Trends Analysis of Research on Principal Leadership and Teacher Quality Application using Tag Crowd

Ihwan, Handoko Santoso*, Juhri AM, Marzuki Noor
Graduate of University of Muhammadiyah Metro, Indonesia

*handoko.umm@gmail.com

Abstract. Starting from the assumption that the study of school leadership has been done is the main reason the study was conducted. This simple study to be a part of pre-research to be able to position the focus of full-research studies are planned. Several software tools are required YagHarzing's Publish or Perish and Tagcrowd, and metadata retrieved from the database CrossRef research. The result is a data visualization research with variable Principal Leadership and Teacher Quality. The phenomenon that appears in data visualization studies describes new trends and loopholes that can be done.

1. Introduction
School is a learning organization; leadership is necessary for learning to improve the quality of institutional culture. Leadership learning is an effort that led teachers to implement better learning and quality. Leadership learning can not be separated from the role of school leadership[1], [2], Eight standards met at the school, one of which is the standard of educators and education personnel. The fulfillment of these standards is the duty of a school principal[3]. The purpose of the school in the achievement required leaders who can leverage the resources that can be utilized as much as possible. Resources are essential in achieving the goals of education is the teacher. Teachers are at the forefront in achieving educational goals. The quality teacher thus becomes essential to be developed and given space to develop. The school principal is expected to form a learning process that teachers become. Right school leadership will be able to create a situation conducive climate that encourages work and harmonious human relations. In essence, leadership plays an important role and has a function as a determinat of the success of the group or organization[3] - [5],

Guru is one of the elements that affect the implementation of the learning process in the school environment. Without excellent teacher performance and the professional learning process at school then becomes ineffective, necessitating the presence of qualified teachers. The existence of teacher quality determines the quality of education. The quality of education will impact the progress of a nation's resources[6]. Facts on the field the quality of education is still far from expectations, the quality of education is a concern. Survey data from OECD (Organization for Economic Co-operation and Development) shows that the quality or the quality of education in Indonesia, especially at the level of elementary school to the high school ranks only 69 out of 76[7], This can be an indicator that shows the low quality of teachers. Education without good quality teachers and principals an adequate role in managing the school, it is difficult to increase the quality of education. This paper presents the results of research metadata mapping studies related to school leadership and teacher quality.
2. Method
This study attempts to map metadata research topics of school leadership and teacher quality. The first step starts with collecting metadata paper using software Harzing's Publish or Perish. The second step chooses the metadata database. Researchers selected paper metadata from the CrossRef database, then specify search keywords in Indonesian “kepemimpinan kepala sekolah” and "mutu guru." The third step storing metadata with CSV extension and RIS, the results obtained metadata download as many as 200 papers from the years 2005-2019. The fourth step determines that the metadata will be used. The fifth step to visualize the metadata in the form of a word cloud. The sixth step interprets data visualization.

3. Result and Discussion
3.1. Total paper and year
The results of the metadata collection of paper using software Harzing's Publish or Perish obtained 200 papers selected from the years 2005-2019. The process of downloading the data in the database using software CrossRef Harzing's Publish or Perish turned out to be limited as much as 200 papers for each download process. Figure 1 displays the data visualization of paper per year using Datawrapper page. From the first image, the display can be seen with no metadata found in the year 2006 to 2011. It can be assumed there are no studies in the range of 2006-2011 on the topic "school leadership" and "quality teachers." Perhaps because of the limitations of software Harzing's Publish or Perish or no input CrossRef metadata database that year.

![Figure 1. The amount of paper in a year (https://www.datawrapper.de)](https://www.datawrapper.de)

3.2. Weight of word cloud
Visualization is then performed using a word cloud. This is done to determine the weight of each word that is often used as a study variable. So it can be interpreted themes and research trends in the period 2005-2019. This analysis is based on the trend of using a term that is used as the object of research. The tendency of the emergence of a term can be seen from the number of occurrences of a word. So it can be in the range of 2005-2019 theme of what often appears in a scientific publication and trend. The following are the visualization of metadata using cloud word analysis in Figure 2.

Results visualization in Figure 2 several terms became the theme and trend of the last nine years of research related to “kepemimpinan kepala sekolah” and “mutu guru” within nine years. There are 5 significant themes related published research kepemimpinan kepala sekolah including meningkatkan, kinerja, mutu, pengaruh, kerja, supervisi, kompetensi, implementasi, motivasi dan peran (improve the performance, quality, influence, labor, supervision, competence, implementation, motivation and role), In figure 5 can be seen a lot of research done in the public schools. This theme may be a consideration for the next study to examine the theme/topic that remains unstudied.
3.3. The analysis said principal leadership

Referring to the sample data is visualized, said the leadership appeared 120 times, when combined with the school principal said, then within nine years already there were 120 studies on school leadership. Leadership is not only related to the knowledge, skills, aptitudes, and the authority of a person, but also concerning tenacity, patience, as well as physical and spiritual strength. Leadership is a theory that contains the power to do by the leaders of any section so that the task assigned to him can be resolved. A good leader is a leader who understands the task and understands whom he leads, and the "leadership is a set of abilities and personality traits, including therein the authority,[8], [9].

Another definition of school leadership is the ability shown by the principal in doing duties and functions as an educator, manager, administrator, supervisor, innovator, and motivator [10], [11]. Of the duties and functions of the principal, when seen in figure 2, the equivalent inferred manager said there are 23, there is two and supervision supervisor there are 33, innovator/innovation No 1, and motivators / No 30. Description of motivation can be a consideration for studies on aspects another rarely studied. The school principal as a leader in school leadership roles in many respects. The headmaster is responsible on the provision of education, school administration, coaching staff, utilization and maintenance of facilities and infrastructure, and as a supervisor at the school led "]12" -
[14], Referring to figure 2 said there are 22 roles, assuming there are 22 research investigators about the role of the principal in the period 2005-2019.

Table 1. Count and term

| No | Count | Term     | No | Count | Term     | No | Count | Term     |
|----|-------|----------|----|-------|----------|----|-------|----------|
| 1  | 233   | sekolah  | 21 | 18    | manajemen| 41 | 8     | profesional |
| 2  | 167   | kepala   | 22 | 18    | budaya   | 42 | 8     | kecamatan  |
| 3  | 167   | guru     | 23 | 18    | gaya     | 43 | 8     | berbasis   |
| 4  | 120   | kepemimpinan | 24 | 17 | kabupaten | 44 | 8     | hubungan   |
| 5  | 98    | meningkatkan | 25 | 16 | dasar    | 45 | 8     | melalui    |
| 6  | 80    | dalam    | 26 | 16    | smp      | 46 | 8     | denggan    |
| 7  | 79    | dan      | 27 | 14    | pada     | 47 | 8     | siswa      |
| 8  | 70    | kinerja  | 28 | 13    | transformasional | 48 | 7     | pembelajaran|
| 9  | 68    | mutu     | 29 | 13    | kota     | 49 | 7     | belajar    |
| 10 | 61    | terhadap | 30 | 12    | madrasah | 50 | 7     | islam      |
| 11 | 48    | pendidikan| 31 | 12   | persepsi | 51 | 7     | man        |
| 12 | 47    | pengaruh | 32 | 11    | profesionalisme | 52 | 7     | smk        |
| 13 | 45    | kerja    | 33 | 11    | peningkatan | 53 | 6     | mengembangkan|
| 14 | 41    | untuk   | 34 | 11    | organisasi | 54 | 6     | situasional|
| 15 | 33    | supervisi| 35 | 11    | iklim    | 55 | 6     | berprestasi|
| 16 | 32    | negeri   | 36 | 10    | akademik  | 56 | 6     | kepuasan   |
| 17 | 31    | kompetensi| 37 | 10   | menengah | 57 | 6     | sebagai    |
| 18 | 30    | motivasi | 38 | 9     | kontribusi| 58 | 6     | lulusan    |
| 19 | 29    | implementasi | 39 | 9   | penerapan | 59 | 6     | layanannya |
| 20 | 22    | peran    | 40 | 9     | sma      | 60 | 6     | medan      |

* Detailed tables can be viewed here ([https://www.datawrapper.de/_/QjZvn/](https://www.datawrapper.de/_/QjZvn/))

3.4. The analysis said the quality of teachers

If the principal duties and functions appropriately to impact on them to improve the quality of teachers. The teacher is a profession, as a duty of the teaching profession to educate, teach, and train. Education means to continue and develop the values of life, and teaching means to continue and develop the knowledge, training means developing life skills for students[15] - [17]. A professional teacher is a teacher who can carry out its role. Become professional teachers have at least a minimum standard, namely; 1) intellectual capability, 2) the ability to understand the vision and mission of national education, 3) expertise transfer science to students effectively, 4) understand the concept of psychological development of children, 5) the ability to organize the learning process, 6) has the creativity and the arts. Teachers are aware of its role as a teacher, and makes the task of the teacher as a profession, then in their daily life is affected by leadership principals in which he worked, then so be it teacher quality[16] - [21].Associated with the term quality of teachers and the teaching profession is a term that intersects even though it may have a different definition. Results of data visualization show there are 68 words quality, professionalism 11, Professional 8, professionalization 1, professionalism 1, professionalism 1. According to Table 1, it can be concluded themes related research in teacher quality No 68 published research related to the teaching profession, and there are 22 research published,

4. Conclusion

The initial stage can be done to start a more extensive study that can be initiated with the analysis of trending topics/themes of research. Early studies of trends in research will be the basis of positioning research undertaken cap. A simple way that can be done by utilizing metadata publication that spread on the internet. Then process the data using a variety of free or paid apps to create a visualization or data display that is attractive and easy to read. Some of the applications that are used in this paper is [https://tagcrowd.com](https://tagcrowd.com) and [https://www.datawrapper.de](https://www.datawrapper.de). The second application is quite simple and easy to use; the researchers only need to develop critical thinking and analytic to be able to interpret data visualization on the template provided.
References

[1] Tommy Hendrick, “Supervisi Kepala Sekolah Untuk Meningkatkan Pembelajaran Guru Di Sekolah.” Center for Open Science, 2019.

[2] S. Daud, A., and N. Djafri, “Kepemimpinan Spiritual Kepala Sekolah Dalam Penguatan Karakter Siswa Di Sekolah Menengah Atas Terpadu Wira Bhakti Gorontalo,” JURNAL PENDIDIKAN GLASSER, vol. 2, no. 2. Universitas Muhammadiyah Luwu, p. 54, 2018.

[3] N. T. L. Gaol, “Teori dan Implementasi Gaya Kepemimpinan Kepala Sekolah,” Kelola: Jurnal Manajemen Pendidikan, vol. 4, no. 2. Universitas Kristen Satya Wacana, p. 213, 2017.

[4] T. Apriyanto, Pengaruh Kepemimpinan Kepala Sekolah dan Iklim Organisasi Terhadap Kreativitas Guru IPA SMP Negeri Se Kota Pekalongan. lib.unnes.ac.id, 2007.

[5] E. Rahmatawati and K. Kardoyo, “Pengaruh Pembiayaan Pendidikan, Kepemimpinan Kepala Sekolah, Peran Komite, Dan Integritas Sekolah Terhadap Mutu Lulusan Melalui Mutu Proses,” Economic Education Analysis Journal, vol. 7, no. 3. Department of Drama, Dance and Music, Semarang State University, pp. 961–975, 2019.

[6] M. Yazid and C. S. A. Jabar, “Hubungan Mutu Guru, Kepemimpinan Kepala Sekolah, Dan Status Ekonomi Guru Dengan Kinerja Guru Sd Kecamatan Suralaga Lombok Timur,” Jurnal Prima Edukasia, vol. 1, no. 1. Universitas Negeri Yogyakarta, p. 94, 2013.

[7] OECD and ADB, Education in Indonesia: Rising to the Challenge, vol. 20, no. 15. 2015.

[8] A. Rahmi, “Kontribusi kepemimpinan kepala sekolah dan kinerja guru terhadap prestasi siswa MTsN Kuranji Padang. Program Doktor Jurusan administrasi pendidikan Universitas Negeri Padang,” Pedagogi: Jurnal Ilmu Pendidikan, vol. 17, no. 1. Universitas Negeri Padang (UNP), p. 40, 2017.

[9] C. A. A. Putra, M. Yudana, and N. Natajaya, “Hubungan Motivasi Berprestasi, Prilaku Kepemimpinan Kepala Sekolah dan Etos Kerja dengan Kinerja Guru,” Jurnal Penelitian dan Pengembangan Sains dan Humaniora, vol. 1, no. 1. Universitas Negeri Ganesha, 2018.

[10] H. Widodo, “Kepemimpinan Kepala Sekolah Perempuan di Sekolah Dasar Muhammadiyah Kabupaten Sleman [Female Principal Leadership at Muhammadiyah Elementary School, Sleman Regency],” PEDAGOGIA: Jurnal Pendidikan, vol. 8, no. 1. Muhammadiyah University Sidoarjo, p. 127, 2019.

[11] B. R. Werang, “Pengaruh Kepemimpinan Transformasional Kepala Sekolah, Moral Kerja Guru, Dan Kepuasan Kerja Terhadap Kinerja Guru Sdn Di Kota Merauke,” Jurnal Cakrawala Pendidikan, vol. 1, no. 1. Universitas Negeri Yogyakarta, 2014.

[12] “Kontribusi Motivasi Berprestasi Dan Kepemimpinan Kepala Sekolah Terhadap Kinerja Guru Sma Negeri Di Kecamatan Koto Tangah Kota Padang,” econoica, vol. 5, no. 1. STKIP PGRI Sumatera Barat, pp. 63–68, 2016.

[13] A. Suriyasyah and A. A., “Strategi Kepemimpinan Kepala Sekolah, Guru, Orang Tua, Dan Masyarakat Dalam Membentuk Karakter Siswa,” Jurnal Cakrawala Pendidikan, vol. 2, no. 2. Universitas Negeri Yogyakarta, 2015.

[14] V. A. Sudharta, “Gaya Kepemimpinan Kepala Sekolah Dalam Perspektif Psikologi,” Jurnal Manajemen dan Supervisi Pendidikan, State University of Malang (UM), pp. 208–217, 2017.

[15] R. A. Wardhana, “Pengaruh Kepemimpinan Kepala Sekolah, Profesionalisme Dan Pelatihan Guru Terhadap Implementasi Kurikulum 2013 Smkn Yogyakarta,” Jurnal Akuntabilitas Manajemen Pendidikan, vol. 4, no. 2. Universitas Negeri Yogyakarta, p. 257, 2016.

[16] T. Tarhid, “Kepemimpinan Kepala Sekolah dalam Meningkatkan Profesionalisme Guru,” Jurnal Kependidikan, vol. 5, no. 2. IAIN Purwokerto, pp. 141–155, 2017.

[17] E. Erwin, “Kontribusi Kepemimpinan Kepala Sekolah: Profesionalisasi Guru dan Iklim Sekolah terhadap Motivasi Kerja Guru di MTsN Pasir Lawas Kabupaten Tanah Datar,” al-fikrah: Jurnal Manajemen Pendidikan, vol. 1, no. 2. Iain Batusangkar, p. 111, 2016.

[18] R. Ariyani, “Kepemimpinan Kepala Sekolah Dalam Pengembangan Profesionalisme Guru,” Al-Afkar : Jurnal Keislaman & Peradaban, vol. 5, no. 1. Institut Dirosat Islamiyah Al-Amien Prenduan Sumenep, 2017.

[19] A. H. Mukhtar, “Profesionalisme Guru Pai Dan Kepemimpinan Kepala Sekolah,” Jurnal
Pemikiran Keislaman, vol. 25, no. 2. Institut Agama Islam Tribakti Kediri, pp. 303–318, 2014.

[20] “PKG Bimbingan dan Konseling Menuju Profesionalisme Kinerja Guru BK/Konselor di Era Modern dan Multikultur,” 2013.

[21] J. Winardi, N. Nurkolis, and Y. Yuliejantiningsih, “Pengaruh Kepemimpinan Kepala Sekolah Dan Kompetensi Profesional Guru Terhadap Sekolah Efektif Pada Smp Negeri Rayon Patebon Kabupaten Kendal,” Jurnal Manajemen Pendidikan (JMP), vol. 6, no. 2. Universitas PGRI Semarang, 2017.