The Link between Distributed Leadership and Educational Outcomes: An Overview of Research

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Abstract—School leadership is commonly considered to have a significant influence on school effectiveness and improvement. Effective school leaders are expected to successfully introduce and support change and innovation at the school unit. Despite an abundance of studies on educational leadership, very few studies have provided evidence on the link between leadership models, and specific educational and school outcomes. This is true of a popular contemporary approach to leadership, namely, distributed leadership. The paper provides an overview of research findings on the effect of distributed leadership on educational outcomes. The theoretical basis for this approach to leadership is presented, with reference to methodological and research limitations. The paper discusses research findings and draws their implications for educational research on school leadership.

Keywords—Distributed leadership, educational outcomes, leadership research.

I. INTRODUCTION

DISTRIBUTED leadership is generally used to refer to a situation where leadership in groups or organizations does not function as the monopoly of the individual but rather as shared functions among individuals. The term "distributed leadership" appears for the first time in psychology, where Gibb [1] drew attention to the dynamics of influence processes as they impact on the work of different groups. In education, the belief that leadership is best considered a group quality has gradually gained widespread acceptance. Harris, Leithwood, Day, Sammons and Hopkins [2] describe distributed leadership as "the leadership idea of the moment", while Peter Gronn [3] refers to distributed leadership as "the new kid on the block". A review of the educational administration literature suggests that the concept of distributed leadership has been embraced with enthusiasm by educational thinkers and academics.

Research on the effect of any form of school leadership on educational outcomes is limited. Robinson [4] draws attention to the fact that less than 30 of the published studies of educational leadership have investigated the link between leadership and student outcomes. The limited research on the topic does not allow for the informed promotion and/or adoption of leadership models and practices in education in that policy makers lack the evidence that can serve as the basis for the support of specific approaches to leadership. In this context, the present study attempts to evaluate the contribution of distributed leadership to educational effectiveness through the examination of its relationship to educational outcomes. The paper begins with a presentation of the theoretical framework of distributed leadership. This is followed by a discussion of research findings and an examination of important limitations relevant to the conceptualization and operationalization of the distributed leadership concept. The paper concludes with the implications for the study of distributed leadership in education.

II. DISTRIBUTED LEADERSHIP: THE THEORY

Two popular interpretations of distributed leadership theory are found in the work of James Spillane and Peter Gronn. Spillane, Halverson and Diamond [5] refer to leadership as distributed practice. Spillane [6] draws on work in cognitive psychology emphasizing distributed cognition and the role of the social context as an influence on human learning and behavior. In organizations, both formal and informal groups are believed to constantly interact, resulting in shared patterns of communication, learning and action. In this framework, distributed leadership emerges as a shared practice by individuals seeking to address organizational issues and problems. At the school, teachers may be considered to engage in distributed leadership practice when, for instance, they collaborate in an attempt to take action regarding specific problems.

A distributed perspective can be viewed as a conceptual framework for investigating school leadership and management. It involves two aspects: the leader-plus aspect (who) and the practice aspect (how) [6]. The leader-plus aspect acknowledges that the work of leading schools involves multiple individuals and is not restricted to those at the top of the organizational hierarchy or those assigned formal leadership duties. In this framework, leadership practice is the outcome of the interaction of school leaders, followers, and their situations [7]. Consequently, the distributed view of leadership is responsible from a shift of focus in that the emphasis is no longer on school principals and other formal and informal leaders but on a web of stakeholders and their situations.

Gronn [8] suggests that the distributed perspective introduces a dynamic understanding of leadership according to which leadership is no longer individually conceived. He argues against traditional approaches to leadership based on the assumption of the superiority of the leader and the

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dependence of followers on leaders. A new perspective of leadership is proposed grounded in a theory of action. According to Gronn [3, p. 325], a distributed view of organizational activities and tasks is linked to a new form of the division of labor in organizations, in which "the authorship and the scope of the activities to be performed have to be redefined to encompass pluralities of agents whose actions dovetail or mesh to express new patterns of interdependent relations."

Gronn [9] distinguishes between two forms of distributed leadership, namely, "additive" and "holistic". Additive forms of distribution refer to an uncoordinated leadership pattern, in which many different people may engage in leadership practices without taking into account the leadership activities of others in the organization. Holistic leadership refers to consciously existing and managed collaborative patterns involving some or all leadership sources in the organization. This form of distributed leadership assumes that the sum of the work performed by leaders adds up to more than the parts and that there are high levels of interdependence among those engaged in leadership.

In an attempt to arrive at a taxonomy of distributed leadership, Gronn [10] focuses on working relations and practices. The taxonomy is based primarily on a distinction between co-performed work and collectively performed work and on the type of concertive action (intuitive working relations versus institutionalized practices). More recently, Gronn [11] has suggested that leadership in some situations is "hybrid" rather than truly distributed. He uses the term hybrid to refer to the mix of solo, dyadic, triadic and team leadership groupings that occur in some schools and acknowledges that there may be highly influential individuals working in parallel with collectivities [11].

Both Spillane's and Gronn's accounts of distributed leadership are descriptive in that they attempt to provide a coherent conceptual base for this idea of leadership. However, the unit of analysis is not the same [12]: Spillane, Halverson and Diamond [5, p. 9] refers to "actors in situations working with artifacts", while Gronn [10, p. 24] considers his unit of analysis to refer to "the idea of a bounded set of elements comprising the entity which is the focus of research." This is an indication of important differences in the approaches of different authors to distributed leadership. In general, "distributed leadership" has been assigned different meanings in the literature [13, 14], with the term being often used to refer to any type of collaborative and/or shared leadership activity [2]. One difference in the descriptions or accounts of distributed leadership found in the literature concerns its relationship to transformational leadership. As noted by Timperley [12, p. 397], one important issue concerns the question of "whether one is a sub-set of the other, and if so which is a sub-set of which."

III. THE RESEARCH EVIDENCE

Research on distributed forms of leadership is still at its early stages [7]. Even though research suggests that distributed leadership is more likely to have a positive impact on student achievement/outcomes than traditional, top-down forms of leadership [3, 5], the available empirical evidence is not sufficient. In this section, we discuss the findings of a small number of studies which have attempted to link distributed leadership to educational outcomes.

The effect of distributed leadership on student outcomes has not been adequately explored in the literature. In a discussion of the evidence regarding the relationship between distributed leadership and organizational outcomes, Harris, Leithwood, Day, Sammons and Hopkins [2] draw attention to two studies of the effects of leadership on student outcomes, the study by Leithwood and Jantzi [15, 16] in Canada and the study by Silins and Mulford [17] in Australia. Leithwood and Jantzi [15, 16] examined the effect of principal and teacher leadership on student engagement with school based on the analysis of survey data from a sample of 1762 teachers and 9941 students in a large Canadian district. They found that principal sources of leadership had larger effects on student engagement than teacher sources of leadership. The authors reported nonsignificant negative effects of collective leadership on students.

In another study, Leithwood and Mascall [18] investigated the effects of collective leadership on student achievement. Collective leadership was conceptualized and operationalized as 'a form of distributed influence and control'. The teacher data consisted of 2570 survey responses from teachers, while student achievement data in language and mathematics were obtained through school web sites. Collective leadership was found to explain significant variation in student achievement across schools, with the effect of collective leadership most strongly linked to achievement through teacher motivation. Schools with students in the highest 20% achievement category reported most sources of collective influence to be considerably more influential. Leithwood and Mascall [18] pointed to differences in the findings between this and earlier studies and attributed these differences to the choice of mediating variables in the investigation of leadership effects on student outcomes.

Another important study was conducted in Australia by Silins and Mulford [17]. They examined leadership effects on student learning outcomes based on survey data collected from over 2500 teachers and 35000 15-year old Australian high school students. They reported that student outcomes were more likely to improve when leadership sources were distributed throughout the members of the school community and when teachers felt empowered in relation to issues they considered important. Their research provides additional evidence in support of an indirect effect of school leadership on outcomes, pointing to the complexity of the processes through which distributed forms of leadership have an impact on student learning outcomes.

It is also important to acknowledge the contribution of "The Distributed Leadership Study", a collection of research projects undertaken in U.S. schools to investigate distributed leadership practice. This four-year longitudinal study focused on 13 elementary schools in Chicago and drew attention to the

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importance of the school rather than the individual leader as the most appropriate unit for the development of leadership expertise [19, 5]. Spillane and Zoltners Sherer [19] found a link between distributed leadership practice in elementary schools and an improvement in the quality of teaching and learning in certain subjects.

In smaller studies, Harris and Muijs [20] reported positive relationships between the extent of teachers' involvement in decision-making, and student motivation and self-efficacy. Their research suggested that more distributed forms of leadership had a positive impact on student engagement. Moreover, Harris [21], based on case studies, arrived at findings in support of the positive effects of distributed leadership. Specifically, her findings pointed to a positive impact of distributed practices of leadership on organizational and individual learning.

In addition to attempts to investigate the link between distributed leadership and student outcomes, a small number of studies have focused on the link between distributed leadership and other educational outcomes. For instance, Mascall, Leithwood, Straus and Sacks [22] examined the relationship between distributed leadership and teachers' academic optimism. They collected data from 1640 elementary and secondary teachers in Ontario through an online survey. According to their findings, there was a significant association between planned approaches to the distribution of leadership and high levels of academic optimism. In contrast, unplanned and unaligned approaches to the distribution of leadership were negatively associated with low levels of academic optimism. In another study, Hulpia and Devos [23] explored the link between distributed leadership and teachers' organizational commitment through semi-structured interviews with teachers. They found that teachers were more committed to the school when school leaders were highly accessible and encouraged their participation in decision making.

The results presented above provide an indication of a positive link between distributed leadership and educational outcomes. However, systematic research into the topic remains limited; thus, more evidence is necessary in order to assess the effect of more distributed patterns of leadership on educational outcomes. Moreover, it is necessary to address important limitations and weaknesses linked to the conceptualization and study of distributed leadership. The most important of these are outlined below.

IV. LIMITATIONS AND WEAKNESSES

Despite its widespread use in studies of educational leadership, the concept of distributed leadership remains unclear, with different definitions found in the literature. Mayrowetz [13] identifies the following four common usages of the term "distributed leadership" and discusses the strengths and weaknesses of each. The first usage is linked to the theoretical approach advocated by Gronn and Spillane, who use the term to examine the activity of leadership, drawing on other areas of social science. In the second usage, distributed

leadership is linked to the promotion of democratic ideals while in the third, it is presented as a way to improve organizational efficiency and effectiveness since the distribution of leadership practice allows for the utilization of multiple sources of knowledge and expertise. The fourth usage presents distributed leadership as the means to advance human capacity building in the organization, through its emphasis on the development of individual skills and abilities associated with participation in leadership activity. Mayrowetz [13, p. 432] points to the need for "a shared, theoretically informed definition of distributed leadership that is well connected to the problems of practice that this field engages, specifically school improvement and leadership development." Even though some definitions can serve this purpose better than others (e.g. the view of distributed leadership as human capacity building), the research evidence is not sufficient to support the link between this form of leadership and school improvement.

The lack of a clear approach to the definition of distributed leadership has been highlighted by other authors. According to Harris, Leithwood, Day, Sammons and Hopkins [2, p. 338], the term is conveniently used to provide a description of "many types of shared or collaborative leadership practice." They also note that distributed leadership has been used in the literature to refer to the opposite of hierarchical leadership and has been linked to "bossless" or "self-managed" groups. Moreover, Robinson [4] identifies two main alternative conceptions of distributed leadership: "distributed leadership as task distribution" and "distributed leadership as distributed influence processes." Thus, there appears to be little agreement in the literature regarding the meaning of the term. In fact, it is debatable whether, as Timperley [12, p. 396] claims, "one point on which different authors appear to agree is that distributed leadership is not the same as dividing task responsibilities among individuals who perform defined and separate organizational roles."

The different approaches to the definition of distributed leadership have implications for research on the topic. Differences in the definition of the term can be linked to differences in its operationalization and measurement. Thus, findings of different studies may not be comparable if authors use different variables to conceptualize distributed leadership practices. Consequently, the findings from the few available studies on the effects of distributed leadership on educational outcomes may not provide us with a reliable indication of its role in promoting certain outcomes and/or behaviors at the school unit. In the case of transformational leadership, the development of a research instrument (Multifactor Leadership Questionnaire) has promoted research on the topic in different countries by providing a common basis for the collection and analysis of data. A comparable research tool is lacking in the case of distributed leadership even though attempts have been made to develop an appropriate instrument [24].

An additional concern relates to the extent to which certain assumptions linked to distributed leadership theory are valid. For instance, it has been widely assumed that distributed leadership is good leadership even though this is not

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necessarily the case. A lot depends on the quality of distributed leadership as well as on the method and purpose of its distribution [2]. As suggested by Timperley [12, p. 417], "distributing leadership over more people is a risky business and may result in the greater distribution of incompetence." In addition, the distribution of leadership in organizations has been linked to inefficiencies stemming from a larger number of leaders and disagreements over aims and priorities [2]. Moreover, teacher leaders may not command the respect of formal leaders which may in turn lead to them being questioned and dismissed [12]. It is also possible that, contrary to popular assumption, teachers may not always desire their involvement in leadership practices. The literature on teacher participation in decision making suggests that this may very well be the case since teachers appear not to expect or desire their involvement in all decisions [25].

In summary, the weaknesses discussed above point to several limitations applicable to the interpretations of distributed leadership found in the literature. The most important limitations include conceptual and definitional issues, research and measurement issues, and the validity of underlying assumptions. These limitations are further exacerbated by the lack of sufficient empirical evidence on the effects of distributed leadership on educational outcomes.

V. IMPLICATIONS

The review of the literature on distributed leadership has certain implications for future research. First, it is important that the conceptual and methodological challenges associated with this form of leadership be addressed. Even though it may be impossible to arrive at a "universal usage" of distributed leadership [13], research on the outcomes/effects of such leadership should be guided by a common understanding of what is meant by the distribution of leadership. This is necessary in order to ensure that findings are comparable and can be used to build a reliable evidence base which can in turn inform policy and practice. Second, the overview of the literature points to a tendency to focus exclusively on the theoretical foundation of distributed leadership, detaching it from practice. For instance, the relationship between distributed leadership and democratic leadership has intrigued scholars [see, for example, 11]. Even though the refinement of the conceptual base of distributed leadership requires the exploration of its links with other conceptual domains, the key question for any leadership model remains whether a specific approach to leadership can contribute significantly to student outcomes. Consequently, more evidence is needed on the effect of distributed leadership on student outcomes.

Finally, more evidence is needed on the role of mediating variables in the effects of leadership on school outcomes. Earlier research on the effects of leadership on outcomes generally finds them to be indirect through actions that school leaders take to influence the situation at the school and the classrooms [26]. Thus, the nature of the relationship between leadership and educational outcomes makes it necessary to identify those intervening variables that are likely to have an impact on student performance. For, a better understanding of the relationship between leadership and school variables will facilitate educational initiatives that can support and empower leaders in their attempt to successfully promote innovation and effectiveness at the school unit.

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