

***Relegating School Principal Leadership From Teacher Professional Learning:
Social Network Analysis Approach***

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Abstract

Researchers have been trying to identify through which ‘path’ the principal’s leadership practice is most impactful to the quality of teaching and learning as a preferred outcome. On the other hand, there is some evidence that its influence on student learning is indirect. This study seeks to contribute to the knowledge regarding influence of school leadership on teacher professional learning by investigating their relationship using a social network analysis (SNA) approach in Indonesian context. SNA is applied to examine the level of leadership influence in the observed schools. Social network analysis measurement is going to be used to analyse the relations among variables. This research wants to offer insights to Indonesian policymakers and practitioners on how they could support teachers professional learning in a society where the influence of leadership on teaching and learning is still poorly explored in network perspective. Preliminary result of this research in progress shows that although the principal still has significant influence on teacher professional learning, there are influential individuals outside formal leadership hierarchy. It is one of evidence of a shared/distributed leadership in practice with which further exploration could identify the attributes and practice lead to higher organisational effectiveness and agility.

Keywords: School Leadership, Professional Learning, Social Network Analysis

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Introduction

Effective school leadership is essential for improving the school performance. School principals play a central part in ensuring a positive environment for teaching and learning in schools. The role of school principal demands the bearer to give direction and provide guidance for all school improvement programme. The responsibility also includes ensuring teaching quality and resources allocation for professional development programme (Yeigh et al., 2018), and school success (Raihani, 2008). The change in educational policy, evaluation systems, and increased external pressure on accountability, have raised expectations for principals to improve school climate, instructional practice, and student outcomes. Thus, the successful education reform implementation depends on the school leadership's execution of the reform (Lumban Gaol, 2021). There is evidence that principals are significant elements in student learning outcomes, whereas not much knowledge about how principals could best achieve the aims (Liebowitz & Porter, 2019).

The influence of principal leadership and school capacity on teacher professional learning were modelled (Hallinger & Lu, 2014) and examined (Li et al., 2016) in Hong Kong. These studies were further explored to verify the mediating effects of trust on principal leadership and teacher professional learning in Hong Kong (Li et al., 2016) and Turkey (Karacabey et al., 2020). Collectively, the results indicated that shared vision within school leadership team is positively related to teacher's perception of school alignment, teachers' commitment, and teacher support to students (Hallinger and Lu, 2014). They also demonstrated that multiple dimensions of principal leadership in the presence of trust makes significant contributions to teacher professional learning (Li et al., 2016; Piyaman et al., 2017; Karacabey et al., 2022). The quantitative studies confirm the significant positive however indirect influence of principal leadership on teacher professional learning.

Indonesia currently undergoes massive educational transformation highlighting the need to support teachers in professional learning, which is similar to what has been experienced in Turkey (Karacabey et al., 2022) in terms of school principals' increased responsibility for improving teaching and learning in their schools. The education bureaucracies in Indonesia also reflects similarly with China, and Thailand in a hierarchical fashion, in addition to close relations in culture in terms of respect for age, experience, and rank as elements of social values (Hallinger et al., 2019).

The study's results and comparability spark our interest in examining the relationship between principal leadership and the teacher professional learning in Indonesian context. Despite the similarity in education bureaucracies and cultural hierarchies, there is not one model fits all in the face of change initiatives. But there is a need to explain a leader's role within a complex system to initiate organisational change and manage dynamic social network (Dinh et al., 2014). Social network analysis (SNA) approach provides theories and methods to investigate, with higher precision and rigor, the relational perspectives suggested by leadership theories (Carter et al., 2015). Hence, it would be beneficial to introduce social network approach to investigate school leadership.

This study is designed to address the following research question:

RQ: How does school leadership effectively influence teacher professional learning?

This research extends insights to school leaders and management, Indonesian policymakers, scholars, and practitioners on how they could support teacher professional learning where the influence of leadership on professional learning is still poorly explored within Indonesian and SNA approach context. This study would also contribute to the expanding literature on school leadership and teacher learning in Asia (Hallinger & Kulophas, 2019; Harris & Jones, 2018; Karacabey et al., 2020; Liu et al., 2016; Piyaman et al., 2017).

Findings of the systematic literature reviews

Effective leadership is an essential aspect to improve the quality of education. School leaders are expected to be able to appropriately manage the school's own or access to resources, lest the institution would struggle to develop. A systematic literature review on leadership for professional learning done by Poekert et al. (2020) investigated leadership approaches which forms professional development. The criteria used provide reasonable basis for conceptual framework which identifies the characteristics of effective professional learning (Desimone et al., 2002, in Poekert et al., 2020). The outcomes of professional learning, however, are influenced by how the teachers engage professional learning which further influence their experience (Castanheira, 2016) whereas Hallinger (2018) referred to the learning experience as a 'person-specific context.'

In addition to the practical needs for references, the literature on school leadership is also lacking non-Western context, while Evans (2022) observed that belief systems exist within specific cultures and psyches and within scholarly communities. It was around two decades ago that studies in educational leadership field began in non-Western contexts (Gümüő et al. (2022) in Lumban Gaol, 2021) and articles from Asian countries are still scarce due to lack of studies conducted in Asian schools (Raihani, 2008). The number of school leadership studies in Asian countries has increased in the last decade, nevertheless there are still a few Asian countries that lack contributions to this field and Indonesia is one of them (Walker & Hallinger, 2015).

The educational leadership and school reform issues in Indonesia have been relatively neglected in publications regardless of its significance being acknowledged (Sofa et al., 2012). Thus, Indonesian policymakers have shown the tendency to depend on the results and practices of educational system from Western context rather than relying on Indonesian research results. A systematic literature review on school leadership in the context of Indonesian education by Lumban Gaol (2021) helps constructing the relevant reference basis for this study although there is still no publication to date with SNA approach.

School leadership

Principal leadership has a significant effect on school organisation features, which positively affects the quality of teaching and student learning, and vital to the success of improvement attempts (Leithwood et al., 2019). Principal's transformational leadership is suggested to influence teacher professional learning through mediation of teacher trust and teacher agency, which can change teaching practices and lead to recuperated student's learning outcome. This conceptual model of the research frames the principal as the representation of school leadership and teacher professional learning, which we adapt from Karacabey et al. (2020), Damanik and Aldridge (2017), and Hallinger et al. (2017).

The last decade has been an important period for education in Indonesia regarding policies and regulations for education system improvement and school reform which takes place as school-based management. The policy changes lead to new roles and responsibilities of school principals which generate various demands. The core competencies for school leadership comprise of personal, managerial, supervisory, entrepreneurial, and social competencies (Wiyono, 2017). The implementation of school-based management brings new roles and responsibilities to school principals in which teachers should be empowered to have a voice in educational planning (Bandur, 2012) which in turn requires an improvement in school principals' competencies.

Principals have critical role in improving the quality of educational service, hence they must manage various aspects while carrying out the improvements. School improvement is proven by empirical studies as context-specific and cultural (Jawas, 2017), which applies to critical area of learning level, capacity development, and evaluation of improvement (Teddlie & Reynolds, 2000). Jawas (2017) reaffirmed that leadership practices are context-specific and context-influenced, and that instructional improvement are affected by the condition of the school, social practices, and economic considerations.

However, Lee and Hallinger (2012) found that the emphasis of Indonesian principals were on management and administration rather than leadership. Another study by Bandur (2018) reported the lack of success of school-based management which gave rise to poor students' academic achievement. The studies demonstrated the significance of school principal's leadership impact on learning outcome in Indonesia.

Referring to Jawas (2017) that school improvement and leadership practice are context-specific and context-influenced, this study deploys SNA to approach school leadership and teacher professional learning. SNA allows an inductive approach as it is descriptive in nature (Locke, 2007) and useful to describe the status of the research focus (Hiller et al., 2011). In consideration of school condition and culture, albeit similarity in hierarchical educational systems between Indonesia and the countries in the studies, this study seeks to examine the relationship and explore the mediating factors between the principal leadership influence and teacher professional learning.

Teacher professional learning

Teachers need to engage in professional learning to be conversant with knowledge and skills necessary to accommodate changes in educational environment (Jansen in de Wal et al., 2014). Professional learning now has been an ongoing developmental process rather than discrete activities (Kwakman, 2003; Timperley, 2011) in various forms through formal and informal structures or settings, individually or collectively (Hallinger et al., 2019).

Teacher professional learning, regardless of the format, calls for adult learning practices promoting collective and collaborative behaviours which have been a medium for establishing sustainable school improvement. Teacher professional learning has been a centre of school reform practices correlated with behaviours and practice responsible for student learning as well as teacher's learning (Hallinger & Kulophas, 2019). Teacher growth and development is included in Indonesian Education National Standard (Standar Nasional Pendidikan) as one of the key measurements for school performance which is under the responsibility of the school's leader who also has competencies standard. Thus, school principals bear the responsibility to arrange the teachers' professional development.

Social network analysis

Ogawa and Bossert (1995) in Lin et al. (2018) observed that leadership is not constricted to specific roles or formal titles, rather it flows through the networks of roles that form organisations. They stated that leadership is based on deployment of distributed resources throughout the network, therefore school organisation is considered as the unit of network analysis.

Spillane et al. (2001) professed that school leadership is best understood as a distributed practice influenced by social and contextual factors. Hence, the interdependence and interactions between individuals and the environment in a network is a suitable unit of analysis for examining leadership practice within the network. In this context, SNA could identify the types of existing distributed leadership. This knowledge provides insight on more effective energy and resources allocation for the success of school leadership rather than narrowly focused on the principal's leadership.

Social network analysis (SNA) is a set of theories, tools, and processes to understand the relations and structures of a network represented by nodes and links (Hoppe & Reinelt, 2010). Social network will connect social actors contained in a network, including individuals, organizations, and families. The analysis takes interest in how an individual is nested within a structure or networks of relations with others and how the structure surfaces from the said relations (Hanneman & Riddle, 2005). The purpose of using this social network analysis method is as a basis for studying activities related to organizations, interpersonal relationships, and others (McAndrew & Everett, 2014). The social map generated by SNA computer programs displays the patterns of connections between nodes of the network while networks are measured with mathematical techniques.

Method

This study employs a social network analysis approach with cross-sectional quantitative case study design. Data were compiled from a respondent school comprises of leadership and teaching staff of 41 people across levels (from preschool to high school) in a full network method where information about each individual and the relations with all other individuals is collected. The major limitation of this method is the difficulty of collecting full network data.

To measure the information about relations between individuals, ordinal measure similar to a Likert scale is applied to determine the strength of ties (Liebowitz, 2005). The resulting response would then be converted to zero-one binary scale which brings the strength of influence to extreme of present (one) or absent (zero).

Demographical data such as gender, age, years of teaching experience, years of leadership experience, and highest completed degree are collected to provide context for analysis. And relational data is collected as rating of peer influence on respondent's professional learning as a response to the SNA question, "To what degree does this individual influence your professional learning?" The response provided represents peer influence on respondent's professional learning in the range of options from "To a great extent" to "None at all". The response data would then be coded into square binary matrix in the size of number of individuals. Shown in the graph below is the sociogram generated from 41 x 41 matrix.

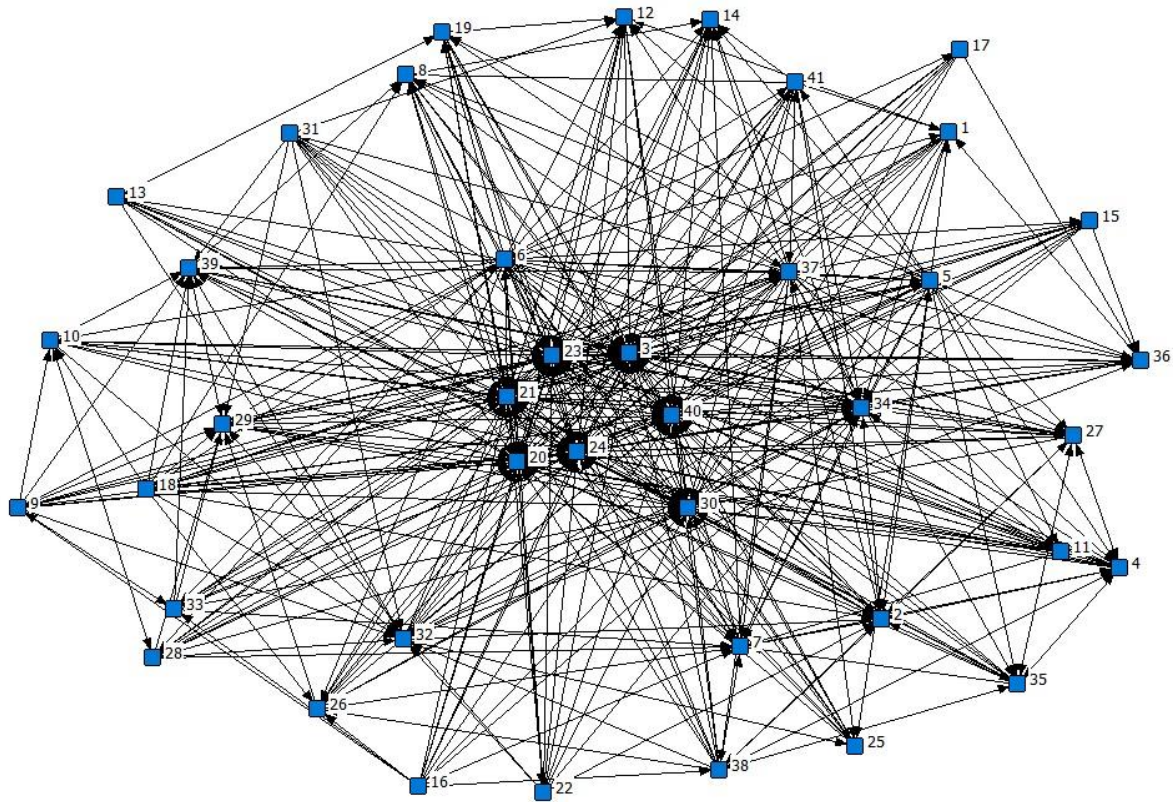


Figure 1: Social network map of individuals within a school (using UCInet)

Initial analysis on result of this research-in-progress shows the dominance of school principal's influence (node 6) that is closely followed by the school management (node 37 and node 5) and an emerging influential individual (node 20). It describes that although the principal has significant influence on teacher professional learning, there are influential individuals outside formal leadership hierarchy. It is one of evidence of a shared/distributed leadership in practice with which further analysis using SNA measurements could identify the more detailed relations and leadership dynamic within the school network.

Conclusion

There is evidence of a shared/distributed leadership in practice in the respondent school with which further exploration could identify the leadership attributes and practice lead to effective intended impact on outcomes. Further detailed analysis on SNA measurements result is vital for discussions to happen and to arrive at the objectives of this study.

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