The role of district leaders for organization social capital

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Abstract

Purpose – Although it is assumed that school district governance by districts leaders can impact schools' capacity to improvement and educational quality, there is little systematic evidence to support this claim. The purpose of this paper is to discuss how governance goals and interventions affect school districts' social capital.

Design/methodology/approach – The empirical enquiry used quantitative data on district leaders enacting governance as perceived by their school principals. These data were collected among 399 school principals of 23 Dutch school districts in elementary education, using a survey. Social network data on social capital within school districts were collected using a social network survey among educational administrators (i.e. district leaders, central office administrators and school principals). Additionally, examples of the relation between school district social capital and governance at six school districts were described.

Findings – Results suggest that district leaders can promote the organizational social capital of their school districts through focusing on educational goals. In addition, the findings show that they can reinforce their impact by using interventions varying in coercion level, of which offering support to school principals appears to be "a golden button" to make organizational social capital thrive.

Research limitations/implications – Limitations to the study are the generalizability of the findings (they can be questioned because "convenience sampling" was used) and warrant a longitudinal design to examine how organization social capital develops over time.

Originality/value – The study is unique as it addresses the impact district leaders may have on their districts' social capital by focusing on social network approach in the study of school district governance.

Keywords Mixed methods, Social network analysis, School districts, District governance, District leaders, Organization social capital

Paper type Research paper

1. Introduction

In many educational systems around the world, the responsibility for high-quality elementary education is increasingly placed in the hands of school district leaders (superintendents) at central offices. In the Netherlands, where this study takes place, the final responsibility for student achievement and school improvement has long been in the hands of school principals, and even when a central office was established, its role was mostly restricted to providing support services such as personnel administration, finance and logistics to often regionally organized clusters of schools. In that role, district leadership has long been conceptualized as a political-administrative environment (i.e. Delagardelle, 2008; Hofman *et al.*, 2002).

However, throughout the years, central offices have grown not only in numbers, but also in size and in responsibilities. Nowadays, it is often not the school principal, but the school district leader (and his/her team) at a central office who is ultimately and legally responsible for the district's quality of education, thereby extending its task to include instructional support for school improvement and increased student achievement (Honig *et al.*, 2010; Hooge and Honingh, 2014). This significant shift in responsibility, from principal to central office, is placing increasing demands on district leaders' skills to include not only organizational leadership skills, but also a growing focus on instructional leadership (Coburn *et al.*, 2009; Coburn and Russell, 2008; Honig *et al.,* 2010; Rorrer *et al.*, 2009; Spillane and Thompson, 1997). Following this shift, school districts are increasingly studied as governance sites that aim to increase educational effectiveness and school improvement (i.e. Childress *et al.*, 2007; Hofman *et al.*, 2002; Land, 2002; Leithwood and Azah, 2017).

The concept of governance has been widely used in different social science disciplines, such as economics, sociology, political science and public administration. Some scholars define governance as a process of regulating and stimulating "collective action […] to achieve some commonly accepted goals" is emphasized (Torfing *et al.*, 2012, p. 14). Other definitions conceive governance as moving organizations and society "in one direction or another not by controlling (but) rather by agenda-setting, bringing together different layers of society, negotiating, and facilitating" (Denhardt and Denhardt, 2000, p. 5). Although there is no universal definition of governance, there appears to be a broad international consensus that governance is affiliated with "authority," "decision-making" and "accountability" (Institute on Governance, 2018). In order for organizations to achieve goals and move toward improvement, governance is enacted by setting direction and using interventions as modes of governance (Kooiman, 2003; McAdams, 2006). In this study, we therefore operationalize school district governance as district leaders focusing on educational goals and using goal-directed interventions to achieve school district goals.

Yet, detailed insights in the paths through which district leaders can contribute to enhancing organizational and student outcomes are limited. It is widely acknowledged that district leaders can affect schools' educational quality and student achievement (De Witte and Schiltz, 2018), yet, this impact is by no means straightforward (i.e. Honig, 2006; Honig *et al.*, 2010; Leithwood and Azah, 2017; Saatcioglu *et al.,* 2011). Rather, district leaders appear to influence educational practice and outcomes indirectly, as school districts are notably complex organizations in which effects of governance trickle down "through several layers of implementation" (Saatcioglu *et al.,* 2011, p. 2). To better understand how governance takes place, several scholars have recently suggested to analyze districts' informal organizational structure and the supportive role social relationships ("social capital") between educational administrators (district leaders, central office administrators, school principals, assistant principals) through which governance may ultimately impact student achievement (Coburn and Russell, 2008; Coburn *et al.*, 2009; Finnigan and Daly, 2010; Honig and Coburn, 2008).

However, what has been hidden from our view is the way in which this social capital may be affected by district leaders enacting governance. Therefore, the research question guiding this paper is:

RQ1. To what extent do governance goals and interventions affect school districts' social capital as assessed by the pattern of social relationships among school administrators?

We will present a quantitative study, building on quantitative and social network data collected in 481 schools in 23 Dutch elementary school districts. We will build on theory on school governance and social capital theory to conceptualize the relationships under study.

2. Theoretical perspective

School district governance

We examine how, to improve school districts, district leaders enacting two modes of governance may stimulate relationships between educational administrators to reinforce the coherence of alignment in the entire school district and work toward school improvement. The first mode is providing a clear direction by focusing on educational goals. Focusing on educational goals is a key factor in effective school district governance (Hooge and Honingh, 2014; Land, 2002; Leithwood and Azah, 2017), as it enables district leaders to act as "sense givers" and to "manage meaning" for active interpretation and enactment to the level of educational practice (i.e. Coburn *et al.*, 2009; Honig and Coburn, 2008). In order to improve the quality of education, district leaders should focus on goals that matter most. In this study, we identify three different educational goals, namely:

(1) goals for math and language proficiency (the basic standards, reflective of the minimal requirement as set by the Dutch Inspectorate of Education);

(2) goals for teaching and learning processes (i.e. teaching strategies, classroom social climate and academic learning time); and

(3) broader learning goals (i.e. student's social-emotional development, civic education, or personalized learning).

Setting educational goals may stimulate moving (groups of) central office administrators and school principals in a specific direction, and support them to aim at specific educational objectives. Yet, goal setting may be necessary, but not sufficient, condition for effective school district governance (see: McAdams, 2006).

A second mode is the use of goal-directed interventions. Goal-directed interventions can be seen as formal rules and regulations, such as consequences when goals are not being met, but also as forms of support or pressure. Interventions are needed as forms of action to implement goals and give them shape in practice (Kooiman, 2003; Rhodes, 1997). Using goal-directed interventions to move schools toward improvement is often referred to as "steering" or "the process of governing" (Kooiman, 2003). These interventions can vary in coercion-level: from empowerment and support to rewarding, pressure, and penalization (McAdams, 2006; Zehavi, 2012). In this study, we conceptualize three goal-directed interventions that differ in level of coercion:

(1) offering support (i.e. providing advice on professional development or the quality of education);

(2) exerting pressure (i.e. making clear arrangements with school principals to guarantee the quality of education); and

(3) taking special measures/sanctions (i.e. sanctioning and rewarding school principals, based on quality assessment).

Social capital

For governance to affect educational outcomes, district leaders need to build and have access to a web of social relationships between central office administrators and school principals through which district policy can "trickle down" to influence educational practice (Daly and Finnigan, 2011). Yet, at the same time, this web of social relationships may be affected by the governance actions enacted by school district leaders (e.g. exerting pressure or placing a school "under sanction"). To understand how governance may be related to patterns of social relationships, we use social capital theory.

The social capital theory posits that social relationships provide access to resources, such as advice, support and information, which can be exchanged, borrowed and leveraged in order to achieve individual and collective goals (Bourdieu, 1986; Burt, 2000; Putnam, 1993, 2000). Based on the conceptualization of social capital as including both the structure of the relationship networks and the resources that can be assessed through these networks, Nahapiet and Ghoshal (1998) have defined social capital as "the sum of the actual and potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or social unit. Social capital thus comprises both the network and the assets that may be mobilized through that network" (Nahapiet and Ghoshal, 1998, p. 243). By reflecting the valuable sources that exist in social relationships among linked individuals, social capital is equivalent to financial, human or intellectual capital, in which money, manpower or intellectual resources are the valuable assets.

Many scholars have argued that social capital can be an important source for organizational advantage by facilitating the flow of information between individuals and overcoming problems of coordination both within organizations and between organizations (e.g. Adler and Kwon, 2002; Cross and Parker, 2004; Fredette and Bradshaw, 2012; Tsai and Ghoshal, 1998; Walker *et al.*, 1997). Research has shown that social capital can contribute to the performance and innovation of organizations by adding significantly to value creation (Katzenbach and Smith, 1993; Lawler, 1992; Reagans and Zuckerman, 2001; Szulanski, 1996; Tsai and Ghoshal, 1998). Although social capital may promote higher levels of performance, it also may reduce flexible organizational response and limit the introduction and exchange of novel information due to stability of social relationships (Burt, 1992; Hannan and Freeman, 1984). Studies conducted in educational settings have suggested that the pattern of relationships among educators in schools matters for school improvement (Coburn and Russell, 2008; Datnow, 2012; Moolenaar *et al.*, 2010), instructional practice and student achievement (Moolenaar, 2010; Penuel *et al.*, 2012; Pil and Leana, 2009; Yasumoto *et al.,* 2001).

To explore organizational social capital, social networks are often used to assess the structure and the content of relationships among actors within a system (Leana and Pil, 2006; Nahapiet and Ghoshal, 1998). To examine the content that is transferred through the network, a distinction can be made between instrumental (work-related) and expressive (personal, affective) social networks (Finnigan and Daly, 2010, 2012; Ibarra, 1993; Moolenaar *et al.*, 2010). In this study, we focus on both work-related relationships ("From whom do you seek advice") as well as personal relationships ("With whom do you engage in more personal conversations") as governance by district leaders may affect both types of relationships.

School district governance and social capital
Although research has shown that focusing on educational goals and using goal-directed interventions by district leaders are effective governance modes (Hooge and Honingh, 2014; Land, 2002; Leithwood and Azah, 2017), little is known about how these modes affect the pattern of social relationships among educational administrators. Since district governance is a knowledge intensive and interpersonal process involving sense making and co-construction (Coburn *et al.*, 2009; Honig and Coburn, 2008; Paavola *et al.*, 2004), "a high frequency of information sharing and exchange among members is likely to improve effectiveness and the collective capability to achieve results" (Saatcioglu *et al.,* p. 7). Promoting the flow of resources in the school district at all levels may therefore reinforce the translation of district governance into practice.

Previous research has shown that school leadership has an impact on the web of social relationships in which teachers exchange knowledge and information (März *et al.*, 2018; Moolenaar *et al.*, 2010; Tuytens *et al.*, 2018). Similarly, studies into the role of school districts

in supporting reforms have indicated that district leadership affects social networks of school leaders and the way these leadership networks facilitate or inhibit change efforts (Daly and Finnigan, 2011, 2012). Based on these findings, we argue that the more district leaders enact governance (i.e. focusing on educational goals and using goal-directed interventions), the more educational administrators in the school district will be involved in work-related and personal relationships, thereby strengthening the district's social capital. By focusing on educational goals that are closely aligned with administrators' daily practice (such as goals for math and language, or goals that pertain specifically to teaching and learning processes), district leaders will foster interactions among district administrators to discuss these issues. In addition, when district leaders use "soft" interventions, such as offering support to administrators to tackle issues, they may stimulate interactions among administrators to a greater extent than when they use interventions that are stricter, such as taking special measures (sanctioning) or exerting pressure. Moreover, the use of "soft" interventions will even reinforce the impact focusing on goals have on the pattern of social relationships among educational administrators. In contrast, enacting governance by focusing on educational goals may be less effective when district leaders use more strict goal-directed interventions, such as exerting pressure. We, therefore, assume that the relation between focusing on goals and the resulting patterns of social relationships within the school district may be negatively or positively mediated by goal-directed interventions, depending on the type of goal-directed interventions used.

3. Context

Dutch school district leaders are responsible for the districts' strategic direction and educational quality, providing an accountability structure that addresses the needs of the school districts' stakeholders and local communities (Hooge and Honingh, 2014; Claassen *et al.*, 2008). District leaders monitor and evaluate school improvement, and support and challenge improvement processes at all levels of the district organization. District leaders hire the school's managerial staff and make decisions about the school's management alongside the principals (Center on International Education Benchmarking, 2014). Dutch school districts that run two schools or more[1] are managed by one or two district leaders who are professional managers in the sense that they are qualified for this full-time paid job. They are recruited and appointed by the school district supervisory board (a non-executive board), which acts as their employer. School districts usually have a central office with human resource management, financial and educational administrators.

Compared internationally, Dutch school districts have an unprecedentedly high degree of autonomy: 85 percent of the decisions are taken by school boards and only 15 percent by the central government (OECD, 2012). Autonomy for Dutch school districts concerns the allocation of resources, personnel matters, infrastructure of buildings and curriculum and assessment. There is no standard national curriculum, but all districts must set time allocations and attainment targets. School districts are free to decide on the academic content, methods of teaching and pedagogical approach, as long as the standard achievement goals are reached at the end of elementary school and students are well prepared to pass the nationwide standard final exams.

About one-third of Dutch elementary schools are public schools that are publicly funded. About two-thirds of Dutch elementary schools are independent (i.e. privately run, mostly based on religious, ideological, or educational convictions). Yet, these schools are also publicly funded with equal financial footing to public schools. School districts in the Netherlands are not organized based on geographical criteria or catchment areas, but schools traditionally organize themselves in school districts based on religious, ideological or educational principals. They vary in size: almost half of the school districts in elementary education (47 percent) run only a single school, a third of the school districts (31 percent) run

2 to 10 schools, and a fifth of the school districts (22 percent) run more than 10 schools, with the largest school district governing about 75 elementary schools. (Center on International Education Benchmarking, 2014).

4. Design and methods
Design
Our empirical enquiry used quantitative data on district leaders enacting governance as perceived by their school principals. These data were collected among 399 school principals of 23 Dutch school districts in elementary education, using a survey. Social network data on social capital within school districts were collected using a social network survey among educational administrators (i.e. district leaders, central office administrators and school principals). Additionally, examples of the relation between school district social capital and governance at six school districts were described.

Sample
In order to obtain a sufficient response rate, we used "convenience sampling": the researchers knew the majority of the approached district leaders in person via executive education programs, conferences, or consultancy projects. Ultimately, 23 school districts agreed to participate (17 independent, 6 public), about evenly distributed across urban, urban fringe, and rural regions. The total sample consisted of 33 district leaders (many school districts had a team of two district leaders), 58 central office administrators and 399 principals.

Additionally, six school districts were selected out of the 23 school districts participating in the study to illustrate the relationships between school district social capital and governance. To select these schools, we used extreme case sampling on the basis of the scores on the variable "offering support" (see below section measurement) assuming that this type of goal-directed intervention will affect school districts' social capital directly. Accordingly, the three school districts (Anima, Celsus, Sapiens) with the highest scores on this variable and the three school districts with the lowest scores (Forum, Ante, Tempus) were selected (see Appendix 1). By using extreme sampling, we expected to find variation in the dependent variable school districts' social capital as assessed by the pattern of social relationships. This variation offers illustrative examples from the six cases, obtained through interviews with district leaders, central office administrators and school principals.

Measurements
To assess the extent to which district leaders focus on different educational goals and use goal-directed interventions varying in level of coercion, a survey among school principals was used in order to prevent self-report bias of school district leaders (Devos *et al.,* 2013). Focusing on goals was measured using 13 items selected from a questionnaire which was validated in a previous pilot-study (Hooge and Janssen, 2013). The items were to be scored on a five-point scale, ranging from 1 (strongly disagree) to 5 (strongly agree). Factor analysis (PCA) with direct Oblimin rotation provided evidence that the 13 items contributed to a three-factor solution, explaining 73.8 percent of the variance. Factor 1 represents focusing on goals for math and language proficiency ($\alpha = 0.91$; mean inter-item correlation $= 0.72$), Factor 2 represents focusing on goals for teaching and learning processes ($\alpha = 0.90$; mean inter-item correlation $= 0.59$) and Factor 3 represents focusing on broader learning goals ($\alpha = 0.87$; mean inter-item correlation $= 0.68$). The internal consistencies (Cronbach's α) indicated that all scales had a good reliability (George and Mallery, 2003).

The variable using goal-directed interventions by the school district was assessed by using 11 items from an existing validated questionnaire (Hooge and Janssen, 2013). The items were to be scored on a five-point scale, ranging from 1 (strongly disagree) to 5

(strongly agree). Factor analysis (PCA) with direct Oblimin rotation showed that the items contributed to a three-factor solution explaining 62.6 percent of the variance. The items that cluster on one component suggested that Factor 3 represents offering support ($\alpha = 0.72$; mean inter-item correlation $= 0.40$), Factor 1 represents exerting pressure ($\alpha = 0.83$; mean inter-item correlation $= 0.55$), and Factor 2 represents taking special measures/sanctions ($\alpha = 0.66$; mean inter-item correlation $= 0.40$). The internal consistencies (Cronbach's α) indicated that the scales had acceptable (taking special measures/sanction) to good reliabilities (exerting pressure and offering support) (George and Mallery, 2003).

Social network survey. To map social capital as assessed by the pattern of social relationships, we used a social network survey. Making a distinction between instrumental and expressive social networks, all district leaders, central office administrators and school principals were asked to answer two social network questions. To delineate the instrumental network, we asked "Whom do you ask for advice?" To delineate the expressive network, we inquired: "With whom do you have more personal conversations?" A list of all the educational administrators (including principals, central office administrators, and district leader(s) per school district was attached to the survey comprising their names accompanied by a letter combination for each person (i.e. Ms. Yolanda Brown $=$ AB). Only unique letter combinations were used. A binary rating scale was used: the respondents could indicate a person by answering the letter combination of the intended person, and as many persons as they wanted. We took a saturated approach (Scott, 2000), which means that respondents can choose from a fixed list of possible actors in the network. This approach generates a higher response rate and more complete and valid data than an unsaturated approach (Finnigan and Daly, 2010).

Data analysis
We analyzed the survey data using descriptive analyses, correlational analyses and multiple regression analyses. Only when the independent variables (focusing on educational goals) significantly correlated with the dependent variables (work-related advice and personal conversations), as well as with the mediator (using goal-directed interventions), mediation analyses have been carried out by means of the bootstrapping method (MacKinnon and Lockwood, 2008; Preacher *et al.*, 2010). The 95 percent reliability interval of the indirect effects has been estimated with 5,000 bootstrap samples (Preacher *et al.*, 2010).

By using social network analysis, we systematically mapped patterns of the instrumental and expressive social networks within the school district. The pattern of social relationships can be described at the district level in terms of density (i.e. the actual number of relationships present among administrators in the district relative to the number of potential relationships), and in terms of centralization (i.e. the extent to which a single person "dominates" the administrators' network). Moreover, the pattern of social relationships can be described at the individual level in terms of out-degree (i.e. the number of colleagues the focal administrator turns to for advice or personal conversations) and in-degree (i.e. the number of colleagues that turn to the focal administrator for advice or personal conversation). We used In-degree and Out-degree measures to map "Whom do you ask for advice?" and "With whom do you have more personal conversations?" by means of UCINET including Netdraw (Borgatti *et al.*, 2002).

5. Results
Descriptive findings
Before answering our research question, we first provide descriptive findings of district leaders enacting governance by focusing on educational goals and using goal-directed interventions, as perceived by their school principals. This is followed by a description of

the district social networks (as measured by seeking work-related advice and personal conversations) of all educational administrators within the school district (including school principals, central office administrators and district leaders).

Educational goals and interventions
In Table I the means and standard deviations of the different educational goals that district leaders set for schools and the type of interventions they use, as perceived by their school principals, are reported. District leaders primarily tend to focus on goals for math and language proficiency and for teaching and learning processes to a large degree (respectively 4.01 and 3.85 on average on a five-point scale). District leaders seem to focus on goals related to broader learning outcomes to a lesser extent (3.00 on average on a five-point scale). Paired *t*-tests showed that these differences were significant ($p < 0.001$). District leaders also tend to offer support and exert pressure to a larger extent (respectively 4.02 and 4.14 on average on a five-point scale) than to take special measures/sanctions (2.69 on average on a five-point scale). Paired *t*-tests showed that these differences are significant ($p < 0.001$).

The examples from the six school districts deepen these findings about the different educational goals that district leaders set for schools, and the interventions they used (see Tables II and III). Apparently, at four school districts the district leaders focused on educational goals aimed at math and language proficiency, taking the minimal standards of the Dutch Inspectorate of Education as the norm (see Table II). Only the forum school district takes its own district standards as the norm. At the Tempus district the district leader set no

	Mean	SD	Min.	Max.
Focusing on educational goals				
For Math and language proficiency	4.01	0.94	1.00	5.00
For teaching and learning processes	3.85	0.82	1.00	5.00
Broader learning goals	3.00	1.01	1.00	5.00
Using goal-directed interventions				
Offering support	4.02	0.69	1.25	5.00
Exerting pressure	4.14	0.72	1.50	5.00
Taking special measures/sanctions	2.69	0.81	1.00	5.00
Note: $n = 399$				

Table I.
District leaders focusing on educational goals and using goal-directed interventions, as perceived by their school principals

School district	Focusing on educational goals by (the) district leader(s)
Anima	Minimal standards of the Education Inspectorate are the norm, target is 20% of the schools achieving the highest level of excellence. Broader learning goals concerning cultural and technical education are set at the school district
Celsus	Requirements with respect to teaching and learning processes, schools must meet the minimal standards of the Education Inspectorate. It is up to the school principals to set more ambitious and/or broader learning goals
Sapiens	Minimal standards of the Education Inspectorate are the norm, higher ambitions are set for the long term. No broader learning goals are set
Forum	School district standards concerning learning outcomes are the norm. No broader learning goals are set
Ante	Minimal standards of the Education Inspectorate are the norm. It is up to the school principals to set more ambitious and/or broader learning goals
Tempus	Minimal standards of the Education Inspectorate are the norm. No goals are set by the district leader

Table II.
Description focusing on educational goals by (the) district leader(s) per school district (illustrative cases)

School district	Using interventions by (the) district leader(s)
Anima	Mainly offering support in the sense of encouraging, challenging, facilitating and empowering school principals. If pressure is exerted, the district leader engages in a dialogue with school principals, monitors and evaluates
Celsus	A deliberately balanced mix of offering support, exerting pressure and undertaking measures. Offering support by means of providing coaching, consultancy or training. A way to exert pressure is calling school principals to account for the accomplishment of goals. Measures/sanctions are taken if necessary, e.g. demotion or dismissal of school principals
Sapiens	A deliberately balanced mix of offering support, exerting pressure and undertaking measures. Offering support by means of providing coaching, consultancy or training. Ways to exert pressure are closely monitoring school principals and opening up the dialogue to third (external) parties. Measures/sanctions are taken if necessary, e.g. demotion or dismissal of school principals
Forum	Low usage of interventions, only new school principals are offered support. District leaders are relying on school principles. If measures/sanctions such as demotion or dismissal of school principals are taken, it is at late stage
Ante	A deliberately balanced mix of offering support, exerting pressure and undertaking measures. Mainly offering support by means of fostering leadership and capacity at the schools. Only if necessary pressure is exerted and measures/sanctions are taken, in various ways
Tempus	Low usage of interventions. Support is offered by enabling school principals to hire external consultancy. If the educational quality at the schools turns out to be inadequate or substandard, measures/sanctions such as demotion or dismissal of school principals are taken at late stage

Table III.
Description of using interventions by (the) district leader(s) per school district (illustrative cases)

goals whatsoever. Concerning the use of interventions, the examples reveal considerable differences between school district leaders in the extent to which goal-directed interventions were used to support and stimulate schools to improve. Table III shows that the Anima district leader limited herself to mainly offering support, complemented with exerting a little pressure if necessary. At Celsus, Sapiens and Ante, the district leaders used a balanced mix of interventions, deliberately deploying progressive degrees of coercion. The Forum and Tempus district leaders only used interventions if necessary, perceiving this as "a last resort." These examples also shed light on the ways in which district leaders used interventions. In offering support, they appeared to encourage, challenge, facilitate and empower school principals, provided them with coaching, consultancy or training to foster leadership and capacity at the schools. Engaging in a dialogue with school principals or calling them to account for the accomplishment of goals, monitoring and evaluating and opening up the dialogue to third (external) parties, are forms through which district leaders exerted pressure. Special measures/sanctions were demotion or dismissal of school principals.

Districts social networks
Findings from our social network survey showed that district instrumental networks are denser (28 percent) than the expressive networks (17 percent). This means that of all potential work-related advice seeking relationships between school principals, central office administrators and district leaders within a school district, about 28 percent of this potential was actually "used." In addition, of all potential personal relationships that could occur between the educational administrators, about 17 percent of these potential personal relationships actually occurred.

The examples from the six cases illustrate differences in centrality and density across the six school districts in more detail (see Figure 1 and Table IV). Compared to the other educational administrators in the network, district leaders occupied a central position in the instrumental network. A school principal and/or central office administrator often accompanied district leaders in this central position. This central position allows them to have access to (and thereby control) the flow of resources that move through the network.
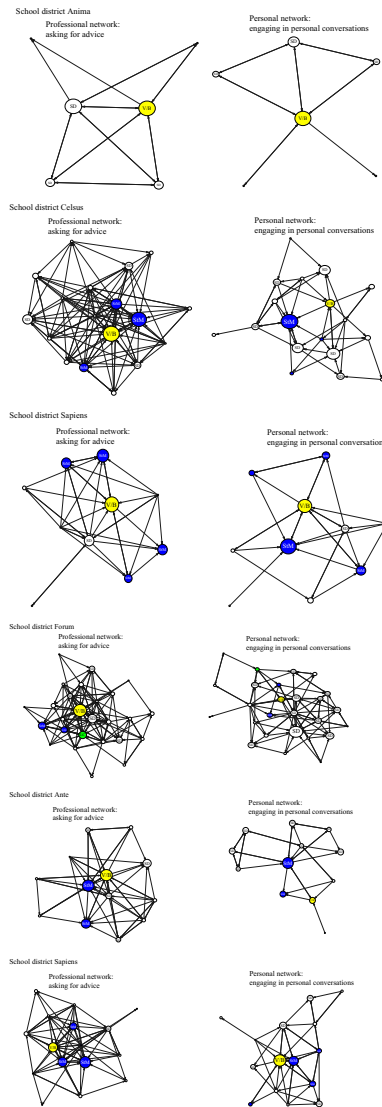
Notes: District leader/chairperson district leadership team: yellow (V/B); District leader: green
(LC); Central office administrator: blue (StM); School principal: white (SD). Arrowed lines
between the nodes represent the direction of the relationships. The size of the node indicates how
often others refer to the person: the larger the node, the more often the person is being referred to.
[a]Instrumental networks are indicated as professional networks in the visualizations; [b]expressive
networks are indicated as personal networks in the visualizations

For instance, in this central position, district leaders tended to be asked disproportionally for
advice, thereby offering more opportunities to enact their modes of governance and collect
information for future action. The examples indicate that district leaders perceived the
potential gains from their central position, but were also aware of the vulnerability of their

School district	Instrumental network	Expressive network
Anima	Star shaped District leader forms connecting link, together with one school principal	Star shaped District leader forms connecting link
Celsus	Dense tangle District leader at the center	Dense tangle District leader and some school principals at the center
Sapiens	Dominance of district leader and central office administrators	Dominance of district leader and central office administrators
Forum	Dense tangle District leader at the center together with one school principal	Dense tangle School principle at the center
Ante	Tangle District leader and central office administrators at the center	Loose tangle One central office administrator at the center, district leader marginal position
Tempus	Tangle District leader and central office administrators at the center	Loose tangle District leader and central office administrators at the center

dominant position. For instance, the Anima school district leader pointed out: "The integration and interconnectedness of people in this school district depends too heavily on me." In contrast, Figure 1 and Table IV also unveil that in the networks that reflect personal conversations among the administrators, district leaders occupied a less central, sometimes even marginalized position in the network. The six cases also show that the networks can be characterized by subgroups. For instance, at the Celsus school district, a subgroup, consisting of the district leader, central office administrators, and a few school principals could be identified. The Celsus school district leader commented: "In this group, we like to share insights and ideas about innovative education." Educational administrators in the school districts Sapiens, Ante, and Forum shared that educators tend to group together and increase their work-related advice seeking based on appreciation for each other's capacities, knowledge, and "thinking and work level." As a central office administrator at Ante explained: "The 'good ones' in our school district like to seek each other out." According to the school principal at Sapiens, principals of higher performing schools are getting together more easily than principals of schools that are under sanction: "It is difficult for us to collaborate with a low performing school."

The role of district leaders for organizational social capital

To answer our research question, we examined the relationship between district leaders' enacting governance by focusing on educational goals and the social capital among all educational administrators (including themselves) in their school district (i.e. tendency to seek other administrators for work-related advice and personal conversations). Correlational analyses indicated modest positive correlations between focusing on goals and the school district's social capital in terms of out-degree, meaning that the more district leaders were focusing on educational goals, the more educational administrators in the district tended to turn to each other for advice ($r = 0.11$ ($p < 0.01$) and 0.15 to 0.21 ($p < 0.05$)) and for personal conservations ($r = 0.11$ and 0.11 ($p < 0.01$) and -0.05 ns) (see Appendix 2). In contrast, we did not found correlations between focusing on educational goals and the school district's social capital in terms of in-degree, indicating that the degree in which district leaders were perceived as focusing on educational goals was not associated with the extent to which educational administrators within the school district are being sought for advice ($r = 0.00$ to 0.03ns) or for personal conservations ($r = -0.03$ to 0.03ns) (see Appendix 2).

Furthermore, correlational analyses indicated modest positive correlations between goal-directed interventions and the school district's social capital in terms of out-degree. The more district leaders were perceived using goal-directed interventions, the more educational administrators in the district tended to turn to each other for advice ($r = 0.11$ and 0.14 ($p < 0.01$) and 0.09ns) and for personal conservations ($r = 0.11$ and 0.16 ($p < 0.01$) and 0.04ns) (see Appendix 2). With respect to the relation between district leaders' interventions and the school district's social capital in terms of in-degree, we found one significant correlation ($r = 0.13$ ($p < 0.01$)), indicating that the more district leaders offered support as intervention, the more all educational administrators were being sought for advice.

Finally, we examined whether the relationship between district leaders enacting governance by focusing on educational goals and the district's social capital is mediated by the use of goal-directed interventions. In other words: does it matter which types of interventions district leaders used to understand whether focusing on goals may affect the school district's social capital? Results from our data (see Figures A1 and A2, Appendix 3) seemed to suggest that offering support by district leaders both reinforced the positive effect of focusing on educational goals on social capital as well as mitigated the negative effects. In other words, when district leaders intervene by supporting schools to improve, their focus on educational goals will even more lead to increased advice seeking. In addition, offering support by district leaders will also compensate the effect that a lack of focus on educational goals can lead to increased reliance on other administrators than the district leader. In contrast, using the most "coercive" form of interventions to stimulate schools to improve, that is, taking special measures/sanctions, seemed to reinforce the small negative effects of focusing on educational goals on the district's social capital. Finally, we found that using exerting pressure as intervention did not affect the relationships between the variables under study.

The examples shed some light on how district leaders influence their organizational social capital differently. Districts leaders from the three school districts with the lowest score on the variable offering support, did not seem to be focused on creating a dense, supportive community of education administrators to foster good quality education at the schools. For example, at the Tempus district, the district leader delegated responsibility for high-quality education to the school principals, referring to the doctrine of school autonomy. He explains: "It is up to them to ensure education of good quality at their school, my role is limited to funding and operating conditions." At both the Forum and Ante districts, the district leaders attempted to involve educational administrators in policymaking and steering activities, but without noticeable impact. At the Forum school district, this was probably due to the rather coercive bureaucratic approach, and at Ante school district this was likely related to a lack of a shared vision on ambitious educational goals.

In contrast, the districts leaders from the three districts with the highest scores on offering support seemed to better succeed in making their organization's social capital thrive. For example, The Anima district leader observed positive effects of collaboration and joint learning among the educational administrators in her school district. She emphasized her supporting role: "I am building networks and connect people districtwide." The Celsus district leader hired external support to create professional learning communities: "I want my principals to undertake a learning journey toward joint leadership and shared education practices." The district leader at Sapiens deliberately promoted exchange and collaboration throughout his district by "starting on a small scale and gradually tempting, supporting and empowering people to join-in."

6. Discussion, implications and conclusion
Discussion
This study was set out to analyze to what extent governance goals and interventions affect school districts' social capital (research question). Our results indicated that the leaders of

Dutch school districts focus most on goals for math and language proficiency. Moreover, focusing on goals for teaching and learning processes appeared to have a more positive impact on the districts' social capital. An explanation may be that by focusing on teaching and learning, school principals and central office administrators felt supported, and inspired by, goals that are most directly aligned with their daily work with teachers and school staff, resulting in increased relationships with other administrators in the district. These findings increase our understanding of how focusing on specific educational goals (in this case, goals for teaching and learning) may contribute to building and having access to the web of social relationships between central office administrators and school principals through which district policy may ultimately impact educational practice.

The findings also showed that offering support as a goal-directed intervention appeared to be the strongest leverage for promoting school district's social capital. Offering support did not only reinforce the positive impact of focusing on educational goals by district leaders on organizational social capital, but also seemed to compensate the impact a lack of focus on educational goals has on increased reliance on other administrators than the district leader.

The examples from six school districts revealed that most district leaders deliberately searched for a balanced mix between different interventions varying in level of coercion, depending on situational contingencies. This finding confirms what is often asserted in the literature on governance of organizations (i.e. McAdams, 2006; Mordaunt and Cornforth, 2010), and on situational leadership (i.e. Ali, 2017): there is no one best way to govern an organization; what matters is the degree to which it is adapted to the internal and the external situation.

Our data offer support for the assumption that district governance is a collective and highly interdependent endeavor. The results revealed school principals and central office administrators to be important links in the enactment of school district governance. District leaders seemed to be focused on school principals in order to get district steering and policies translated into practice and to accomplish educational goals. School district leaders also depend on central office administrators: they call on their capacities to assist with governance actions and to reinforce them. These findings corroborate earlier findings about district leaders' dependency on educational administrators throughout the whole school district to mediate policies, decisions and use of resources, and translate them into action (Daly and Finnigan, 2016; Honig, 2006; Leithwood and Azah, 2017; Sleegers and Leithwood, 2010).

The examples from six cases illustrated how, and in which situations, district leaders involved educational administrators in their policymaking and steering activities, and shared their governance responsibilities with them. School district leadership thus seemed to be stretched over a group of individuals and dispersed through all levels of the organization, rather than being a heroic act of one district leader enacting different governance modes (the "heroic leader paradigm"). These examples stress the importance of analyzing district leadership practices from a distributed perspective (Spillane, 2006), to understand how school district governance takes place in the context of such complex and multi-layered organizations as school districts.

Finally, the findings contribute to a deeper understanding of the role district leaders may play in building organizational social capital. It turned out that the more district leaders enact governance, the demands for work-related advice and personal conservations in the social networks of educational administrators grow, and at the same time the number of administrators that are approached for advice and personal conservations shrinks. As a result, a narrowed subgroup may arise within the social network of educational administrators, which holds a central, sometimes dominant, position in the exchange of district resources and operates as a linking pin, a finding also found in previous research (Daly, 2010; Penuel *et al.*, 2010).

Limitations and future research
Along with its several strengths, this study also has some limitations. The first limitation of our study is the external validity of our findings. By using "convenience sampling," the generalizability of our findings can be questioned. Future studies, using representative and more heterogeneous samples, are needed to validate our findings.

A second limitation of the study is its cross-sectional nature. The analyses we used cannot ascertain causal relations and thus only showed a "snapshot image" of the situation. As a consequence, the study may have exposed coincident temporary relationships. In order to ensure causality, a longitudinal design is needed. By investigating the influence of district leaders on school district social capital over time, future research can increase our understanding of how district leaders can develop and maintain their organization's stock of social capital. A further step to provide more detailed and in-depth information about the complex and dynamic relations between district leaders, central office administrators and school principals through which governance takes place, would be to conduct mixed methods studies in which survey data with multiple case studies and longitudinal data are combined.

Finally, in our study we focused on how school district governance affects the pattern of social relationship among school administrators. Although this relation may ultimately have an impact on school district leaders' responsibility for high-quality education, we did not examine one of the most important indicators of educational quality: student outcomes. In future research information about student achievement, student background variables (e.g. SES, gender, ethnicity, past performance) and school composition, should be included in the analyses. This research is needed to unravel the paths through which district leaders affect schools' educational quality and student achievement. In our view, this is imperative to better understand the importance of school district offices in supporting educational effectiveness and school improvement.

Conclusion
To better understand how governance takes places, researchers have started to analyze the pattern of social relationships ("social capital") between educational administrators (district leaders, central office administrators, school principals, assistant principals) through which governance may impact student achievement. So far, the role of district leadership practices in shaping the pattern of social relationships has been neglected. In this study, we offer insights in the way in which social capital may be affected through district leaders enacting governance by focusing on educational goals and using goal-directed interventions.

The findings of our study demonstrate that governance practices of district leaders matter. If district leaders enact governance by focusing on educational goals (more specifically, goals on teaching and learning processes), they contribute to the organization social capital of their school districts. Moreover, district leaders can reinforce the positive impact of focusing on goals by means of using interventions. By using a supportive and connective governance style, rather than a "muscular" command-and-control style, district leaders can reinforce coherence of alignment in the entire school district.

Note
1. School districts with only one school generally have a different governance structure compared to larger school districts. Because of the non-comparability with the governance structure of larger school districts, these "one-school" districts are excluded from this study.

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Appendix 1

School District	Anima	Celsus	Sapiens	Forum	Ante	Tempus
Score on the variable "offering support"	High	High	High	Low	Low	Low
Denomination	Independent	Independent	Independent	Independent	Public	Public
Number of students	1,500–2,000	3.750–4.250	2.000–2.500	6.750–7.250	1.750–2.250	3.500–4.000
Number of schools	2–5	11–15	6–10	> 15	11–15	11–15
Degree of urbanization	Urban fringe	Urban fringe	Urban	Rural	Rural	Rural

Table AI.
Description of the six
school districts

Appendix 2

	1a	1b	1c	1d	2a	2b	2c	2d
1. "Ask for advice" – network								
a. Out-degree normalized	1	0.40***	0.61***	0.06	0.54***	0.46***	0.16**	0.15**
b. In-degree normalized		1	−0.05	0.73***	0.35***	0.71***	−0.05	0.44***
c. Out-degree			1	0.10*	0.12**	0.01	0.30***	0.20***
d. In-degree				1	0.02	0.38***	0.04	0.60***
2. "Personal conversation" – network								
a. Out-degree normalized					1	0.47***	0.65***	0.16**
b. In-degree normalized						1	0.06	0.70***
c. Out-degree							1	0.23***
d. In-degree								1
3. Focusing on educational goals								
a. For Maths and language proficiency	0.00	−0.11*	0.15**	0.03	−0.02	−0.15**	0.11*	−0.03
b. For teaching and learning processes	−0.03	−0.14**	0.11*	0.01	0.01	−0.12*	0.11*	−0.02
c. Broader learning goals	0.01	−0.16**	0.21***	0.00	−0.07	−0.11*	−0.05	0.03
4. Using interventions								
a. Offering support	0.09	0.09	0.09	0.13**	0.13*	−0.02	0.16**	0.03
b. Exerting pressure	0.04	−0.04	0.11*	0.04	0.04	−0.12*	0.11*	−0.05
c. Taking special measures/sanctions	−0.02	−0.15**	0.14*	−0.02	−0.08	−0.17**	0.04	−0.04

Notes: $*p < 0.05$; $**p < 0.01$; $***p < 0.001$

Table AII.
Pearson correlations between focusing on educational goals and using interventions by district leader(s) and measures for the social networks in school districts

Appendix 3
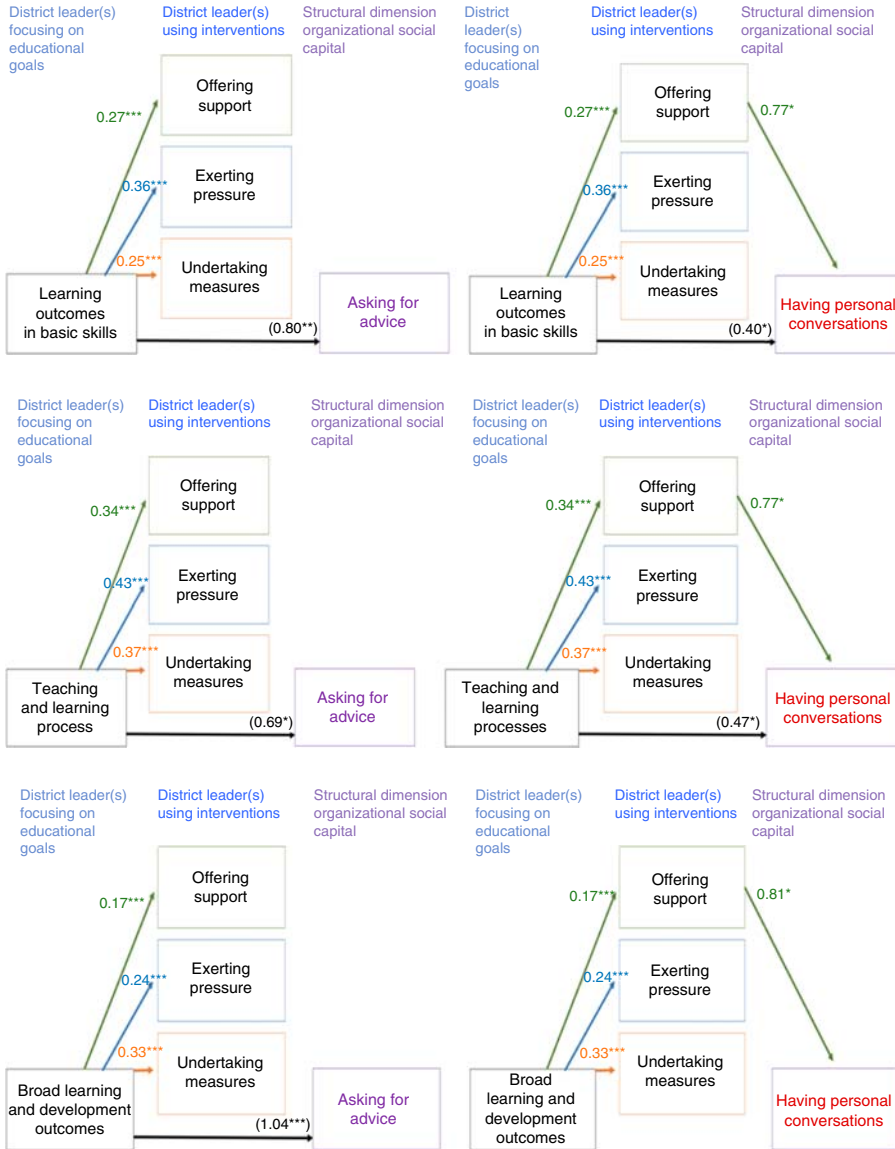
Notes: *$p<0.1$; **$p<0.01$; ***$p<0.001$

Figure A1.
District leader(s) using
interventions,
mediating the relation
between their focusing
on educational goals
and the structure of
the organizational
social capital
(Out-degree)

Figure A2.
District leader(s) using interventions, mediating the relation between their focusing on educational goals and the structure of the organizational social capital (In-degree)
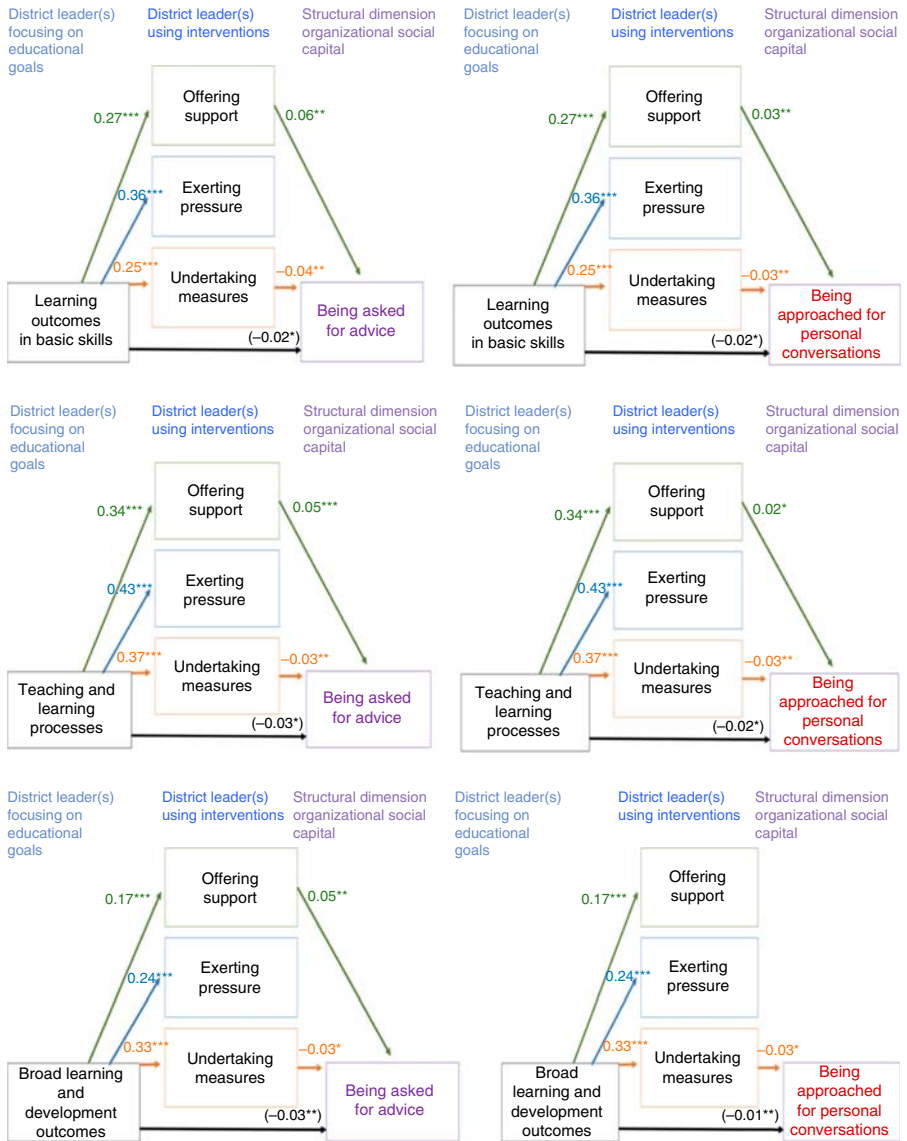
Notes: *$p<0.1$; **$p<0.01$; ***$p<0.001$

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