it was extremely difficult to make fundamental changes in the structure. If structural changes only expanded the existing structure, then the teachers were more likely to accept the changes. Nonetheless, abolishing some formal leadership positions could create strong resistance from those holding these positions.

4.2.3.3 The two-tier vertical structure

One Shanghai school in the study had its own unique context. The school was co-founded by the district government and another leading high-performing school in Shanghai. The district government expected the school to attract high-quality teachers, students, and their parents to work and live in the area. In return, the government gave the school more autonomy than usual to create its own administrative structure and to provide individualised learning for all the students.

Against this background, during its first two years, the school principal and vice-principal recruited 13 teachers and, in order to better serve the goal of individualised learning, built a two-tier vertical structure. In this structure, the school principal and vice-principal were located in the first tier of the hierarchy, and the 13 teachers were in the second tier. Between these two tiers, there was a clear vertical line of authority.

From the agency perspective, the vice-principal believed that ensuring that the teachers could lead students' individualised learning required some barriers in the traditional four-tier vertical structures to be removed to liberate teachers'

agency. For instance, the new structure broke down the division between the academic and student administration and removed the steep hierarchy among the teachers. Also, the school administration, pedagogy, and student care work were integrated into one coherent process. The 13 teachers were multi-positioned in eight project teams to co-lead this process with the principal and the vice-principal. This implied that all the teachers simultaneously played a triple role of administrator, subject teacher, and student tutor. According to the teachers, the new structure enabled them to see the connections between different types of school work, and more importantly, to participate in the whole leadership process from work design, decision-making to implementation and evaluation. During this process, the teachers constantly negotiated their roles in the project team. Informal leaders often emerged from the negotiations.

From the resource perspective, this structure used the teachers for multiple purposes. This arrangement was possible in this school because the number of students was small during the first two years. Half of the teachers' workload was reserved for school administrative tasks and student care work in addition to teaching. Because none of the teachers had previous leadership experience, when they encountered challenges at work, the vice-principal was the main resource person providing advice and sometimes also 'rescuing' the teacher if crises took place.

As a special case with its unique context, the establishment of this two-tier vertical structure deviated from many of the norms underpinning the four-tier vertical structure. Relating to Murphy et al.'s (2009) finding, restructuring school administration alone was insufficient to facilitate distributed leadership; a reculturing process was also needed and was, in fact, critical. In this Shanghai school, reculturing was realised by seeing the relationship among the school administration, pedagogy, and student care work in a new way and redefining the principals' and teachers' roles accordingly. Like the two-tier horizontal structure, one defect of this structure was that it sometimes caused accountability ambiguity. Without any formal leadership positions to underpin their authority, the emerging teacher leaders had to constantly negotiate their roles with their peers. Even though the teachers' agency was greatly liberated in the leadership process, it was far from easy to articulate who was responsible for what. While the school size remained small, it seemed feasible to have a flat structure among the teachers. Once the school started to expand in size, the vice-principal speculated that certain hierarchy should be built to bring more clarity to the school leadership work.

4.2.4 Neglected but pervasive power issues

Flessa (2009) reviewed two bodies of literature on distributed leadership and educational micro-politics, respectively. He found that even though these studies shared similar concerns, the two topics rarely converged. On the contrary, a large number of distributed leadership studies tended to avoid discussing power or to smooth out power conflicts (Flessa, 2009; Lumby, 2013; Maxcy & Nguyen, 2006). According to Flessa (2009), the absence of micro-politics analysis,

and in a broader sense, the exercise of various forms of power in distributed leadership was based on three factors. First, most distributed leadership studies framed their research inquiries to focus on the structural and human resource dimensions of leadership. The political and the symbolic substance of leadership was underemphasised (Bolman & Deal, 2004; Flessa, 2009). Second, previous distributed leadership research comprised either large-scale surveys or case studies. Compared to small-scale ethnographic investigations, these methodological approaches appeared less effective to probe into the complex and multifaceted phenomenon of power (Flessa, 2009). Third, some researchers targeted their distributed leadership studies at educational administrators, school practitioners, and policy makers as both the research subjects and the readers. Avoiding the power issues in discussion might smooth out the power conflicts in reality (Datnow, 2001; Flessa, 2009).

The meta-analysis study in the present research project also discovered that a growing body of research had adopted a prescriptive-normative research paradigm to search for the best practices of distributed leadership (Tian et al., 2016). In line with Flessa's (2009) findings, endorsing distributed leadership as a pragmatic tool for school improvement, these studies tended to neglect the power dynamics behind schools' internal conflicts. Moreover, the meta-analysis study also found that the effectiveness of distributed leadership was mainly measured by the attainment of organisational goals. The individual perspective was largely understudied in the existing literature (Tian et al., 2016). Overlooking school members' divergent personal goals and how members realised these goals through the practice of agency resulted in silence on power issues.

The change of the research framework allowed the present study to account for both organisational and individual perspectives of distributed leadership. Through the lens of resource and agency, power issues were brought to the front in several ways. First, the study showed that the local education authorities exercised their power on the schools through regulations. In Finland, the Finnish education system was decentralised in the late 1980s to delegate more power to local authorities. Correspondingly, school principals and teachers received more power to decide how schools were managed and how teaching and learning was led (Antikainen, 2006). Deregulation accompanied the decentralisation. For example, in the 1990s, the school inspection system was abolished. As a result, Finnish school principals and teachers received more power to act as the main evaluators of their own performance. Competition among the schools was discouraged. Education authorities did not publicly rank the schools according to students' academic performance (Sahlberg, 2015). Later, additional legislation and policy documents were issued, guiding schools to incorporate equality, collaboration, and in recent years, distributed leadership in school leadership work. Under the influence of these political agendas, the power distance between principals and teachers in Finnish schools has remained low.

A similar trend of education decentralisation can be found in Shanghai. However, instead of deregulation, in the 1990s, the Shanghai government built

a municipal-district two-level administrative system. More regulations were created at both levels to supervise local schools (Chan, Mok, & Tang, 2004). The increased hierarchical power over the schools led to increased accountability demands. In addition to the increasing regulation, privatisation (e.g. private schools) and marketization (e.g. school choice, merit pay for teachers) were introduced to give more power to students and parents. It was unsurprising that the growing accountability demands from the education authorities and the increasing expectations from the parents and students exerted a strong influence on how the schools distributed resources and leadership opportunities.

The second power issue mentioned by the interview participants was the complex power relations within the schools. In the Finnish schools, the principal and teachers used the annual developmental discussions to provide feedback to each other through a dialogue. In the dialogue, they discussed how the teachers' agency could be better supported and, at the same time, how the school could benefit from increased teacher agency. As the active agents, most teachers wanted better resources to support their work and they also had various personal goals to pursue. Sometimes, when the school limited resources failed to meet the teachers' divergent goals, some teachers used the developmental discussion opportunities to lobby the principal for resources. In other cases, some subject teachers mentioned that the special education teachers were very skilful in their use of Finnish legislation and education policies to gain more resources for their small-group teaching. This left the other subject teachers with fewer resources. From the principals' viewpoint, because of these competing values, ambitions, and ideas about development, they had to be extremely careful in their decision-making. The ultimate goal for the principals was to build up trust with the teachers and at the same time ensure equity in the school.

Apparently, power in this sense was not unidirectional, flowing from the principal to the teachers, but multi-directional. The principal could also be the subject of teachers' exercises of power. When power is diffused in discourses, actions, and interactions and is directed by individuals' agency, it is called discursive power as outlined by Foucault (1980, 1991). A lot of discursive power and the exercise of it was found in both Finnish and Shanghai schools. In the interviews with the Shanghai principals and teachers, evaluation was frequently mentioned as a power arena. On the one hand, the Shanghai principals had the legitimate power to evaluate teachers' performance, which heavily affected teachers' career development. On the other hand, the teachers were given the power by the local authorities to evaluate their principals' leadership work, which could in turn influence the principals' career prospects. This formed a cycle of power and counter-power in the Shanghai schools. Under this cycle, how leadership was distributed, to whom, and why could encompass a great deal of micro-politics in the background. As one interview revealed, a Shanghai principal intentionally distributed his teacher evaluation power to the five expert teachers so that he could avoid being personally targeted for revenge in the annual principal evaluation.

With the help of the resource and agency duality model, the present study was able to identify manifestations of power in distributed leadership. The findings indicated that under the banner of distributed leadership, education authorities, school principals, teachers, parents, and students all exercised different forms of power on each other. The local authorities appeared to distribute more leadership to the schools, but at the same time, through the increasing regulations and accountability, they could mask their top-down power with distributed leadership. The teachers, on the other hand, wished to be better supported at work. In distributed leadership, they became even more active in lobbying for limited school resources to ease their workload. Furthermore, when principals distributed leadership to their teachers, they were also simultaneously realising their personal agendas. In one way or another, they all appeared to use distributed leadership to camouflage their use of power.

Foucault (1980) claims that power is everywhere and it operates within human agents rather than above them (see also Kelly, 1994). Compared to the unidirectional contract-oppression power (e.g. sovereign authority) and the bidirectional domination-repression power (e.g. war and social class struggle), the multi-directional discursive power identified in the present research project can be more powerful than the legitimate one, but less visible.

Hatcher (2005) warned that distributed leadership could be manipulated to mask substantial imbalances in access to resources and sources of power. Indeed, the present research project discovered that compared to principal-centred leadership, in which principal's legitimate authority formed the power centre, distributed leadership seemed to allow multiple power centres to co-exist. Power relations became more complicated and camouflaged when individuals' agency was acknowledged as one key component of leadership. Woods and Gronn (2009), on the other hand, debunked the myth of distributed leadership equated with school democracy. They stated that distributed leadership contained a democratic deficit in terms of the use of arbitrary power. The findings of the present study echo this statement. Distributed leadership does not necessarily resolve power abuse and conflicts in schools. Rather, applying it uncritically could even give rise to more power abuse and conflicts.

5 CONCLUSION

In the final chapter of the dissertation, it is sensible to review the whole research process. This review includes a methodological discussion, focusing on the advantages and limitations of the study. This is followed by a discussion of theoretical and practical implications, in which concrete suggestions are proposed to researchers, policy makers, educational administrators, and school practitioners. Finally, this chapter also speculates on future research directions.

5.1 A review of the whole research process

As the research project reaches its final stage, looking back over the four-year research process shows that some methodological choices and decisions have proven successful while some practices could have been done differently.

In general, the mixed-methods approach combining the sequential transformative and the concurrent triangulation strategies brought satisfactory results (Creswell, 2009). Regarding the former, due to the lack of both a clear definition and an explicit research framework of distributed leadership, it was a wise decision to start the research project with a theoretical study. The theoretical framework yielded by the meta-analysis sub-study provided a good guide for the second-phase empirical studies. Another benefit of this strategy was that it tracked the development of the researcher's understanding of the topic. By the end of the first-phase research, the researcher found that there was not a universally accepted definition of distributed leadership. This research gap was worth filling. After finishing the second-phase study, the researcher started to see the conceptualisation differently. It became apparent that it might not be realistic or necessary, and might even be harmful, to establish a definitive definition because distributed leadership appeared to be a highly context-bound and practice-oriented phenomenon. Any attempts at creating a definitive definition would fail to capture the complexity and diversity of distributed leadership in practice. In addition, a definitive definition might restrict researchers and, in

particular, practitioners from constructing the meaning of distributed leadership in their specific socio-cultural contexts. Perhaps offering a theoretical framework, such as the resource–agency duality model, would be a better solution. This research project adopted this approach and found it beneficial to let school practitioners reconceptualise distributed leadership and incorporate the socio-cultural context into their conceptions.

During the second phase of the research project, the concurrent triangulation strategy was applied to collect quantitative and qualitative data simultaneously. This strategy served the research aims well; by conducting the survey and the interviews concurrently, the research participants were given two opportunities to express their views on the topic of distributed leadership. In the Discussion, the quantitative and qualitative findings were put side by side to highlight their convergences, differences, and combination (Creswell, 2009). Another advantage of gathering the empirical data at the same time was that it shortened the data collection time and enhanced the response rate. When the researcher was physically present in the eight schools where the interviews were conducted, the survey response rates in these schools was higher than the response rate in the other schools that only participated in the survey.

With respect to the quantitative survey results, the original plan was to compose one cross-cultural comparative sub-study comprising both the Finnish and Shanghai data. However, because part of the Finnish quantitative data was obtained much later, the researcher decided to compose two separate quantitative sub-studies, one on the Shanghai data and another on the Finnish data. Therefore, in the Discussion, the researcher was cautious not to over-interpret the results from the two separate sub-studies.

It is noteworthy that separating the analyses and reporting of the two quantitative datasets did not comprise the overall research aims. The whole research project subscribed to the descriptive-analytical paradigm, trying to deepen the understanding of distributed leadership by looking into its practices in the Finnish and Shanghai contexts. The survey results provided relatively more general pictures of distributed leadership. In order to comprehend these results, the qualitative interview data provided more detailed descriptions of different dynamics in distributed leadership. Therefore, the mixed-methods approach served the research aims well.

As mentioned in the Methodology chapter, one limitation of the study is that the two quantitative sub-studies employed different sampling strategies. In Shanghai, the survey respondents were recruited by using a purposive sampling strategy. However, this strategy failed to gain enough respondents in Jyväskylä, Finland, despite several attempts. To obtain a large enough sample, the catchment area was expanded step-wise using various channels to recruit respondents. For example, the invitation to the online questionnaire was distributed in the professional development training programmes, at the educational fairs, and through the professional networks of the Institute of Educational Leadership. As a result, the sampling strategy in Finland followed the

random sampling method. This was also one of the main reasons the two quantitative sub-studies were analysed separately.

The second limitation worth mentioning is the absence of Finnish general upper secondary schools in the qualitative study, albeit they were included in the quantitative survey. The factors behind the researcher's limited access to these schools was explained in the Methodology chapter. Yet, it would have been very interesting to conduct interviews in Finnish general upper secondary schools in which the teaching and learning is organised on the basis of courses rather than as year-specific classes. This feature was different from the eight schools that were included in the qualitative sub-study. The manifestation of distributed leadership in this context may have offered some valuable insights to the topic.

Lastly, reviewing the whole research process, a few ethical issues must be addressed. Investigating leadership, the focus naturally fell on human beings and their interactions. As stated in the Methodology chapter, the school leaders and teachers who participated in the research were not seen as passive research subjects but as active research participants, with whom the researcher collaborated in conducting the research. When employing phenomenograhy as the research method for the qualitative sub-study, the researcher was oriented to adopt a second-order perspective in the data collection and analysis process (Marton & Booth, 1997). This second-order perspective guided the researcher to investigate how distributed leadership was conceived and experienced by the school leaders and teachers in their socio-cultural contexts, acknowledging the inseparable relationship between human beings and their world (Yates et al., 2012). From the researcher's viewpoint, strictly adhering to the codes of research ethics is the foundation for building reciprocal researcher–participant relationships. In doing so, the researcher carefully followed the ethical codes of consent, confidentiality, and trust (Ryen, 2004; see also Collin, 2005).

Before answering the survey or interview questions, all the research participants were clearly informed about the research topic and purposes and of their rights to withdraw from the research process whenever they decided to do so (Creswell, 2009). It was also explicitly stated in the survey cover letter and at the beginning of every interview that the participants' names and their schools would be kept anonymous or be replaced with pseudonyms in the reports. With respect to trust building, especially in the interviews, the researcher succeeded in gaining the research participants' support to share their real-life distributed leadership experience.

One key element that contributed to the trust building was that the researcher was genuinely interested in the research participants' work. During the interview data collection period, the researcher spent one week in each research school, not just conducting interviews but also spending time with the teachers, observing their lessons and meetings, and participating in school activities. These informal communications appeared crucial for the researcher to gain the trust of the research participants. Building upon the informed consent, confidentiality, and trust, the researcher succeeded in creating a safe environ-

ment for the interview participants to share their personal experiences of distributed leadership. These experiences included their success stories of distributed leadership as well as the conflicts, tensions, and struggles they encountered during the process. These valuable data provided excellent opportunities to explore distributed leadership and to shed light on some understudied phenomena such as the socio-cultural context and power issues in relation to distributed leadership.

5.2 Theoretical and practical implications

The findings of the present research project bring to the foreground some theoretical and practical implications that the researcher regards as valuable and necessary to present. With respect to the theoretical development of distributed leadership, the resource–agency duality model created in the present project turned out to be a useful theoretical tool and could thus be used in future research. After being applied, tested, and expanded in the empirical studies, this model seemed to generate knowledge of distributed leadership that had been earlier neglected, for instance, the impact of the socio-cultural context on the formation of school structures, the interdependence of resources and agency, and the multi-directional power relations.

Returning to the conceptualisation of distributed leadership, the present research project was able to give voice to the school practitioners and let them reconceptualise distributed leadership from their practices. The resource–agency duality model was used as a lens to explicate the complex dynamics of distributed leadership. During this process, it became evident that the meaning of distributed leadership was and should be constructed through practices rather than through theorisation. It is suggested that future research should give more consideration to the different socio-cultural contexts and to power issues in their inquiries. Using the resource–agency duality model could be one way to achieve this.

Regarding the implications of the model for educational leadership research, it is noteworthy that this model is descriptive-analytical in nature. Therefore, it does not search for, nor present, the most desirable patterns of distributed leadership, because that would have required a normative-prescriptive approach. In fact, according to the findings of the present research project as well as those of several earlier studies, it is doubtful that universally applicable best practices of distributed leadership could be found through research.

While distributed leadership may not be a silver bullet for all school leadership problems, the researcher still advocates its use to policy makers, educational administrators and school practitioners. According to the research project, through the lens of the resource–agency duality model, some fundamental issues of school leadership work can be raised, thus offering opportunities to re-examine current practices and seek improvement.

First, when setting a policy direction to facilitate distributed leadership, policy makers should have a system-wide perspective. One criticism of many existing distributed leadership policy documents is that they seem rhetorical and fail to relate to daily school practices (Torrance, 2013). The present study found that there were new policy documents endorsing distributed leadership while at the same time, some old ones were impeding school leaders and teachers from enacting it. Lacking coherence in different educational policies is one fundamental issue of which policy makers should be aware. Having a system-wide perspective implies that when transforming principal-centred leadership to distributed leadership, school leaders' and teachers' roles and relationships should also be re-defined. Additionally, new policies should be developed to make the local and school administrations more compatible. Local authorities should not tie school practitioners' hands with excessive top-down control and expect them to enact distributed leadership in schools at the same time.

The present research project also found that by influencing school administrative structures, allocation of resources, and the school priority work, the local education authorities exercised strong power to shape the distributed leadership practices in schools. Sometimes, the overwhelming top-down control tended to confine the school leaders' and teachers' agency, which was fundamentally contradictory to distributed leadership. Also, the findings highlighted that distributed leadership could be misused to mask managerialism. In both the Finnish and Shanghai contexts, teachers were used as tools to fulfil school administrative tasks and attain evaluation goals, while their agency in leading school development was greatly restrained. School practitioners are calling for the educational administrators in the local authorities to loosen their grip on school-level administration. As distributed leadership emerges from practice, it is necessary to give its ownership back to school practitioners. The role of educational administrators in local authorities should probably be transformed from that of rule makers to resource providers.

Lastly, for school practitioners, the present study suggests that school leaders should not perceive teachers merely as resources for the school but also as active social agents with personal ambitions, values, and goals. Activating teachers' agency to serve shared goals requires the school principal to intentionally create resources that could support teachers' agency.

Through the lens of the resource–agency duality model, the present research project also demonstrated that distributed leadership was not immune from power conflicts. In fact, power relations became more complex when more actors were involved in the leadership process. In addition to the legitimate power of the formal leaders, various forms of discursive power were identified in the study, complicating the process of distributing leadership even further. For school practitioners, awareness should be raised that distributed leadership does not necessarily equate with democracy, transparency, equity, or inclusion. When enacting distributed leadership in schools, there is a definite need to examine various power relations and their impact on the leadership process.

5.3 Future research focus

Looking to the future, the research also raised new questions worth further investigation. First, the resource–agency duality model has been applied and tested in Finnish and Shanghai school contexts. Further validating and refining this model calls for more theoretical and empirical research. Second, distributed leadership is a highly context-bound and practice-oriented phenomenon. How distributed leadership manifests itself in various socio-cultural contexts is an intriguing question worth further exploration. Especially, for revealing the manifestations of distributed leadership, more school practitioners' voices are needed in the empirical research. Third, a missing piece in the present research project was the manifestations of distributed leadership in Finnish general upper secondary schools. A future study on this topic would make a valuable supplement to the present study. Fourth, earlier studies tended to neglect power issues, whereas the present research project discovered that power was pervasive in distributed leadership. How power is produced and used in distributed leadership is a key research area that could be usefully explored.

The first sub-study of this research project, the meta-analysis of distributed leadership 2002—2013, has aroused some interest from other researchers, for example Harris and DeFlaminis (2016). According to them, the recent research on distributed leadership has been able to provide further clarification on the concept of distributed leadership and to present several valuable examples of the practical applications of distributed leadership. All these dialogues on the topic are welcomed with gratitude. The wish is that this doctoral study can, in its own part, be of use in the further conceptualisation and application of distributed leadership.

YHTEENVETO (FINNISH SUMMARY)

Jaettu johtajuus suomalaisissa ja shanghailaisissa kouluissa

1990-luvun alusta lähtien jaettu johtajuus on levinnyt yhä voimistuvana tutkimuksellisena ilmiönä maailmanlaajuisesti. Eräät tutkijat jopa väittävät jaetun johtajuuden syrjäyttäneen perinteisen sankarijohtajuuden siinä määrin, että siitä on tullut 2000-luvun oppilaitosjohtamisen ensisijainen vaihtoehto. Vaikka jaettua johtajuutta on tutkittu yhä enemmän, se on kuitenkin pysynyt käsitteenä epämääräisenä ja sen vaikutukset näyttävät ristiriitaisilta. Lisäksi jaettua johtajuutta on tutkittu lähinnä virallisissa johtotehtävissä toimivien näkökulmasta. Näyttää myös siltä, että jaettu johtajuus on ollut erityisesti tutkijoiden käyttämä ja määrittelemä käsite, eikä niinkään oppilaitosjohtamisen erilaisten sosiokulttuuristen ympäristöjen käytännöistä syntynyt käsite.

Tämä tutkimus pyrki lisäämään ymmärrystä jaetun johtajuuden käsitteestä ja käytännön toteutuksista. Tutkimus toteutettiin tutkimalla mixed-methods -menetelmällä oppilaitosjohtamisen käytäntöjä suomalaisessa ja shanghailaisessa yleissivistävässä koulutuksessa ja aineenopettaja-koulutuksessa. Tutkimus koostui neljästä alatutkimuksesta. Alatutkimus I oli meta-analyysi, jossa tarkasteltiin 85 keskeistä jaettuun johtajuuteen kohdistuvaa tieteellistä julkaisua vuosilta 2002—2013. Meta-analyysin avulla tunnistettiin kaksi jaetun johtajuuden tutkimuksen pääparadigmaa: deskriptiivis-analyyttinen ja preskriptiivis-normatiivinen paradigma. Kummankin paradigman tutkimuksista löytyi puutteita. Ensinnäkin, kumpikaan paradigma ei ole pystynyt muodostamaan yleisesti hyväksyttyä jaetun johtajuuden määritelmää ja selkeää tutkimusmallia, joiden pohjalta olisi voitu tutkia jaettua johtajuutta sekä organisaation että sen yksittäisten jäsenien näkökulmasta. Toiseksi, valtaa ja valtasuhteita oli tutkittu vain harvoin osana jaettua johtamista. Kolmanneksi, valtaosa jaetun johtajuuden tutkimuksista ei tarjonnut yksityiskohtaista tietoa siitä, miten erilaiset sosio-kulttuuriset ympäristöt vaikuttavat jaettuun johtajuuteen.

Meta-analyysin pohjalta jaettua johtajuutta mallinnettiin tavalla, jonka toivottiin poistavan meta-analyysin esille tuomia puutteita. Uusi malli pohjautuu dualistiseen resurssi-toimijuus -näkemykseen. Näkemyksen mukaan jaettu johtajuus on prosessi, jota pitää tarkastella sekä organisaation että sen yksittäisten jäsenten näkökulmasta. Organisaation näkökulmasta johtajuus on resurssia, jota jaetaan koulun eri tasoille organisaation tavoitteiden saavuttamiseksi. Organisaation yksittäisten jäsenten näkökulmasta johtajuus puolestaan on toimijuutta, jota jaetaan koulun erilaisissa johtotehtävissä toimivien ja opettajien tekojen ja vuorovaikutuksen kautta yksilökohtaisten tavoitteiden saavuttamiseksi. Mallissa tarkastellaan, miten sosiaaliset normit, kulttuuriset odotukset ja poliittiset tavoitteet määrittävät resurssien ja toimijuuden jakautumista koulun sosiokulttuurisessa kontekstissa. Lisäksi mallin avulla tutkitaan valtaa ja valtasuhteita jaetussa johtajuudessa analysoimalla koulujen jäsenten toimijuutta.

Dualistista resurssi-toimijuus -mallia käytettiin teoreettisena viitekehyksenä kolmessa empiirisessä alatutkimuksessa. Alatutkimukset II ja III olivat määräl-

lisiä kyselytutkimuksia, jotka tarkastelivat shanghailaisten ja suomalaisten opettajien näkemyksiä resurssin ja toimijuuden jakautumisesta jaetussa johtajuudessa. Tulokset osoittivat johtamisrakenteiden vaikuttavan valtaetäisyyksiin. Sekä shanghailaiset että suomalaiset opettajat pitivät itseään koulujensa yhtenä vähiten hyödynnetyistä resursseista. Lisäksi, opettajien toimijuus kohdistui lähinnä oppilaiden oppimisen johtamiseen, eikä sillä ollut vahvaa roolia koulun johtamisessa ja strategisessa kehittämisessä. Merkillepantavaa oli, että sekä shanghailaiset että suomalaiset opettajat olivat halukkaita johtamaan, mikäli he saisivat rehtoriensa tuen, luottamuksen sekä riittävästi aikaa. Sen sijaan johtajatittelit tai lisäpalkka ei tuntunut vahvistavan halukkuutta johtajuuden jakamiseen.

Alatutkimus IV oli fenomenografinen haastattelututkimus, jossa analysoitiin 55 shanghailaisen ja suomalaisen koulun johtotehtävässä toimivan henkilön ja opettajan näkemyksiä jaetusta johtajuudesta. Analyysin perusteella pystyttiin tunnistamaan kolme erilaista hallintorakennetta sekä yhteensä yhdeksän erilaista kullekin hallintorakenteelle tyypillistä mielikuvaa jaetusta johtajuudesta. Neljän shanghailaisen koulun johtotehtävissä toimivat henkilöt ja opettajat kuvasivat koulujaan vertikaalisina ja nelitasoisina hallintorakenteina, joissa johtajuutta jaettiin *aseman, voimauttamisen, kilpailun* ja *yhteistyön* kautta. Vastaperustetussa shanghailaisessa koulussa, jolle oli annettu poikkeuksellisen paljon autonomiaa, koulun johtotehtävissä toimivat henkilöt ja opettajat olivat puolestaan muodostaneet vertikaalisen kaksitasoisen hallintorakenteen. Tässä koulussa johtajuuden jakamista kuvattiin *asiantuntijuuden* ja *mentoroinnin* mielikuvilla. Kaikissa suomalaisissa kouluissa koulun johtotehtävissä toimivat henkilöt sekä opettajat pitivät koulunsa hallintorakennetta horisontaalisena ja kaksitasoisena, Johtajuuden jakamista kuvaavat mielikuvat liittyivät *oikeudenmukaisuuteen*, *ammatilliseen autonomiaan* ja *luottamukseen*. Haastattelututkimuksen mukaan vallankäytöllä oli niin shanghailaisissa kuin suomalaisissa kouluissa sekä legitiimejä (legitimate) että diskursiivisia (discursive) muotoja.

Tällä tutkimuksella on vaikutuksia sekä jaetun johtajuuden teorian että käytännön kehittämiseen. Tutkimuksessa muodostettiin dualistinen resurssi-toimijuus -malli, jota voidaan käyttää teoreettisena viitekehyksenä jaetun johtajuuden tutkimuksissa. Tutkimuksessa mallia sovellettiin, kehitettiin ja arvioitiin kolmessa empiirisessä alatutkimuksessa. Tutkimuksessa kerättyjen kokemusten perusteella dualistista resurssi-toimijuus-mallia voidaan suositella myös muihin jaetun johtajuuden tutkimuksiin. Lisätutkimukset ovatkin tarpeen, jotta mallin validoimista ja kehittämistä voidaan jatkaa. Mallin avulla pystyttiin täydentämään aiempien tutkimusten tuloksia. Malli toi muun muassa näkyviin jaetun johtajuuden sisältämiä valtasuhteita ja ristiriitoja. On olettavaa, että ainakin joitain mallin avulla saatuja tuloksia voidaan soveltaa myös muissa kouluissa, joissa on vastaavanlainen sosio-kulttuurinen toimintaympäristö kuin tähän tutkimukseen osallistuneissa kouluissa.

Avainsanat: jaettu johtajuus, dualistinen resurssi-toimijuus malli, shanghailaiset koulut, suomalaiset koulut

REFERENCES

Anderson, S, Moore, S., & Sun, J. (2009). Positioning the principal in patterns of school leadership distribution. In K. Leithwood, B. Mascall, & T. Strauss (Eds.), *Distributed leadership according to the evidence* (pp. 111–136). New York: Routledge.

Antikainen, A. (2006). In search of the Nordic model in education. *Scandinavian Journal of Educational Research, 50*(3), 229–243.

Archer, M. (1995). *Realist social theory: The morphogenetic approach.* Cambridge: Cambridge University Press.

Avis, J. (2007). *Education, policy and social justice: Learning and skills.* London: Continuum.

Babbie, E. (1990). *Survey research methods* (2nd ed.). Belmont, CA: Wadsworth.

Bass, B. M. (1990). From transactional to transformational leadership: Learning to share the vision. *Organizational Dynamics, 18*(3), 19–31.

Bennett, N., Wise, C., Woods, P. A., & Harvey, J. A. (2003). *Distributed leadership: A review of literature.* Nottingham: National College for School Leadership.

Blake, R., & Mouton, J. S. (1964), *The managerial grid*. Houston: Gulf Publishing Company.

Bolden, R. (2011). Distributed leadership in organizations: A review of theory and research. *International Journal of Management Reviews, 13*(3), 251–269.

Bolman, L., & Deal, T. (2004). *Reframing organizations: Artistry, choice, and leadership* (3rd ed.). San Francisco: Jossey-Bass.

Bush, T., & Glover, D. (2012). Distributed leadership in action: Leading high-performing leadership teams in English schools. *School Leadership and Management, 32*(1), 21–36.

Carson, D., Gilmore, A., Perry, C., & Gronhaug, K. (2001). *Qualitative marketing research.* London: Sage.

Chan, D., Mok, K., & Tang, A. (2004). Education. In L. Wong, L. White, & S. Gui (Eds.), *Social policy reform in Hong Kong & Shanghai: A tale of two cities* (pp. 85–126). New York: M.E. Sharpe.

Ci, J. (2011). Evaluating agency: A fundamental question for social and political philosophy. *Metaphilosophy, 42*(3), 261–281.

Collin, K. (2005). *Experience and shared practice - Design engineers' learning at work.* Jyväskylä, Finland: Jyväskylä University Printing House. Jyväskylä Studies in Education, Psychology and Social Research, 261.

Compulsory Education Law of the People's Republic of China. (1986 §26). Retrieved July 25, 2016 from http://en.moe.gov.cn/Resources/Laws_and_Policies/201506/t20150626_191391.html.

Crawford, M. (2012). Solo and distributed leadership definitions and dilemmas. *Educational Management Administration & Leadership, 40*(5), 610-620.

Creswell, J. W. (2009). *Research Design: qualitative, quantitative, and mixed methods approach.* Los Angeles: Sage.

Creswell J. W., & Miller, D. (2000). Determining validity in qualitative inquiry. *Theory in Practice, 39*(3), 123–130.

Creswell J. W., & Plano Clark, V. L. (2013). *Designing and conducting mixed methods research* (3rd ed.). ThousandOaks, CA: Sage.

Datnow, A. (2001). Gender politics in school reform. In N. Bascia, & A. Hargreaves (Eds.), *The sharp edge of educational change: Teaching, leading, and the realities of reform* (pp. 131–154). London: Routledge Falmer.

Eteläpelto, A., Vähäsantanen, K., Hökkä, P., & Paloniemi, S. (2013). What is agency? Conceptualizing professional agency at work. *Educational Research Review, 10,* 45–65.

Fiedler, F. E. (1964). A contingency model of leadership effectiveness. In L. Berkowitz (Ed.), *Advances in experimental social psychology*, (pp. 149–190). New York: Academic press.

Finnish Basic Education Act (628/1998). Suomen laki ja asetuskokoelma. Amended by Act (642/2010). Retrieved July 28, 2016, from http://www.finlex.fi/fi/laki/ajantasa/1998/19980628.

Finnish National Board of Education. (2013). *Rehtorien työnkuvan ja koulutuksen määrittämistä sekä kelpoisuusvaatimusten muodostamista valmistelevan työryhmän raportti. [Working group report to determine principals' job descriptions and education and to prepare reforming principals' qualifications].* Reports and accounts 16. Helsinki: Finnish national Board of Education.

Flessa, J. (2009). Educational micropolitics and distributed leadership. *Peabody Journal of Education, 84*(3), 331–349.

Foucault, M. (1980). *Power/Knowledge: Selected interviews and other writings 1972–1977.* London: Harvester Press.

Foucault, M. (1991). *Discipline and punish: The birth of a prison.* London: Penguin.

Fowler, F. J. (2002). *Survey research methods* (3rd ed.). Thousand Oaks, CA: Sage.

Gibbs, G. R. (2007). Analyzing qualitative data. In U. Flick (Ed.), *The Sage qualitative research kit.* London: Sage.

Greene, J. C., Caracelli, V. J., & Graham, W. F. (1989). Toward a conceptual framework for mixed-method evaluation designs. *Educational Evaluation and Policy Analysis, 11*(3), 255–274.

Gronn, P. (2002). Distributed leadership as a unit of analysis. *Leadership Quarterly, 13(4),* 423–451.

Gronn, P. (2008). Hybrid leadership. In K. Leithwood, B. Mascall, & T. Strauss (Eds.), *Distributed leadership according to the evidence* (pp. 17–40). Abingdon: Routledge.

Gronn, P. (2009). Leadership configurations. *Leadership, 5*(3), 381–394.

Gunter, H., Hall, D., & Bragg, J. (2013). Distributed leadership: A study in knowledge production. *Educational Management Administration & Leadership, 41*(5), 555–580.

Hargreaves, A., & Shirley, D. (2009). *The fourth way: The inspiring future of educational change.* Thousand Oaks, CA: Corwin.

Harris, A. (Ed.). (2008). *Distributed leadership in schools: Developing the leaders of tomorrow.* London: Routledge.

Harris, A. (2009). Distributed leadership and knowledge creation. In K. Leithwood, B. Mascall, & T. Strauss (Eds.), *Distributed leadership according to the evidence* (pp. 253–266). Abingdon: Routledge.

Harris, A. (2012). Distributed leadership: Implications for the role of the principal. *Journal of Management Development, 31*(1), 7–17.

Harris, A., & DeFlaminis, J. (2016). Distributed leadership in practice: Evidence, misconceptions and possibilities. *Management in Education, 30* (4), 141-146.

Hartley, D. (2007). The emergence of distributed leadership in education: why now?. *British Journal of Educational Studies, 55*(2), 202–214.

Hartley, D. (2009). Education policy, distributed leadership and socio-cultural theory. *Educational Review,61*(2), 139–150.

Hatcher, R. (2005). The distribution of leadership and power in schools. *British Journal of Sociology of Education, 26*(2), 253–267.

Heck, R., & Hallinger, P. (2010). Testing a longitudinal model of distributed leadership effects on school improvement. *Leadership Quarterly, 21,* 867–885.

Heikka, J., Waniganayake, M., & Hujala, E. (2012). Contextualizing distributed leadership within early childhood education: Current understandings, research evidence and future challenges. *Educational Management Administration & Leadership, 41*(1), 30–44.

Hesse-Biber, S. (2010). *Mixed methods research: Merging theory with practice.* New York: Guilford.

Hudson, L., & Ozanne, J. (1988). Alternative ways of seeking knowledge in consumer research. *Journal of Consumer Research, 14*(4), 508–521.

Hulpia, H., & Devos, G. (2009). Exploring the link between distributed leadership and job satisfaction of school leaders. *Educational Studies, 35,* 153–171.

Hulpia, H., Devos, G., & Van Keer, H. (2009). The influence of distributed leadership on teachers' organizational commitment: A multilevel approach. *Journal of Educational Research, 103*(1), 40–52.

Hulpia, H., Devos, G., & Van Keer, H. (2011). The relation between school leadership from a distributed perspective and teachers' organizational commitment: Examining the source of the leadership function. *Educational Administration Quarterly, 47*(5), 728–771.

Jick, T. D. (1979). Mixing qualitative and quantitative methods: Triangulation in action. *Administrative Science Quarterly, 24*(4), 602–611.

Jäppinen, A.-K., & Sarja, A. (2012). Distributed pedagogical leadership and generative dialogue in educational nodes. *Management in Education, 26*(2), 64–72.

Kelly, M. (Ed.). (1994). *Critique and power: Recasting the Foucault/Habermas debate.* Cambridge: MIT Press.

Kelly, M. (2009). *The political philosophy of Michel Foucault.* London: Routledge.

Kvale, S. (1996). *Interviews: An introduction to qualitative research interviewing*. Thousand Oaks, CA: Sage.

Law, E., Galton, M., & Wan, S. (2010). Distributed curriculum leadership in action: A Hong Kong case study. *Educational Management Administration & Leadership, 38*(3), 286–303.

Lee, M., Hallinger, P., & Walker, A. (2012). A distributed perspective on instructional leadership in international baccalaureate (IB) schools. *The Journal of Leadership for Effective & Equitable Organizations, 48*(4), 664–698.

Leithwood, K., Mascall, B., & Strauss, T. (Eds.). (2009). *Distributed leadership according to the evidence.* Abingdon: Routledge.

Leithwood, K., Mascall, B., Strauss, T., Sacks, R., Memon, N., & Yashkina, A. (2007). Distributing leadership to make schools smarter: Taking the ego out of the system. *Leadership and Policy in Schools, 6*(1), 37–67.

Lincoln, Y. S., & Guba, E. G. (2000). Paradigmatic controversies, contradictions, and emerging confluences. In N. K. Denzin & Y. S. Lincoln (Eds.), *The handbook of qualitative research* (2nd ed., pp. 163–188). Beverly Hills, CA: Sage.

Louis, K. S., Mayrowetz, D., Smiley, M., & Murphy, J. (2009). The role of sense making and trust in developing distributed leadership. In A. Harris (Ed.), *Distributed school leadership: Different perspectives* (pp.157–180). London: Springer.

Lumby, J. (2013). Distributed leadership: The uses and abuses of power. *Educational Management Administration & Leadership, 41*(5), 581–597.

MacBeath, J. (2005). Leadership as distributed: A matter of practice. *School Leadership & Management, 25*(4), 349–366.

Marton, F. (2000). The structure of awareness. In J. A. Bowden & E. Walsh (Eds.), *Phenomenography* (pp. 102-116). Melbourne, Australia: RMIT University.

Marton, F., & Booth, S. (1997). *Learning and awareness.* Mahwah, NJ: L. Erlbaum Associates.

Mascall, B., Leithwood, K., Strauss, T., & Sacks, R. (2009). The relationship between distributed leadership and teachers' academic optimism. In A. Harris (Ed.), *Distributed school leadership: Different perspectives* (pp. 81–100). London: Springer.

Maxcy, B., & Nguyen, T. S. T. (2006). The politics of distributing leadership: Reconsidering distribution in two Texas elementary schools. *Educational Policy, 20*(1), 163–196.

Mayrowetz, D. (2008). Making sense of distributed leadership: Exploring the multiple usages of the concept in the field. *Educational Administration Quarterly, 44* (3), 424 – 435.

Mayrowetz, D., Murphy, J., Louis, K. S., & Smylie, M. A. (2009). Conceptualizing distributed leadership as a school reform: revisiting job redesign theory. In K. Leithwood, B. Mascall, & T. Strauss (Eds.), *Distributed leadership according to the evidence* (pp. 167–195). New York: Routledge.

McCall, M. W. Jr., & Lombardo, M. M. (1983). *Off the track: Why and how successful executives get derailed.* Greenboro, NC: Centre for Creative Leadership.

Meindl, J. R., Ehrlich, S. B., & Dukerich, J. M. (1985). The romance of leadership. *Administrative Science Quarterly, 30,* 78 –102.

Menon, M. E. (2005). Students' views regarding their participation in university governance: Implications for distributed leadership in higher education. *Tertiary Education and Management, 11,* 167–182.

Merton, R. K. (1957). *Social theory and social structure.* New York: Free Press.

Miller, D. C. (1991). *Handbook of research design and social measurement* (5th ed.). Newbury Park, CA: Sage.

Mills, S. (2003). *Michel Foucault.* London: Routledge.

Minarik, M., Thornton B., & Perreault, G. (2003). Systems thinking can improve teacher retention. *The Clearing House: A Journal of Educational Strategies, Issues and Ideas, 76*(5), 230-234. doi: 10.1080/00098650309602010

Murphy, J., Smylie, M., Mayrowetz, D., & Louis, K. S. (2009). The role of the principal in fostering the development of distributed leadership. *School Leadership and Management, 29*(2), 181–214.

OECD. (2013). *PISA 2012 Results: What Makes Schools Successful? Resources, Policies and Practices (Volume IV).* Paris: OECD Publishing. http://dx.doi.org/10.1787/9789264201156-en

OECD. (2014a). Results from TALIS 2013, Country note: Finland. Retrieve July 15, 2016 from http://www.oecd.org/finland/TALIS-2013-country-note-Finland.pdf

OECD. (2014b). Results from TALIS 2013–2014, Country note: Shanghai (China). Retrieve July 15, 2016 from https://www.oecd.org/edu/school/TALIS-2014-country-note-Shanghai.pdf

Okkolin, M.-A. (2013). *Highly educated women in Tanzania: Constructing educational well-being and agency.* Jyväskylä studies in education, psychology and social research 483. University of Jyväskylä.

OSF (Official Statistics of Finland). (2014a). Pre-primary and comprehensive school education. Retrieve July 26, 2016 from http://www.stat.fi/til/pop/2014/pop_2014_2014-11-14_tie_001_en.html

OSF (Official Statistics of Finland). (2014a). Upper secondary general school education. Retrieve July 26, 2016 from http://www.stat.fi/til/lop/2014/lop_2014_2015-06-10_tie_001_en.html

Pedersen, J., Yager, S., & Yager, R. (2012). Student leadership distribution: Effects of a student led leadership program on school climate and community. *International Journal of Educational Leadership Preparation, 7*(2), 1 – 9.

Pfeffer, J., & Salancik, G. R. (1975). Determinants of supervisory behavior: A role set analysis. *Human Relations, 28,* 139–153.

Piot, L., & Kelchtermans, G. (2016). The micropolitics of distributed leadership: Four case studies of school federations. *Educational Management Administration & Leadership, 44*(4), 632-649. doi: 10.1177/1741143214559224

Risku, M. (2014). A historical insight on Finnish education policy from 1944 to 2011. *Italian Journal of Sociology of Education, 6*(2), 36–68.

Ryen, A. (2004). Ethical issues. In C. Seale, G. Gobo, J. F. Gubrium, & D. Silverman (Eds.), *Qualitative research practice* (pp. 230–247). London: Sage.

Sahlberg, P. (2011). PISA in Finland: An education miracle or an obstacle to change? *Centre for Education Policy Journal, 1*(3), 119–140.

Sahlberg, P. (2012). Finland: A non-competitive education for competitive economy. *In OECD: Strong performers and successful reformers – Lessons from PISA for Japan* (pp.93–111). Paris: OECD.

Sahlberg, P. (2015). *Finnish lessons 2.0. What can the world learn from educational change in Finland?* (2nd ed.). New York: Teachers Collage Press.

Scribner, J., Sawyer, R., Watson, S., & Myers, V. (2007). Teacher teams and distributed leadership: A study of group discourse and collaboration. *Educational Administration Quarterly, 43*(1), 67–100.

Sen, A. (1985). Well-being, agency and freedom: The Dewey lectures 1984. *Journal of Philosophy, 82*(4), 169–221.

SHMEC (Shanghai Municipal Education Commission) (2015). *上海市教育督导条例. [Principles of Shanghai Education Inspection].* Retrieved April. 27, 2016 from http://www.shmec.gov.cn/html/xxgk/201502/201072015001.php.

Spillane, J. P. (2006). *Distributed leadership.* San Francisco: Jossey-Bass.

Spillane, J. P., Camburn, E., & Pareja, A. (2007). Taking a distributed perspective to the school principal's work day. *Leadership and Policy in Schools, 6,* 103–125.

Spillane, J. P., & Coldren, A. F. (2011). *Diagnosis and design for school improvement.* New York: Teachers College Press.

Spillane, J. P., Halverson, R., & Diamond, J. B. (2004). Towards a theory of leadership practice: A distributed perspective. *Journal of Curriculum Studies, 36*(1), 3–34.

Spillane, J. P., & Healey, K. (2010). Conceptualizing school leadership and management from a distributed perspective. *The Elementary School Journal, 11*(2), 253–281.

Spillane, J. P., & Kim, C. M. (2012). An exploratory analysis of formal school leaders' positioning in instructional advice and information networks in elementary schools. *American Journal of Education*, *119*(1), 73–102. doi: 10.1086/667755

Squires, A. (2009). Methodological challenges in cross-language qualitative research: A research review. *International Journal of Nursing Studies, 46*(2), 277–287. doi:10.1016/j.ijnurstu.2008.08.006

Stogdill, R. M. (1974). *Handbook of leadership: A survey of the literature.* New York: Free Press

Storey, A. (2004). The problem of distributed leadership in schools. *School Leadership and Management, 24*(3), 249–265.

Sulkunen, P. (2010). Agency and power: The contractual illusion. *European Journal of Cultural Studies, 13,* 495–510.

Tschannen-Moran, M. (2009). Fostering teacher professionalism in schools: The role of leadership orientation and trust. *Educational Administration Quarterly, 45* (2), 217-247. doi: 10.1177/0013161X08330501

Tian, M., Risku, M., & Collin, K. (2016). A meta-analysis of distributed leadership from 2002 to 2013: Theory development, empirical evidence and future research focus. *Educational Management Administration & Leadership*, *44* (1), 146-164. doi:10.1177/1741143214558576

Timperley, H. S. (2005). Distributed leadership: Developing theory from practice. *Journal of Curriculum Studies, 37*(4), 395–420.

Timperley, H. S. (2009). Distributing leadership to improve outcomes for students. In K. Leithwood, B. Mascall, & T. Strauss (Eds.), *Distributed leadership according to the evidence* (pp.197–222). Abingdon: Routledge.

Torrance, D. (2009). Distributed leadership in Scottish schools: Perspectives from participants recently completing the revised Scottish qualification for headship programme. *Management in Education, 23*(2), 63–70.

Torrance, D. (2013). Distributed leadership: Still in the gift of the headteacher. *Scottish Educational Review, 45* (2), 50–63.

Vaughan, R. (2007). Measuring capabilities. In M. Walker & E. Unterhalter (Eds.), *Amartya Sen's capability approach and social justice in education* (pp. 109–130). New York: Palgrave Macmillan.

Wells, C. S., & Wollack, J. A. (2003). *An instructor's guide to understanding test reliability.* Testing & Evaluation Services, University of Wisconsin

Woods, P. A. (2004). Democratic leadership: Drawing distinctions with distributed leadership. *International Journal of Leadership in Education, 7*(1), 3–26.

Woods, P. A. (2005). *Democratic leadership in education*. London: Sage.

Woods, P. A. (2011). *Transforming education policy: Shaping a democratic future.* Bristol: Policy Press.

Woods, P. A., Bennett, N., Harvey, J. A., & Wise, C. (2004). Variabilities and dualities in distributed leadership: Findings from a systematic literature review. *Educational Management Administration & Leadership, 32*(4), 439–457.

Woods, P. A., & Gronn, P. (2009). Nurturing democracy: the contribution of distributed leadership to a democratic organizational landscape. *Educational Management Administration and Leadership, 37*(4), 430–451.

Woods, P. A., & Roberts, A. (2016). Distributed leadership and social justice: Images and meanings from across the school landscape. *International Journal of Leadership in Education, 19*(2), 138–156.

Woods, P. A., & Woods, G. J. (2013). Deepening distributed leadership: A democratic perspective on power, purpose and the concept of the self. *Leadership in Education [Vodenje v vzgoji in izobraževanju], 2,* 17–40.

Yan, D. M. (1999). *现代学校管理学 [Contemporary School Management].* Beijing: People's Education Press.

Yates, C., Partridge, H. L., & Bruce, C. S. (2012) Exploring information experiences through phenomenography. *Library and Information Research*, *36*(112), 96-119.

Yin, R. K. (2003). *Case study research: Design and methods* (2nd ed.). Thousand Oaks, CA: Sage.

Youngs, H. (2009). (Un)Critical times? Situating distributed leadership in the field. *Journal of Educational Administration and History, 41*(4), 377–389.

Yukl, G. A. (1989). *Leadership in organizations*. Englewood Cliffs, New Jersey: Prentice Hall.

Özdemir, M., & Demircioğlu, E. (2015). Distributed leadership and contract relations: Evidence from Turkish high schools. *Educational Management Administration & Leadership, 43*(6), 918–938.

APPENDIXES

Appendix 1 Distributed Leadership in Finnish and Shanghai Schools (Teacher questionnaire)

Dear Participant,
We warmly welcome you to fill in our questionnaire online. This questionnaire investigates distributed leadership in your school. It takes approximately 10-15 minutes to complete all the questions.

Procedures:
In Part one, you are invited to provide some personal information about your current work. From Part two to Part four, we ask for your personal opinions about the leadership work in your current school.

Benefits:
Your answers are highly important for us to identify the key features of school leadership work in general. This survey may also help you and your colleagues to reflect on your own daily work. This questionnaire is distributed in both Finnish and Chinese schools. Your participation will generate valuable data for our Finland-China comparative study.

Confidentiality:
All your answers in this survey will be kept anonymous. The collected data will be used by the researchers for academic purposes such as publications and presentations. If your individual results are discussed, we will use pseudonyms or unidentifiable codes in our reports.

Participant's Rights:
Your participation in this survey is voluntary. You have the right to skip particular questions if they do not fit your situation. If you have any questions concerning the survey items, please contact us for clarification.

Contact Person:

Meng Tian, Doctoral student / M.A.
Institute of Educational Leadership
University of Jyväkylä, Finland

1. School name _____

2. You work in...
[ ] unified comprehensive school (Grades 1-9)
[ ] lower secondary school (Grades 7–9) [1] (Grades 6–9)[2]
[ ] upper secondary school (Grades 10–12)
[ ] combined secondary school (Grades 6–12)[2]

3. Gender
( ) Male
( ) Female

4. Current position(s) (Tick all responses that apply)
[ ] Vice principal
[ ] Assistant principal[1]
[ ] Communist Party secretary[2]
[ ] Homeroom teacher[2]
[ ] Subject teacher
[ ] Special education teacher[1]
[ ] Guidance counselor[1]
[ ] Teaching assistant[1]
[ ] Support staff
[ ] Other, please specify _____

5. In your school, leadership mostly resemble...
[ ] a **pyramid** with one fixed power centre at the zenith of the hierarchy and a high degree of stability
[ ] a **fountain** with multiple power centres at the bottom of the hierarchy and a high degree of stability
[ ] a **spider's web** with one power centre at the hub of the web and a high degree of flexibility
[ ] an **organic community** with multiple power centres and allowed the teams to emerge and dissolve flexibly.
[ ] Other, please specify _____

[1] In the Finnish version.
[2] In the Chinese version.

6. The power distance between the principal and teachers is...

0 very low 10 very high

_____

7. How much do the following people and artefacts influence the school leadership work?

	Influence on school leadership work				
	none	little	some	a lot	decisive
Principal	( )	( )	( )	( )	( )
Vice / Assistant principal	( )	( )	( )	( )	( )
Team leaders	( )	( )	( )	( )	( )
Teachers	( )	( )	( )	( )	( )
Students	( )	( )	( )	( )	( )
Parents	( )	( )	( )	( )	( )
School board	( )	( )	( )	( )	( )
Superintendent	( )	( )	( )	( )	( )
Information sharing platforms	( )	( )	( )	( )	( )
School culture	( )	( )	( )	( )	( )
School reputation	( )	( )	( )	( )	( )
External network	( )	( )	( )	( )	( )
Budget	( )	( )	( )	( )	( )
Curriculum	( )	( )	( )	( )	( )
Student test scores	( )	( )	( )	( )	( )
National education laws	( )	( )	( )	( )	( )
Local education policies	( )	( )	( )	( )	( )

8. Should the following people and artefacts have more or less influence on the school leadership work?

	Increase, decrease or keep the same level of influence				
	decrease a lot	decrease some	keep the same	increase some	increase a lot
Principal	( )	( )	( )	( )	( )
Vice / Assistant principal	( )	( )	( )	( )	( )
Team leaders	( )	( )	( )	( )	( )
Teachers	( )	( )	( )	( )	( )
Students	( )	( )	( )	( )	( )
Parents	( )	( )	( )	( )	( )
School board	( )	( )	( )	( )	( )
Superintendent	( )	( )	( )	( )	( )
Information sharing platforms	( )	( )	( )	( )	( )
School culture	( )	( )	( )	( )	( )
School reputation	( )	( )	( )	( )	( )
External network	( )	( )	( )	( )	( )
Budget	( )	( )	( )	( )	( )
Curriculum	( )	( )	( )	( )	( )
Student test scores	( )	( )	( )	( )	( )
National education laws	( )	( )	( )	( )	( )
Local education policies	( )	( )	( )	( )	( )

9. How much does the school <u>PRINCIPAL</u> lead the following work?

	none	very little	some	a lot	Not sure
Setting the school vision	( )	( )	( )	( )	( )
Making the strategic plans	( )	( )	( )	( )	( )
Leading students' learning	( )	( )	( )	( )	( )
Developing school culture	( )	( )	( )	( )	( )

Leading teacher teams	( )	( )	( )	( )	( )
Managing administrative work	( )	( )	( )	( )	( )
Delegating tasks	( )	( )	( )	( )	( )
Evaluating school performance	( )	( )	( )	( )	( )
Networking with stakeholders	( )	( )	( )	( )	( )
Providing resources	( )	( )	( )	( )	( )

10. How much do the school <u>MID-LEVEL TEAM LEADERS</u> lead the following work?

	none	very little	some	a lot	Not sure
Setting the school vision	( )	( )	( )	( )	( )
Making the strategic plans	( )	( )	( )	( )	( )
Leading students' learning	( )	( )	( )	( )	( )
Developing school culture	( )	( )	( )	( )	( )
Leading teacher teams	( )	( )	( )	( )	( )
Managing administrative work	( )	( )	( )	( )	( )
Delegating tasks	( )	( )	( )	( )	( )
Evaluating school performance	( )	( )	( )	( )	( )
Networking with stakeholders	( )	( )	( )	( )	( )
Providing resources	( )	( )	( )	( )	( )

11. How much do the school <u>TEACHERS</u> lead the following work?

	none	very little	some	a lot	Not sure
Setting the school vision	( )	( )	( )	( )	( )
Making the strategic plans	( )	( )	( )	( )	( )
Leading students'	( )	( )	( )	( )	( )

learning					
Developing school culture	( )	( )	( )	( )	( )
Leading teacher teams	( )	( )	( )	( )	( )
Managing administrative work	( )	( )	( )	( )	( )
Delegating tasks	( )	( )	( )	( )	( )
Evaluating school performance	( )	( )	( )	( )	( )
Networking with stakeholders	( )	( )	( )	( )	( )
Providing resources	( )	( )	( )	( )	( )

12. I feel my workload is...

( ) too heavy
( ) just fine
( ) too light

13. How strongly do the following things <u>MOTIVATE</u> you to participate in leadership work?

	not at all	very little	some degree	quite a bit	a great deal	Not sure
extra pay	( )	( )	( )	( )	( )	( )
official leadership title	( )	( )	( )	( )	( )	( )
support from the principal	( )	( )	( )	( )	( )	( )
recognition from colleagues	( )	( )	( )	( )	( )	( )
democratic culture	( )	( )	( )	( )	( )	( )
enough financial resources	( )	( )	( )	( )	( )	( )
enough time	( )	( )	( )	( )	( )	( )
career development	( )	( )	( )	( )	( )	( )
decision making power	( )	( )	( )	( )	( )	( )
task matching my expertise	( )	( )	( )	( )	( )	( )

risk-bearing environment	( )	( )	( )	( )	( )	( )
trust from others	( )	( )	( )	( )	( )	( )

14. How strongly do the following things <u>DISCOURAGE</u> you from participating in leadership work?

	not at all	very little	some degree	quite a bit	a great deal	Not sure
no extra pay	( )	( )	( )	( )	( )	( )
no official leadership title	( )	( )	( )	( )	( )	( )
no decision-making autonomy	( )	( )	( )	( )	( )	( )
no support from the principal	( )	( )	( )	( )	( )	( )
no career opportunities	( )	( )	( )	( )	( )	( )
insufficient financial resources	( )	( )	( )	( )	( )	( )
distraction from my own work	( )	( )	( )	( )	( )	( )
too much administrative work	( )	( )	( )	( )	( )	( )
competition with colleagues	( )	( )	( )	( )	( )	( )
task mismatching expertise	( )	( )	( )	( )	( )	( )
punishment for failure	( )	( )	( )	( )	( )	( )
mistrust from others	( )	( )	( )	( )	( )	( )

Thank you for answering the survey!

Appendix 2 Semi-structured interview questions

1. Can you please briefly describe the administrative structure of your school? Where do you locate yourself in this structure? How do you perceive the power distance in your school? Why did the school build this structure?
2. Whom do you think are the most influential leaders in your school and why? Who have the strongest influence on your daily work and why?
3. Can you describe a few situations in which leadership was distributed to you and/or by you? What kinds of resources did you receive/provide? What resources you wanted to get/give but you did not receive/give?
4. How did you use the leadership that was distributed to you? Whom did you collaborate with the most? How did the school benefit from this? How did you personally benefit from this?
5. Have you experienced any challenges or conflicts after distributing/receiving leadership, and what did you do about them?
6. In your opinion, what are the key factors that decided who received the leadership in your school? Can you provide a few examples?
7. In your opinion, what are the main purposes for distributing leadership to more members in your school? Have these purposes been achieved in practice, why or why not?
8. If you can change anything in the current school leadership work, what would you change and why?

In addition to the above questions, other follow-up questions were asked to encourage the interview participants to elaborate their answers.

ORIGINAL PAPERS

I

A META-ANALYSIS OF DISTRIBUTED LEADERSHIP FROM 2002 TO 2013: THEORY DEVELOPMENT, EMPIRICAL EVIDENCE AND FUTURE RESEARCH FOCUS

by

Meng Tian, Mika Risku & Kaija Collin, 2016

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A meta-analysis of distributed leadership from 2002 to 2013: Theory development, empirical evidence and future research focus

Meng Tian, Mika Risku and Kaija Collin

Abstract

This article provides a meta-analysis of research conducted on distributed leadership from 2002 to 2013. It continues the review of distributed leadership commissioned by the English National College for School Leadership (NCSL) (*Distributed Leadership: A Desk Study*, Bennett et al., 2003), which identified two gaps in the research during the 1996–2002 period. The review found that the studies had been unable to conceptualise distributed leadership or empirically outline its application. The two research gaps identified by Bennett et al. (2003) constitute the focus of the present review, which attempts to determine whether recent research has been able to fill these gaps. Based on the findings of the present meta-analysis, the authors recommend directions for future studies on distributed leadership.

Keywords

Distributed leadership, leadership as resource, leadership as agency, meta-analysis

Introduction

Since the mid-1990s, one of the most significant discussions concerning educational leadership has involved distributed leadership (Bolden, 2011; Bush, 2013; Elmore, 2003; Gronn, 2000; Harris, 2007; Hartley, 2007, 2009). Distributed leadership first emerged as a pragmatic tool that allowed leaders to share their increasing workload. The concept was later applied to the leadership influence of other actors (Gronn, 2002; Robinson, 2008; Spillane, 2006; Storey, 2004). At the beginning of the millennium, Bennett et al. (2003), commissioned by the English National College for School Leadership (NCSL), conducted a meta-analysis of distributed leadership studies published from January 1996 to July 2002. Its findings indicated two major gaps in the research: the failure to both clarify the concept of distributed leadership and empirically define its application.

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The present article attempts to determine how the research after 2002 until 2013 has tried to fill the two gaps identified by Bennett et al. (2003) and to propose how distributed leadership could be studied in the future.

Methodology

Because the starting point of the present meta-analysis was Bennett et al.'s (2003) review, our preliminary intention was to follow the same methodology. However, over the past decade, the concept of distributed leadership in education had gained a lot of unprecedented independence and popularity (Bolden, 2011). Consequently, an increased number of studies on distributed leadership were conducted between 2002 and 2013, compared to the period between 1996 and 2002. Because of this fundamental change in context, the methodology was designed quite differently. Although Bennett et al. (2003) included most studies that were published at that time, we were compelled to select the most representative ones for our review.

In the methodology used in Bennett et al.'s (2003) review, the first step consisted of an extensive literature search, using four keywords connected with distributed leadership. The search was later confined to studies published from 1996 to 2002. Publications with fewer than five pages were also excluded from the selection. Furthermore, only one publication by each author was included in the review. Finally, the selected publications were filtered using the keywords: delegated leadership, democratic leadership, dispersed leadership and distributed leadership. Ultimately, 80 publications were selected for the review.

The methodology of the present article comprised five steps. First, preliminary investigations determined the range of the number of publications on distributed leadership. The initial search revealed that over 720,000 articles had been published between 2002 and 2013. The second step consisted of finding the most representative publications. For this purpose, the focus was switched from articles to journals; both the Elton Bryson Stephens Company (EBSCO) and Education Resources Information Centre (ERIC) search engines in education were used to identify peer-reviewed journals that frequently published studies in English on distributed leadership. Eight peer-reviewed educational journals were identified.

Third, an examination was conducted to determine the number of articles on distributed leadership that were published in these eight journals between July 2002 and October 2013. Consequently, 823 articles were obtained from the following journals: *Educational Management, Administration & Leadership* (174), *Education Administration Quarterly* (72), *Journal of Research on Leadership Education* (28), *Journal of Cases in Educational Leadership* (18), *Management in Education* (76), *School Leadership and Management* (229), *Journal of Educational Administration* (188) and *British Journal of Sociology of Education* (38).

Fourth, the titles, keywords and abstracts of the 823 articles were examined to identify those that dealt with the two gaps in distributed leadership research found in Bennett et al.'s (2003) review. Consequently, 379 articles dealing with either the conceptualisation and/or the application of distributed leadership were identified.

The fifth and final step consisted of two phases. First, articles that did not deal with primary or secondary education were excluded from the review. Thus, the perspective of the present meta-analysis was somewhat more confined than that of Bennett et al.'s (2003) review. On one hand, a much larger number of studies were available; on the other hand, our goal was to provide a meta-analysis that better served further studies focusing on distributed leadership in primary and secondary education. Second, criteria were established to select the most representative articles.

It was decided that only articles that had been cited at least 50 times would be selected for the review. During the examination of the selected articles, it was noted that some articles and book chapters that were published in other channels had been extensively cited by the selected articles. Thus, these articles and book chapters were also considered representative of the examined period and were included in the final selection.

The selection process yielded 85 articles and book chapters, of which 53 dealt with the conceptualisation of distributed leadership and 32 focused on the application of distributed leadership. Each of these articles is marked with an asterisk (*) in the reference list.

In order to avoid personal biases, a review protocol was established, which comprised a structured table for collecting and categorising the key information from each article. The table included items such as the research subject, context, methodology and key findings. Regular meetings were held to discuss individual findings and confirm similar interpretations of the readings.

Two focus areas and two paradigms in distributed leadership research

Bennett et al.'s (2003) review focused on two areas in the research on distributed leadership: *conceptualisation* and *application*. This review pointed out that the primary challenge in the research was the absence of an explicit and commonly accepted definition of the concept. In its initial stage, distributed leadership was mainly perceived as an analytical lens to observe the interactions among people when they enacted leadership work (Bennett et al., 2003: 8). In addition to the absence of a solid theoretical foundation, the lack of empirical evidence on the practices and effects of distributed leadership was identified as another research gap, which thus constituted the second focus of future research.

The search methodology used in the present review identified 85 publications that concentrated on the two focus areas identified by Bennett et al. (2003). Concerning the operationalisation and dimensions of distributed leadership, the lack of clear agreement notably persisted. However, two examples found during the analysis provided interesting perspectives for future studies on distributed leadership. The first example was a study by Woods et al. (2004), the same group of researchers who carried out Bennett et al.'s (2003) review. They applied Archer's (1995) *structure–agency analytical dualism* to categorise the 32 publications they had examined in Bennett et al.'s (2003) review. According to them, studies adopting a structural view tended to examine 'the distribution of resources and responsibilities, cultural ideas and values, as well as social relations' (Woods et al., 2004: 450). On the other hand, studies from the point of view of agency examined the actions and interactions of people in taking initiatives, making choices and participating in leadership work. Although Bennett et al. (2003) and Woods et al. (2004) examined the same pool of literature, their foci differed. Due to their study design, Woods et al. (2004: 450) explicitly pointed out that distributed leadership had both structural and agential dimensions and that in practice, these two dimensions would often interact. Bennett et al. (2003), on the other hand, focused on the structural dimension of distributed leadership in their recommendation for future research.

The second example was the study of Hartley (2010), who adopted Burrell and Morgan's (1979) *sociological typology* to evaluate a series of pragmatic studies, finding that the majority of distributed leadership research fell under the *social regulation* dimension, not *radical change*. Hence, according to Hartley (2010), most of these studies had tried to understand and interpret distributed leadership instead of seeking change through it.

Neither the *structure–agency dualism* nor the *sociological typology* or any other research categorisation we recognised in the 85 articles directly examined distributed leadership from the angle

of the two gaps identified by Bennett et al. (2003). However, as earlier stated, both the structure–agency dualism and the sociological typology proved to offer interesting perspectives for future studies as the analysis proceeded.

Although the individual articles examined in the present meta-analysis did not specifically aim at filling the two research gaps identified by Bennett et al.'s (2003) review, overall they shed much light on both of them. In fact, two corresponding research paradigms could be inferred from the articles. The first paradigm emerged from the 53 articles that mainly dealt with the conceptualisation of distributed leadership. It was labelled as a *descriptive-analytical paradigm* because it seemed to aim at providing an understanding and interpretations of the concept of distributed leadership. The second paradigm arose from the 32 publications attempting to present prescriptions for and best practices of distributed leadership in daily school operations. It was named a *prescriptive-normative paradigm* since it focused on the practical application of distributed leadership.

Studies in the *descriptive-analytical paradigm* tended to assume that leadership was already distributed, not reflecting on whether it should be distributed (Gronn, 2002, 2003; MacBeath, 2005; Mayrowetz, 2005, 2008; Spillane, 2006). By presupposing that distributed leadership was a phenomenon that naturally existed in schools, these studies aimed at dissecting the components and processes of leadership practice in order to expand and deepen the understanding of leadership work (Gronn, 2002, 2003, 2008a; Mayrowetz, 2005; Spillane, 2006; Spillane et al., 2004; Timperley, 2005; Woods et al., 2004).

Research in the descriptive-analytical paradigm focused on examining various kinds of social interactions in schools. It perceived leadership as an emergent characteristic created by social interactions. Traditional leadership theories that narrowly examined the causal relationships between officially designated leaders and organisational effectiveness were openly challenged. Not just official leaders but any school member and even artefacts were considered as having the ability to exert leadership influence on activities (Gronn, 2003; Spillane, 2006; Spillane et al., 2004).

In the descriptive-analytical paradigm, common research questions included: *What does leadership mean to you* (Gronn, 2009a: 25)*? Who are the formal and informal leaders? What constitutes a leadership task* (Spillane et al., 2004: 13)*?* The answers to these questions involved capturing key tasks, actors, actions and interactions of distributed leadership.

Studies under the *prescriptive-normative* paradigm seemed to have won a lot of popularity over the past decade. Harris' (2009b: 265) statement that schools in the 21st century needed to proactively design 'fluid, organic structures premised on widely distributed forms of leadership' illustrated the belief in the pragmatic value of distributed leadership. Hargreaves and Fink (2008) continued in the same line of thinking, arguing that distributed leadership was a more sustainable approach in the contemporary complex and fast-changing world, but they also advised that distributed leadership should be tightly connected to schools' core work: learning. In the reviewed articles, studies in this paradigm mainly focused on identifying those distributed leadership patterns that seemed to exert positive impacts on school improvement and on trying to provide norms and prescriptions to guide practice (Harris, 2004, 2008, 2009b, 2012; Leithwood et al., 2009a).

Research in the prescriptive-normative paradigm explored the practices and effects of distributed leadership from the utilitarian viewpoint. Articles in this paradigm did not necessarily claim that distributed leadership was intrinsically an effective model by default (Day et al., 2009; Harris, 2012); however, they were inclined to find out those distributed leadership patterns that might effectively contribute to school improvement (Camburn et al., 2003; Copland, 2003; Hargreaves and Fink, 2008; Harris, 2005, 2012; Mayrowetz et al., 2009; Timperley, 2005, 2009).

Research questions that prescriptive-normative researchers raised include: *How can leadership be distributed in order to maximally benefit the school practice* (Bolden, 2011)? *How does distributed leadership develop leaders who serve the knowledge creation* (Harris, 2009b)?

As the next two sections show, over the past decade, research employing either the descriptive-analytical or the prescriptive-normative paradigm has failed to completely fill the two research gaps identified by Bennett et al.'s (2003) review. These studies remained unable to define distributed leadership in a universally accepted way or to offer enough knowledge about its effects and ideal forms.

Filling the gap of conceptualising distributed leadership

Based on the 53 articles representing studies on the conceptualisation of distributed leadership, three main approaches were identified: *modelling distributed leadership practice*, *comparing distributed leadership with similar concepts* and *questioning the concept of distributed leadership*.

Concerning modelling distributed leadership practice, two models were considered to have exerted profound influence on the conceptualisation of distributed leadership. The first one was Spillane's (2006: 3) practice-centred model, consisting of *leaders*, *followers* and *situation* as the key components and indicating that 'collective interactions among leaders, followers and their situation are paramount' for distributed leadership practice (2006: 4). Notably, Spillane's practice-centred model highlighted distributed leadership as going beyond shared leadership, because it not only comprised the leader-plus aspect (i.e. multiple individuals function as leaders) but also the practice aspect (i.e. leadership generated from interactions).

Spillane's (2006) model seemed to have fundamentally changed the unit of analysis from people to practice. He also tested his model empirically and identified four distributed leadership patterns: *collaborative*, *collective*, *coordinated* and *parallel*. From an analytical-descriptive angle, these patterns offered a logical categorisation of how leadership was distributed in practice.

Gronn (2002, 2003) built the second highly influential model on the conceptualisation of distributed leadership. At the beginning of the millennium, he had established the *numerical–concertive* model, which resembled Spillane's (2006) leader-plus and practice-centred aspects. After reviewing a number of empirical studies, he later proposed the *hybrid* model as a more appropriate descriptor for distributed leadership because it fused 'hierarchical and heterarchical elements' (Gronn, 2009a: 155). One major contribution of Gronn's hybrid model was that it detached distributed leadership from the individual–collective and formal–informal leadership continuums. The model admitted that individual leaders were equally significant and simultaneously co-existed with collective forms of leadership. Additionally, because distributed leadership would evolve over time and differed from one context to the other, it had no fixed pattern.

Compared to Spillane (2006), who examined distributed leadership as the conjoint agency of multiple actors, Gronn (2008, 2009b) to some extent acknowledged leadership also as individual agency in his hybrid model. However, Gronn's main interest was to delineate how different sources of agency would constitute the holistic leadership pattern. Neither Spillane's nor Gronn's model examined how individuals would feel, participate and develop in the leadership process.

Modelling distributed leadership practice seemed to have provided theoretical foundations for empirical studies. The models asserted that an organisation's sustainable development relied on multiple sources of leadership and regarded the formal leaders' role not as that of an absolute authority, but more of a coordinator who utilised others' expertise (Gronn, 2008; Spillane, 2006). The scope of distributed leadership had gradually been expanded from task sharing to collective

interactions and then to a hybridity of individual and collective, hierarchical and heterarchical leadership forms, which could be utilised as frameworks for empirical studies.

Concerning the comparison of concepts, no systematic analysis was found to solely concentrate on delineating the conceptual boundaries between distributed leadership and other related concepts. There even seemed to be some concerns that distributed leadership would be used interchangeably with similar concepts. For example, Harris (2007) argued that using distributed leadership as a catch-all concept for any form of devolved, shared or dispersed leadership might lead to misunderstandings in research, policymaking and practice. By quoting Spillane's (2006) practice-centred model, Harris asserted that in contrast to shared leadership, which perceived leadership as an aggregated agency created by multiple individuals, distributed leadership was essentially about practice, not people. Later, Heikka et al. (2012: 34) explicitly pointed out that shared leadership focuses on micro-level teams, while 'distributed leadership adopts a more macroscopic view of organisation'.

A similar comparison among teacher leadership, team leadership and distributed leadership surfaced from the review. The first two, as their names would suggest, might be expected to adopt a people-centred perspective by studying teachers' or teams' roles and functions. However, although quite a few of the reviewed studies investigated distributed leadership from the perspective of teachers (e.g. Camburn et al., 2003; Chang, 2011; Law et al., 2010) and teams (e.g. Hulpia et al., 2009a; Pedersen et al., 2012; Scribner et al., 2007; Sentočnik and Rupar, 2009; Timperley, 2009; Wallace, 2002), they generally did not focus on studying the role of teachers or teams but were confined to the interactions among different levels in the school hierarchy through people and teams. In other words, the studies focused more on the resources which emerged from teacher and team leadership than on the agency which teacher or team leadership allowed.

The third example of comparisons concerns the one between distributed and democratic leadership. Spillane (2006) and Woods (2004) claim that distributed leadership could be both democratic and autocratic. As earlier described, Spillane's (2006) distributed leadership model focused on interaction and how it manifested itself in school work. His longitudinal studies revealed that formal leaders played a dominant role in boosting informal leadership (Spillane and Healey, 2010; Spillane et al., 2003, 2007) but did not question the power relationship as such. Particularly, Spillane and Healey's (2010) perspective was organisational and regarded leadership as a resource. They closely examined the formal and informal dimensions of the school organisation, but how the power relationship affected individuals' agency gained little attention.

On the other hand, research on democratic leadership by Woods (2004, 2011, 2013), as well as by Woods and Woods (2013), did not simply identify the democratic nature of leadership but also aimed at using human potentials to serve people's holistic well-being. Thus, how leadership would manifest itself as individuals' agency was one of the foci. Democratic leadership incorporated meaningful participation in decision-making as well as personal growth; thus, it had a more normative perspective than distributed leadership.

The third identified approach to fill the gap of conceptualisation involved researchers' critical voices on distributed leadership. For example, Johnson (2004) warned that distributed leadership might be camouflaged as a micropolitical strategy to rationalise top-down management. Thus, how leadership would be distributed might be manipulated, and distributions might serve some people's interests only. Most studies on the subject seemed to examine the effectiveness of distributed leadership from the organisational perspective, neglecting the scope of how individuals could exert agency during the process. This pitfall was further deepened by Woods (2004, 2005, 2011) in his holistic democracy model. He claimed that distributed leadership was grounded in a narrow understanding of the human being, which primarily focused on developing people's intellectual and

psychological dimensions. Thus, it was often measured with calculable outcomes such as test scores and financial performance and did not necessarily consider the ethical foundation of leadership (Woods and Woods, 2013). Furthermore, Lumby (2013: 583) criticised the literature on the subject for tending to avoid 'problematizing power and its relationship to distributed leadership'. She argued that ignoring politics in education actually made distributed leadership a political phenomenon 'replete with the uses and abuses of power' (Lumby, 2013: 592).

It can be concluded that over the past decade, research seems to have enriched the discussion of how to fill the gap of conceptualising distributed leadership, but has not yet reached a consensus on what distributed leadership is. Moreover, research tends to have focused on examining leadership more as a resource from an organisational point of view than as an agency that allowed individuals to have an active role in the organisation.

Filling the gap on the application of distributed leadership

As a result of the search process, 32 articles were reviewed concerning the research gap on the application of distributed leadership. The articles represented 23 studies in five continents and 19 countries, thus providing a broader geographical and cultural spectrum than the ones on the conceptualisation of distributed leadership. Those studies almost solely represented research conducted in the Anglo-American world.

At the beginning of the millennium, distributed leadership seemed to have been a novel phenomenon, with limited studies on the topic. For this reason, Bennett et al.'s (2003) review included studies from education, social community, public service and business settings. As mentioned in the methodology section, because of the abundant relevant literature over the last 10 years and with the parallel aim of forming a research background for a distributed leadership study in primary and secondary education, this meta-analysis reviewed studies conducted solely in those two educational levels.

Similar to the research quantity, the scale and methodology of distributed leadership studies also seemed to have evolved over the last decade. Bennett et al.'s (2003: 6) review mostly comprised 'small-scale qualitative case studies'. The present meta-analysis found more variation. Of the 23 studies, 21 were empirical and two were meta-analyses. Of the 21 empirical studies, six used a qualitative approach, featuring interviews, observations, and case studies; seven adopted a quantitative method based on surveys; five employed mixed methods and three were comparative.

As earlier described, studies on distributed leadership have become more global, making the research findings more versatile and complicated. In fact, the versatile results may indicate that there are few universal answers and that how distributed leadership is interpreted and subscribed to in practice is heavily shaped by the social-cultural contexts. Thus, the findings of the following studies cannot be regarded as universal truths but should be examined in various contexts to obtain broader verification.

Three main approaches to tackling the gap in the application of distributed leadership were identified: examining the favourable conditions for distributed leadership, evaluating the effects of distributed leadership applications and recognising the potential risks of applying distributed leadership.

Concerning favourable conditions, several studies found four key elements that seemed to nurture distributed leadership in schools: formal leaders' support, climate of trust, strategic staff policy and utilisation of artefacts in leadership. Research in this area often seemed to examine leadership

both as a resource from the organisational standpoint and as an agency from the individual one, as the following review shows.

Regarding formal leaders' support, research seemed to indicate that informal leadership was tightly linked to and significantly shaped by formal leadership (Angelle, 2010; Dinham et al., 2008; Hulpia et al., 2009b; Jing, 2010; Law et al., 2010; Leithwood et al., 2007; Spillane and Healey, 2010; Wright, 2008). Moreover, empirical evidence tended to reaffirm that schools with only one power centre and a steep hierarchy led to poor performance and low morale (Oswald and Engelbrecht, 2013; Williams, 2011).

In a distributed leadership setting, formal leaders should also be regarded as important 'gate keepers' who either encourage or discourage others from leading and participating in organisational changes. For example, a Canadian study (Bush and Glover, 2012) showed that the effectiveness of distributed leadership strongly depended on the principal's intentional support. In a successful distributed leadership setting, school staff also tended to acknowledge informal leaders who shared similar traits and dispositions with formal leaders (Leithwood et al., 2007). Studies such as these can be deemed to examine leadership not only as an organisational resource but also as an individual agency. This agency often seems to be created by the principals, who first demonstrate it themselves by intentionally creating leadership opportunities for others. In return, teachers practise their agency by acting as informal leaders and acknowledging other informal leaders.

In line with the sociological typology emphasising distributed leadership as a tool for change, prescriptive-normative research urges principals to allow fundamental changes in school leadership so that formal and informal leadership are not oppositional but compatible (Harris, 2013a). In such a setting, it seems that principals' power and authority should be determined in relation to the overall leadership resources in schools, as Hong Kong, Australia and South Africa already seem to be doing (Lee et al., 2012; Leithwood et al., 2007; Williams, 2011). Additionally, prescriptive-normative research challenges principals to acknowledge alternative sources of leadership in their organisations (Lee et al., 2012; Murphy et al., 2009; Wright, 2008). The application of distributed leadership tends to encourage principals to consciously facilitate and support leadership from others. Finally, to succeed in the distribution of leadership, it seems that schools' daily routines should be redesigned so that both formal and informal leadership can flourish and be sustained (Ban Al-Ani and Bligh, 2011; Gunter et al., 2013; Harris, 2013b; Spillane et al., 2007). As a case in point, a Belgian study implied that leaving teacher teams to work alone without the principal's regular supervision may lead to low effectiveness (Hulpia et al., 2012).

The studies on the application of distributed leadership suggested the essential aspect of the climate of trust for distributed leadership, yet how trust would be established seemed to vary among different cultural settings. Oduro's (2004) data from 11 primary and secondary schools in England showed trust as the most frequently and commonly mentioned factor for promoting distributed leadership. He found out that trust enabled principals to distribute leadership, not only through formal task delegation but also through informal empowerment. The prerequisite appeared to be teachers' ability to demonstrate their trustworthiness in enacting leadership work. Jing's (2010) comparative study indicated that in Chinese schools, trust would first be built upon an interpersonal relationship, then on pedagogical competence and finally, on leadership experience. Distributing leadership in Chinese schools might encounter cultural barriers if it would disturb the harmonious interpersonal relationships. In contrast, in American schools, trust mostly tended to come from leadership competencies, which appeared tightly connected to a specific expertise. American teachers thus seemed to accept expertise-based distributed leadership fairly easily (Jing, 2010).

Strategic staff policies seemed to provide fluidity and flexibility in organisational structures. Findings debunked the myth that distributed leadership aimed to abolish organisational hierarchy and reaffirmed the perception that distributed leadership allowed practitioners to utilise human resources more innovatively. For example, in a Hong Kong case study, leaders' roles were intentionally rotated from official leaders to committed teachers (Law et al., 2010). The leadership role rotation seemed to boost teachers' confidence in using their professional knowledge in curriculum work. Teachers also became more engaged when they were invited into the decision-making process. As another example, in a comparison of five International Baccalaureate (IB) schools in mainland China, Hong Kong, Thailand and Vietnam (Lee et al., 2012), three staff strategies emerged from the data: recruiting teachers who shared similar professional backgrounds, putting key persons in several programmes and regularly switching teachers' positions. Lee et al. (2012) claimed that purposeful recruitment, multiple positioning and position switching ensured the availability of the instructional resource and professional support at all levels of the school. They also pointed out international schools as ideal research contexts for distributed leadership studies due to their greater degree of freedom than ordinary schools to try new structures.

The utilisation of artefacts seemed to expand the operational sphere of leadership. Spillane (2006: 84) brought artefacts from the background to the centre of the stage, claiming that 'tools and routines are the vehicles through which leaders interact with each other or with followers'. A four-year consecutive research (Timperley, 2009) conducted in seven New Zealand schools indicated that school teachers accelerated students' outcomes by purposefully using artefacts (e.g. achievement data). The influence of artefacts appeared to expand the operational sphere of leadership in two ways. First, leadership would no longer follow a one-way direction from superiors to subordinates but proceed both ways, enabling subordinates to have agency and also exert influence on their superiors. Second, leadership does not limit itself to human–human interactions; it can also be displayed in human–artefact and human–artefact–human formats. Both Spillane (2006) and Timperley (2009) noted that in schools, artefacts had not yet been effectively used for leadership purposes or had even been misused to 'distort teaching practice' (Spillane, 2006: 80).

The second identified approach to filling the gap was to evaluate the effects of distributed leadership applications. Besides observing the effects, research in this area seemed to have obtained interesting information concerning leadership both as organisational resource and individual agency. As a starting point, the approach examined distributed leadership not only to understand it better, but also as a tool for change.

Over the past decade, one of the most heated debates involved whether or not distributed leadership could enhance students' learning outcomes. Despite the keen interest from academia, providing robust evidence to validate distributed leadership in relation to students' learning improvement appeared extremely difficult. A representative example is the study by Anderson et al. (2009), whose two limitations were also experienced by other small-scale, distributed leadership case studies (e.g. Angelle, 2010; Timperley, 2009) – the difficulty of modelling the causal relationship between distributed leadership and student learning outcomes, and the problem of generalising the identified applications of distributed leadership at the macro-level.

Anderson et al.'s study (2009) attempted to investigate normative links between distributed leadership and students' three-year, standardised test scores in five British schools. Similar to many other small-scale case studies, the research failed to find direct correlations between distributed leadership and students' longitudinal test scores in all subjects. What it discovered was that students' test scores fluctuated over the years, which was attributed more to student and personnel mobility than to distributed leadership. The correlations with various subjects also varied. For example, in one of the

studied schools, the improved test scores could be indirectly attributed to distributed leadership in reading and mathematics but not in science. Anderson et al. (2009: 132) concluded that seeking direct, measurable correlations between distributed leadership and students' learning outcomes might be less productive than exploring how distributed leadership would affect teachers' professional communities. Earlier studies had already proven that teachers contributed the most to students' learning outcomes, and the correlation between distributed leadership and teachers' effectiveness seemed to be more easily examined.

Only one large-scale research (Heck and Hallinger, 2010) on the correlation between distributed leadership and students' learning outcomes was found in the present meta-analysis. This four-year longitudinal study in 197 American primary schools seemed to have overcome the above-mentioned two limitations concerning small-scale studies on distributed leadership. Methodologically, the study had adopted the structural equation model (SEM) to investigate the impact of 'the changes in distributed leadership on changes in school improvement capacity and growth in student learning' (Heck and Hallinger, 2010: 868). The study provided distinct indicators for distributed leadership, school improvement capacity and student learning outcomes. Moreover, with the SEM technique, the researchers were able to incorporate missing data and student mobility into the analysis, thus reducing parameter bias. Based on their results, Heck and Hallinger (2010: 881) claimed that distributed leadership indirectly but significantly enhanced students' mathematics and reading performance.

As Anderson et al. (2009) recommended, most empirical studies looked for the effects of distributed leadership on teachers, rather than the direct relationship between distributed leadership and students' learning outcomes (e.g. Scribner et al., 2007; Watson and Scribner, 2005, 2007). A quantitative study of 46 secondary schools in Belgium (Hulpia and Devos, 2009b; Hulpia et al., 2009a) contended that distributed leadership might significantly enhance teachers' organisational commitment and job satisfaction when there was cohesion in the leadership team. School staff appeared to welcome support from both formal and informal leaders. However, teachers' commitment seemed to drop if multiple leaders supervised them. In a Finnish case, vocational school teachers broke the system-level boundaries to collaborate with other stakeholders such as social workers and employers in the labour market. Building a distributed leadership network within the educational system appeared to pave a smoother learning path and to prevent dropouts (Jäppinen and Maunonen-Eskelinen, 2012; Jäppinen and Sarja, 2012).

Moreover, as Leithwood et al. (2007) stated, the emergence of distributed leadership would not necessarily flatten the hierarchical structure or share undifferentiated leadership functions across different roles. On the contrary, distributed leadership would admit the co-existence of hierarchical and fluid structures. Furthermore, as Locke (2003) mentioned, the agency created by distributed leadership would not have the same impact for all actors because leadership functions were bound to position and legitimacy.

Although research suggested that distributed leadership might bring positive impacts on students' learning, teachers' morale and students' transition, some critics argued that such improvement may be rhetoric. These critics tried to fill the research gap by identifying the potential risks of applying distributed leadership. This constitutes the third research approach on the application of distributed leadership. It can be claimed that the approach strongly focuses on perceiving leadership as an individual agency.

Lumby (2013: 582) warned that distributed leadership 'reconciles staff to growing workloads and accountability' but in terms of the use of power, teachers' 'autonomy is offered with a leading rein'. On the other hand, Fitzgerald and Gunter (2006) questioned the ethical foundation of

distributed leadership, arguing that luring teachers into doing more work was a new form of managerialism. Woods and Woods (2013) also claimed that distributed leadership did not ontologically embed social justice and equity. Normative studies that evaluated distributed leadership via calculable indicators such as test scores might blind research from recognising the deeper value of school leadership work. These criticisms argued that the majority of distributed leadership studies merely examined leadership as an organisational resource that can be cultivated and utilised to serve school improvement. What they demanded was that individuals, especially teachers, who genuinely exercised their professional agency in decision-making, should also be at the core of distributed leadership and its research.

It can be concluded that research on the application of distributed leadership, in the same way as that on the conceptualisation, has provided new information on distributed leadership but has not been able to fully fill the gap identified by Bennett et al.'s (2003) review. The lack of a universally accepted definition of distributed leadership seems to complicate the task. The reviewed articles also indicate that different sociocultural contexts subscribe to distributed leadership in different ways; thus, using the same approaches in various contexts may provide diverse results (Feng, 2012). Additionally, students' learning outcomes depend on so many variables that it is challenging to underpin the correlation between them and distributed leadership.

Research on the application of distributed leadership has raised the issue of regarding leadership both as organisational resource and individual agency, though from a utilitarian perspective. It can also be argued that research in this area considers distributed leadership as a tool for change and does not merely examine it to gain a better understanding of its nature. The ethical foundation of distributed leadership has been heavily questioned as well. There seems to be an absence of research that tries to illuminate the use and misuse of power.

Suggestions for future research

This section comprises suggestions for future studies in distributed leadership. The recommendations are based on a definition of distributed leadership, which is designed according to the present meta-analysis and which we hope provides a starting point for a more general framework.

This article proposes that distributed leadership be defined and studied in terms of leadership as a process that comprises both organisational and individual scopes; the former regards leadership as a resource and the latter as an agency. Both resource and agency are considered to emerge and exist at all organisational levels.

Leadership as resource

In the context of the foregoing definition of distributed leadership, from an organisational perspective, the resource is vital for both its operations and development. The resource does not stay stagnant at the top of the organisational hierarchy but emerges and flows vertically and horizontally as the processes do. It is essential to try both to identify the resource and how it emerges.

Based on existing research, the resource can refer to leadership created in the processes among people, artefacts and situations. In practice, people and artefacts are distributed at various levels of the school organisation, creating leadership in both formal and informal structures. Once meaningful interactions among different levels are built within and outside the organisation, new resources can emerge. As Harris (2009b) stated, organisations today rely increasingly on external networks. It is

crucial to attempt to identify and describe the various manifestations of the resource more exclusively.

The examined research indicates that the relationship between the situation and the actors determines both the emergence and the nature of the resource. Earlier studies also listed some favourable conditions and ways of successfully establishing the resource. Nonetheless, much information remains unknown or unclear about the various situations and actors, their relationships and the processes in which the resource emerges. These should be the central foci of future research.

Besides being able to establish the leadership resource in an organisation, it is essential to cultivate it, on which future studies should also concentrate. The existing research has been able to provide some information to proceed with the studies. For instance, as Leithwood et al. (2009b) stated, distributed leadership is not just a tool to collect dispersed expertise, but also a means of further cultivating both people's and organisations' potentials. Leadership can be expanded and extended when more members of the organisation contribute their know-how.

It is also noteworthy that perceiving distributed leadership solely from the standpoint of organisations may allow them to slip into a new type of managerialism (Johnson, 2004; Lumby, 2013) and decrease efficiency. Examining leadership from the perspective of individuals (as agency) is also needed to cultivate and use the organisational leadership resource efficiently.

Leadership as agency

In the context of the proposed definition of distributed leadership, for an individual, agency is a vital presupposition for the ability to have ownership, empowerment, self-efficacy and well-being in the organisation, both as an individual and through collective bodies. As Eteläpelto et al. (2013: 61) argued, professional agency would allow 'professional subjects and/or communities [to] exert influence, make [a] choice and take stances in ways that affect their work and/or their professional identity'.

For example, Woods et al. (2004) recognised agency in connection with distributed leadership, but generally the results of the present meta-analysis indicate that the individual scope has not constituted the core of distributed leadership research. The focus has dominantly been on the organisational scope. However, future research should also underline the individual scope and include agency. For instance, this claim is consistent with Leithwood and Mascall's (2008: 529) statement that the state-of-the-art strategy in leadership conversation is now moving towards 'distributed sources of influence and agency'.

It is already known that in schools, distributed leadership entails a deliberate organisational redesign by the principal and purposeful engagement by the other school staff. Nonetheless, so far, researchers have been unable to clearly describe how different agents use their initiatives to influence leadership work. For example, research (Duif et al., 2013: 31) indicates that school leaders perceive teachers as not demonstrating enough initiative and responsibility in leadership. For their part, teachers attribute this issue to the lack of guidance and direction in the school.

Distributed leadership research has not yet elaborated on what kind of agency school leaders can exert to create a supportive environment in which teachers can practise their agency to co-lead their school's daily operations. The research gap calls for a closer examination of the reciprocal relationship between professional agency and organisational improvement.

After a decade of evolution, distributed leadership is no longer a simple pragmatic solution to reduce official leaders' workload. It shows a greater potential to enhance school members' self-efficacy when their expertise is applied in particular leadership work (Day et al., 2009).

Distributed leadership implies 'actively brokering, facilitating and supporting the leadership of others' (Harris, 2013b: 547). All these factors require professional agency from both the formal and informal leaders of a school. Therefore, we propose that future research on distributed leadership closely examines the social interaction process in which agency is exercised by various school members.

The conceptualisation of agency presented in this article is based on a sociocultural approach that emphasises subjectivity at both individual and collective levels (see e.g. Eteläpelto et al., 2013). Leadership is considered to comprise multiple sources, including individual leaders, leadership teams and artefacts. Indeed, both the distributed leadership and professional agency theories admit that human beings are active and self-creating, despite their entanglement with the sociocultural practices, power relations and discourses in which they have to function (Davies, 2000; Fenwick, 2006). Therefore, professional agency is always practised in the sociocultural conditions of the workplace, such as in the practices, power relations, discourses and subject and role positions of a school (Clegg, 2006; Pyhältö et al., 2012). This fact may provide meaningful insights to explain why and how micro-politics manipulate distributed leadership (Fitzgerald and Gunter, 2006; Johnson, 2004).

The concept of professional agency includes two aspects: the individual, which is determined by the will to act, and the social, which includes an opportunity to act (Ci, 2011). When both aspects are present, professional agency is possible (Caldwell, 2007). Individuals act in structures and organisations; at the same time, they build and change their surroundings (Battilana, 2006; Berger and Luckmann, 1991). Although a few existing studies have to some extent adopted the agency scope, their main focus has been on the individual instead of the social aspect. These studies have been primarily interested in measuring the end results of school members' agency, such as task fulfilment and goal attainment. The social aspect of professional agency, which concerns its emergence and process, has not yet gained enough attention in distributed leadership research. As Woods and Woods (2013) pointed out, the fuller conceptualisation of the human being would transcend the cognitive, emotional and aesthetic capacities. Leadership shall also serve the human being's social needs, including the sense of connectedness, spiritual awareness and relational consciousness. This individual–social dualism from the professional agency theory may provide an analytical framework to deepen the concept of distributed leadership. Particularly, the combination of distributed leadership and professional agency theories may help researchers explore how to build a reciprocal relationship and a supportive environment in which school members are willing to contribute their professional expertise to leadership work while enhancing their self-efficacy and professional capacity.

Professional agency is needed for employees to build a shared understanding of the creation of new work practices, development of work contents, transformation of organisations and introduction of creativity and innovations at work (Collin et al., 2010, 2012). As Woods and Woods (2013) criticised, one pitfall of distributed leadership involved its narrow focus on the development of the performative self via measuring goal attainment, intellectual growth and emotional maturity. If the aim is using distributed leadership to develop organisational members as whole human beings with both psychological and social needs, agency is needed. Agency may help create ideal circumstances for distributed leadership to be realised in schools. Consequently, future research on distributional leadership should focus on how it is exercised in everyday school work and on practices among all groups of agents (e.g. officially designated leaders, teachers and students). Therefore, it is also imperative to investigate how agency, both at individual and collective levels, manifests in distributed leadership.

Conclusion

This meta-analysis set out to enhance the understanding of distributed leadership and provide a research framework for future studies. It intended to continue Bennett et al.'s (2003) review on distributed leadership research from 1996 to 2002. The scope of the present review spanned the 2002–2013 period. It turned out that the research in the field of distributed leadership had become both more independent and broader. Because of such changes, the methodology of this meta-analysis was developed to prudently select a set of contemporary articles on distributed leadership. There was also a need to narrow the focus to primary and secondary education as the meta-analysis had a parallel aim of assisting in the design of a distributed leadership study confined to these two levels of education.

Bennett et al. (2003) had identified two research gaps, which became the criteria for the selection and analysis of the articles. The results of the present review indicate new information obtained concerning both research gaps, but neither of them has been filled satisfactorily. Further studies on the conceptualisation and application of distributed leadership are needed.

One of the main drawbacks for all research on the topic was the lack of a universal definition of distributed leadership. Its absence seemed to impede studies on both the conceptualisation and application of distributed leadership. Based on the meta-analysis, we proposed a definition of distributed leadership as an attempt to offer a general framework for future studies.

In the context of the proposed definition of distributed leadership, two main scopes for future studies are suggested. The first one comprises perceiving leadership as a resource from the organisational perspective. This approach seems to have dominated studies on distributed leadership. The second one aims to examine leadership from the viewpoint of the individual as an agency. To date, this approach has not been the focus of distributed leadership research in the same way as the organisational approach has been and could possibly provide novel insights.

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References

*Anderson S, Moore S and Sun J (2009) Positioning the principal in patterns of school leadership distribution. In: Leithwood K, Mascall B and Strauss T (eds) *Distributed Leadership According to the Evidence*. New York: Routledge, pp.111–136.

*Angelle PS (2010) An organizational perspective of distributed leadership: A portrait of a middle school. *RMLE Online: Research in Middle Level Education* 33(5): 1–16.

Archer M (1995) *Realist Social Theory: The Morphogenetic Approach*. Cambridge, UK: Cambridge University Press.

*Ban Al-Ani AH and Bligh MC (2011) Collaborating with 'virtual strangers' towards developing a framework for leadership in distributed teams. *Leadership* 7: 219–249.

Battilana J (2006) Agency and institutions: The enabling role of individuals' social position. *Organization* 12(5): 653–676.

*Bennett N, Wise C, Woods PA, et al. (2003) *Distributed Leadership: A Desk Study*. Nottingham: NCSL.

Berger PL and Luckmann T (1991) *The Social Construction of Reality*. Penguin Books: London.

*Bolden R (2011) Distributed leadership in organizations: A review of theory and research. *International Journal of Management Reviews* 13: 251–269.

Burrell G and Morgan G (1979) *Sociological Paradigms and Organizational Analysis: Elements of the Sociology of Corporate Life*. London: Heinemann.

*Bush T (2013) Distributed leadership: The model of choice in the 21st century. *Educational Management Administration & Leadership* 41(5): 543–544.

*Bush T and Glover D (2012) Distributed leadership in action: Leading high-performing leadership teams in English schools. *School Leadership and Management* 32(1): 21–36.

Caldwell R (2007) Agency and change: Re-evaluating Foucault's legacy. *Organization* 14(6): 769–791.

*Camburn E, Rowan B and Taylor JE (2003) Distributed leadership in schools: The case of elementary schools adopting comprehensive school reform. *Educational Evaluation and Policy Analysis* 25: 347–375.

*Chang I (2011) A study of the relationships between distributed leadership, teacher academic optimism and student achievement in Taiwanese elementary schools. *School Leadership & Management* 31(5): 491–515.

Ci J (2011) Evaluating agency: A fundamental question for social and political philosophy. *Metaphilosophy* 42(3): 261–281.

Clegg S (2006) The problem of agency in feminism: A critical realist approach. *Gender and Education* 18(3): 309–324.

Collin K, Paloniemi S and Mecklin J-P (2010) Promoting inter-professional teamwork and learning – The case of a surgical operating theatre. *Journal of Education and Work* 23(1): 43–63.

Collin K, Valleala UM, Herranen S, et al. (2012) Ways of inter-professional collaboration and learning in emergency work. *Studies in Continuing Education* 34(3): 281–300.

*Copland MA (2003) Leadership of inquiry: Building and sustaining capacity through school improvement. *Educational Evaluation and Policy Analysis* 25: 375–396.

Davies B (2000) *(In)scribing Body/Landscape Relations*. Alta Mira Press: Walnut Creek.

*Day C, Sammons P, Hopkins D, et al. (2009) *The Impact of School Leadership on Pupil Outcomes*. London: Final Report DCSF.

*Dinham S, Aubusson P and Brady L (2008) Distributed leadership as a factor in and outcome of teacher action learning. *International Electronic Journal for Leadership in Learning* 12(4): 1–13.

*Duif T, Harrison C, van Dartel N, et al. (2013) Distributed leadership in practice: A descriptive analysis of distributed leadership in European schools. European Policy Network of School Leadership. Available at: http://www.schoolleadership.eu/sites/default/files/esha-etuce_report_on_dl.pdf (accessed 22 December 2014).

*Elmore RF (2003) A plea for strong practice. *Educational Leadership* 62(3): 6–10.

Eteläpelto A, Vähäsantanen K, Hökkä P, et al. (2013) What is agency? Conceptualizing professional agency at work. *Educational Research Review* 10: 45–65.

*Feng DM (2012) 分布式领导之中国意义 [The significance of distributed leadership in China's context]. *Educational Development and Research* 12: 31–35.

Fenwick T (2006) Escaping/becoming subjects: Learning to work the boundaries in a boundaryless work. In: Billett S, Fenwick T and Somerville M (eds) *Work, Subjectivity and Learning*. Springer: Dordrecht, pp.21–36.

*Fitzgerald T and Gunter H (2006) Teacher leadership? A new form of managerialism. *New Zealand Journal of Educational Leadership* 21(2): 44–57.

Gronn P (2000) Distributed properties: A new architecture for leadership. *Educational Management Administration & Leadership* 28: 317–338.

*Gronn P (2002) Distributed leadership as a unit of analysis. *Leadership Quarterly* 13(4): 423–451.

*Gronn P (2003) Leadership: Who needs it? *School Leadership and Management* 23(3): 267–290.

*Gronn P (2008) The future of distributed leadership. *Journal of Educational Administration* 46: 141–158.

*Gronn P (2009a) Hybrid leadership. In: Leithwood K, Mascall B and Strauss T (eds) *Distributed Leadership According to the Evidence*. New York: Routledge, pp.17–40.
*Gronn P (2009b) Leadership configurations. *Leadership* 5: 381–394.
*Gunter H, Hall D and Bragg J (2013) Distributed leadership: A study in knowledge production. *Educational Management Administration & Leadership* 41(5): 555–580.
*Hargreaves A and Fink D (2008) Distributed leadership: Democracy or delivery? *Journal of Educational Administration* 46: 229–240.
*Harris A (2004) Distributed leadership for school improvement: Leading or misleading. *Educational Management Administration & Leadership* 32: 11–24.
*Harris A (2005) Leading or misleading? Distributed leadership and school improvement. *Journal of Curriculum Studies* 37: 255–265.
*Harris A (2007) Distributed leadership: Conceptual confusion and empirical evidence. *International Journal of Leadership in Education* 10(3): 315–325.
*Harris A (2008) Distributed leadership: According to the evidence. *Journal of Educational Administration* 46(2): 172–188.
*Harris A (2009a) Distributed leadership: What we know. In: Harris A (ed) *Distributed Leadership: Different Perspectives*. Dordrecht: Springer, pp.11–21.
*Harris A (2009b) Distributed leadership and knowledge creation. In: Leithwood K, Mascall B and Strauss T (eds) *Distributed Leadership According to the Evidence*. Abingdon: Routledge, pp.253–266.
*Harris A (2012) Distributed leadership: Implications for the role of the principal. *Journal of Management Development* 31(1): 7–17.
*Harris A (2013a) *Distributed Leadership Matters: Potential, Practicalities and Possibilities*. Thousand Oaks, CA: Corwin Press.
*Harris A (2013b) Distributed leadership: Friend or foe. *Educational Management Administration & Leadership* 41(5): 545–554.
*Hartley D (2007) The emergence of distributed leadership in education: Why now? *British Journal of Educational Studies* 55(2): 202–214.
*Hartley D (2009) Education policy, distributed leadership and socio-cultural theory. *Educational Review* 61: 139–150.
*Hartley D (2010) Paradigms: How far does research in distributed leadership "stretch"? *Educational Management Administration & Leadership* 38(3): 271–285.
*Heck R and Hallinger P (2010) Testing a longitudinal model of distributed leadership effects on school improvement. *Leadership Quarterly* 21: 867–885.
*Heikka J, Waniganayake M and Hujala E (2012) Contextualizing distributed leadership within early childhood education: Current understandings, research evidence and future challenges. *Educational Management Administration & Leadership* 41(1): 30–44.
*Hulpia H and Devos G (2009) Exploring the link between distributed leadership and job satisfaction of school leaders. *Educational Studies* 35: 153–171.
*Hulpia H, Devos G and Rosseel Y (2009a) Development and validation of scores on the distributed leadership inventory. *Educational and Psychological Measurement* 69(6): 1013–1034.
*Hulpia H, Devos G, Rosseel Y, et al. (2012) Dimensions of distributed leadership and the impact on teachers' organizational commitment: A study in secondary education. *Journal of Applied Social Psychology* 42(7): 1745–1784.
*Hulpia H, Devos G and Van Keer H (2009b) The influence of distributed leadership on teachers' organizational commitment: A multilevel approach. *Journal of Educational Research* 103(1): 40–52.

Jäppinen AK and Maunonen-Eskelinen I (2012) Organizational transition challenges in the Finnish vocational education – Perspective of distributed pedagogical leadership. *Educational Studies* 38(1): 9–50.

*Jäppinen AK and Sarja A (2012) Distributed pedagogical leadership and generative dialogue in educational nodes. *Management in Education* 26(2): 64–72.

*Jing WL (2010) *School leadership in two countries: Shared leadership in American and Chinese high schools*. Dissertation, Arizona State University. 1–178.

*Johnson B (2004) Local school micropolitical agency: An antidote to new managerialism. *School Leadership and Management* 24: 267–286.

*Lakomski G (2008) Functionally adequate but causally idle: W(h)ither distributed leadership? *Journal of Educational Administration* 46: 159–171.

*Law E, Galton M and Wan S (2010) Distributed curriculum leadership in action: A Hong Kong case study. *Educational Management Administration & Leadership* 38(3): 286–303.

*Lee M, Hallinger P and Walker A (2012) A distributed perspective on instructional leadership in international baccalaureate (IB) schools. *The Journal of Leadership for Effective & Equitable Organizations* 48(4): 664–698.

*Leithwood K and Mascall B (2008) Collective leadership effects on student achievement. *Educational Administration Quarterly* 44(4): 529–561.

*Leithwood K, Mascall B and Strauss T (2009a) *Distributed Leadership According to the Evidence*. Abingdon: Routledge.

*Leithwood K, Mascall B and Strauss T (2009b) New perspectives on an old idea: A short history of the old idea. In: Leithwood K, Mascall B and Strauss T (eds) *Distributed Leadership According to the Evidence*. Abingdon: Routledge, pp.1–14.

*Leithwood K, Mascall B, Strauss T, et al. (2007) Distributing leadership to make schools smarter: Taking the ego out of the system. *Leadership and Policy Studies* 6(1): 37–67.

*Locke EA (2003) Leadership: Starting at the top. In: Pearce CL and Conger JA (eds) *Shared Leadership: Reframing the Hows and Whys of Leadership*. Thousand Oaks, California: Sage, pp.271–284.

*Lumby J (2013) Distributed leadership: The uses and abuses of power. *Educational Management Administration & Leadership* 41(5): 581–597.

*MacBeath J (2005) Leadership as distributed: A matter of practice. *School Leadership and Management* 25(4): 349–366.

*Mayrowetz D (2005, 10-13 November) Perceptions and interpretations of distributed leadership: Implications for leadership development and school improvement. Nashville, TN: University council on educational administration annual convention.

*Mayrowetz D (2008) Making sense of distributed leadership: Exploring the multiple usages of the concept in the field. *Educational Administration Quarterly* 44: 424–435.

*Mayrowetz D, Murphy J, Louis KS, et al. (2009) Conceptualizing distributed leadership as a school reform: Revisiting job redesign theory. In: Leithwood K, Mascall B and Strauss T (eds) *Distributed Leadership According to the Evidence*. New York: Routledge, pp.167–195.

*Murphy J, Mayrowetz D, Smylie M, et al. (2009) The role of the principal in fostering the development of distributed leadership. *School Leadership & Management* 29(2): 181–214.

*Oduro GKT (2004) Distributed leadership in schools. *Education Journal* 80: 23–25.

*Oswald M and Engelbrecht P (2013) Leadership in disadvantaged primary schools: Two narratives of contrasting schools. *Educational Management Administration & Leadership* 41(5): 620–639.

*Pedersen J, Yager S and Yager R (2012) Student leadership distribution: Effects of a student-led leadership program on school climate and community. *International Journal of Educational Leadership Preparation* 7(2): 1–9.

*Pyhältö K, Pietarinen J and Soini T (2012) Do comprehensive school teachers perceive themselves as active professional agents in school reforms? *Journal of Educational Change* 13: 95–116.
*Robinson VMJ (2008) Forging the links between distributed leadership and educational outcomes. *Journal of Educational Administration* 46(2): 241–256.
*Scribner SMP and Bradley-Levine J (2010) The meaning(s) of teacher leadership in an urban high school reform. *Educational Administration Quarterly* 46: 491–522.
*Scribner J, Sawyer R, Watson S, et al. (2007) Teacher teams and distributed leadership: A study of group discourse and collaboration. *Educational Administration Quarterly* 43(1): 67–100.
*Sentočnik S and Rupar B (2009) School leadership of the future: How the national education institute in Slovenia supported schools to develop distributed leadership practice. *European Education* 41(3): 7–22.
*Spillane J (2006) *Distributed Leadership*. San Francisco: Jossey-Bass
*Spillane J, Camburn EM and Pareja AS (2007) Taking a distributed perspective to the school principal's workday. *Leadership and Policy in Schools* 6(1): 103–125.
*Spillane J, Diamond J and Jita L (2003) Leading instruction: The distribution of leadership for instruction. *Journal of Curriculum Studies* 35(5): 533–543.
*Spillane J, Halverson R and Diamond J (2004) Towards a theory of leadership practice: A distributed perspective. *Journal of Curriculum Studies* 36: 3–34.
*Spillane J and Healey K (2010) Conceptualizing school leadership and management from a distributed perspective. *The Elementary School Journal* 11(2): 253–281.
*Storey A (2004) The problem of distributed leadership in schools. *School Leadership and Management* 24: 249–265.
*Timperley HS (2005) Distributed leadership: Developing theory from practice. *Journal of Curriculum Studies* 37(4): 395–420.
*Timperley HS (2009) Distributing leadership to improve outcomes for students. In: Leithwood K, Mascall B and Strauss T (eds) *Distributed Leadership According to the Evidence*. Abingdon: Routledge, pp.197–222.
*Wallace M (2002) Modelling distributed leadership and management effectiveness: Primary school senior management teams in England and Wales. *School Effectiveness and School Improvement* 13(2): 163–186.
*Watson ST and Scribner JP (2005, 10-13 November) Emergent reciprocal influence: Toward a framework for understanding the distribution of leadership within collaborative school activity. Nashville, TN: University council for educational administration annual convention.
*Watson ST and Scribner JP (2007) Beyond distributed leadership: Collaboration interaction and emergent reciprocal influence. *Journal of School Leadership* 17: 443–468.
*Williams CG (2011) Distributed leadership in South African schools: Possibilities and constraints. *South African Journal of Education* 31(2): 190–200.
*Woods PA (2004) Democratic leadership: Drawing distinctions with distributed leadership. *International Journal of Leadership in Education: Theory and Practice* 7(1): 3–26.
*Woods PA (2005) *Democratic Leadership in Education*. London: Sage.
Woods PA (2011) *Transforming Education Policy: Shaping a Democratic Future*. Bristol: Policy Press.
*Woods PA (2013) Drivers to holistic democracy: Signs and signals of emergent, democratic self-organising systems. In: Weber SM, Göhlich A, Schröer H, et al. (eds) *Organisation und Partizipation: Beiträge der Kommission Organisationspädagogik*. Berlin: Springer VS, pp.343–356.
*Woods PA, Bennett N, Harvey JA, et al. (2004) Variabilities and dualities in distributed leadership: Findings from a systematic literature review. *Educational Management Administration & Leadership* 32(4): 439–457.
*Woods PA and Woods GJ (2013) Deepening distributed leadership: A democratic perspective on power, purpose and the concept of the self. *Vodenje v vzgoji in izobraževanju (Leadership in Education)* 2: 17–40.

*Wright LL (2008) Merits and limitations of distributed leadership: Experiences and understandings of school principals. *Canadian Journal of Educational Administration and Policy* 69: 1–33.

Author biographies

Meng Tian is a doctoral student majoring in educational leadership at the University of Jyväskylä, Finland. She is Chinese by origin and has been studying in Finland for seven years. Her life experience has given her great opportunities to conduct comparative studies in the field of educational leadership. Meng Tian is a member of several international research networks. Particularly, she has been researching distributed leadership for more than a decade and has composed both of her Bachelor's and Master's theses on distributed leadership in Chinese schools. Her ongoing doctoral studies aim at expanding her research scope to comparing distributed leadership in Finnish and Chinese schools.

Mika Risku is the director of the Institute of Educational Leadership (IEL) at the University of Jyväskylä, Finland. Prior to working at the university he worked as a teacher and principal in secondary education. He is active in several national and international networks on educational leadership. He enjoys teaching and is glad to be able to participate as a teacher with IEL education programmes. As a researcher he conducts a national research programme in educational leadership for the Finnish Ministry of Education and Culture and is a member of several international research networks. His doctoral research on superintendency is a pioneering study on the topic in Finland. He is especially interested in examining education as a tool for social justice, in looking at leadership as a resource and pedagogical leadership.

Kaija Collin, PhD, Adjunct Professor, holds a post of University Researcher at the University of Jyväskylä, Department of Educational Sciences. Currently, her research interests are focused on workplace learning, professional identity and agency and inter-professional collaboration and work practices in various work environments.

II

SHANGHAI TEACHERS' PERCEPTIONS OF DISTRIBUTED LEADERSHIP

by

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Shanghai teachers' perceptions on distributed leadership: resource and agency

This paper investigates Shanghai teachers' perceptions on distributed leadership with the resource–agency duality model. An online survey collected data from 327 teachers in nine Shanghai public schools. The results show that distributed leadership is manifested in three forms of leadership structures. In addition, the higher the school member's position is in the hierarchy, the more resource he/she possesses and the more agency he/she exercises. Furthermore, nurturing distributed leadership requires the principal's support, colleagues' recognition and trust, sufficient time, purposefully designed tasks and career opportunities. However, offering extra pay or an official leadership title alone does not effectively engage Shanghai teachers in distributed leadership. Theoretically, this study empirically tested the resource–agency duality model of distributed leadership and proved it to be a useful theoretical framework. Practically, this study mapped the resource and agency distribution in the Shanghai school context and offered guidance to policy makers and school leaders who wish to promote distributed leadership to the teachers.

Keywords: distributed leadership; Shanghai public schools; leadership as resource; leadership as agency

Introduction

In the mid-1990s, scholars discovered that organisational success or failure depended more on the interactions among leaders, followers and situations than on the top–down direction from formal leaders (Bennett, Wise, Woods, & Harvey, 2003; Fullan, 1998; Harris, 2008; Spillane, Halverson, & Diamond, 2004). This finding challenged the traditional, heroic leadership theories that narrowly concentrated on formal leaders' traits and behaviours. Distributed leadership was born and soon spread all over the world. The cutting-edge research publications reveal that a wide range of countries, such as Belgium (Hulpia, Devos, Rosseel, & Vlerick, 2012), Canada (Melville, Jones, & Campbell, 2014), Finland (Jäppinen & Sarja, 2012), New Zealand (Timperley, 2009), the USA (Spillane et al., 2004) and the UK (Oduro, 2004), have adopted distributed leadership as a key strategy for school development in the twenty-first century.

Meanwhile in East Asia, several countries and economies such as Hong Kong, Japan, Shanghai, Singapore, South Korea, and Taiwan have continuously outperformed most western counterparts in the Programme for International Student Assessment (PISA) (OECD, 2007, 2010, 2013a). Particularly, being crowned the champion of PISA in 2009 and 2012, the Shanghai education system has aroused international interest. As earlier studies point out that school leadership exerts the second strongest impact on students' learning next to classroom teaching, investigating distributed leadership in Shanghai schools may reveal the leadership mechanism behind this high-performing system (Leithwood, Mascall, Strauss, Sacks, Memon, & Yashkina, 2007; Robinson, Lloyd, & Rowe, 2008; Timperley, 2009). Recently, the Chinese Ministry of Education (2014, 2015) has started to separate educational administration, provision, and evaluation. Chinese schools are expected to transform into more autonomous, power-decentralised, and

democratic organisations. Researching distributed leadership in Shanghai schools may also shed light on this national level reform.

Admittedly, Shanghai may not represent the immense diversity of China. As the commercial and financial centre of China, Shanghai provides richer educational resources to its local schools than many other regions. In 2013, the Chinese government invested 322 billion USD in education, first time reaching 4% of the national GDP (National Bureau of Statistics of China, 2014). By contrast, Shanghai municipality invested 12 billion USD in education which amounted for about 3.7% of the national education fund (Shanghai Municipal Education Commission, 2013). Getting more resources also means bearing more responsibilities. By 2012, Shanghai compulsory education level public schools have admitted over 538,000 migrant workers' children from all over China (Ming, 2014). School principals and teachers face the challenge of integrating students with diverse socio-economic backgrounds and academic levels into a learning community. Culturally, the concept of leadership in China is deeply rooted in the social ideology of Confucianism with patriarchy and hierarchy on the one side and social harmony on the other side (Shah, 2006; Tung, 2002). In the context of school leadership, research has found that interpersonal relationship often prevails over professional relationship in Chinese schools comparing to their counterparts in the USA (Jing, 2010).

Combing the above economic, social and cultural factors, Shanghai provides a valuable research context to explore distributed leadership. The present article comprises five sections. It starts with the theoretical framework of distributed leadership. The research questions and method are introduced in the second section. The analyses of the survey data are reported in the results section, which is followed by the discussion answering the two research questions. Lastly, the implications and limitations of the study are reflected on.

Theoretical framework

This study applies the distributed leadership resource–agency duality model as the theoretical framework. This model was proposed in Tian, Risku, and Collin's (2016) distributed leadership meta-analysis 2002–2013. In the meta-analysis, distributed leadership is defined and studied in terms of seeing leadership as a process that comprises both organisational and individual scopes; the former regards leadership as a resource and the latter as an agency. Both resource and agency are considered to emerge and to exist at all organisational levels (Tian, et al., 2016).

Compared to Spillane et al.'s (2004) model, which defines distributed leadership as the interactions among leaders, followers and situations, the resource–agency duality model also regards leadership as emerging from multiple sources. Additionally, the resource–agency duality model puts the reciprocal relationship between the organisation and individual at its core.

From the organisational scope, distributed leadership perceives actors, artefacts and networks that influence the school administrative and pedagogical work as the leadership resources. Thus, in addition to the formal school leaders, teachers, parents and students are also deemed providers of leadership. Similarly, artefacts, such as the curriculum, budget and test scores that guide, liberate or restrain school members' choices and behaviours, are considered leadership resources, too. Today, schools do not operate alone but continuously interact with external networks, such as educational authority and local community, for resources (Harris, 2009; Jäppinen & Sarja, 2012). Perceiving leadership as a resource dramatically expands the scope from individual leaders to a hybridity of

various interactions (Gronn, 2009). The present study intends to further map the levels of influence exerted by various leadership resources.

Under the resource–agency duality model, perceiving leadership as an agency is another side of the same coin. Notably, Tian et al.'s (2016) meta-analysis argues that compared to the resource dimension, the agency dimension is considerably understudied. Hall, Gunter, and Bragg (2013, p. 180) claim that distributed leadership is "limited to the accomplishment of instrumental tasks and targets set by government officials". Distributed leadership is at risk of being manipulated as the new managerialism if it only serves organisational purposes (Fitzgerald & Gunter, 2006; Johnson, 2004; Lumby, 2013).

From the individual scope, perceiving leadership as an agency refers to professionals as either individuals or communities making professional judgements and exerting influence on their work and professional identities (Eteläpelto, Vähäsantanen, Hökkä, & Paloniemi, 2013, p. 61). Embedding the agency dimension into distributed leadership can be traced back to Fullan (1998), who argues that educational reforms should shift from restructuring to re-culturing. In his description, re-culturing comprises reshaping relationships, redefining teaching and learning, and recombining professional expertise. Real change occurs only when people's agency is involved. A decade later, Mayrowetz (2008) further elaborates the connection between distributed leadership and human-capacity building. Simply put, by participating in the leadership process, people seem to have a better understanding of themselves and the tasks. Murphy, Smylie, Mayrowetz, and Louis (2009, p. 188) describe the collegial exchange and relational interactions as the "lifeblood of distributed leadership". When individual and organisational scopes match, a reciprocal relationship between agency and resource can be built. To elaborate this agency dimension, the present study also intends to identify the favourable conditions that engage teachers in distributed leadership.

Notably, the resource and agency dimensions are analytically separated, yet practically integrated. Harris (2012, p. 7) argues that distributed leadership "build[s] a high degree of reciprocal trust" between formal and informal leaders to negotiate resource distribution. Correspondingly, the availability of and access to the resources may create different leadership opportunities for school members to use their agency (Spillane et al., 2004).

Research questions and method

The present study aims at answering two research questions. *What are the manifestations of distributed leadership in Shanghai schools? What are the favourable conditions for promoting distributed leadership to Shanghai teachers?*

Instrument

From January to March 2014, an online survey called *Distributed Leadership in Finnish and Shanghai Schools (teacher questionnaire)* was conducted in nine Shanghai public schools. As part of a larger comparative study of distributed leadership in Finnish and Shanghai schools, this survey was first constructed in English and then translated into Finnish and Chinese for the respondents' convenience. The English—Chinese translation was conducted by the first author, who is a native Chinese speaker and an educational researcher.

Compared to the Finnish version, two modifications were made in the demographics part of the Shanghai survey. First, the *school levels* were specified according to the Chinese educational system: comprehensive school (Grades 1–9), lower secondary school (Grades 6–9) and upper secondary school (Grades 10–12). Second, two roles were added to the list of *current positions* – Communist Party secretary and homeroom teacher. The

Communist Party secretary supervises the school's compliance with the educational policies and integrates socialist values into school's moral education (Bush & Qiang, 2000, p. 63). The homeroom teacher is a subject teacher who has the closest contact with the students and assumes multiple roles, including "instructor, leader, counsellor, and sometimes surrogate parent" (Liu & Barnhart, 1999, p. 381). Both roles bear a strong Chinese characteristic and exist in almost all the public schools. As for other positions that were excluded from the *current positions* list, an open-ended text box was offered for the teachers to fill. Notably, the modifications were only made in Part I, the demographics. Part II, which examined distributed leadership, remained identical in both Finnish and Chinese versions. Part II comprised four sections. An overview of each section is presented as follows.

Leadership structures and power distance

Teachers were asked to first choose one or several metaphors to represent their school leadership structure and then to evaluate the power distance between the principal and the teachers. The four metaphors were constructed on the basis of two leadership features: the power source (one vs. multiple power centres) and the structure's stability (fixed vs. flexible). These two features created four distinct leadership structures: *pyramid* (a fixed, hierarchical structure with one power centre at the zenith), *fountain* (a fixed structure with multiple power centres at the bottom), *spider's web* (a flexible structure with one power centre at the core and multiple functional teams) and *organic community* (a flexible structure with multiple power centres focusing on tasks).

Earlier studies have proven the existence of these four leadership structures. Yan (1999, pp. 57–58) claims that the *pyramid* seems popular among small Chinese schools, while the *spider's web* appears more dominant among medium to large schools. The bottom-up *fountain* refers to school formal leaders adapting leadership practices to meet their teachers' initiatives (Woods, Bennett, Harvey, & Wise, 2004). The metaphor of the *organic community* can be compared to Spillane's (2006) distributed leadership model, which has been theorised and empirically tested in the USA since the mid-1990s (Spillane, Diamond, & Jita, 2003; Spillane, 2006; Spillane & Healey, 2010). Spillane (2006) claims that leadership practice determines the roles of leaders and followers, thus creating multiple power centres in a school. Teams may flexibly emerge, develop and dissolve throughout the work process like an organic system. Next, the teachers evaluated the power distance between them and the principal on a continuous scale from 0 (none) to 10 (very high). The scale was evenly divided into three categories for analysis: low (0–3.33), medium (3.34–6.67) and high (6.68–10) power distance.

Leadership as a resource

The second section mapped the resource distribution and teachers' preferences for resource redistribution. Altogether 17 leadership resources emerged from earlier distributed leadership studies were examined. Research confirms that the *school principal* plays a critical role in either nurturing or sabotaging teachers' leadership initiatives (Heller & Firestone, 1994; Leithwood et al., 2007; Murphy et al., 2009; Smylie, 1996). District-level *superintendents* often lead schools with their educational policies and goals (Hall et al., 2013). School *vice principals* and *mid-level team leaders* tend to play a pivotal role, connecting the principal and teachers (Scribner, Sawyer, Watson, & Myers, 2007). *Teachers*' participation in leadership work largely depends on the leadership opportunities provided by the school structure (Crow & Pounder, 2000; Frost & Durant, 2003; Lieberman & Miller, 1999; Spillane, 2006). Although very few studies have

examined *students*' or *parents*' roles in distributed leadership, Pedersen, Yager, and Yager's (2012) study confirms that involving students in the leadership process may positively enhance the school climate, culture and workforce preparation. Getting resources from *external stakeholders* like local community was proven to smoothed the student transition from lower to upper level of education (Jäppinen & Sarja, 2012).

In addition to these actors, a number of studies report that artefacts, such as *student test scores*, *curriculum*, *school culture*, *budget, timetable, information-sharing platform, school reputation, national educational laws* and *local educational policies*, also shape the school's daily operation (Hall et al., 2013; Melville et al., 2014; Murphy et al., 2009; Spillane, Camburn, & Pareja 2007; Spillane et al., 2004; Spillane, 2006). Teachers were first asked to measure the degrees of influence of the leadership resources, and then to express their preferences for increasing, decreasing or maintaining the influence of each resource.

Leadership as an agency

Earlier studies consider that agency is manifested in leadership through initiating ideas, transforming ideas into actions, questioning the status quo and interpreting other people's activities (Engeström, 2005; Lipponen & Kumpulainen, 2011; Rainio, 2008; Rajala, Hilpiö, Lipponen, & Kumpulainen, 2013; Virkkunen ,2006). The third section scrutinised the amount of agency wielded by principal, mid-level team leaders and teachers respectively in 10 concrete leadership processes extracted from several earlier studies: *setting school vision, making strategic plans, leading students' learning, developing school culture, leading teacher teams, managing administrative work, delegating tasks, evaluating school performance, networking with stakeholders* and *providing resources* (Alava, Halttunen, & Risku 2012; Hulpia et al., 2012; OECD, 2013b). Echoing the previous sections, this section explored the manifestations of distributed leadership from the agency dimension.

Motivators and demotivators

The last section surveyed the teachers' workload as well as the motivators and demotivators behind their participation in distributed leadership. According to Herzberg (1964), the presence of hygiene factors does not enhance motivation, but their absence causes dissatisfaction. These hygiene factors comprised *extra pay, official leadership title, financial resources, time* and *work environment.* In contrast, the satisfiers, including *recognition, trust, healthy culture* and *tasks matching expertise*, can boost intrinsic motivation. Moreover, *principal's support*, *colleagues' trust*, *career opportunities* and *participatory decision making* were identified as incentives for distributed leadership (Leithwood, 2006; Murphy et al., 2009; Smylie, Mayrowetz, Murphy, & Louis, 2007). Nonetheless, *overwhelming administrative tasks*, *distraction from teaching*, *mistrust, competition with colleagues* and *lack of principal's support* tend to discourage teachers from assuming leadership responsibilities (Hall et al., 2013; Harris, 2005; Hulpia et al., 2012; Murphy et al., 2009). Altogether, 12 motivators and 12 demotivators that emerged from Herzberg's two-factor theory (1964) and several earlier distributed leadership studies formed the variables of this section.

Reliability and validity

The whole survey data set was tested to find the non-random patterns of missingness in item values. The Little's (1988) test indicated that the missing data of the present study were completely, randomly distributed: $\chi 2$ (15694) = 15497.051, p = .867. The reliability test examined how consistent the survey produced the results. In the present study, the

Cronbach's alpha value in each section was above .90, suggesting a high internal consistency (Wells & Wollack 2003). The validity indicates how accurately the survey measures what it was supposed to measure. The face validity and the content validity of the present study were examined. First, applying the resource–agency duality model generated from the meta-analysis as the theoretical framework, all the survey variables were generated from earlier distributed leadership studies (e.g. Hulpia et al., 2012; Murphy et al., 2009; Spillane et al., 2004). This ensured that the measures were relevant to distributed leadership and reflected its different dimensions. Second, three distributed leadership researchers from Finland and England provided their expert judgement to assess the face validity of the survey content before its pre-test. Later, two school principals and five teachers from Shanghai were invited to pre-test the online questionnaire. The follow-up interviews with these seven Shanghai pre-testees showed that the content and translation of the survey fit well in the Shanghai school context.

Participants

Supported by the Shanghai Municipal Education Commission (SMEC), the school sampling applied the criterion of selecting medium-sized, medium-level performing schools from different districts of Shanghai. Altogether 20 schools were invited, out of which nine accepted the research request. These nine schools came from five outskirt districts and four central districts. Notably, during the sampling process one small-sized high-performing upper secondary school with altogether 13 teachers and 75 students was recommended by the SMEC officials for its distributed leadership practice. Thus, teachers from this school were invited to participate in the quantitative survey. However, due to its small size, this school only provided six respondents, which amounted for 1.8% of the whole survey population. The rest eight schools which contributed 321 respondents (98.2%) were medium-sized, medium-level performing schools. C omparing the demographics of these eight schools to the Shanghai 2013 educational statistics, their class sizes (about 40 students/class), the proportions of migrant students (about 50% in comprehensive and lower secondary schools) and students' academic performance represented the municipal average (Shanghai Municipal Development and Reform Commission, 2013).

Regarding the online survey implementation, each school assigned one teacher to assist the data collection. The survey web link and its Quick Response code were posted on the school websites and in the teacher's offices. Teachers used their work computers or mobile phones to answer the survey during the breaks.

Altogether, 327 Shanghai teachers participated in the survey, with a 68.3% response rate. Among them, 66.5% worked for four comprehensive schools (Grades 1–9), 12.3% for two lower secondary schools (Grades 6–9) and 21.5% for three upper secondary schools (Grades 10–12). The gender distribution was 23.7% males and 76.3% females. Regarding the current positions, the teachers were allowed to provide multiple answers. The largest population comprised subject teachers (85.0%, n = 278). Among all the subject teachers, 32.6% (n = 89) also assumed responsibilities as homeroom teachers. Approximately 9.0% (n = 25) of the teachers held seven mid-level team leaders' positions: head teacher of the grade (n = 5), chairperson of the teachers' union (n = 2), director of student affairs (n = 3), director of academic affairs (n = 4), director of general service (n = 3), subject leaders (n = 5) and Young Pioneer leaders (n = 3). Only 0.2% (n = 7) of the respondents were school top-level leaders, including four vice principals and three Communist Party secretaries. Those top-level leaders who declined the research request explained that school principals, vice principals and Communist Party secretaries were

full-time administrators and thus did not belong to the teacher category. The survey data were processed by using IBM SPSS Statistics 22.

Results

Leadership structure and power distance

This section examined the popularity of the four leadership structures and their relations to the power distance between the principal and the teachers. According to 94.2% (n = 308) of the teachers who chose only one metaphor to describe their school structures, the most popular structures were the *pyramid* (40.5% of the 308 teachers) and the *spider's web* (37.5%). Both signified one strong power centre at the zenith of the hierarchy or at the hub of the network. In contrast, Spillane's distributed leadership model, the *organic community,* was identified by 20.4% of the teachers. The bottom-up *fountain* (1.6%), where power resided in the hands of teachers, was the least common type in the teachers' view.

Altogether, 81.2% of the teachers depicted a medium or high power distance in their respective schools. The Pearson chi-square test of independence examined the correlations between leadership structure and power distance (Table 1).

<Insert Table 1 here>

The independence test results revealed that leadership structure and power distance had statistically significant associations: $\chi 2$ (6) = 40.804, p < .001. Particularly, this dependence was caused by the *pyramid* and *organic community* structures. At α = .05 level, the teachers who linked the *pyramid* with a *low power distance* and those who associated the *organic community* with a *high power distance* were significantly under-represented. By contrast, the teachers who considered the *pyramid* as having a *high power distance* and those who connected the *organic community* with a *low* or *medium power distance* were considerably over-represented. In conclusion, the most popular *pyramid* was associated with a *high power distance*. The *organic community* was linked with a *low* or *medium power distance*. The teachers who chose the *fountain* and the *spider's web* did not seem to correlate them with any specific range of the power distance.

The rest 5.8% (n = 19) of the teachers considered their schools as having several leadership structures. The most common combination they identified comprised both the *pyramid* and the *spider's web* (47.4% of 19 teachers), followed by the *spider's web* and *organic community* combination (21.1%). Both combinations were selected by all the comprehensive and lower secondary school teachers. However, the five upper secondary school teachers held various opinions; two selected a mixture of all four metaphors, another two chose none, and the fifth picked the *pyramid* and *fountain* combination. Concerning the relations between leadership structure and power distance, when the combinations included the *organic community*, the teachers tended to choose a *low power distance*, too. However, if the combinations even partly involved the *pyramid*, the power distance appeared to be *medium* or *high*. These results corroborated the majority's observations.

Leadership as a resource

On a five-point Likert scale (1 = none, 2= little, 3= some, 4= a lot, 5 = decisive), the second section first measured the influence of the 17 leadership resources. Cronbach's reliability test showed an excellent internal consistency among these 17 items: α = .91, p < .001 (George & Mallery, 2003). The calculation of the most frequently appearing value

in the dataset (i.e. mode) showed that all the 17 resources exerted at least some influence (mode ≥ 3) on school leadership work. The influence of *principals* and *superintendents* were unsurprisingly decisive (mode = 5). Following the school hierarchy, *vice principals* and *mid-level team leaders* were perceived as the second most influential actors (mode = 4). Likewise, artefacts including *school reputation, student test scores, national-level educational laws* and *local-level educational policies* also exerted a lot of influence (mode = 4). To some extent (mode = 3), *teachers, students, parents*, *external stakeholders* and *school board*, along with the artefacts including *budget, curriculum, school culture* and *information-sharing platform,* affected the school day-to-day work, but their influence did not seem to be that vital.

The second part of this section asked the teachers whether the influence of each resource should increase (increase to some extent = +1, increase a lot = +2), remain the same (0) or decrease (decrease to some extent = -1, decrease a lot = -2). In general, teachers felt dissatisfied with the current situation and called for changes. Their strongest preference was to increase *teachers*' influence (57.2% of the teachers); followed by a desire to let the *school budget* (47.1%), *school culture* (46.2%) and *school reputation* (44.7%) play stronger roles. *Student test scores* constituted the first and foremost (38.1%) factor whose influence the teachers wanted to decrease. Similarly, almost one-third of the teachers wanted to weaken the impacts of *superintendents* (34.4%) and *principals* (34.2%). Spearman's correlation test results further confirmed the associations among the teachers' preferences. The more the teachers wanted to increase their impact on school leadership work, the less they wanted the *student test scores* (ρ = - 0.11, $p < .001$), *superintendents* (ρ = -0.19, $p < .001$) and *principals* (ρ = - 0.20, $p < .001$) to influence.

Leadership as an agency

On a four-point Likert scale (1 = none, 2 = very little, 3 = some, 4 = a lot), the teachers evaluated the amount of agency exercised by principals, mid-level team leaders and teachers in 10 leadership processes. Cronbach's reliability tests proved that the subscales had good internal consistencies: principals' agency (α = .91), mid-level team leaders' agency (α = .95) and teachers' agency (α = .93) (George & Mallery, 2003). The nonparametric Friedman's test was used to detect the discrepancies and to rank the values of each dataset. The results disclosed that at α = .05 level, there was a significant difference in the agency of principals, mid-level team leaders and teachers. Table 2 presents the mean ranks of Friedman's test and the accumulated valid percent of point 3 and 4.

<Insert Table 2 here>

At the between-groups level, formal school leaders, including principals and mid-level team leaders, seemed more agentic than teachers in most of the leadership processes except for *leading students' learning*. The general tendency appeared to match the school hierarchy. The higher position one held, the more agency one exercised.

At the within-group level, according to the accumulated valid percent, the teachers reported that the principals' agency was strongly presented in *delegating tasks*, *managing administrative work* and *evaluating school performance*. The mid-level team leaders' agency was mostly observed in *delegating tasks, managing administrative work* and *leading teacher teams*. The teachers' agency was most visible in *leading students' learning* and *developing school culture* but weakly presented in other leadership processes.

Motivators and demotivators

The last section evaluated teachers' workload and the effectiveness of 12 motivators and 12 demotivators behind their participation in distributed leadership on a five-point Likert scale (1 = not at all, 2 = very little, 3 = some degree, 4 = quite a bit, 5 = a great deal). The reliability tests showed that Cronbach's alpha was .93 for the 12 motivators and .95 for the 12 demotivators, both suggesting an excellent internal consistency (George & Mallery, 2003).

Being asked to assess their workload, 53.9% (n = 151) of the teachers reported their workload as *too heavy*, 45% (n = 126) managed it *just fine*, and less than 1% (n = 3) claimed that it was *too light*. The latter two groups were combined into teachers with a manageable workload group to be compared with the overloaded teachers group. It was hypothesised that the overloaded teachers were motivated and demotivated by different factors compared to the ones who reported a manageable workload. Table 3 shows the chi-square test results and the accumulated valid percent of points 3 to 5 for each motivator.

<Insert Table 3 here>

The chi-square test results rejected the hypothesis. At the between-group level, the overloaded teachers and the ones with a manageable workload held very similar opinions on the most effective motivators. At the within-group level, both groups identified the same top six motivators although the rankings differed slightly. Participating in distributed leadership was strongly driven by *career opportunities*. The motivators related to other members' agency, including *principal's support, colleagues' recognition* and *trust* were ranked high by both groups. Likewise, if the teachers found that the *tasks matched their expertise*, they were more willing to assume extra responsibilities. Having *enough time* appeared vital, too. Interestingly, compared to the remaining 10 factors, considerably fewer teachers in both groups were motivated by *extra pay* or *official leadership title*.

A similar analysis was carried out for the 12 demotivators. Table 4 presents the chi-square results and the accumulated valid percent of points 3 to 5.

< Insert Table 4 here >

Resembling the motivators, there was almost no difference concerning the effectiveness of demotivators for both teacher groups. The only statistically significant between-group discrepancy was *no extra pay*: $\chi 2$ (5) = 11.96, p = .04. The result suggested that if the teachers were asked to lead with *no extra pay*, the overloaded ones felt slightly more discouraged than those with a manageable workload. Another highly interesting observation was that both within-group rankings showed *no extra pay* and *no official leadership title* as among the least effective demotivators, suggesting that the absence of the other 10 factors was considered more discouraging than the lack of money and leadership title.

The *absence of the principal's support* was the strongest demotivator for both groups. Similarly, the teachers tended to withdraw from distributed leadership if they faced *no career opportunities, insufficient financial resources* and *distraction from teaching*. Among the top six demotivators, the overloaded teachers also highlighted *no decision-making autonomy* and *excessive administrative work* to be discouraging. For the teachers

with a manageable workload, the third and fourth strongest demotivators were *mistrust from others* and *task mismatching expertise*, respectively.

Discussion

Through the lens of the resource–agency duality model, this study answered the two research questions: What are the manifestations of distributed leadership in Shanghai schools? What are the favourable conditions to promote distributed leadership to Shanghai teachers? In contrast to Kennedy and Lee's (2008, p. 138) conclusion that "transformational and distributive leadership models were problematic" in Asian schools with a high power distance, the present study discovered that distributed leadership was most frequently manifested in the top–down *pyramid* structure with a *high power distance*. The results revealed that the higher position one had in the hierarchy, the more resources one possessed and the more agency one practised. This conclusion echoes Walker's (2002, p. 214) observation that "the values of harmony and hierarchy in Chinese societies relate to the maintenance of relationships and power structures".

The second most popular distributed leadership manifestation was the *spider's web* structure. Although the chi-square test failed to prove its correlation with a specific range of power distance, this structure shared one common feature with the *pyramid,* involving the central role of the school principal. This conclusion was repeatedly confirmed in other sections of the survey. From the resource perspective, the teachers ranked their principals as the most influential persons with a decisive impact on school leadership work. From the agency perspective, although the principals did not directly lead students' learning process, their agency was significantly stronger than that of the team leaders and the teachers in the other nine leadership processes. More importantly, the teachers felt greatly motivated to participate in distributed leadership if they received the principal's support, while its absence might considerably discourage teachers from assuming extra responsibilities. Hence, in line with several relevant studies conducted in the western context, the present study confirmed the school principal's essential role in enacting distributed leadership also in Shanghai schools (e.g. Heller & Firestone, 1994; Hulpia et al., 2012; Leithwood et al., 2007; Murphy, 2006; Murphy et al., 2009; Smylie, 1996; Spillane et al., 2007).

Altogether, nearly 80% of the teachers identified the *pyramid* and *spider's web* as the two dominant manifestations of distributed leadership. In contrast, less than 2% observed the bottom–up *fountain* in their schools. This result implied the grass-root teachers' weak impact on their superiors. The teachers' desires to adjust the resource distribution appeared consistent with this observation. Teachers wished to see more leadership come from teachers, students and parents while less control from student test scores.

One-fifth of the teachers detected the *organic community* structure, which is commonly seen as the flexible, emergent and practice-centred distributed leadership model. Its existence may be explained by the system-level power decentralisation reform in China since the mid-1990s. According to Yang and Hu (2008), the vertical line of administration began to diminish while the teaching-related units started to expand. This may have transformed the leadership structures in some Shanghai schools. During the past two decades, school-based curriculum development and individualised teaching have become two popular tasks that invite agency and resources from teachers, students, parents and other stakeholders (Li, 2008; Meng & Tian, 2007; Zhuang, 2003). Thus, the *organic community* is not a completely western influence on China; it also matches the agenda of contemporary Chinese educational reforms, too. Law (2012, p. 273) describes this phenomenon as Chinese school leaders creatively embedding both Chinese and

Anglo-American leadership values in the school structure where power centralisation and decentralisation co-exist.

A Bangladesh distributed leadership case study discovered that compared to formal leaders, teachers wielded more influence on instructional practices and school curricular work (Mullick, Sharma, & Deppeler, 2013). Although a similar conclusion was drawn in the present study regarding Shanghai teachers' strong agency in leading students' learning, their weak agency presented in other school leadership processes should not be overlooked. Murphy et al.'s (2009, p. 188) empirical study alerts us that structural change by itself is insufficient to bring positive outcomes. Making distributed leadership an authentic and sustainable approach, enabling teachers' agency is indispensable.

Regarding motivators and demotivators, it is noteworthy that the most effective motivators did not seem to increase the financial burden or add extra layers to the school hierarchy. Instead, engaging teachers in distributed leadership seemed to require strong agency from both principal and colleagues in the forms of showing support, recognition, and trust. From the agency aspect, the leadership opportunities provided by superiors and colleagues heavily determine individuals' propositions and actions (see also Caldwell, 2007; Ci, 2011). From the resource aspect, offering career opportunities, time and purposefully designed tasks appeared vital, too. Hulpia et al. (2012, p. 1770) discovered teachers' organisational commitment positively correlated with the quality support from the leadership team, but associated only to a lesser extent with participative school decision making. Likewise, the present study found offering *decision-making autonomy* less effective than creating a supportive and trusting work environment. Another key motivator indicated that Shanghai teachers would assume leadership only if the tasks matched their expertise. It can be interpreted that distributed leadership does not simply equate to sharing the workload with as many people as possible. It requires a purposeful design.

The survey results concerning the demotivators shed light on how to avoid impairing distributed leadership. *Lacks of principal's support and career opportunities were* listed among the top. Once again, agency and resource works hand in hand. Although Herzberg (1964) categorises salary and status as hygiene factors, the present study found that *no extra pay* and *no official leadership title* might demotivate teachers to some extent, but their impact was less fatal than that of the other factors. From the resource aspect, *insufficient financial resources* and *distraction from teaching* were ranked high, implying that enacting distributed leadership should avoid burdening teachers with miscellaneous errands that conflicted with their teaching. Though Shanghai teachers seemed less concerned about no extra pay to individuals, they required sufficient financial resources to support the work enactment.

Implication and limitations

This paper assessed Shanghai teachers' perceptions on distributed leadership under the resource–agency duality model. Several noteworthy implications need to be highlighted. Theoretically, the empirical data further confirmed the significance of agency as an inseparable part of distributed leadership model. Emphasising agency from superiors and colleagues seemed to be more effective than merely providing organisational resources such as financial incentives or positional power.

Practically, this study may serve as a base for the ongoing educational reform which aims at streamlining the educational administration and delegating more power to local schools in China. The reform initiatives include replacing excessive top–down inspections and test score-based evaluations with multi-faceted professional evaluation

and empowering schools to lead pedagogy, personnel, finance, educational research, and international collaboration more independently (Chinese Ministry of Education, 2014, 2015). Under the principal accountability system, Chinese teachers, students and parents are expected to play a stronger role in promoting school democracy (Chinese Ministry of Education, 2015). Taken together, these initiatives appear to match the key results of the present study. Practical suggestions were provided to both policy makers and school practitioners who intend to motivate Shanghai teachers to participate in distributed leadership.

Finally, a few limitations of this study need to be addressed. First, since the study only investigated teachers from nine Shanghai schools, it might pose the risk of generalising the results to the entire Shanghai municipality or the other regions of China. Second, as part of a larger comparative study, the study mainly conducted a descriptive analysis of quantitative data and did not examine the internal causal relations among the different factors. This limitation calls for further qualitative studies to explore the complexity of distributed leadership in the Chinese context.

References

Alava, J., Halttunen, L. & Risku, M. (2012). *Changing School Management: Status Review.* Helsinki: Finnish National Board of Education.

Bennett, N., Wise, C., Woods, P. A., & Harvey, J. A. (2003). *Distributed Leadership: A Review of Literature*. Nottingham: National College of School Leadership.

Bush, T. & Qiang, H.Y. (2000). Leadership and culture in Chinese education. *Asia Pacific Journal of Education,* 20(2), 58–67.

Caldwell, R. (2007). Agency and change: re-evaluating Foucault's legacy. *Organization,* 14(6), 769–791.

Chinese Ministry of Education. (2014). *教育部2014年工作要点 [The Key Tasks for the Ministry of Education in 2014].* Retrieved on June 4th 2015 from http://www.moe.gov.cn/publicfiles/business/htmlfiles/moe/moe_164/201401/163169.html

Chinese Ministry of Education. (2015). ***教育部关于深入推进教育管办评分离促进政府职能转变的若干意见*** *[Opinions on Separating the Educational Administration, Operation and Evaluation and Transforming Government Functions].* Retrieved on June 9th 2015 from http://www.gov.cn/xinwen/2015-05/08/content_2859141.htm

Ci, J. (2011). Evaluating agency: a fundamental question for social and political philosophy. *Metaphilosophy,* 42(3), 261–281.

Crow, G. M., & Pounder, D. G. (2000). Interdisciplinary teacher teams: context, design, and process. *Educational Administration Quarterly,* 36(2), 216–254.

Engeström, Y. (2005). *Development, Movement and Agency: Breaking Away into Mycorrhizae Activities.* Paper presented at the International Symposium Artefacts and Collectives: Situated Action and Activity Theory, Lyon, July 4–6.

Eteläpelto, A., Vähäsantanen, K., Hökkä, P., & Paloniemi, S. (2013). What is agency? conceptualizing professional agency at work. *Educational Research Review,* 10, 45–65.

Fitzgerald, T. & Gunter, H. (2006). Teacher leadership? A new form of managerialism. *New Zealand Journal of Educational Leadership,* 21(2), 44–57.

Frost, D. & Durrant, J. (2003). *Teacher-led Development Work: Guidance and Support.* London: David Fulton.

Fullan, M. (1998). Leadership for the 21st century. *Educational Leadership,* 55(7), 6–10.

George, D. & Mallery, P. (2003). *SPSS for Windows Step by Step: A Simple Guide and Reference. 11.0 update (4th ed).* Boston: Allyn & Bacon.

Gronn, P. (2009). Hybrid leadership. In K. Leithwood, B. Mascall, & T. Strauss (Eds.), *Distributed Leadership According to the Evidence* (pp. 17–40). Abingdon: Routledge.

Hall, D., Gunter, H., & Bragg, J. (2013). Leadership, new public management and the re-modelling and regulation of teacher identities. *International Journal of Leadership in Education,* 16(2), 173–190.

Harris, A. (2005). Leading or misleading? Distributed leadership and school improvement. *Journal of Curriculum Studies,* 37, 255–265.

Harris, A. (2008). Distributed leadership: according to the evidence. *Journal of Educational Administration,* 46(2), 172–188.

Harris, A. (2009). Distributed leadership and knowledge creation. In K. Leithwood, B. Mascall, & T. Strauss (Eds.), *Distributed Leadership According to the Evidence* (pp. 253–266). Abingdon: Routledge.

Harris, A. (2012). Distributed leadership: implications for the role of the principal. *Journal of Management Development,* 31(1), 7–17.

Heller, M. F. & Firestone, W. A. (1994). *Heroes, Teams, and Teachers: A Study of Leadership for Change.* ERIC Document Reproduction Service No. ED371445.
Herzberg, F. (1964). The motivation-hygiene concept and problems of manpower. *Personnel Administrator,* 27, 3–7.
Hulpia, H., Devos, G., Rosseel, Y., & Vlerick, P. (2012). Dimensions of distributed leadership and the impact on teachers' organizational commitment: a study in secondary education. *Journal of Applied Social Psychology,* 42(7), 1745–1784.
Jäppinen, A-K. & Sarja, A. (2012). Distributed pedagogical leadership and generative dialogue in educational nodes. *Management in Education,* 26(2), 64–72.
Jing, W. L. (2010). *School Leadership in Two Countries: Shared Leadership in American and Chinese High Schools* (doctoral disseration). Arizona State University, Glendale.
Johnson, B. (2004). Local school micropolitical agency: an antidote to new managerialism. *School Leadership & Management,* 24, 267–286.
Kennedy, K. J. & Lee, J. K-C. (2008). *The Changing Role of Schools in Asian Societies: Schools for the Knowledge Society.* New York: Routledge.
Law, W. W. (2012). Educational leadership and culture in China: dichotomies between Chinese and Anglo-American leadership traditions? *International Journal of Educational Development,* 32(2), 273–282.
Leithwood, K. (2006). *Teacher Working Conditions that Matter: Evidence for Change.* Toronto: Elementary Teachers' Federation of Ontario.
Leithwood, K., Mascall, B., Strauss, T., Sacks, R., Memon, N., & Yashkina, A. (2007). Distributing leadership to make schools smarter: taking the ego out of the system. *Leadership and Policy in Schools,* 6(1), 37–67.
Li, J. X. (2008). 教师发展与学校组织变革创新[Teacher Development, School Organisational Change and Innovation]. *教育研究 [Educational Research],* 3, 79–83.
Lieberman, A. & Miller, L. (1999). *Teachers – Transforming their World and their Work.* New York: Teachers College Press.
Lipponen, L. & Kumpulainen, K. (2011). Acting as accountable authors: creating interactional spaces for agency work in teacher education. *Teaching and Teacher Education,* 27(5), 812–819.
Little, R. J. A. (1988). A test of missing completely at random for multivariate data with missing values. *Journal of the American Statistical Association,* 83, 1198–1202.
Liu, J. Q. & Barnhart, R. (1999). Homeroom teacher and homeroom class: the key to classroom management in china's schools. *The Educational Forum,* 63(4), 380–384.
Lumby, J. (2013). Distributed leadership: the uses and abuses of power. *Educational Management Administration & Leadership,* 41(5), 581–597.
Mayrowetz, D. (2008). Making sense of distributed leadership: exploring the multiple usages of the concept in the field. *Educational Administration Quarterly,* 44 (3), 424–435.
Melville, W., Jones, D., & Campbell, T. (2014). Distributed leadership with the aim of 'reculturing': a departmental case study. *School Leadership & Management,* 34(3), 237–254.
Meng, F. H. & Tian, H. Z. (2007). 走向合作:现代学校组织的发展趋势 [Towards collaboration: the trend of development of contemporary school organisations]. *教育研究 [Educational Research],* 12, 55–59.
Ming, H. H. (2014). *The Education of Migrant Children and China's Future: The Urban Left Behind.* Abingdon: Routledge.

Mullick, J., Sharma, U., & Deppeler, J. (2013). School teachers' perception about distributed leadership practices for inclusive education in primary schools in Bangladesh. *School Leadership & Management,* 33(2), 151–168.

Murphy, J. (2006). *Connecting Teaching Leadership and School Improvement.* Thousand Oaks, CA: Corwin Press.

Murphy, J., Smylie, M., Mayrowetz, D., & Louis, K. S. (2009). The role of the principal in fostering the development of distributed leadership. *School Leadership & Management,* 29(2), 181–214.

National Bureau of Statistics of China. (2014). *China Statistical Yearbook 2014: Basic Statistics of Educational Funds.* Retrieved on June 4th 2015 from http://www.stats.gov.cn/tjsj/ndsj/2014/indexeh.htm

Oduro, G. K. T. (2004). Distributed leadership in schools. *Education Journal,* 80, 23–25.

OECD. (2007). *PISA 2006. Science Competencies for Tomorrow's World. Vol. 1.* Paris: OECD.

OECD. (2010). *PISA 2009 Results: What Students Know and Can Do. Student Performance in Reading, Mathematics and Science. Vol. I.* Paris: OECD.

OECD. (2013a). *PISA 2012 Results: What Students Know and Can Do (Volume I). Student Performance in Mathematics, Reading and Science.* Paris: OECD.

OECD. (2013b). *PISA 2012 Results: What Makes Schools Successful? Resources, Policies and Practices (Volume IV).* Paris: OECD.

Pedersen, J., Yager, S., & Yager, R. (2012). Student leadership distribution: effects of a student-led leadership program on school climate and community. *International Journal of Educational Leadership Preparation,* 7(2), 1–9.

Rainio, A. P. (2008). From resistance to involvement: examining agency and control in a playworld activity. *Mind, Culture and Activity,* 15(2), 115–140.

Rajala, A., Hilpiö, J., Lipponen, L., & Kumpulainen, K. (2013). Expanding the chronotopes of schooling for promotion for students' agency. In O. Erstad & J. Sefton-Green (Eds.), *Identity, Community and Learning Lives in the Digital Age* (pp. 107–125). Cambridge: Cambridge University Press.

Robinson, V. M. J., Lloyd, C. A., & Rowe, K. J. (2008). The impact of leadership on school outcomes: An analysis of the differential effects of leadership types. *Educational Administration Quarterly,* 44(5), 635-674.

Scribner, J., Sawyer, R., Watson. S., & Myers, V. L. (2007). Teacher teams and distributed leadership: a study of group discourse and collaboration. *Educational Administration Quarterly,* 43(1), 67–100.

Shah, S. (2006). Educational leadership: an Islamic perspective. *British Educational Research Journal,* 32(3), 363–385.

Shanghai Municipal Development and Reform Commission. (2013). *2013年上海市国民经济和社会发展报告 [Report on National Economic and Social Development of Shanghai for 2013].* Shanghai: Shanghai Academy of Social Sciences Publishing House.

Shanghai Municipal Education Commission. (2013). *2013年全市财政教育投入预计达749.5亿[2013 Shanghai Municipality Education Investment Expected to Reach 75 Billion Yuan].* Retrieved on June 4th 2015 from http://www.shmec.gov.cn/html/article/201312/70492.php

Smylie, M. A. (1996). Research on teacher leadership: assessing the state of the art. In B. J. Biddle, T. L. Good, & I. F. Goodson (Eds.), *International Handbook of Teachers and Teaching* (pp. 521–592). Dordrecht, Boston: Kluwer Academic.

Smylie, M. A., Mayrowetz, D., Murphy, J., & Louis, K. S. (2007). Trust and the development of distributed leadership. *Journal of School Leadership,* 17(2), 469–503.

Spillane, J. P. (2006). *Distributed Leadership.* San Francisco: Wiley.

Spillane, J. P., Camburn, E. M., & Pareja, A. S. (2007). Taking a distributed perspective to the school principal's work day. *Leadership and Policy in Schools,* 6(1), 103–125.

Spillane, J. P., Diamond, J. B., & Jita, L. (2003). Leading instruction: the distribution of leadership for instruction. *Journal of Curriculum Studies,* 35(5), 533–543.

Spillane, J. P., Halverson, R., & Diamond, J. B. (2004). Towards a theory of leadership practice: a distributed perspective. *Journal of Curriculum Studies,* 36(1), 3–34.

Spillane, J. P. & Healey, K. (2010). Conceptualizing school leadership and management from a distributed perspective. *The Elementary School Journal,* 11(2), 253–281.

Tian, M., Risku, M., & Collin, K. (2016). A meta-analysis of distributed leadership from 2002 to 2013: theory development, empirical evidence and future research focus. *Educational Management Administration & Leadership*, 44(1), 146—164.

Timperley, H. S. (2009). Distributing leadership to improve outcomes for students. In K. Leithwood, B. Mascall, & T. Strauss (Eds.), *Distributed Leadership According to the Evidence* (pp. 197–222). Abingdon: Routledge.

Tung, R. L. (2002). Managing in Asia: cross-cultural dimensions. In M. Warner & P. Joynt (Eds.), *Managing Across Cultures: Issues and Perspectives* (pp. 137–142). London, England: Thomson Learning.

Virkkunen, J. (2006). Dilemmas in building shared transformative agency. *Activités,* 3, 19–42.

Walker, A. (2002). Hong Kong principals' dilemmas." In A. Walker & C. Dimmock (Eds.), *School Leadership and Administration: The Cultural Context* (pp. 205–222). New York: Routledge.

Woods, P. A., Bennett, N., Harvey, J. A., & Wise, C. (2004). Variabilities and dualities in distributed leadership: findings from a systematic literature review. *Educational Management Administration & Leadership,* 32(4), 439–457.

Wells, C. S. & Wollack, J. A. (2003). *An Instructor's Guide to Understanding Test Reliability. Testing & Evaluation Services.* University of Wisconsin. November 2003. Retrieved on June 8th 2015 from http://testing.wisc.edu/Reliability.pdf

Yan, D. M. (1999). *现代学校管理学 [Contemporary School Management].* Beijing: People's Education Press.

Yang, Y. X. & Hu, X. H. (2008). 论学校组织结构的重构 [Restructuring school organisational structures]. *教育发展研究 [Educational Development and Research],* 20, 53–56.

Tables

Table 1. Power distance and leadership structure, chi-square test.

			Leadership Structure			
			Pyramid	Fountain	Spider's web	Organic community
Power distance	Low	Count	8	1	24	21
		Expected count	21.8	0.9	20.3	11.0
		Standard residual	-3.0	0.1	0.8	3.0
	Medium	Count	39	1	32	30
		Expected count	41.3	1.7	38.3	20.8
		Standard residual	-.4	-0.5	-1.0	2.0
	High	Count	76	3	58	11
		Expected count	59.9	2.4	55.5	30.2
		Standard residual	2.1	0.4	0.3	-3.5

Table 2. Mean ranks of agency.

Leadership processes	Principals		Mid-level team leaders		Teachers	
	Mean ranks	% (some–a lot)	Mean ranks	% (some–a lot)	Mean ranks	% (some–a lot)
Setting school vision $\chi 2$ (2) = 311.18 $p < .001$, $n = 307$	2.60	94.2	1.98	83.6	1.42	53.8
Making strategic plans $\chi 2$ (2) = 255.58 $p < .001$, $n = 303$	2.52	93.5	2.02	86.3	1.45	57.5
Leading students' learning $\chi 2$ (2) = 17.02 $p < .001$, $n = 307$	1.90	76.6	1.96	86.4	2.14	86.8
Developing school culture $\chi 2$ (2) = 155.24 $p < .001$, $n = 303$	2.41	92.8	1.94	87.1	1.65	72.8
Leading teacher teams $\chi 2$ (2) = 250.02 $p < .001$, $n = 304$	2.44	92.4	2.11	88.7	1.45	53.9
Managing administrative work $\chi 2$ (2) = 343.45 $p < .001$, $n = 301$	2.58	97.6	2.10	89.3	1.33	42.2
Delegating tasks $\chi 2$ (2) = 341.33 $p < .001$, $n = 306$	2.56	98.0	2.12	91.1	1.33	41.6
Evaluating school performance $\chi 2$ (2) = 311.18 $p < .001$, $n = 307$	2.47	94.5	2.04	88.0	1.48	54.8
Networking with stakeholders $\chi 2$ (2) = 194.25 $p < .001$, $n = 303$	2.42	86.3	2.06	77.6	1.52	45.2
Providing resources $\chi 2$ (2) = 157.883 $p < .001$, $n = 295$	2.41	88.7	1.99	77.9	1.60	59.0

Table 3. Workload and 12 motivators.

12 Motivators	Overloaded teachers (n = 151) Rank	% (some degree–a great deal)	Teachers with a manageable workload (n = 129) Rank	% (some degree–a great deal)	Chi-square test
Career opportunities	1	91.8	3	92.9	$\chi2$ (5) = 3.37, p = .64
Enough time	2	89.6	2	93.7	$\chi2$ (5) = 9.70, p = .08
Trust from others	2	89.6	3	92.9	$\chi2$ (5) = 6.62, p = .25
Task matches expertise	4	88.3	6	92.0	$\chi2$ (5) = 8.03, p = .16
Principal's support	5	87.1	1	94.4	$\chi2$ (5) = 6.31, p = .28
Colleagues' recognition	6	87.0	5	92.1	$\chi2$ (5) = 4.09, p = .54
Enough financial resources	7	86.3	8	89.7	$\chi2$ (5) = 4.87, p = .43
Risk-bearing environment	8	84.1	9	89.6	$\chi2$ (5) = 3.85, p = .57
Democratic culture	9	83.4	6	92.0	$\chi2$ (5) = 6.78, p = .24
Decision-making power	10	77.2	10	85.0	$\chi2$ (5) = 5.63, p = .34
Extra pay	11	59.3	12	57.4	$\chi2$ (5) = 2.48, p = .78
Official leadership title	12	51.7	11	62.2	$\chi2$ (5) = 11.07, p = .05

Table 4. Workload and 12 demotivators.

12 Demotivators	Overloaded teachers (n = 151) Rank	% (some degree–a great deal)	Teachers with a manageable workload (n = 129) Rank	% (some degree–a great deal)	Chi-square test
No principal support	1	84.5	1	80.0	$\chi2$ (5) = 5.64, p = .34
No career opportunities	2	80.9	2	78.3	$\chi2$ (5) = 3.51, p = .62
Insufficient financial resources	3	76.6	5	74.8	$\chi2$ (5) = 2.73, p = .74
Distraction from teaching	3	76.6	6	74.5	$\chi2$ (5) = 4.24, p = .52
No decision-making autonomy	5	76.0	10	58.7	$\chi2$ (5) = 9.09, p = .11
Excessive administrative work	6	74.0	8	68.8	$\chi2$ (5) = 7.06, p = .22
Mistrust from others	7	73.1	3	77.6	$\chi2$ (5)= 6.69, p = .25
Task mismatching expertise	8	70.6	4	76.1	$\chi2$ (5) = 8.89, p = .11
No extra pay*	9	69.3	11	52.7	$\chi2$ (5) = 11.96, p = .04
Punishment for failure	10	62.3	7	69.8	$\chi2$ (5) = 4.91, p = .43
Competition with colleagues	11	60.4	9	62.9	$\chi2$ (5) = 2.71, p = .74
No official leadership title	12	55.1	12	52.0	$\chi2$ (5) = 8.90, p = .11

*p < .05 indicates a between-group difference

III

FINNISH TEACHERS' PERCEPTIONS OF DISTRIBUTED LEADERSHIP

by

Meng Tian 2015

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Finnish teachers' perceptions on distributed leadership: resource and agency

Abstract

Applying the resource–agency duality model, this paper examines Finnish teachers' perceptions on distributed leadership. A total of 203 comprehensive and secondary school teachers responded to an online survey that investigated the following aspects within the Finnish school context: leadership structures and power distance, leadership as a resource, leadership as an agency, and motivators and demotivators underlying teachers' participation in leadership tasks. The survey results showed that Finnish schools did not have a one common leadership structure. The resource and agency distributions showed both alignment and misalignment. In particular, the misalignment was manifested in the tight school budgets, local educational policies, and national educational laws whose impact the Finnish teachers wanted to decrease. Meanwhile, the teachers wanted to exercise stronger agency together with mid-level team leaders and students. Time, financial resources, and trust were identified as the most powerful driving force behind distributed leadership. Teachers were motivated to lead if the tasks matched their expertise and did not disturb their teaching. In contrast, leadership titles or assigning administrative tasks were less effective in promoting distributed leadership among Finnish teachers.

Keywords: distributed leadership, resource–agency duality model, Finnish schools

Introduction

The over-attribution of organizational success to an individual leader's performance has given rise to the notion the "romance of leadership," which has intrigued scholars for centuries (Meindl 1995; Meindl, Ehrlich, Dukerich, 1985). However, over the past two decades, this notion has been challenged by a growing body of literature on the theme of distributed leadership. These findings reveal that there are other factors, besides individual leaders, that play an equal, if not more, significant role in organizations. The concept of distributed leadership has gained considerable popularity in the school context because leadership in the teaching and learning domain has become more dynamic and interactive. Individual principals can no longer handle all the administrative and pedagogical tasks alone (Kangas, Venninen, Ojala, 2015; O'Connor, Day, 2007). Recent development in distributed leadership suggests that achieving organizational goals should not be the only criterion for measuring the value of distributed leadership (Fitzgerald, Gunter, 2006; Lumby, 2013). The ethical foundations of distributed leadership should be also examined from the individual perspective, especially in terms of how organizations provide and support agency from individuals and communities (Tian, Risku, Collin, 2015; Woods, Bennett, Harvey, Wise, 2004; Woods, Woods, 2013).

The present study examines the landscape of distributed leadership in Finnish comprehensive and secondary schools from the viewpoint of teachers. Applying the resource–agency duality model, this study aims to answer what kind of leadership has been distributed to whom and how (Tian, et al., 2015). Finland has been chosen as the research context for three reasons. First, Finland has been one of the most consistent top performers on the OECD Program for International Student Assessment (PISA) tests since 2000. Investigating distributed leadership in a high-performing education system is likely to shed light on its successes. Second, according to Sahlberg (2015), Hargreaves and Shirley (2012), Finnish education follows a different path of development, which steers away from standardized testing, student streaming, and competition. Most of the existing literature on distributed leadership investigates competition-driven educational systems such as those in the U.S. and the U.K. Very few studies examined how distributed leadership functions in an equity-driven system like Finland. Third, since the 1960s, Finnish education has been driven by the basic values of promoting equity, local autonomy, and flexibility (Aho, Pitkänen, Sahlberg, 2006). In fact, since the 1980s, educational administration has been gradually decentralized to local municipalities and schools. With increasing teacher autonomy, distributed leadership has emerged an inevitable trend in the Finnish schooling context (Kangas, et al., 2015; Sahlberg, 2015).

1. Theoretical framework

The theoretical framework underpinning this study is the resource–agency duality model proposed in Tian, Risku and Collin's (2015) meta-analysis of distributed leadership in 2002–2013. According to Tian et al., distributed leadership has two distinct and yet intertwined aspects. From the organizational aspect, leadership as a resource is distributed at various hierarchical levels to serve organizational purposes. From the individual aspect, leadership as an agency is exercised by various actors and artefacts to influence work processes as individuals or communities. Mapping the

distribution of leadership resources and agency reveals the manifestations of distributed leadership in practice.

Tian et al. (2015) also reported that to date very few distributed leadership studies have taken both organizational and individual aspects into account. Scholars who hold a prescriptive–normative view on distributed leadership tend to focus mainly on the organizational aspect. As a result, most empirical studies investigate causal relations between distributed leadership and students' test performance, school effectiveness, financial achievement, and other measurable outcomes stipulated in the government agenda (Gunter, Hall, Bragg, 2013; Hartley, 2010; Woods, Woods, 2013). Following that line of thinking, many educational systems tend to set educational priorities according to competitive values (Hartley, 2010; Sahlberg, 2015), which advocate distributing resources through rigorous competitions such as standardized tests, league tables, labor market-oriented curricula, and cost effective pedagogical approaches. In contrast, individual agency in distributed leadership has been largely understudied (Tian et al, 2015). Lumby (2013) criticizes many distributed leadership studies for being silent about the power issues and taking the micro-politics for granted. One recent research which closely examines the use and abuse of power reveals that some distributed leadership approaches which serve the short-term school goals seem to restrain leaders', teachers', and students' agency and eventually hinder sustainable development in the long run (Tian, Collin, forthcoming). Since organizational goals may be at odds with individual agency, it is vital to examine both aspects of distributed leadership simultaneously. In the present study, the resource–agency duality model has been applied to acquire a more comprehensive understanding of distributed leadership in Finnish schools.

2. Research question and design

A quantitative approach has been used to answer two research questions. *What are the manifestations of distributed leadership in terms of resource and agency in Finnish schools? What are the key motivators and demotivators underlying Finnish teachers' participation in distributed leadership?*

Instrument

The present article utilized data from 203 Finnish teachers collected via an online survey titled *Distributed leadership in Finnish and Shanghai Schools (Teacher questionnaire)* for a larger comparative study of distributed leadership in Finnish and Shanghai schools. The questionnaire sought demographic information such as the respondents' gender, school type, and current teaching and leadership positions. Two modifications were made to the Chinese version to ensure that the list of current positions was suited to the Finnish context.

First, the roles of vice-principals and assistant principals were separated. In Finland, municipalities are the main providers of primary and secondary level education. Municipal education bureaus autonomously decide whether to appoint a vice-principal (Vararehtori in Finnish) or an assistant principal (Apulaisrehtori) in local public schools. A vice-principal usually refers to a temporary leadership position that allows a teacher to exercise the authority of a principal when he/she is away for a long period of time. The assistant principal, on the other hand, is a formal leadership position with regulated working hours for school administration and a school-based job description. Assistant

principals usually co-lead with the principals on a daily basis in addition to executing their teaching duties (Mäkelä, 2007).

Second, a special education teacher was added to the list of current positions. In 2011, the Finnish special education amendment stipulated that schools should provide three-tier (i.e., general, intensified, and special) support to students (Finnish National Board of Education, 2011). Finnish schools are obliged to recruit special education teachers who provide part- or full-time support to students. Because a special education teacher is not present in most Shanghai public schools, it was excluded from the Chinese version of the questionnaire, to avoid confusion.

The second part of the questionnaire applied the distributed leadership resource–agency duality model to answer the two research questions. It comprised four sections: *leadership structures and power distance, leadership as a resource, leadership as an agency*, and *motivators and demotivators*. The first three sections identify the manifestations of distributed leadership in Finnish schools in terms of resource and agency. The fourth section identifies the strongest drivers of Finnish teachers' motivation to lead. Table 1 summarizes the key variables of each section.

[Insert Table 1 here]

The *leadership structures and power distance* section required the respondents to choose one or several metaphors to describe their school administrative structures, and then to rate the power distance between the school principal and teachers on a 0–10 continuous scale. The purpose of this section was to examine the correlation between administrative structures and power distance. Gronn (2000) depicted distributed leadership as a fluid and emergent phenomenon, contrary to fixed and stagnant leadership. Other scholars reported that distributed leadership can be manifested in one or multiple power centers which exercise micro politics, formal and informal leadership, and rhetorical partnership (Björk, Blase, 2009; Bolden, 2011; Lumby, 2009; Spillane, 2006; Storey, 2004). By combining the ideas of the power source (one vs. multiple power centers) and structure stability (fixed vs. flexible), four metaphors of leadership structures were created. The *pyramid* had one fixed power center at the zenith of the hierarchy, distributing leadership from top to down; the *fountain* was built on multiple power centers at the bottom, exercising bottom-up leadership with a stable nature; the *spider's web* structure contained one power center at the center but instilled flexibility in team building; and *organic community* comprised multiple power centers and flexibly formed teams in response to the external task environment. The power distance scale (0–10) was divided into three categories for statistical analysis: low (0–3.33), medium (3.34–6.67), and high (6.68–10).

In the *leadership as a resource* section, respondents were asked to evaluate the strength of influence of 17 actors and artefacts on a 1–5 scale (1 = none, 2 = little, 3 = some, 4 = a lot, 5 = decisive) and express their wishes to increase (2 = increase a lot, 1 = increase some), decrease (-2 = decrease a lot, -1 = decrease some), or maintain (0= maintain the same) the influence of each item. The purpose of this section was to identify the dominant actors and artefacts serving as key leadership resources in Finnish schools. The selection of 17 items was based on previous findings on distributed leadership. Formal leaders, such as principal, vice-/assistant principal, team leaders, and superintendents, have been widely recognized as the gatekeepers who nurture or undermine the leadership from others (Gunter, et al., 2013; Harris, 2012; Mayrowetz, Murphy, Louis, Smylie,2009; Scribner, Sawyer, Watson, Myers, 2007). Informal leaders, which mainly refers to non-leading teachers, students, parents, and external

stakeholders, exert their impact on leadership in a less visible way, which can either align or misalign with the agendas of the formal leaders (Hulpia, Devos, 2009; Jäppinen, Sarja, 2012; Leithwood, Mascall, Strauss, Sacks, Memon, Yashkina, 2007; Leithwood, Jantzi, 2000; Menon, 2005; Pederson, Yager, Yager, 2012; Spillane, Camburn, Pareja, 2007). Artefacts, including *student test scores, curriculum, school culture, budget, timetable, information-sharing platform, school reputation, national educational laws,* and *local educational policies* have served as powerful tools that constitute the interactions between leaders, followers, and the situations in distributed leadership (Gunter, et al., 2013; Hartley, 2010; Murphy, Smylie, Louis., 2009; Spillane, Halverson, Diamond, 2004; Spillane, 2006; Timperley, 2005).

The *leadership as an agency* section examined another aspect of the resource–agency duality model. The respondents rated the agency exercised by the school principal, mid-level team leaders, and teachers on 10 concrete work processes on a 0–4 scale (0 = not sure, 1 = none, 2 = very little, 3 = some, 4 = a lot). These 10 processes, which covered administrative, pedagogical, strategic development, and relationship building dimensions of school leadership work, were synthesized from several significant distributed leadership studies (e.g., Anderson, Moore, Sun, 2009; Mayrowetz, et al., 2009; Spillane, et al., 2007; Timperley, 2005). The administrative processes covered *managing administrative work, delegating tasks* and *leading teacher teams*; the pedagogical processes comprised *leading students' learning* and *evaluating school performance*; the strategic development processes consisted of *setting school vision, making strategic plans,* and *providing resources*; and the relationship-building processes referred to *developing school culture* and *networking with stakeholders*.

The *motivators and demotivators* section first surveyed Finnish teachers' perceptions of their workload (1 = too heavy, 2 = just fine, 3 = too little) and then asked the teachers to evaluate the effectiveness of 12 motivators and 12 demotivators on a six-point Likert scale (0 = not sure, 1 = not at all, 2 = very little, 3 = some degree, 4 = quite a bit, 5 = a great deal). The items in this section served two purposes: first, they examined the relationships between workload and teachers' motivation to lead, and second, they helped rank the effectiveness of motivators and demotivators in the Finnish context. The 12 motivators and 12 demotivators were derived from Herzberg's (1964) two-factor theory along with several other distributed leadership studies (e.g. Fairman, Mackenzie, 2015; Gunter, et al., 2013; Hulpia, Devos, Rosseel, Vlerick., 2012; Smylie, Mayrowetz, Murphy, Louis, 2007).

Motivators, which can be associated with Herzberg's satisfiers, are factors that enhance people's extrinsic and intrinsic motivation to carry out certain work. In the early twenty-first century, researchers identified two types of motivation to lead (MTL): affective MTL and social normative MTL (Brockner, Higgins, 2001; Kark, Van Dijk, 2007; Van Dijk, Kluger, 2004). The MTL theory suggests that promotion-focused people are motivated to lead because they recognize their desire to influence, enjoy the leadership process, and seek personal development (affective MTL). On the other hand, prevention-focused people are motivated to lead when they have to carry out duties, prevent negative outcomes, and seek security (social normative MTL) (Kark, Van Dijk, 2007). The 12 motivators considered in the survey were roughly divided into the two categories under the affective–social normative MTL framework. The affective MTL included *task matching expertise, career opportunities, decision-making power, official leadership title, colleagues' recognition,* and *principal's support*. The social normative MTL comprised *enough time, democratic culture, trust from others, enough financial resources, extra pay*, and *risk-bearing environment.*

Demotivators, which can be linked to Herzberg's hygiene factors, are factors whose absence would trigger dissatisfaction or disappointment, preventing people from carrying out certain tasks (Herzberg, 1964). The 12 demotivators included in the survey were *no extra pay, no official leadership title, no decision-making autonomy, no support from the principal, no career opportunities, insufficient financial resources, distraction from teaching, excessive administrative work, competition with colleagues, task mismatching expertise, punishment for failure,* and *mistrust from others*.

Participants

From December 2013 to September 2015, a total of 203 randomly selected Finnish teachers participated in the online survey. Of these, 28.6% were males and 71.4% were female. In terms of the schools they worked at, 36.2% served in comprehensive schools (Grades 1–9), 48.0% in lower secondary schools (Grades 7–9), and 22.5% in general upper secondary schools (Grades 10–12). Some teachers worked in more than one type of school simultaneously and were included in both. When indicating their current position(s), the respondents chose all the positions that they occupied at that time. The majority were subject teachers (73.9%), followed by class teachers (10.3%), special education teachers (7.9%), guidance counsellors (6.4%), assistant principals (3.9%) and vice-principals (2.5%). Notably, since the present study solely focused on Finnish teachers' perceptions on distributed leadership, Finnish principals did not participate in this survey. Because assistant and vice-principals dedicate only 5-10% of their working hours to administration and the rest 90-95% to teaching (Mäkelä, 2007), they were regarded as teachers and invited to participate in the survey.

Reliability and validity

The reliability of the study was first examined by evaluating the missing data. Little's (1988) MCAR test showed that the missing data were completely randomly distributed: $\chi 2\ (7401) = 6806.525$, $p = .977$. The absence of a systematic pattern in the missing item values indicated that the results of the statistical analysis would be trustworthy. Second, Cronbach's alpha values were calculated to estimate the internal consistency of the measure in each section. Results revealed that all the Cronbach's alpha values were above .80, suggesting optimal internal consistency (Wells, Wollack, 2003). More specifically, the 17 items in the *leadership as a resource* section measured the same construct: $\alpha = .802$, $p < .001$. In the *leadership as an agency* section, the Cronbach alpha value for each subgroup showed excellent internal consistency: principal's agency ($\alpha = .825$, $p < .001$), mid-level team leaders' agency ($\alpha = .962$, $p < .001$), and teachers' agency ($\alpha = .831$, $p < .001$). In the *motivator and demotivator* section, the Cronbach's alpha values for the 12 motivators and 12 demotivators were .895 and .853 ($p< .001$) respectively, which also confirmed high reliability of the results.

Validity indicates how a survey instrument measures what it intends to measure. According to Kimberlin and Winterstein (2008, p. 2278), validity is not a property of the test itself but "the extent to which the interpretations of the results of a test are warranted." To comprehend a complex phenomenon like distributed leadership, it is vital to use survey constructs backed by robust theoretical foundations and existing empirical evidence. In this study, to ensure construct validity, all the survey items were generated from an extensive meta-analysis of 85 published studies on distributed leadership released between 2002 and 2013 (Tian et al., 2015). Further, content validity

was evaluated by four distributed leadership experts from Finland, the U.K., and China before the pre-test. As mentioned earlier, two modifications were made to the current positions list in the demographics section. The English–Finnish translation of the survey was performed by a Finnish educational expert with a background in English linguistics. Before administering the survey to a wider audience, six Finnish teachers from comprehensive, lower, and upper secondary schools were invited to pre-test it online. Follow-up interviews with these pre-testees confirmed the appropriateness of the survey content and its translation.

3. Results

Leadership structure and power distance

With regard to the four metaphors of leadership structure, although Finnish teachers were given the opportunity to choose multiple answers, all the respondents (n = 198) chose only one metaphor to describe their school leadership. The most popular leadership structure was the *spider's web* (42.42%), which was followed by the *pyramid* (28.28%) and the *organic community* (27.27%). Only 2% of the teachers chose the bottom-up *fountain* structure. Both the *spider's web* and *pyramid* structures signified one power center, while both the *spider's web* and *organic community* structures underlined the flexibility feature.

The continuous 0–10 power distance scale was evenly divided into three categories: low (0–3.33), medium (3.34–6.66) and high (6.67–10). More than half of the Finnish teachers (55.56%) observed a *low* power distance between them and their principals. Another quarter (26.26%) reported a *medium* power distance, and only a minority (18.18%) perceived a *high* power distance. Pearson's chi square test of independence showed strong evidence of a relationship between leadership structures and power distance (Table 2): χ^2 (6) = 37.599, $p < .001$.

[Insert table 2 here]

The residual analysis identified that the *pyramid, spider's web*, and *organic community* in particular contributed to the relationships between leadership structure and power distance. Two cells had positive adjusted residual values that exceeded 2. This indicated that at $\alpha = .05$ level, more teachers who worked under the *pyramid* structure experienced a *high* power distance and more teachers who worked under the *spider's web* structure experienced a *low* power distance than what would be expected by chance (Agresti, 2007). Conversely, three adjusted residual values were greater than -2. This meant at $\alpha = .05$ level, fewer teachers who worked under *spider's web* and *organic community* structures detected a *high* power distance than what would be expected by chance (Agresti, 2007). Likewise, teachers who linked the *pyramid* structure with a *low* power distance were significantly under represented at $\alpha = .05$ level.

To summarize, a *low* power distance was experienced by 69.69% of the Finnish teachers who worked in *spider's web* and *organic community* structures. The other 28.28% teachers who worked in the *pyramid* structure, however, detected a *high* power distance. Only 2% teachers worked in *fountain,* and this structure was not statistically associated with any specific range of power distance.

Leadership as a resource

On the basis of the mode value, the most frequently occurring value in the dataset, the influence of the 17 resources was categorized into four tiers. According to the Finnish teachers (n = 203), the *principal* was the only *decisive* leader for daily school operations (mode = 5). *Vice-/assistant principals, school culture, budget, curriculum, local educational policies* and *national educational laws* were grouped in the second tier, exerting *a lot* of influence on school leadership operations (mode = 4). *Team leaders, teachers, school board, superintendent, school reputation,* and *students' test scores* served as resources in Finnish schools only *to some extent* (mode = 3). Alarmingly, *students, parents,* and *external stakeholders,* along with *information sharing platform,* exerted *little* impact on school leadership, according to the Finnish teachers (mode = 2).

On being asked to decrease, maintain, or increase the influence of each item, over one-third of the respondents wanted to decrease the influence of *budget* (71.8%, n = 203), *national educational laws* (37.8%), and *local educational policies* (45%). Spearman's correlation test revealed positive relationships among these three variables. These results seemed to suggest two things. First, artefacts such as budget, laws and policies were powerful tools to influence school leadership work. Second, *national* ($\rho = 0.248$, $p < .001$) and *local* ($\rho = 0.356$, $p < .001$) *educational laws and policies* might negatively influence school administration through budget cuts.

Over one-third of the respondents wanted to increase the influence of *team leaders* (35.9%, n = 203), *teachers* (45.3%), and *students* (45.8%). Likewise, positive correlations were found among these three variables. This result indicated that the teachers' believed that these three actors are largely underappreciated in Finnish schools. The Finnish *teachers* wished to assume more leadership responsibilities. Meanwhile, they expected more leadership would be granted to *team leaders* ($\rho = 0.428$, $p < .001$) and *students* ($\rho = 0.191$, $p < .001$). Interestingly, Spearman's correlation test failed to detect any statistically significant correlations between the three artefacts whose influence had to be decreased (i.e., *budget, national educational laws,* and *local educational policies*) and the three actors whose influence had to be increased (i.e., *team leaders, teachers* and *students*). This result possibly suggests that despite national and local level austerity measures, leadership resources could be cultivated within the school by empowering team leaders, teachers, and students.

Leadership as an agency

Viewing leadership as an agency helped identify who led what work processes in Finnish schools. As mentioned in the instrument section, the present study examined the agency of the principal, mid-level team leaders, and teachers in 10 concrete work processes related to *administration, pedagogy, strategic development*, and *relationship building*. The respondents were asked to repeatedly evaluate the amount of agency exercised by the three subgroups on a five-point Likert scale (0 = not sure, 1 = none, 2 = very little, 3 = some, 4 = a lot). At the within-group level, the valid percent of point 3 (some) and 4 (a lot) was summed up and ranked. At the between-group level, the nonparametric Friedman's test was used to examine the discrepancies and rank the amount of agency exercised by the three subgroups. Table 3 presents the results of the between- and within-group ranks of agency.

[Insert table 3 here]

At the within-group level, principals seemed to be more agentic in leading *school administration* and *strategic development* than *pedagogy* or *relationship building*. The principal's leadership was most evident in the processes of *managing administrative work, delegating tasks,* and *making strategic plans*. On the other hand, teachers' agency was the strongest in domains of *pedagogy* and *relationship building*, such as *leading students' learning, developing school culture*, and *evaluating school performance*. In addition to building internal relationship with students and peers through teaching and school culture, the Finnish teachers were also actively *networking with stakeholders*. Team leaders appeared to play a pivotal role in the *relationship building* and *school administration* domains. Their agency was most visible in *developing school culture, leading teacher teams*, and *setting school vision*. Only few teachers acknowledged team leaders' and teachers' agency in *providing resources* or *managing administrative work*.
At the between-group level, nonparametric Friedman's tests revealed that at $\alpha = .05$ level, statistically significant differences were observed among principals', team leaders', and teachers' agency in all the 10 work processes. This confirmed that in Finnish schools, leadership was not distributed in an undifferentiated manner. Principals were unsurprisingly the most prominent leaders in almost all the work processes with the exception of *leading students' learning*. Notably, according to the between-group mean ranks, the amount of agency did not directly correspond to the organizational hierarchy in the school. Although mid-level team leaders possessed a higher administrative position than teachers, their agency was not always ranked higher than teachers' agency.

Motivators and demotivators

With regard to workload, a majority of the Finnish teachers found the workloads to be *just fine* (79.12%, n =144) or *too light* (1.65%, n = 3). The rest 19.23% (n= 35) considered it *too heavy*. In the analysis, the first two subgroups were combined into non-overloaded teachers (80.77%, n = 147), who were then compared with the overloaded teachers (19.23%, n = 35).
For evaluating the effectiveness of the motivators and demotivators, the six-point Likert scale (0 = not sure, 1 = not at all, 2 = very little, 3 = some degree, 4 = quite a bit, 5 = a great deal) was re-coded into two categories: 0–2 = low effectiveness, 3–5 = high effectiveness. Table 4 shows the chi-square test results of the relationships between teachers' workload and the 12 motivators.

[Insert table 4 here]

At $\alpha = .05$ level, the chi-square test results showed strong evidence of a relationship between teachers' workload and two motivators: *principal's support* and *extra pay*. Particularly, for most of the teachers who were non-overloaded (n = 147), receiving *principal's support* was the third strongest motivator behind their participation in distributed leadership. By comparison, for the remaining 35 teachers, who were already overloaded, *principal's support* seemed to exert a relatively weaker impact on their participation. A similar interpretation can be drawn with regard to *extra pay*. Rewarding extra leadership work with *extra pay* seemed to motivate the non-overloaded teachers more effectively than the overworked ones.

The chi-square test results failed to detect any association between the effectiveness of the remaining 10 motivators and workload. This indicated that similar approaches could be utilized to enhance teachers' willingness to lead. Over 90% of the teachers in both groups chose the same top five motivators, although in a slightly different order. Among them, both resource (i.e., *enough time, enough financial resources,* and *task matching expertise*) and agency (i.e., *democratic culture* and *trust from others*) aspects were critical. Table 5 illustrates the positive correlations among these top five motivators.

[Insert table 5 here]

The results of the correlational analysis confirmed that to encourage teachers to assume additional leadership responsibilities, providing leadership resources and supporting teachers' agency are the optimal strategies. Interestingly, compared to the other motivators, considerably fewer Finnish teachers in both groups were effectively motivated by an *official leadership title.* Therefore, simply creating and distributing leadership titles to a wider community do not seem to be an effective approach.

A similar statistical analysis was carried out to assess the demotivators that prevented Finnish teachers from assuming additional responsibilities. However, the chi-square test results failed to detect statistically significant between-group differences at $\alpha = .05$ level in relation to the ranks of the 12 demotivators (Table 6).

[Insert table 6 here]

Both teacher groups shared similar views on the effectiveness of the 12 demotivators. The top six demotivators comprised four resource-related items and two agency-related items. From the resource perspective, *taking away financial resources* and *extra pay*, *distracting teachers from teaching* and loading them with *excessive administrative work* seemed to create an insecure and unpleasant work environment that considerably restrained teachers from leading. From the agency perspective, the *absence of principal's support* and *decision-making autonomy* exerted a strong negative impact on teachers' motivation to lead. Moreover, significant positive correlations were found among these top six demotivators (Table 7).

[Insert table 7 here]

These results highlight the interdependence of factors within the resource–agency duality model. For instance, *no support from the principal* was associated with providing *insufficient financial resources* or restraining teachers' *decision-making autonomy*. Last but not least, less than half of the Finnish teachers in both groups ranked *punishment for failure, no official leadership title,* and *competition with colleagues* as the least effective demotivators. One interpretation could be that Finnish schools seldom use market-like competition and test-based accountability to punish or reward teachers (Sahlberg, 2015). The low effectiveness of these three demotivators can probably be attributed to the fact that punishment and competition are rarely experienced by the teachers in their daily practice.

4. Discussion

Using the resource–agency duality model (Tian et al., 2015) as a lens, this study set out to examine the relationships between leadership structures and power distance, map the resource and agency distribution, and identify the key motivators and demotivators underlying Finnish teachers' participation in distributed leadership.

No one structure fits all

The first research question posed at the beginning of this paper was *What are the manifestations of distributed leadership in terms of resource and agency in Finnish schools?* The results of the survey indicate that there is no one leadership structure that fits all the Finnish schools. Teachers who worked in less hierarchical structures, such as the *spider's web* and *organic community*, perceived a low power distance, while others who served in the *pyramid* structure perceived a high power distance. The bottom-up leadership structure, the *fountain,* was rare but not absent. No correlation was found between the *fountain* structure and power distance.

The diversity of school leadership structures in Finland can be explained by the educational transformation in the late 1980s (Antikainen, 2005). From 1972 to 1977, Finland carried out comprehensive school reforms by restructuring the elite-oriented parallel system (i.e., grammar school and civic school) into an equity-driven nine-year comprehensive school system with a strong centralized administration (Aho, Pitkänen, Sahlberg, 2006). However, a significant change took place in the late 1980s: the provision of primary and secondary education was decentralized to municipalities. Local schools, with their increasing autonomy, began to establish various types of leadership structures to serve administrative and pedagogical purposes. Along with the decentralization process, the central government issued national-level guidelines, such as the Basic Education Act, national core curricula, and national evaluation plan, to safeguard the sustainability and consistency of the local education provision. The 1990s marked the era of networking and self-regulated school leadership (Sahlberg, 2011). Schools began to network more extensively with external stakeholders, including local communities, other schools, parents, the labor market, and international institutions like OECD and the European Union. The collaboration with stakeholders enabled schools to obtain extra resources for developing their school profiles (Antikainen, 2006). To summarize, according to Hargreaves and Shirley (2012), Finland illustrates the fourth way of educational reform. The Finnish education system has a strong national vision, with the direction coming from the top, local authorities, and professional teachers building the process from the bottom, and key stakeholders providing support from the side. Equity, autonomy, and sustainability are the key values underpinning the whole system. Hence, school leadership structures and the process of leading do not follow an established blueprint. Instead, self-directed school leadership is strongly encouraged.

The alignment and misalignment between resource and agency

The second key result of the study, which also addresses the first research question, highlights that viewing leadership as a resource and as an agency varies according to roles, situations and purposes. The results showed that the school principal was the most prominent resource person whose agency was strongly manifested in leading *school administration* and *strategic development*. Teachers, in contrast, were highly

agentic in leading *pedagogy* and *relationship building*. Mid-level team leaders seemed to play a pivotal role by leading *school administration* and *relationship building*. Only in three administration-related work processes that the mid-level teachers' agency was ranked higher than that of the teachers: *leading teacher teams, managing administrative work*, and *delegating tasks*. Two interpretations were proposed to explain this phenomenon. First, it was likely that in Finnish schools, team leaders' authority was not robustly underpinned by positional power. Owing to the lack of legitimacy and the low power distance, teachers might perceive team leaders more as team representatives than superiors. Second, the existing education system granted Finnish teachers a high level autonomy to independently lead teaching-related work processes without excessive external control (Sahlberg, 2015).

Taken together, these results are not surprising as they support existing literature on distributed leadership. Regarding curriculum reform and enactment, leadership seems to be distributed more in favor of the teachers than the school administrators (Halverson, Clifford, 2013; Mullick, Sharama, Deppler, 2013). In some extreme cases, teachers may even be superior to formal leaders, especially when the principal is overloaded with managerial tasks and cannot undertake tasks related to teaching and learning (Fairman, Mackenzie, 2015). Murphy, Smylie, and Louis (2009) advocate that distributed leadership should not undermine formal leadership; however, the principal's role must be changed from that of a solo decision maker to that of a leader of leaders. The task of building a collegial climate to improve teachers' morale is entrusted to mid-level team leaders. Even in a less collegial environment, using team leaders to resolve the resistance from teachers seems more effective than top-down administrative orders (Fairman, Mackenzie, 2015).

In addition to confirming the earlier distributed leadership findings, the present study also identified instances of alignment and misalignment between resource and agency. Misalignment led to the school members' agency being restricted. From the resource perspective, three artefacts whose influences that the Finnish teachers wanted to decrease considerably were *school budget, local educational policies*, and *national educational laws*. That these factors were positively correlated suggests that the current economic recession possibly affects the school budget through legislations and policies. Given the ongoing educational changes in Finland, resources have become scarcer. Since the 1990s, state subsidies and transfers to local municipals are no longer earmarked. Municipalities receive general funds from the state on the basis of unit costs and then autonomously decide the share for education and other public services (Aho, Pitkänen, Sahlberg, 2006). Thus, the tighter austerity measures, the tighter the schools budgets. In order to optimize resource distribution and efficiency, a five-year municipal administration reform, i.e., PARAS, was launched to merge municipalities between 2008 and 2013 (OECD, 2010). As a result, the number of Finnish municipalities has decreased from 432 in 2006 to 317 in 2015. A similar trend has been witnessed in the case of schools in Finland. Statistics show that from 2008 to 2013, the number of educational institutions has decreased by 16%, even though the total number of students is at the same level (Suomen virallinen tilasto, 2014). All these measures indicate that new managerialism has gradually tightened its grip on the Finnish education system.

Sahlberg (2011) warns that overemphasizing rationalism, efficiency, and productivity may undermine the moral purpose of education. This view is supported by Hökka and Vähäsantanen (2014) who write that blindly adopting new management models may jeopardise teachers' commitment. Highlighting the Finnish teachers' perspective, the present study shows that the current leadership resource distribution is not at its

optimum. The survey responses clearly showed that the Finnish *teachers* wanted to exert a stronger impact on school leadership work together with *students* and *mid-level team leaders.* Accordingly, Hökka and Vähäsantanen (2014) have proposed an agency-centered coupling structure, which shed light on distributed leadership. When financial resources are decreasing and administrative boundaries are on the rise, distributed leadership should go beyond selecting the most appropriate physical structure for an organization, irrespective of whether the structure is tightly or loosely coupled. In such situations, an agency-centered coupling structure is ideal for creating leadership opportunities for meaningful cooperation, high-quality communication, and shared meaning construction in a more dynamic way (Hökka, Vähäsantanen, 2014).
The upcoming Finnish national core curricula 2016 program seem to have adopted the same vein of thinking. The new curricula focus on developing students' transversal competences through phenomenon-based learning. In practice, this implies that Finnish teachers will collaborate more extensively not only with students but also with colleagues from different subject backgrounds. Inevitably, more leadership will be distributed to teachers and students throughout the whole pedagogical process from planning and implementation to evaluation and reflection. Against the backdrop of economic recession, cultivating leadership resources among mid-level team leaders, teachers, and students through agency-centered coupling might be a novel solution to enhance the school dynamics without adding to the financial burden of the school.

Driving force behind distributed leadership

Given the trends of school mergers and individualized learning, distributing more leadership among the teachers seems inevitable. With regard to the second research question, *what are the key motivators and demotivators underlying Finnish teachers' participation in distributed leadership,* the syntheses of the top motivators and demotivators revealed a strong interdependent relationship between resource and agency. Providing *sufficient time* and *financial resources* was strongly linked with supporting teachers' agency with *trust* and a *democratic culture*. Likewise, the analysis of the most effective demotivators revealed that the *absence of financial resources, principal's support* and *extra pay* would tremendously discourage teachers' engagement in leadership work. Notably, overloading teachers with *excessive administrative tasks* or *distracting them from teaching* were clearly undesirable. Finnish teachers did not expect to lead any tasks that were not *matched their expertise*. Interestingly, granting an *official leadership title* did not substantially motivate the Finnish teachers, and taking it away did not seem to discourage them as strongly as the other factors.
The collection of motivators and demotivators underlying Finnish teachers' participation in distributed leadership has historical roots. During the comprehensive education reform in the 1970s, both pre- and in-service teacher education advanced rapidly. Since 1978, a master's degree in science or arts has become a pre-requisite qualification for all Finnish teachers. As one of the most popular professions in Finland, being a teacher has been traditionally respected in society. Since the early 1990s, as the accountability culture in Finnish schools has weakened, professional autonomy of the teachers has grown stronger (Hökka, Vähäsantanen, 2014). The teacher's role is transformed from a knowledge deliverer to a pedagogical leader (Säntti, 2007). Unlike many other countries which heavily rely on external incentives like a teacher's professional title, merit, pay, and formal leadership titles to motivate teachers, Finnish schools trust their teachers to use their professional judgment and autonomy with as

little external control as possible (Sahlberg, 2015). The more sustainable and effective driving force behind distributed leadership, therefore, seems to lie in providing leadership opportunities and resources that support Finnish teachers' agency.

5. Implications and limitations

This study offers several noteworthy implications. Theoretically, the study demonstrates a successful application of the distributed leadership resource–agency duality model. Empirical evidence from the data supports the conceptual premise that leadership as a resource and leadership as an agency are two inseparable aspects. Nonetheless, there could be both alignment and misalignment between them. Practically, this study explains how the current landscape of distributed leadership in Finnish schools has been shaped by a series of educational reforms since the 1970s. The ongoing school mergers, austerity measures on school budgets, and more learner-centered curricula reforms all seem to call for expanding the depth and breadth of distributed leadership in the future. Cultivating leadership resources from Finnish teachers with agency-centered coupling has been proposed as a likely solution. These leadership resources include time, financial resources, and trust, which would enable Finnish teachers to use their expertise in the relevant tasks. On the contrary, sharing excessive administrative tasks with the teachers or creating a steep hierarchy with numerous leadership positions are less favorable approaches for distributed leadership.

Lastly, the generalizability of these results is subject to certain limitations. First, this study is based on a relatively small sample of Finnish teachers because of the limited access to schools. Second, as part of a larger comparative study, the main purpose of this quantitative study is to describe the resource and agency distribution and identify the key motivators and demotivators underlying Finnish teachers' participation in distributed leadership. Given its descriptive nature, this study did not explore the more sophisticated causal relationships among the different variables. In other words, this study has addressed what leadership has been distributed to whom and how; the reasons for this distribution have been investigated using eight qualitative case studies in another paper.

Reference

Aho, E., Pitkänen, K., Sahlberg, P., (2006), *Policy development and reform principles of basic and secondary education in Finland since 1968.* Washington, DC: World Bank, Education Working Paper Series 2

Agresti, A., (2007), *An introduction to categorical data analysis.* Hoboken, Wiley, NJ

Anderson, S.E., Moore, S., Sun, J.P., (2009), *Positioning the principals in patterns of school leadership distribution*, in: Leithwood, K., Mascall, B., (eds.), *Distributing Leadership: According to the Evidence*. New York: Routledge. pp. 111–136

Antikainen, A., (2006), *In search of the Nordic model in education,* in: Scandinavian Journal of Educational Research, Vol. 50(3), pp. 229–243

Björk, L.G., Blase, J., (2009), *The micropolitics of school district decentralization,* in: Educational Assessment, Evaluation and Accountability, Vol. 21, pp. 195–208

Bolden, R., (2011), *Distributed leadership in organizations: a review of theory and research,* in: International Journal of Management Reviews, Vol. 13, pp. 251–269

Brockner, J., Higgins, E.T., (2001), *Emotions and management: A regulatory focus perspective,* in: Organizational Behavior and Human Decision Processes, Vol. 86, pp. 35–66

Fairman, J.C., Mackenzie, S.V., (2015), *How teacher leaders influence others and understand their leadership,* in: International Journal of Leadership in Education: Theory and Practice, Vol. 18(1), pp. 61–87

Finnish National Board of Education, (2011), *Amendments and additions to the national core curriculum for basic education,* Retrieved on 15.10. 2015 from http://www.oph.fi/download/132551_amendments_and_additions_to_national_core_curriculum_basic_education.pdf

Fitzgerald, T., Gunter. H., (2006), *Teacher leadership? A new form of managerialism,* in: New Zealand Journal of Educational Leadership, Vol. 21(2), pp. 44–57

Gronn, P., (2000), *Distributed properties: a new architecture for leadership*, in: Educational Management Administration & Leadership, Vol. 28, pp. 317–338.

Gunter, H., Hall, D., Bragg, J., (2013), *Distributed leadership: a study in knowledge production,* in: Educational Management Administration & Leadership, Vol. 41(5), pp. 555–580

Halverson, R., Clifford, M., (2013), *Distributed instructional leadership in high schools,* in: Journal of School Leadership, Vol. 23(2), pp. 389–419

Hargreaves, A., Shirley, D., (2012), *The Global Fourth Way: The Quest for Educational Excellence,* Thousand Oaks, CA: Corwin

Harris, A., (2012), *Distributed leadership: implications for the role of the principal,* in: Journal of Management Development, Vol. 31(1), pp. 7–17

Hartley, D., (2010), *Paradigms: how far does research in distributed leadership "stretch"?* in: Educational Management Administration & Leadership, Vol. 38(3), pp. 271–285

Herzberg, F., (1964.), *The Motivation-Hygiene Concept and Problems of Manpower,* in: Personnel Administrator, Vol. 27, pp. 3–7

Hulpia, H., Devos, G., (2009), *Exploring the link between distributed leadership and job satisfaction of school leaders,* in: Educational Studies, Vol. 35, pp. 153–171

Hulpia, H., Devos, G., Rosseel, Y., Vlerick, P., (2012), *Dimensions of distributed leadership and the impact on teachers' organizational commitment: a study in secondary education*, in: Journal of Applied Social Psychology, Vol. 42(7), pp. 1745–1784

Hökkä, P., Vähäsantanen, K., (2014), *Agency-centred coupling—a better way to manage an educational organization,* in: International Journal of Leadership in Education, Vol. 17(2), pp. 131–153

Kark, R., Van-Dijk, D., (2007), *Motivation to lead, motivation to follow: The role of the self-regulatory focus in leadership processes,* in: Academy of Management Review, Vol. 32, pp. 500–528

Kangas, J., Venninen, T., Ojala, M., (2015), *Distributed leadership as administrative practice in*

Finnish early childhood education and care, in: Educational Management Administration & Leadership, pp. 1–15

Kimberlin, C.L., Winterstein, A.G., (2008),*Validity and reliability of measurement instruments used in research,* in: American Journal of Health-System Pharmacists, Vol. 65(1), pp. 2276–2284

Leithwood, K., Jantzi, D., (2000), *The effects of different sources of leadership on student engagement in school,* in: Riley, K., Louis, K., (eds.), *Leadership for Change and School Reform*, London: Routledge, pp. 50–66

Leithwood, K., Mascall, B., Strauss, T., Sacks, R., Memon, N., Yashkina, A., (2007), *Distributing leadership to make schools smarter: taking the ego out of the system,* in: Leadership and Policy Studies, Vol. 6(1), pp. 37–67

Little, R.J.A., (1988), *A test of missing completely at random for multivariate data with missing values,* in: Journal of the American Statistical Association, Vol. 83, pp.1198–1202

Lumby, J., (2009), *Collective leadership of local school systems: power, autonomy and ethics,* in: Educational Management Administration & Leadership, Vol. 37, pp. 310–328

Lumby, J., (2013), *Distributed leadership: the uses and abuses of power,* in: Educational Management Administration & Leadership, Vol: 41, pp. 581–97

Mayrowetz, D., Murphy, J., Louis, K.S., Smylie, M.A., (2009), *Conceptualizing distributed leadership as a school reform: Revisiting job redesign theory,* In Leithwood,

K., Mascall, B. (eds.), *Distributed Leadership According to the Evidence.* Routledge Taylor & Francis Group, pp. 167–195

Meindl, J., (1995), *The romance of leadership as a follower centric theory: a social constructionist approach*, in: Leadership Quarterly, Vol. 6, pp. 329–341

Meindl, J.R., Ehrlich, S.B., Dukerich, J.M., (1985), *The romance of leadership,* in: Administrative Science Quarterly, Vol. 30, pp. 78–102

Menon, M.E., (2005), *Students' views regarding their participation in university governance: implications for distributed leadership in higher education,* in: Tertiary Education and Management, Vol. 11, pp. 167–182

Mullick, J., Sharma, U., Deppeler, J., (2013), *School Teachers' Perception about Distributed Leadership Practices for Inclusive Education in Primary Schools in Bangladesh,* in: School Leadership & Management, Vol. 33 (2), pp. 151–168

Murphy, J., Smylie, M., Louis, K., (2009), *The role of the principal in fostering the development of distributed leadership,* in: School Leadership & Management, Vol. 23(9), pp. 181–214

Mäkelä, A., (2007), *Mitä rehtorit todella tekevät? Etnografinen tapaustutkimus johtamisesta ja rehtorin tehtävistä peruskoulussa, (What principals really do? An ethnographic case study on leadership and on principal's tasks in comprehensive schools),* Jyväskylä: University of Jyväskylä, 316

O'Connor, P.M.G., Day, D.V., (2007), *Shifting the emphasis of leadership development. From 'me' to 'all of us'*. In: Conger, J.A., Riggia, R.E. (eds) *The Practice of Leadership. Developing the Next Generation of Leaders.* San Francisco: Jossey-Bass, pp. 64–86.

OECD, (2010), *OECD public governance reviews. FINLAND: Working together to sustain success. Assessment and recommendations.* Paris, OECD

Pedersen, J., Yager, S., Yager, R., (2012), *Student leadership distribution: effects of a student-led leadership program on school climate and community,* in: International Journal of Educational Leadership Preparation, Vol. 7(2), pp. 1–9

Sahlberg, P., (2011), *Paradoxes of educational improvement: The Finnish experience,* in: Scottish Educational Review, Vol. 43(1), pp. 3–23

Sahlberg, P., (2015), *Finnish Lessons 2.0. What can the world learn from educational change in Finland? (second edition).* New York, Teachers Collage Press

Scribner, J., Sawyer, R., Watson, S., Myers, V., (2007), *Teacher teams and distributed leadership: A study of group discourse and collaboration,* in: Educational Administration Quarterly, Vol. 43(1), pp. 67–100

Smylie, M.A., Mayrowetz, D., Murphy, J., Louis, K.S., (2007), *Trust and the Development of Distributed Leadership,* in: Journal of School Leadership, Vol. 17 (2), pp. 469–503

Spillane, J.P., (2006), *Distributed Leadership*, San Francisco, CA: Jossey-Bass

Spillane, J., Camburn, E., Pareja, A., (2007), *Taking a distributed perspective to the school principal's work day,* in: Leadership and Policy in Schools, Vol. 6, pp. 103–125

Spillane, J., Halverson, R., Diamond, J., (2004), *Towards a theory of school leadership practice: Implications of a distributed perspective,* in: Journal of Curriculum Studies, Vol. 36, pp. 3–34

Storey, A., (2004), *The problem of distributed leadership in schools,* in: School Leadership & Management, Vol. 24, pp. 249– 265

Suomen virallinen tilasto, (2014), *Koulutuksen järjestäjät ja oppilaitokset, (Education and educational institutions)*, Helsinki, Tilastokeskus, Retrieved on 22.11.2015 from http://tilastokeskus.fi/til/kjarj/2013/kjarj_2013_2014-02-13_tie_001_fi.html

Säntti, J., (2007), *Opettajuuden rakentuminen ja muuttuminen sotienjälkeisessä Suomessa opettajien omaelämäkertojen valossa, (Construction and change of teacherhood after World War II in Finland in the light of teachers' life stories),* University of Helsinki, Doctoral thesis in education, Helsinki

Tian, M., Risku, M., Collin, K., (2015), *A Meta-analysis of Distributed Leadership from 2002 to 2013: Theory Development, Empirical Evidence and Future Research Focus,* in: Educational Management Administration & Leadership, pp. 1–19

Tian, M., Collin, K., (forthcoming), *Conceptualising Distributed Leadership in Shanghai and Finnish Schools,* Manuscript submitted to Educational Administration Quarterly.

Timperley, H., (2005), *Distributed leadership: developing theory from practice,* in: Journal of Curriculum Studies, Vol. 37, pp. 395–420

Van Dijk, D., Kluger, A. N., (2004), *Feedback sign effect on motivation: Is it moderated by regulatory focus?,* in: Applied Psychology: An International Review, Vol. 53, pp. 113–135

Wells, C. S., Wollack, J.A., (2003), *An Instructor's Guide to Understanding Test Reliability.* Testing & Evaluation Services, University of Wisconsin

Woods, P., Woods, G.J., (2013), *Deepening distributed leadership: a democratic perspective on power, purpose and the concept of the self,* in: Leadership in Education, (Vodenje v vzgoji in izobraževanju), Vol. 2, pp. 17–40

Woods, P., Bennett, N., Harvey, J., Wise, C., (2004), *Variabilities and dualities in distributed leadership: Findings from a systematic literature review,* in: Educational Management Administration & Leadership, Vol. 32(4), pp. 439–57.

Table 1. Questionnaire design

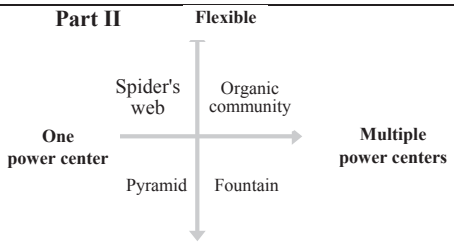
Demographics	**Part I**	
Leadership structures and power distance	**Part II** 	
Leadership as a resource (17 actors and artefacts)	Actors	
	Formal leaders	Informal leaders
	● *Principal*	● *Teachers*
	● *Vice-/assistant principal*	● *Students*
	● *Team leaders*	● *Parents*
	● *Superintendents*	● *External stakeholders*
	Artefacts	
	● *Student test scores*	● *Information-sharing platform*
	● *Curriculum*	● *School reputation*
	● *School culture*	● *National educational laws*
	● *Budget*	● *Local educational policies*
	● *Timetable*	
Leadership as an agency (10 work processes)	Administration	Strategic development
	● *Managing administrative work*	● *Setting school vision*
	● *Delegating tasks*	● *Making strategic plans*
	● *Leading teacher teams*	● *Providing resources*
	Pedagogy	Relationship building
	● *Leading students' learning*	● *Developing school culture*
	● *Evaluating school performance*	● *Networking with stakeholders*
12 Motivators	Affective factors	Social normative factors
	● *Task matching expertise*	● *Enough time*
	● *Career opportunities*	● *Democratic culture*
	● *Decision-making power*	● *Trust from others*
	● *Official leadership title*	● *Enough financial resources*
	● *Colleagues' recognition*	● *Extra pay*
	● *Principal's support*	● *Risk-bearing environment*
12 Demotivators	Hygiene factors	
	● *No extra pay*	● *Distraction from teaching*
	● *No official leadership title*	● *Excessive administrative work*
	● *No decision-making autonomy*	● *Competition with colleagues*
	● *No principal's support*	● *Task mismatching expertise*
	● *No career opportunities*	● *Punishment for failure*
	● *Insufficient financial resources*	● *Mistrust from others*

Table 2. Leadership structures and power distance

			Power distance		
			Low	Medium	High
Leadership structure	Pyramid	Count	16	16	24
		Expected Count	31.1	14.7	10.2
		Std. Residual	-2.7	.3	4.3
		Adjusted Residual	-4.8	.5	5.7
	Fountain	Count	3	1	0
		Expected Count	2.2	1.1	.7
		Std. Residual	.5	.0	-.9
		Adjusted Residual	.8	-1	-1.0
	Spider's web	Count	57	19	8
		Expected Count	46.7	22.1	15.3
		Std. Residual	1.5	-.7	-1.9
		Adjusted Residual	3.0	-1.0	-2.7
	Organic team	Count	34	16	4
		Expected Count	30.0	14.2	9.8
		Std. Residual	.7	.5	-1.9
		Adjusted Residual	1.3	.7	-2.4

3 cells (25.0%) have expected count less than 5. The minimum expected count is .73.

Table 3. Between- and within-group ranks of agency in 10 work processes

Leadership processes Friedman's test	Principals		Team leaders		Teachers	
	Between-group mean ranks	Within-group ranks (Valid percentage some–a lot)	Between-group mean ranks	Within-group ranks (Valid percentage some–a lot)	Between-group mean ranks	Within-group ranks (Valid percentage some–a lot)
Setting school vision $\chi2$ (2) = 107.375 $p < .001$, $n = 195$	2.49	5 (88.6%)	1.61	3 (63%)	1.90	4 (76.4%)
Making strategic plans $\chi2$ (2) = 149.308 $p < .001$, $n = 187$	2.62	3 (91.5%)	1.61	4 (62%)	1.77	6 (71%)
Leading students' learning $\chi2$ (2) = 212.507 $p < .001$, $n = 192$	1.56	10 (52.8%)	1.67	5 (60.3%)	2.77	1 (97.5%)
Developing school culture $\chi2$ (2) = 26.767 $p < .001$, $n = 191$	2.14	7 (87.2%)	1.67	1 (73.7%)	2.10	2 (92.1%)
Leading teacher teams $\chi2$ (2) = 14.015 $p < .001$, $n = 192$	2.17	9 (75.4%)	1.98	2 (63.4%)	1.85	7 (65.8%)
Managing administrative work $\chi2$ (2) = 272. 493 $p < .001$, $n = 192$	2.88	1 (96.6%)	1.57	9 (35.1%)	1.55	10 (29.4%)
Delegating tasks $\chi2$ (2) = 137.396 $p < .001$, $n = 189$	2.60	2 (93.5%)	1.71	7 (54.7%)	1.69	8 (53.7%)
Evaluating school performance $\chi2$ (2) = 100.823 $p < .001$, $n = 186$	2.45	4 (88.9%)	1.59	6 (58.3%)	1.96	3 (79.2%)
Networking with stakeholders $\chi2$ (2) = 116.022 $p < .001$, $n = 190$	2.51	6 (87.6%)	1.61	8 (50.5%)	1.88	5 (72%)
Providing resources $\chi2$ (2) = 169.829 $p < .001$, $n = 173$	2.70	8 (84.9%)	1.54	10 (23.1%)	1.76	9 (33%)

Table 4. Workload and 12 motivators

12 Motivators	Overloaded teachers (n = 35) Rank	Valid percentage of teachers who rated high effectiveness	Non-overloaded teachers (n = 147) Rank	Valid percentage of teachers who rated high effectiveness	Chi-square test
Enough time	1	97.1%	2	97.2%	$\chi2$ (1) = 0.003, p = .954
Democratic culture	1	97.1%	1	97.3%	$\chi2$ (1) = 0.004, p = .949
Trust from others	1	97.1%	5	93.1%	$\chi2$ (1) = 0.760, p = .383
Enough financial resources	4	94.1%	6	92.4%	$\chi2$ (1) = 0.119, p = .730
Task matching expertise	5	91.2%	4	93.8%	$\chi2$ (1) = 0.290, p = .590
Colleagues' recognition*	6	82.4%	7	84.8%	$\chi2$ (1) = 0.128, p = .721
Career opportunities	7	81.8%	8	81.5%	$\chi2$ (1) = 0.002, p = .967
Principal's support	7	81.8%	3	95.2%	$\chi2$ (1) = 7.081, p = .008**
Extra pay	9	64.7%	9	80.8%	$\chi2$ (1) = 4.144, p = .042**
Decision-making power	9	64.7%	10	75.3%	$\chi2$ (1) = 1.595, p = .207
Risk-bearing environment	11	60.6%	11	63.7%	$\chi2$ (1) = 0.111, p = .739
Official leadership title	12	38.2%	12	29.9%	$\chi2$ (1) = 0.895, p = .344

*1 cells (25%) have expected count less than 5.

** $p < .05$ which indicated the evidence of dependence

Table 5. Correlations among top five motivators

		Enough time	Enough financial resources	Task matching expertise	Democratic culture	Trust from others
Enough time	Pearson Correlation	1	.441**	.217**	.294**	.242**
	Sig. (2-tailed)		.000	.002	.000	.001
	N	200	200	198	200	198
Enough financial resources	Pearson Correlation	.441**	1	.309**	.232**	.264**
	Sig. (2-tailed)	.000		.000	.001	.000
	N	200	200	198	200	198
Task matching expertise	Pearson Correlation	.217**	.309**	1	.256**	.559**
	Sig. (2-tailed)	.002	.000		.000	.000
	N	198	198	199	199	197
Democratic culture	Pearson Correlation	.294**	.232**	.256**	1	.286**
	Sig. (2-tailed)	.000	.001	.000		.000
	N	200	200	199	201	199
Trust from others	Pearson Correlation	.242**	.264**	.559**	.286**	1
	Sig. (2-tailed)	.001	.000	.000	.000	
	N	198	198	197	199	199

**Correlation is significant at the 0.01 level (2-tailed).

Table 6. Workload and 12 demotivators

12 Demotivators	Overloaded teachers (n = 35) Rank	Valid percentage of teachers who rated high effectiveness	Non-overloaded teachers (n = 147) Rank	Valid percentage of teachers who rated high effectiveness	Chi-square test
Insufficient financial resources	1	94.1%	2	88.3%	$\chi2$ (1) = 0.991, p = .320
No support from the principal	2	90.9%	1	89.0%	$\chi2$ (1) = 0.107, p = .744
No extra pay	3	88.2%	3	80.8%	$\chi2$ (1) = 1.037, p = .309
Distraction from teaching	4	79.4%	6	74.5%	$\chi2$ (1) = 0.361, p = .548
No decision-making autonomy	5	76.5%	4	80.7%	$\chi2$ (1) = 0.305, p = .581
Excessive administrative work	5	76.5%	5	76.6%	$\chi2$ (1) = 0.000, p = .992
Task mismatching expertise	7	70.6%	7	72.7%	$\chi2$ (1) = 0.063, p = .802
Mistrust from others	7	70.6%	8	67.1%	$\chi2$ (1) = 0.152, p = .697
No career opportunities	9	63.6%	9	65.6%	$\chi2$ (1) = 0.042, p = .838
Punishment for failure	10	44.1%	10	35.4%	$\chi2$ (1) = 0.893, p = .345
No official leadership title	11	42.4%	11	30.8%	$\chi2$ (1) = 1.640, p = .200
Competition with colleagues	12	25.6%	12	25.3%	$\chi2$ (1) = 0.018, p = .892

Table 7. Correlations among top six demotivators

		No extra pay	No decision-making autonomy	No support from the principal	Insufficient financial resources	Distraction from teaching	Excessive administrative work
No extra pay	Pearson Correlation	1	.257**	.243**	.463**	.204**	.202**
	Sig. (2-tailed)		.000	.001	.000	.004	.004
	N	201	200	199	200	200	200
No decision-making autonomy	Pearson Correlation	.257**	1	.263**	.314**	.063	.133
	Sig. (2-tailed)	.000		.000	.000	.376	.062
	N	200	200	198	199	199	199
No support from the principal	Pearson Correlation	.243**	.263**	1	.285**	.064	.171*
	Sig. (2-tailed)	.001	.000		.000	.370	.016
	N	199	198	199	198	198	198
Insufficient financial resources	Pearson Correlation	.463**	.314**	.285**	1	.220**	.237**
	Sig. (2-tailed)	.000	.000	.000		.002	.001
	N	200	199	198	200	199	199
Distraction from teaching	Pearson Correlation	.204**	.063	.064	.220**	1	.353**
	Sig. (2-tailed)	.004	.376	.370	.002		.000
	N	200	199	198	199	200	199
Excessive administrative work	Pearson Correlation	.202**	.133	.171*	.237**	.353**	1
	Sig. (2-tailed)	.004	.062	.016	.001	.000	
	N	200	199	198	199	199	200

**Correlation is significant at the 0.01 level (2-tailed).
*Correlation is significant at the 0.05 level (2-tailed).

IV

RECONCEPTUALISING DISTRIBUTED LEADERSHIP IN SHANGHAI AND FINNISH SCHOOLS

by

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Reconceptualizing Distributed Leadership in Shanghai and Finnish Schools

Abstract

Purpose: This study first aims at reconceptualizing distributed leadership in terms of organizational resources and individual agency. Second, it aims at scrutinizing power and its manifestations in distributed leadership.
Methods: The empirical data is comprised of 55 interviews with school leaders and teachers from five Shanghai and three Finnish schools. A two-phase phenomenographic analysis was conducted to yield three administrative structures and nine conceptions of distributed leadership.
Findings: Distributed leadership seemed to manifest itself differently in various administrative structures. The four-tier vertical structure distributed leadership through position, empowerment, competition, and collaboration, whereas the two-tier vertical structure distributed leadership through expertise and mentoring. The two-tier horizontal structure distributed leadership through equity, professional autonomy, and trust. Besides organizational resources and individual agency, socio-cultural context also shapes school practitioners' conceptions of distributed leadership. The interplay of these three factors generates various forms of legitimate and discursive power in distributed leadership.
Implications: This cross-cultural study has theoretical and practical implications. Theoretically, this study expands the resource-agency duality model of distributed leadership by adding socio-cultural context as one key component. This study also fills the research gap by connecting distributed leadership to Foucault's definition of power. In particular, our findings confirm that enacting distributed leadership should not stop at structures and the restructuring process. It should also include cultures and the re-culturing process. To avoid distributed leadership becoming a manipulative tool, power should be constantly reflected on at both individual and organizational levels.

Keywords
empirical paper, distributed leadership, phenomenography, resource-agency duality model, administrative structures

Distributed leadership, as a burgeoning phenomenon, has aroused strong interest and fierce controversy among educational researchers, policy makers and school practitioners. By challenging heroic leadership, distributed leadership focuses on leadership practice instead of individual leaders (Spillane, 2006). However, little is known about educational leadership practices, especially their components, processes, and impact on school core work, teaching, and learning (Harris, 2014). Before drawing an ideological assertion to claim distributed leadership as "the model of choice in the twenty-first century", more robust empirical evidence is needed (Bush, 2013, p. 543). Therefore, instead of solely debating the normative merits of distributed leadership at an ideological level, we argue the need to revisit the concept through practices.

In the present paper, we first aim to reconceptualize distributed leadership through the lenses of organizational resources and individual agency, and second to scrutinize the manifestations of power in distributed leadership.

This paper is composed of four parts. The first part problematizes some widely cited definitions of distributed leadership, indicating the need and possibility to reconceptualize this ambiguous notion through leadership practices. The second part is concerned with the methodology, data collection, and data analysis processes. A two-phase analysis of the data revealed three types of administrative structures and nine distributed leadership conceptions. Meanwhile, multidirectional power relations in distributed leadership became evident from the data. Finally, by applying and expanding the resource-agency duality model, we discuss how organizational resources, individual agency, and socio-cultural context shape distributed leadership practices through structures and restructuring as well as cultures and re-culturing.

Distributed Leadership: A Call for Reconceptualization

Although great efforts have been made in the past two decades to define distributed leadership, much uncertainty still exists about the concept and its application (Tian, Risku, & Collin, 2016). In Bennett, Wise, Woods, and Harvey's (2003, p. 3) literature review, distributed leadership was defined as "a group activity that works through and within relationships" with three features: emergent property, openness to boundaries, and varieties of expertise. Nevertheless, these features failed to differentiate distributed leadership from other similar concepts. In fact, Bennett et al. (2003, p. 4) used four concepts as synonymies in their literature review: delegated, democratic, dispersed, and distributed leadership. Later, Spillane, Halverson, and Diamond (2004) delineated distributed leadership on the basis of two aspects: the leader plus aspect saw leadership as stretching over multiple individuals and the practice-centered aspect perceived leadership as being produced from the interaction among leader, follower, and situation. Particularly, Spillane et al.'s (2004) strong emphasis on leader-follower-situation interaction challenged the long-standing belief in heroic leaders. By shifting the research focus from an individual leader to the interaction between individuals and context, Spillane (2006) asserted distributed leadership to be a post-heroic leadership approach. Hartley (2007, p. 208), however, disagreed with Spillane's post-heroic leadership viewpoint and defined distributed leadership as a response to a "contemporary cultural shift," which weakened the classifications of social roles, time, and space to replace the

bureaucratic structure with a network culture. Hartley's statement offered significant insights into the restructuring and re-culturing processes of distributed leadership. It also implied that undermining a formal leader's authority was not the agenda for distributed leadership. Another milestone in the history of distributed leadership conceptualization was Gronn's (2008) hybrid model. Recognizing the complexity of leadership work in today's information-rich society, Gronn (2000) revised his previous numerical-concertive model. He redefined distributed leadership as a hybridity of different kinds and degrees of both individualized and collective patterns of leadership (Gronn, 2008). On the one hand, Gronn's (2008) definition seemed to resolve Bennett et al.'s (2003) conceptual confusion. As distributed leadership manifested itself in mixed patterns of leadership, it was not always delegated, shared, or dispersed. Moreover, echoing Woods (2004) and Spillane (2006), Gronn (2008) also agreed that distributed leadership could be used in both democratic and autocratic ways. On the other hand, Gronn's (2008) hybrid model appeared to expand distributed leadership into an intangible catchall notion, which provided limited analytical usage for empirical studies.

Tian et al.'s (2016) meta-analysis outlined two gaps of the conceptualization of distributed leadership. First, there is a lack of holistic research framework which examines both organizational and individual perspectives of distributed leadership. After scrutinizing 85 distributed leadership publications from 2002 to 2013, Tian et al. (2016) found that most studies narrowly examined how distributed leadership served organizational purposes and neglected an individual's agency in the process. The few studies that accounted for agency mostly focused on the formal leaders' agency, neglecting other stakeholders within or outside the school community. Second, the question of the use and abuse of power in distributed leadership remained unanswered in earlier studies (Lumby, 2013; Tian et al., 2016).

In response to the described research gaps, the present article aims at reconceptualizing distributed leadership through the lenses of school leaders' and teachers' practices. We consider school practitioners as the best participants because their first-hand experiences offered us valuable opportunities to re-examine the variations of the phenomenon in real-life settings. Notably, during the interviews, the participants frequently mentioned the use and abuse of power when delineating their distributed leadership practices. These data guided us to probe into the power relations that many earlier studies had neglected. Therefore, we formulated two research questions in this study: *How do Shanghai and Finnish school leaders and teachers understand and enact distributed leadership in terms of organizational resources and individual agency?* and *How is power manifested in distributed leadership?*

Research Framework: A Resource-agency Duality Model

To reveal the complexity of distributed leadership in practice, we applied Tian et al.'s (2016) resource-agency duality model as the research framework for this study. This model comprises two perspectives. From the organizational perspective, leadership is seen as a resource distributed in various tiers of the hierarchy in order to attain organizational goals (Tian et al., 2016). Leadership as a resource does not only refer to human resources but also to artifacts such as school budget, culture, curriculum, and daily

routine.

From the individual perspective, leadership is seen as an agency, implying how individuals or communities make choices, take stances, enact decisions and influence others for the purpose of achieving personal goals (Eteläpelto, Vähäsantanen, Hökkä, & Paloniemi, 2013; Tian et al., 2016). More specifically, because the present study examines school leaders' and teachers' agency in their work setting, we specify it as professional agency. According to Heiskala (2000), professional agency comprises four key components: actor, means, aims, and operational environment. As professional agency is continuously shaping and shaped by its context, it creates an interdependent and interactive relationship with organizational resources (Battilana, 2006; Caldwell, 2007; Collin & Herranen, 2016).

The organizational and individual perspectives are analytically separate, but in practice, they are often intertwined. We argue that probing into distributed leadership from these two perspectives may shed light on multidirectional power relations. In the resource-agency duality model, leadership does not only come from formal leaders. Similarly, in this study, we also see that power transcends position-bound legitimate authority. We take Foucault's (1980) postmodern stance by viewing power as a network of social relations that are generated, meditated, negotiated, contested, or resisted by social agents through discursive practices. Discursive practice comprises both meaningful actions and verbal communications (Collin, Sintonen, Paloniemi, & Auvinen, 2011). Hence, when leadership as a resource and an agency is distributed, multidirectional power relations are created.

Methodology: A Phenomenographic Approach

To reconceptualize distributed leadership from practices, we avoided imposing a predetermined concept on the research participants. Instead, we expected the participants to construct the meaning of distributed leadership from their real-life experiences. Earlier studies have proven phenomenography as a preferable data-driven approach to complex educational phenomena (Marton, 1981; Marton & Booth, 1997). Phenomenographic research depicts the different ways in which an individual can perceive, understand, and experience a phenomenon (Giorgi, 1994; Larsson & Holmström, 2007; Marton, 1981). Ontologically and epistemologically, we assume that distributed leadership as a complex phenomenon always holds meaning for the person who experiences it. Instead of adopting Marton and Booth's (1997, p. 114) realist epistemological position which defines individuals as "the bearers of different ways of experiencing a phenomenon," we subscribe to Säljö's (1997) and Uljens' (1996) constructivist revision of phenomenography. We presume that participants continuously construct the meaning of distributed leadership by connecting it to their socio-cultural context during an interview. The meaning of distributed leadership is later interpreted, rather than discovered, by the researchers during the data analysis (Henwood & Pidgeon, 1992; Richardson, 1999).

Data Collection and Analysis

The present study utilizes 55 individual interviews collected from five schools in Shanghai, China, and three schools in Jyväskylä, Finland from the autumn of 2013

through the spring of 2014 (Table 1). These eight schools, representing comprehensive, lower, and upper secondary levels of education, were recommended by the Shanghai Municipal Education Commission and the Jyväskylä Municipal Education Office for their distributed leadership practices.

The eight school principals were first asked to describe their school administrative structures to the first author, including the tiers of school hierarchy, distribution of formal leadership positions, and leader selection procedure. Based on the descriptions, the participants were purposefully selected from each tier of the hierarchy to cover the whole range of the schools' formal leaders and teachers. Owing to its small size, all 13 teachers and one vice-principal in School II were interviewed. In the rest seven schools, the principals forwarded the interview invitations to the teachers. The first author made the interview timetables based upon participants' availability. Due to the large number of participants, the first author spent one week in each school conducting the interviews. Each audio recorded interview lasted from 45 to 90 minutes.

Table 1. School Demographics and Participants.

School	Grades	Size	Participants (by tiers)
I (SH)	10–12	1,290 students 157 teachers and staff	T1: 1 principal T2: 1 director of academic affairs, 1 director of student affairs T3: 1 subject leader, 1 grade head T4: 1 subject teacher
II (SH)	10–12	75 students 13 teachers and staff	T1: 1 vice-principal T2: 13 subject teachers
III (SH)	1–9	470 students 78 teachers and staff	T1: 1 principal T2: 1 director of academic affairs T3: 1 subject leader, 1 grade head T4: 1 subject teacher
IV (SH)	1–9	948 students 130 teachers and staff	T1: 1 principal T2: 1 director of student affairs T3: 1 grade head T4: 3 homeroom teachers
V (SH)	6–9	417 students 60 teachers and staff	T1: 1 principal T2: 1 director of academic affairs T3: 1 grade head T4: 1 homeroom teacher
VI (FIN)	7–9	490 students 57 teachers and staff	T1: 1 principal, 2 vice-principals T2: 3 subject teachers
VII (FIN)	5–9	500 students 56 teachers and staff	T1: 1 principal, 2 vice-principals T2: 4 subject teachers
VIII (FIN)	1–9	453 students 40 teachers and staff	T1: 1 principal, 2 vice-principals T2: 4 subject teachers

During the data collection phase, the resource-agency duality model served as a research framework to guide the interviews. Without imposing distributed leadership as a concept, the first author asked the participants this question: *Can you describe a few situations in which leadership was distributed to you and/or by you?* On the basis of these real-life

situations, the first author further probed into the phenomenon from the organizational and individual perspectives by asking questions such as the following: *What kinds of resources were distributed for leadership purposes?, How did you use the leadership that was distributed to you?,* and *Have you experienced any challenges or conflicts after distributing/receiving leadership, and what did you do about them?*

The answers to these interview questions were iteratively sorted and compared to generate a set of distributed leadership conceptions (Marton & Booth, 1997). According to Marton and Pong (2005), a conception generally comprises two aspects: the referential aspect entails the particular meaning of a phenomenon discerned by an individual and the structural aspect indicates the internal features or logic of the meaning. When sufficient evidence indicates that several referential meaning units formulate an overall implication of distributed leadership in a particular situation, a conception is created (Marton & Pong, 2005). For example, in the Shanghai schools with a four-tier vertical administrative structure, the participants discerned positional power and formal leadership positions as two referential meaning units associated to leadership. According to the data, these two referential meaning units were connected with each other through a logical structure in which positional power was distributed through formal leadership positions. Thus, as the result of the analysis, Conception 1A distributing leadership through positions was generated.

In phenomenography, there is no right or wrong answer to the research questions, only the variations of meaning discerned by the interview participants from their respective viewpoints (Marton & Booth, 1997). Therefore, it is the plausibility, rather than the absolute truth, that establishes the trustworthiness of the findings (Cousin, 2009). Adopting Lincoln and Guba's (1981) four criteria of plausibility, this study enhanced *credibility* by providing quotations from the original interview transcripts for readers to evaluate the authors' interpretations. *Fittingness* was achieved by providing detailed descriptions of each research context, so that school practitioners who worked in a similar context could compare the findings with their own practices. *Auditability* was accomplished by presenting an open and honest data collection and analysis procedure, so that other researchers could replicate the study and confirm the consistency of the findings. Lastly, *conformability* was attained by making interview participants' different voices confront each other (Dezin & Lincoln, 1998). When interviewing, the first author sometimes noticed contradictory voices from the participants. By asking the participants to confirm each other's viewpoints, the researchers later constructed both a general conception and its subcategories after the data analysis.

For example, most participants in School II reported that all 13 teachers received a similar amount of leadership responsibilities. Nonetheless, three participants claimed leadership responsibilities tended to fall repeatedly on the same teachers. When noticing this contradiction, the first author asked the three participants to comment on others' viewpoint with two follow-up questions: *Do you disagree with the viewpoint that leadership is distributed quite evenly in your school?* and *Can you give some examples to underpin your statement?* The answers of the follow-up questions established two subcategories of Conception 2A distributing leadership through expertise: professional expertise and interpersonal expertise. Thus, the follow-up questions together with the

original questions created a form of data triangulation to enhance confirmability.

Findings

Three School Administrative Structures

According to Elmore (2000), school administration does not directly manage pedagogy but rather the structures and processes that serve pedagogical purposes. In this study, we define a school's administrative structure as the configuration of professional relationships within and between various tiers of the hierarchy that serve the school pedagogy.

As mentioned above, the eight principals were asked to describe their school administrative structures by answering these questions: *How many tiers constitute the school hierarchy?, What are the formal leadership positions distributed in each tier?,* and *How are the leaders in each tier selected?* After synthesizing and comparing principals' descriptions, we identified three distinct administrative structures after the first-phase data analysis. These structures appeared to represent their respective socio-cultural contexts: a four-tier vertical structure in four Shanghai schools (Schools I, III, IV and V), a two-tier vertical structure in one Shanghai school (School II), and a two-tier horizontal structure in three Finnish schools (Schools VI, VII and VIII).

In the second-phase analysis, the whole interview data were analyzed. In order to take socio-cultural context into consideration, we decided to conduct the analysis of distributed leadership conceptions under each administrative structure. In fact, this method turned out to be successful as we could identify some conceptions as structure-specific (Figure 1).

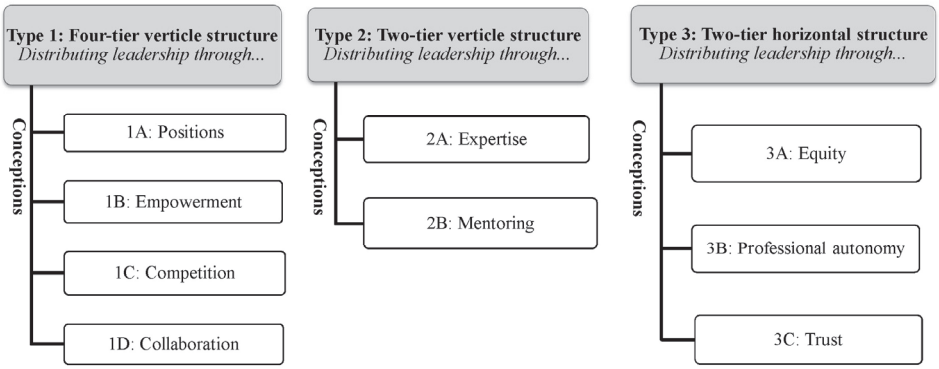

Figure 1. Administrative Structures and Distributed Leadership Conceptions.

Type 1: Four-tier Vertical Structure

According to the principals in Schools I, III, IV and V, since the establishment of the principal accountability system in 1986, most Chinese public schools built a top-down vertical structure to administrate academic and student affairs. Although each school may alter the structure to suit its specifications, the hierarchy is generally comprised of four tiers (Figure 2).

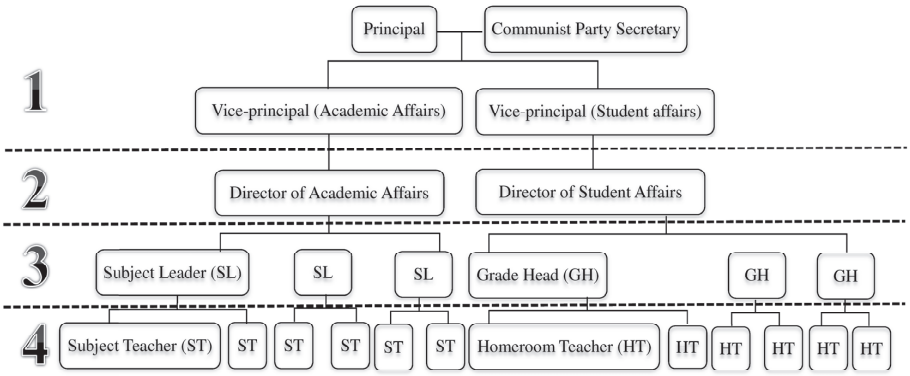

Figure 2. Four-tier Vertical Structure.

Notably, the four-tier vertical structure separated the administration of academic affairs and student affairs to emphasize their equal status. Academic affairs included classroom teaching, testing, curriculum development, and educational research, whereas student affairs covered ideological and moral education, home-school collaboration, extracurricular activities, and student discipline. A number of formal leadership positions were set in each tier to lead either academic or student affairs. Most of the school leaders were elected, with the exception of the school principal and the Communist Party Secretary, who were appointed by the local education authorities. School leaders and teachers in the lower tier were held accountable to and supervised by the ones in a higher tier. The national teachers' professional title system was employed to evaluate and rank all the teachers from low to high using five classifications: third-grade, second-grade, first-grade, professional, and senior professional. A teacher's salary, pension, and eligibility for formal leadership positions were largely determined by the professional title.

Conception 1A: Distributing Leadership through Positions

Most participants who worked under the Type 1 structure depicted a rigid, top-down hierarchy. In the interviews, they frequently associated leadership with positional power and considered leadership to be distributed to formal leaders in different tiers. When locating themselves in the hierarchy, the participants described the quantity and quality of power that was distributed to them based on their job descriptions. They described how many subordinates they led, what responsibilities they carried, and what kind of leadership functions they performed. This issue was expressed by a Tier 3 subject leader in School III:

> Confucius once said, when you don't hold an office, you don't consider the policies. When working as

> a mathematics teacher, I only cared about my own teaching. Now I am the subject leader. I am responsible for all the mathematics teachers and students under my leadership.

By citing Confucius, this subject leader suggested that teachers in the lower tier were neither expected nor willing to lead beyond their current positions. This made the school power structure resemble a reversed pyramid. Interestingly, many participants acknowledged one unwritten rule: advancing one's leadership position was the prerequisite to exerting a stronger agency on school issues. Thus, the four-tier vertical structure was also visualized as a career ladder by these Shanghai teachers.

The participants also differentiated the quality of power belonging to each tier through functions. Tier 1 leaders, who were frequently labelled as *thinkers*, *idea providers*, *navigators*, and *top-down designers*, wielded the power of envisioning. Tier 2–3 leaders, who were described as *pivotal*, *amplifiers*, and *buffers*, exercised the power of communication and coordination. Tier 4, who were described as *frontline*, *grassroots,* and *bottom level* teachers, were often engaged in implementation.

Under this conception, the annual or biannual teacher leader election became the tool for distributed leadership. Most of the leadership positions in Tier 2—3 were open for election. For instance, teacher candidates who wanted to become a subject leader in Tier 3 had to demonstrate their capacities in classroom teaching, educational research, student management, and professional development. Some participants said climbing the four-tier hierarchy often took years because candidates had to obtain enough merits for each criterion. Once the formal leaders were elected, they typically held their positions for years, too. Therefore, teachers always had clear personal goals ahead of them. One advantage of distributing leadership through positions, according to the participants, was to reinforce the stability of the school hierarchy.

Notably, even though using various evaluation systems to elect school leaders seemed to diminish favoritism, some Tier 1–2 leaders disclosed that they sometimes dropped hints to their preferred teacher candidates. For instance, the principal who envisioned building a movie studio in School I thought two teachers might embrace his agenda. One year prior to the teacher leader election, he encouraged these two teachers to take multimedia education training that brought them extra merits in the election.

Conception 1B: Distributing Leadership through Empowerment

The second conception emerged from the interviews with nine Tier 1–2 leaders, who occasionally used empowerment to divert conflicts between different tiers. One Tier 1 principal empowered the teachers to elect five members among them and to form a teacher evaluation committee. Replacing the principal, this committee evaluated other teachers' teaching performance twice a year. The principal criticized the Chinese educational system as being obsessed with evaluations. He worried that some teachers might take his evaluation results personally and take revenge on him by giving low marks in the annual principal evaluation. To him, empowering the teachers to lead teacher evaluation saved him from the principal-versus-teachers conflict.

In addition to using empowerment to avoid conflicts with subordinates, some Tier 2 leaders also swayed their superiors' minds with the following strategy. In School III, when

the new principal initiated a series of pedagogical reforms, the director of academic affairs (Tier 2) immediately sensed resistance from his unprepared teachers. The interviewee revealed how he used empowerment to maneuver the situation:

> In the Chinese culture, a subordinate does not throw "cold water" on the superior. I do not want the new principal to think I am incapable or disobedient. So, I empowered the teachers to try the principal's new pedagogical ideas, although I knew they would fail. Their failures spoke louder than my words. When the principal realized that his reforms were premature, I used the opportunity to suggest other approaches.

Three other Tier 2 leaders also recalled similar dilemmas at work. Being located in one of the middle tiers of the hierarchy, they sometimes felt the need to play double faces in front of the principal and teachers. Interestingly, many participants attributed this phenomenon to the face-saving culture in China. Maintaining harmonious interpersonal relationships appeared essential, even when it meant taking a detour to reach organizational goals. Under this conception, leadership was distributed through empowerment to resolve power conflicts. Leaders who used this strategy were also aware of the risks. Diminishing formal leaders' authority and nurturing a clan culture were two examples cited by the participants.

Conception 1C: Distributing Leadership through Competition

The participants in the Type 1 structure seemed to acknowledge one rule: teachers who excelled in competitions were rewarded with better resources and more agency to decide school issues. Standardized tests served as one competition arena. Teachers whose subjects were part of high-stakes standardized tests appeared to use their privilege to procure other teachers' resources. For example, a lower-secondary history teacher was often persuaded by the mathematics and English teachers to give his lesson hours to them so they could prepare students for tests. This phenomenon was especially observed in Grades 9 and 12 before the entrance exams for upper-secondary schools and universities, respectively.

The merit pay system, introduced in 2009, became another arena for competition. The local education authority mandated that Shanghai schools create school-specific merit pay plans, according to which pedagogical and administrative tasks were quantified for merit pay. Although this system aimed at distributing more leadership opportunities to teachers, the underlying strategy was to make teachers compete against each other for financial rewards. Several participants reported that their professional relationship with colleagues was deteriorating because of the merit pay. At School V, a Tier 4 homeroom teacher put it this way:

> The new merit pay system rewards my homeroom teacher's work with a bit extra pay. But other teachers said I ate their "cheese." Nowadays, when they have difficult students in class, they simply send the students to me because I am paid for disciplining misbehaviors.

When reflecting on how competition affected an individual teacher's work, some participants perceived competition as a relatively efficient approach to motivate teachers to assume extra responsibilities. The rest, however, criticized it for demoralizing teachers.

They asserted that attaching different price tags to teachers' roles gave unfair privilege to some teachers, which enhanced the risk of power abuse.

Conception 1D: Distributing Leadership through Collaboration

Besides competition, collaboration was also mentioned during the interviews conducted in Schools I and V. In past years, both schools modified their four-tier vertical structure to encourage more professional collaboration among the teachers.

Since 2009, School I restructured grade level administration by mixing leaders and teachers across four tiers. Six Tier 1–2 leaders were divided into three groups. Each group, together with a few Tier 4 teachers, followed the leadership of Tier 3 grade heads. On a weekly basis, the new leadership team discussed and decided grade level issues such as moral education themes, teachers' supervision timetables for lunch breaks, and weekly newsletters to parents. After restructuring the grade-level leadership team, a Tier 3 grade head observed that many Tier 4 grassroots teachers became more creative and committed to their work when they participated in the decision-making process. Nevertheless, she also voiced some concern. When disagreement arose in the meetings, those Tier 1–2 leaders tended to wield their positional power to prevail over collective decision-making. Restructuring administrative teams was relatively easy, while re-culturing the bureaucratic mentality in the Type 1 structure seemed challenging.

In School V, another type of professional collaboration was formed to distribute pedagogical leadership to subject teachers. The school principal criticized the traditional subject-based teaching and research seminars for their narrow focuses. When teachers were grouped in subject teams, the weekly seminars mainly focused on how to plan lessons, teach the syllabus, and evaluate students. In 2007, School V experimented with multidisciplinary teaching and research seminars by encouraging teachers with different subject backgrounds to observe and comment on each other's lessons. One School V Tier 3 physics teacher described the change in her own teaching:

> This afternoon, I taught the concept of density to the eighth graders. Besides two physics teachers, I invited mathematics, psychology, language and chemistry teachers to observe my lesson. Interestingly, these teachers captured a lot of students' reactions in my lesson. They told me which parts I succeeded well in and which parts I should have elaborated on more. I felt students' learning was at the center of the discussion, not the subject, not me.

Other participants also experienced benchmarking pedagogical and class management strategies with the teachers they never collaborated with before. Some found their attitudes towards low-performing students had changed after learning about students' achievement in other subjects. Multidisciplinary teaching and research seminars seemed to open a new platform for the teachers to exercise and receive pedagogical leadership.

Nevertheless, some participants also expressed two major concerns. First, in comparison with the traditional subject-based seminars, multidisciplinary seminars prevented teachers from discussing in-depth subject content. Second, although most teachers preferred the combination of both subject-based and multidisciplinary seminars, time became a scarce resource for them to have professional collaboration.

Type 2: Two-tier Vertical Structure

Among the five Shanghai schools, School II had an exceptional administrative structure. The school was co-founded in 2013 by a high-performing upper secondary school and the local educational authority. According to the district development plan, School II was given high-level autonomy to experiment with individually tailored pedagogy and distributed leadership. According to the vice-principal, a two-tier vertical administrative structure was built to serve both pedagogical and leadership purposes (Figure 3).

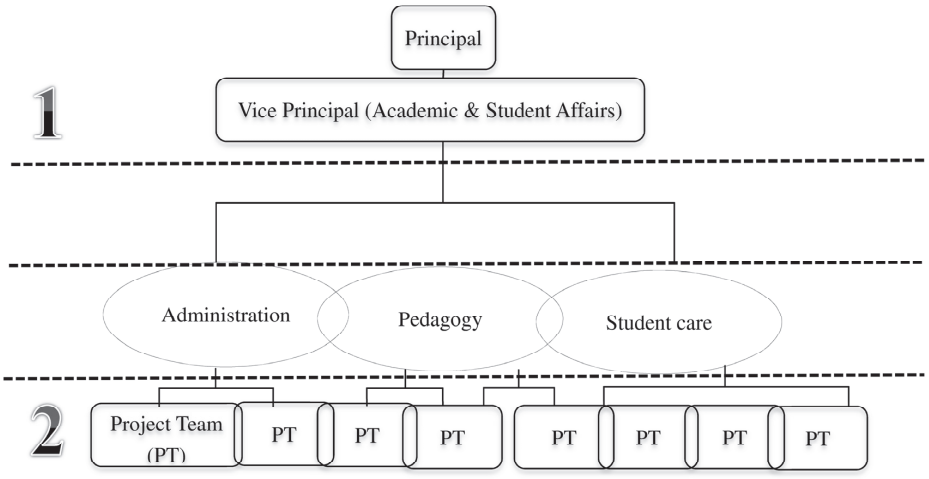

Figure 3. Two-tier Vertical Structure.

This structure had only two formal leadership positions in Tier 1: the honorary principal who supervised the school's overall development and the vice-principal who led the school's daily operations. In Tier 2, 13 teachers were multi-positioned in eight project teams, co-leading school administration, pedagogy, and student care. Each project team consisted of 3–5 teachers. Among the teachers, none of them held a formal leadership position. Before the projects started, informal leadership roles were negotiated among the vice-principal and teachers. Eight project teams were purposefully designed to have overlapping responsibilities so that they could flexibly merge, split, or regroup in response to tasks.

Similar to the Type 1 structure, teachers in the Type 2 structure were also evaluated using the teacher's professional title system. As most of the teachers were novices, the vice-principal spent an enormous amount of time mentoring teachers' pedagogical and administrative work. Although School II had a small number of teachers, the vice-principal depicted a clear vertical relationship between the two tiers.

Conception 2A: Distributing Leadership through Expertise

Since its establishment, two principals decided to loosen the ties between leadership responsibilities and fixed leadership positions in School II. The vice-principal introduced this strategy in the teacher recruitment phase. She said that the school searched for the teachers with diverse expertise and a lifelong learning attitude, not the ones who were

used to being or working for top-down leaders. Instead of separating the administration of academic and student affairs like that in the Type 1 structure, the Type 2 structure combined pedagogy, administration, and student care into one entity. Various short-term and long-term projects were designed to engage teachers in leadership work, such as student recruitment projects, school celebration projects, and student club projects. Teachers' job description was expanded and enriched, as each teacher had to be a pedagogical leader, a moral leader, and an administrator at the same time.

Although the Type 2 structure did not assign formal leadership positions to the teachers, before each project started, the vice-principal discussed the tasks openly with all 13 teachers and allowed the teachers to negotiate their roles in the project. Informal leaders, very often the ones with the most relevant expertise, emerged from the process. Most participants considered leadership to be distributed evenly among them because each project corresponded to some teachers' expertise or interests. Nevertheless, three participants revealed that, when emergencies took place, leadership was repeatedly distributed to the same teachers. One Tier 2 teacher described this type of situation:

> I remember I rescued crises several times. Once before the school celebration, the teacher in charge failed to arrange rehearsals due to the lack of authority in front of the students. Other teachers asked me to help. Therefore, I had to leave my own work behind and started to contact the student leaders and arrange the rehearsal timetable. Sometimes the requests came so abruptly that I felt my own teaching and other duties were constantly interrupted.

As this participant described, in emergency, leadership was taken from the teachers with the most relevant professional expertise and redistributed to the ones with better interpersonal expertise such as crisis management and interpersonal communication skills. Only when these teachers failed to rescue the situation, the vice-principal came to their aid. As a result, some teachers suffered from an unbearable workload. In addition, since different expertise was needed at different phases of a project, distributing leadership through expertise seemed to cause role ambiguity and accountability problems. Because teachers were unclear about their exact responsibility areas, all the projects required constant coordination by the vice-principal.

Conception 2B: Distributing Leadership through Mentoring

Many participants described the school principal as the mastermind behind the school's overall design and the vice-principal as a mentor for the teachers. Since most teachers did not possess former leadership experience, the mentoring process of teaching teachers how to lead was seen as a form of distributed leadership. One physical education teacher found that grassroots teachers in School II had more leadership opportunities and direct collaboration with the two principals than those in other schools. The vice-principal mentored him to take charge of the school facility and its security. Together they conducted campus security checks four times a year. According to that teacher, in his second year in School II, he bore the same responsibilities as a director of facilities. In other schools, it would have taken him 5–10 years to achieve such a director's position.

According to the vice-principal, having a great deal of hands-on experience in various areas of school administration was the prerequisite for a mentor. During her 20-year work

experience, she had worked in almost all the administrative positions in a school. She stressed that enacting distributed leadership was not task delegation but a value choice. It was more important for her to teach teachers how to lead a school and why than what tasks to do. This Tier 1 vice-principal summed up her mentoring work with the following example:

> We have a year clock in the teachers' office, marking the monthly key tasks. In most cases, I can anticipate the challenges that my teachers will encounter. So I prepare them in advance. Sometimes, we cannot foresee difficulties, or teachers want to do things differently. Then we have to learn together. After the first year, I encouraged my teachers to construct the next year clock by themselves. It became a useful tool to make my teachers see how different types of school work constitute the big picture of the school.

According to this vice-principal, distributing leadership through mentoring involved another important aspect. Besides teaching teachers how to lead, she also repeatedly underlined the importance of how to follow. Some teachers found this process beneficial because they learned to be a better leader through being a better follower. One geography teacher in School II said that teachers frequently switched their roles from leaders to followers and vice versa when working on different projects. Gradually, she learned to support other leaders' leadership because she also counted on their support when leadership responsibilities fell on her shoulders.

Type 3: Two-tier Horizontal Structure

Figure 4 presents the two-tier horizontal administrative structure shared by the three Finnish schools, Schools VI, VII, and VIII. According to their principals, each school had a top leadership team in Tier 1, consisting of the principal, vice-principals, and a few elected lead teachers. This leadership team steered the school administration. Teachers in Tier 2 with high-level professional autonomy led pedagogy. The parents, social welfare system, local educational authority and other stakeholders were also factors that contributed to the school's support system.

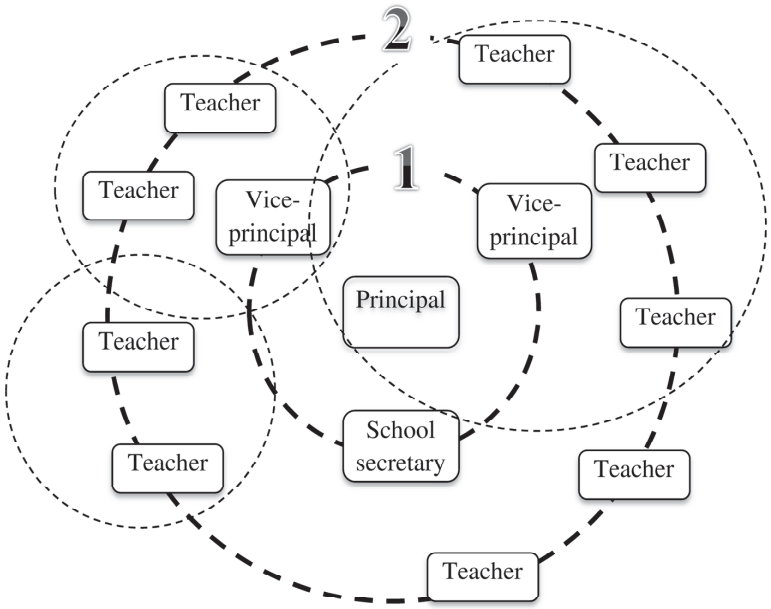

Figure 4. Two-tier Horizontal Structure.

In comparison to the Type 1 and 2 structures, the Type 3 structure seemed to have an unclear demarcation between the two tiers. In keeping with Finnish customs, students and teachers addressed their principals by their first names instead of their titles. The schools' power distance was low. According to the three principals, their schools had multiple power centers. Both top-down and bottom-up decision-making coexisted.

School administration in the Type 3 structure was highly streamlined. In the 1990s, school inspection was abolished in Finland. School principals and teachers were exempted from excessive external control by the national or local education authorities. By comparison, each Shanghai school in this study, including School II with promised autonomy, received constant external inspections and evaluations. Due to the different level of external control, the number of full-time administrators in the Type 3 structure was about one-third of that in the Type 1 structure.

The principal-teacher relationship was another feature that distinguished the Type 3 structure from the Type 2 structure. The three Finnish principals perceived themselves as the supporters of and resource providers for the teachers. By contrast, the vice-principal in the Type 2 structure discerned herself as a superior pedagogical expert and mentor to her teachers. Therefore, the principal-teacher relationship in the Type 3 structure was horizontal, whereas in the Type 2 structure the relationship was vertical.

Conception 3A: Distributing Leadership through Equity

With the given autonomy, Finnish schools were not obliged to build teams, although it was a common practice to engage teachers in school leadership work. Across the three schools, two types of teams were found: parallel and project teams. In School VI, teachers were randomly grouped into six parallel teams using a lottery system. These parallel teams served as discussion forums for teachers to participate in school level decision-making. Team leaders hosted the discussions and presented teachers' opinions to the top leadership team. In Schools VII and VIII, teachers volunteered to join the project teams. These project teams had specific functions such as supervising student discipline, networking with international partners, organizing school celebrations, and monitoring campus security.

In both types of teams, team leaders were re-elected every 1–2 years. One principal explained that putting more teachers into the leader's shoes made them see school as a community not just as individual teachers and teams. As many interview participants pointed out, building the team structure and rotating the team leaders aimed at sharing equal leadership responsibilities among all the teachers. Their interpretations of equity, however, seemed to differ. In one interpretation, equity was understood as each team having an equal access to resources and exerting a similar level of agency. The role of a team leader was to balance the resource and agency distribution among different teams.

Another interpretation of equity was distributing better resources and more agency to the teams that dealt with more demanding tasks. The student care team (oppilashuoltoryhmä in Finnish) was one example. Finnish legislation has mandated that all schools build a student care team, which generally includes the school principal and/or vice-principal, special education teachers, school nurse, psychologist, and social worker. In some cases, the network has been expanded to include assistant teachers (koulunkäynninohjaaja), a regional principal, a doctor, a lawyer, and parents. Those participants who believed students with special intellectual, behavioral, and emotional needs require more support to produce equal learning outcomes, advocated for distributing more leadership resources and agency to the student care team that supported this type of students.

Nevertheless, since the Finnish economic austerity policy started to tighten its grip on school budgets in the late 2000s, these two interpretations of equity started to clash in the Type 3 structure. A Tier 2 subject teacher at School VII described the conflict as follows:

> Honestly, I dislike some teachers work more closely with the principal than the others. In their [student care team] weekly meetings, they use the opportunities to lobby for more resources for their own small classes. As a result, other teachers have to teach more students with fewer resources. It does not sound fair to me because the budget cut affected everyone in the school.

When interest conflicts emerged, many participants expected their principals to lead open discussions with different interest groups regarding how resources were distributed and why. They even highlighted that, when consensus became impossible, the principal should make a solo decision to avoid chaos.

Conception 3B: Distributing Leadership through Professional Autonomy

Regarding leading and evaluating students' learning, pedagogical leadership was mostly distributed to the teachers through professional autonomy. The Finnish national core curricula liberated teachers from passively teaching according to the prescribed syllabi. In order to achieve the learning goals regulated in the national core curricula, teachers had the autonomy to compile learning materials, choose teaching methods, and tailor teaching content. One Tier 2 subject teacher at School VII explained how she succeeded in minimizing the negative impact of the school budget cuts on students' learning by using her professional autonomy in teaching:

> I teach home economics together with Tiina (pseudonym). We have collected recipes and articles on nutrition as our own teaching materials. The textbook is just a supplement. Because of the economic recession, we have a tighter budget now. This morning, we decided to use soya products to replace red meat in Friday's cooking lessons. They are cheaper, and we can use the opportunity to teach nutrition and about a vegetarian lifestyle.

Evaluating students' learning was another key task led by the teachers. The national core curricula discouraged teachers from solely using test scores as final evaluation results; students' overall performance had to be taken into consideration. Hence, interpreting and elaborating on evaluation criteria became one important part of teachers' pedagogical leadership. Many participants reported that they often collaborated with their peers to co-evaluate students' performance. They also held regular meetings with teachers from other schools to compare evaluation criteria and results.

Nevertheless, distributing leadership through professional autonomy seemed to have another side. In the interviews, two novice teachers stated that they often felt alone and unsupported in their teaching because "every teacher was so careful not to interfere with others' work." Teachers' professional collaboration was mainly need-based, self-initiated and voluntary. School principals seldom observed teachers' lessons unless they were invited or there were major complaints from the students. One interviewed principal disclosed that, because of teachers' autonomy, he lacked tools to directly lead teachers' pedagogical work.

Conception 3C: Distributing Leadership through Trust

In the Type 3 structure, leadership was distributed because of trust. The participants provided the following examples. After the government abolished school inspection in the 1990s, national and local educational authorities trusted school principals to lead the implementation of the school budget, timetable, curricula, and student intake more autonomously. Because teachers were trusted as pedagogical experts, they were exempted from various external evaluations. Students and parents trusted schools to support learning in the best possible way. Therefore, when noticing a teacher did not perform well, they gave direct feedback to the principal. Likewise, teachers trusted their principal to support teachers' teaching and professional development. The annual developmental discussion became a platform on which teachers and principal provided constructive feedback to each other. Teachers also trusted the students to master the learning content in their individual ways. Sample-based standardized tests were used to compare students' learning outcomes with the national core curricula requirements. Students' test results

were also used to redistribute resources within and among schools to better support low-performing learners.

Occasionally, the three schools were also challenged by the teachers with low motivation. Trust became even more essential to support these teachers. School VII experienced a turbulent three-year period. Due to its severe indoor air problem, the old school building was demolished and rebuilt. Contaminated air had adversely affected many teachers' and students' health. After moving to the new school building, most teachers felt exhausted. Their morale was low. A couple of teachers became informal leaders who resisted the principal's teacher exchange plan with a neighboring school. The School VII principal described how she distributed leadership through trust:

> In that situation, I decided to distribute more leadership to these informal leaders by letting them re-evaluate this teacher exchange project. I had to trust them to use their power wisely. When they made the conclusion that our teachers were not ready for that amount of workload, I backed up their decision and postponed the project for one year.

In order to acquire teachers' viewpoints, one informal leader mentioned in the principal's description was also interviewed. Coincidently, this senior male teacher also reaffirmed the importance of trust. He said that leadership was distributed to him by both the principal and the teachers because he was seen as a trustworthy person by all concerned. When he represented other teachers in negotiations with the principal, he also trusted their principal to see teachers' well-being as her priority. The teacher further noted that, without a school culture based on profound trust, his informal leadership might have been taken as an affront to the principal's authority. With trust, nevertheless, the potential power conflicts between formal and informal leaders seemed to be resolved.

Discussion and Conclusion

The first research question of this study asked the following: *How do Shanghai and Finnish school leaders and teachers understand and enact distributed leadership in terms of organizational resources and individual agency?* The two-phase phenomenographic analysis yielded three administrative structures and nine distributed leadership conceptions. Under these conceptions, we identified key resources such as formal leadership positions, teachers' professional autonomy, job descriptions, standardized tests, school year clock, curricula, and developmental discussions that were used for leadership purposes. This echoes Spillane, Halverson and Diamond's (2001) conclusion that organizational routines, artifacts, and tools are important components of distributed leadership to build interactions between leaders, followers, and situations.

In addition, we also recognized different types of agency that the school leaders and teachers exerted to share, compete in, collaborate on, control, support, and even manipulate the leadership process. Agreeing with Scribner, Sawyer, Watson, and Myers (2007), we claim that distributed leadership is sometimes associated with oppression and control disguised as shared governance. Therefore, distributed leadership is not an apolitical approach. In fact, we detected micro-politics in all three types of administrative structures. For instance, in the Type 1 structure, one principal directed two teachers' applications towards certain leadership vacancies because he knew these teachers would

support his development plan. This echoes what Hatcher (2005) called "selective distributed leadership," where formal leaders tend to favor those who embrace their particular agenda. In the Type 2 structure, we also found that when emergencies took place, leadership was repeatedly distributed to the same teachers because they demonstrated expertise in managing crisis. This phenomenon is quite alarming because distributed leadership without a limit could lead to burdening teachers with unbearable workloads (Gunter, Hall, & Bragg, 2013; Murphy, Smylie, & Seashore, 2009). Even in the Type 3 structure, where distributed leadership was profoundly underpinned by the value of equity, different teacher teams seemed to compete for scarce resources by using their agency.

Employing the resource-agency duality model to analyze and interpret data also enabled us to detect the alignment and misalignment between the organizational and individual perspectives. Our empirical data indicated if distributed leadership aimed at boosting individual teacher's agency to assume leadership responsibilities, the school organization should equip leaders and teachers with sufficient leadership resources. When the organizational resources aligned with individual agency, distributed leadership served both organizational and individual goals. The misalignment between organizational and individual perspectives, according to our data, appeared to arouse various power and interest conflicts which eventually turned distributed leadership into what Youngs (2009, p. 7) called "distributed pain."

Surprisingly, in this study, socio-cultural context seemed to play a more decisive role than we had expected. Although the researchers probed into distributed leadership phenomenon from the perspectives of organizational resources and individual agency, many participants underlined that how leadership was distributed was neither decided by the resources nor by school leaders' or teachers' choice, but by certain social norms and culture (Hartely, 2009). Hence, we supplemented Tian et al.'s (2016) resource-agency duality model by adding socio-cultural context as one key component of distributed leadership.

Regarding the social norms and culture, our empirical evidence pointed out that the face-saving culture and bureaucratic mentality in China tended to prevent mid-level lead teachers from openly challenging their principals' authority. By contrast, the social value of equity in Finland seemed to yield multiple power centers and a low power distance between the principal and teachers in the three Finnish schools. Representing different interest groups, teachers in different power centers constantly exercised their agency to balance the leadership resource distribution. The trust-based culture in the three Finnish schools, on the other hand, appeared to ease the power conflict between formal and informal leaders. From the data, we also found that the same artifact in different socio-cultural contexts distributed leadership in opposite ways. In the four Shanghai schools, teachers whose students excelled on standardized tests were valued and rewarded with better resources. The three Finnish schools, by contrast, used sample-based standardized tests to identify students with special needs and provide better resources to the teachers who worked with them.

For school leaders and teachers, being aware of one's socio-cultural context is vital in two respects. First, enacting distributed leadership may encounter some socio-cultural

norms, for instance the face-saving culture and bureaucratic mentality, which intrinsically advocate top-down leadership. In this case, there is a risk that distributed leadership becomes a camouflage under which formal leaders' power is extended through informal leaders (Collin et al., 2011). Second, if distributed leadership only stops at structures and the restructuring process and neglects cultures and the re-culturing process, it may lead to a new type of managerialism (Murphy et al., 2009). One example from the Type 1 structure revealed that restructuring leadership teams to enhance collective decision-making did not necessary change the dominant top-down decision-making culture. From the re-culturing perspective, the vice-principal in the Type 2 structure also underlined the reason why she avoided recruiting teachers who were used to being or working for top-down leaders.

With respect to the second research question: *How is power manifested in distributed leadership?,* we found power was pervasive when enacting distributed leadership in all three types of administrative structures. Unsurprisingly, legitimate power was manifested in the formal leadership positions in different tiers of a hierarchy (Collin et al., 2011). Especially in the hierarchical Type 1 structure, the higher the position one held, the more power one had. Through job descriptions, the spectrum of legitimate power was clearly defined. Notably, in addition to position-bound legitimate power, we also found power to be embodied in what Foucault (1980) called discursive practice. This means that, through verbal discourse and meaningful action, school leaders and teachers establish order and define accepted behaviors in a school through negotiation, persuasion, contestation, and resistance (Collin et al., 2011).

Using Collin et al.'s (2011) taxonomy, the present study identified at least three forms of discursive power: manipulation/trickster, competent authority, and rational argumentation/persuasion. In the Type 1 structure, by empowering the teachers, one Tier 3 leader manipulated the school pedagogical reform and used teachers' failure to suggest alternative pedagogical approaches to the principal. The Type 2 structure, on the other hand, allowed the teachers to negotiate their roles in various projects on the basis of their expertise. Using competent authority as power, the teachers resolved pragmatic tasks and cultivated themselves as human resources for the school. This conception of distributed leadership appeared to match what MacBeath (2005) called incremental distribution. In the Type 3 structure, one experienced teacher persuaded the principal to postpone the teacher exchange project in a crisis scenario. Supported by the culture of trust, rational argumentation was turned into discursive power to negotiate with the principal's legitimate power. Therefore, our study concludes that both legitimate and discursive forms of power exist in distributed leadership.

Theoretical and Practical Implications

This study offers the following implications for academic researchers, school practitioners, and policy makers. First, studying or enacting distributed leadership should account for both organizational and individual perspectives. This means that distributed leadership cannot solely serve organizational purposes by viewing individuals as resources. It is equally important to examine whether distributed leadership liberates or restrains an individual's agency in the work process. A misalignment between organizational resources and individual agency can give rise to power or interest conflicts.

Second, this study suggests that power in distributed leadership should be viewed from a broader perspective. At the organizational level, power is pervasive. It does not simply equate to position-bound legitimate authority, but rather to a network of social relations (Foucault, 1980). At the individual level, power is relational and multidirectional. School leaders and teachers should have open discussions on how organizational resources and individual agency produce various forms of power through the use of verbal discourse and meaningful action.

Third, researching distributed leadership at the school level should also account for its socio-cultural context. Besides organizational resources and individual agency, social values, norms, and cultures constantly shape school practitioners' conceptions of distributed leadership. This finding expands Tian et al.'s (2016) resource-agency duality model by adding socio-cultural context into the framework.

Notably, there is no one conception that encapsulates all the complexity of distributed leadership in practice. Conceptualizing distributed leadership, one has to take organizational resources, individual agency and socio-cultural context into consideration. Notwithstanding this fact, the present study may shed light on the transferability of distributed leadership in similar contexts. To a large extent, the Type 1 and 3 structures demonstrated many school administrative features in conventional Shanghai and Finnish schools. The findings about these two structures can shed light on similar cases. The Type 2 structure, as a special case, may not however be directly transferrable to other contexts. Nonetheless, it is equally essential for researchers, policy makers and practitioners to be aware of some alternative ways of enacting distributed leadership.

Looking into the future, we call for more empirical studies on distributed leadership in different socio-cultural contexts. Before policy makers advocate distributed leadership as an effective educational development strategy, more evidence is needed to reveal its benefits and potential challenges.

References

Battilana, J. (2006). Agency and institutions: the enabling role of individuals' social position. *Organization, 12 (5),* 653–676.

Bennett, N., Wise, C., Woods, P. A., & Harvey, J. A. (2003). *Distributed leadership: A review of literature.* Nottingham: National College for School Leadership.

Bush, T. (2013). Distributed leadership: the model of choice in the 21st century. *Educational Management Administration & Leadership, 41(5),* 543-544.

Caldwell, R. (2007). Agency and change: re-evaluating Foucault's legacy. *Organization, 14 (6),* 769–791.

Collin, K. & Herranen, S. (2016). *What kinds of aspects frame professional agency and creativity in information technology work?* Paper to be presented in OLKC-conference in St. Andrews, Scotland. 26.-29.4.2016.

Collin, K., Sintonen, T., Paloniemi, S. & Auvinen, T. (2011). Work, power and learning in a risk filled occupation. *Management Learning, 42,* 301-318.

Cousin, G. (2009). *Researching Learning in Higher Education, An Introduction to Contemporary Methods and Approaches.* Abingdon: Routledge.

Denzin, N. K. & Lincoln, Y. S. (Eds.) (1998). *Strategies of qualitative research*. London: Sage.

Elmore, R. F. (2000). *Building a new structure for school leadership.* Washington, D.C.: Albert Shanker Institute.

Eteläpelto, A., Vähäsantanen, K., Hökkä, P., & Paloniemi, S. (2013). What is agency? Conceptualizing professional agency at work. *Educational Research Review, 10,* 45–65.

Foucault, M. (1980). *Power/Knowledge: Selected Interviews and Other Writings 1972–1977.* London: Harvester Press.

Giorgi, A. (1994). A phenomenological perspective on some phenomenographic results on learning. *Journal of Phenomenological Psychology, 25,* 190-220.

Gronn, P. (2000). Distributed properties: a new architecture for leadership. *Educational Management Administration & Leadership, 28,* 317–338.

Gronn, P. (2008). Hybrid leadership. In Leithwood, K., Mascall, B. and Strauss, T. (eds), *Distributed Leadership according to the Evidence* (pp. 17–40). Abingdon: Routledge.

Gunter, H. M., Hall, D., & Bragg, J. (2013). Distributed leadership: A study in knowledge production. *Educational Leadership, Management & Administration, 41,* 556-581.

Harris, A. (2014). *Distributed leadership matters: Perspectives, practicalities, and potential.* Thousand Oaks, CA: Corwin Press.

Hartley, D. (2007). The emergence of distributed leadership in education. *British Journal of Educational Studies, 55,* 202–214.

Hartley, D. (2009). Education policy, distributed leadership and socio-cultural theory. *Educational Review, 61(2),* 139–150.

Hatcher, R. (2005). The distribution of leadership and power in schools. *British Journal of Sociology of Education, 26,* 253–267.

Heiskala, R. (2000). *Practices and structure. Towards constructionist synthesis of social theories [Toiminta, tapa ja rakenne. Kohti konstruktionistista synteesiä yhteiskuntateoriassa]*. Helsinki: Gaudeamus.

Henwood, K. L. & Pidgeon, N. F. (1992). Qualitative research and psychological theorizing. *British Journal of Psychology, 83(1),* 97–111.

Larsson, J. & Holmström, I. (2007). Phenomenographic or phenomenological analysis: does it matter? Examples from a study on anaesthesiologists' work. *International Journal of Qualitative Studies on Health and Well-being, 2(1),* 55-64.

Lincoln, Y. & Guba, E. (1985). *Naturalistic inquiry.* Beverly Hills, CA: Sage.

Lumby, J. (2013). Distributed leadership: the uses and abuses of power. *Educational Management Administration & Leadership, 41,* 581–597.

MacBeath, J. (2005). Leadership as distributed: A matter of practice. *School Leadership and Management, 25(4),* 349–366.

Marton, F. (1981). Phenomenography-describing conceptions of the world around us. *Instructional Science, 10(2),* 177-200.

Marton, F., & Booth, S. (1997). *Learning and awareness.* New Jersey: Lawrence Erlbaum Associates.

Marton, F., & Pong, W. Y. (2005). On the unit of description in phenomenography. *Higher Education Research and Development, 24(4),* 335-348.

Murphy, J., Smylie, M. & Seashore, L. K. (2009). The role of the principal in fostering the development of distributed leadership. *School Leadership & Management, 29(2),* 181-214.

Richardson, J. (1999). The concept and methods of phenomenographic research. *Review of Educational Research, 69(1),* 53-82.

Scribner, J., Sawyer, R., Watson, S., & Myers, V. (2007). Teacher teams and distributed leadership: A study of group discourse and collaboration. *Educational Administration Quarterly, 43(1),* 67–100.

Spillane, J. P. (2006). *Distributed leadership.* San Francisco, CA: Jossey-Bass.

Spillane, J. P., Halverson, R., & Diamond, J. B. (2001). Investigating school leadership practice: A distributed perspective. *Educational Researcher, 30,* 23-28.

Spillane J. P., Halverson, R., & Diamond, J. B. (2004). Towards a theory of leadership practice: A distributed perspective. *Journal of Curriculum Studies, 36(1),* 3–34.

Säljö, R. (1997). Talk as data and practice — a critical look at phenomenographic inquiry and the appeal to experience. *Higher Education Research & Development*, *16(2),* 173 - 190.

Tian, M., Risku, M. and Collin, K. (2016). A meta-analysis of distributed leadership from 2002 to 2013: Theory development, empirical evidence and future research focus. *Educational Management Administration & Leadership*, *44(1),* 146–164.

Uljens, M. (1996). On the philosophical foundations of phenomenography. In G. Dall'Alba, & B. Hasselgren (Eds.), *Reflections on phenomenography* (pp. 103-128). Göteborg: Actauniversitatis Gothoburgensis.

Woods, P. (2004). Democratic leadership: Drawing distinctions with distributed leadership. *International Journal of Leadership in Education, 7(1),* 3–26.

Youngs, H. (2009). (Un)critical times? Situating distributed leadership in the field. *Journal of Educational Administration and History*, *41(4),* 377–389.