International Journal of Innovation, Creativity and Change. www.ijicc.net
Volume 13, Issue 11, 2020

The Role of Leader Assessment in Developing Teacher Teams in the Industrial Revolution 4.0

Endin Mujahidin[a], Ending Baharuddin[b], Rudi Hartono[c], [a]Assoc. Profesor Education, Departement of Community Education, Faculty of Teaching and Education, University of Ibn Khaldun Bogor, Indonesia, [b]Assoc. Profesor, Departement of Islamic Education, Faculty of Islamic Studies, University of Ibn Khaldun Bogor, Indonesia, [c]Assoc. Profesor, Departement Educationional Management, Faculty Pascasarjana, Universitas Negeri Jakarta, Indonesia, Email: [a]endin.mujahidin@uika-bogor.ac.id, [b]bahruddin@uika-bogor.ac.id, [c]rudihartono_mp16s3@mahasiswa.unj.ac.id

This study aims to determine the role of assessment in building teacher work teams in the era of the industrial revolution 4.0 and the role of education stakeholders in supporting the success of elementary school teacher achievement programs. This study uses a multisite approach and survey with research respondents consisting of teachers, principals, supervisors, Teacher Working Groups and education. The schools included in this study are Bandung Pajagalan 03 Primary School, Tangerang 7 Sukasari Primary School, Menteng 1 Primary School, Jakarta, Al-Azhar Primary School, Al-Salam, and Jakarta Pondok Labu Elementary School. Data collection was carried out through interviews, questionnaires, documented observations, and group discussion forums. Data analysis techniques used included data reduction, data presentation, and verification. The results of the study stated that the indicators of primary school teacher achievement evaluation consisted of portfolios (20%), teaching videos (10%), written tests (20%), scientific papers (20%), presentation of scientific papers (20%)), and role models (10%). While educational stakeholders play a role with their respective duties and functions.

Keywords: *Leadership, Work Team, Industrial Revolution 4.0.*

Introduction

The success of education in schools will not be achieved only by educators (teachers) who are smart and professional. Smart work teams are the most influential factor in this success. The principal is demanded to be a conductor for the working harmony in an institution and in dealing with stakeholder communities.As a learning institution, the appropriate role for the principal is in theform of learning leadership.

Learning leadership requires school principals to free themselves from the bureaucratic tasks of confinement and focus on efforts to improve teaching/learning and teaching/learning. The role of the principal as a learning leader is a relatively new concept that emerged in the early 1980s, and was strongly influenced by the results of research that revealed that effective schools usually had principals who emphasised the importance of learning leadership (Brookover & Lezotte, 1982). In the first half of the 1990s, attention to leadership learning faded away, replaced by discussions around school-based management and facilitative leadership (Lashway, 2002). However, lately, learning leadership has risen again with increasing demands for meeting academic standards and the need for schools to open themselves and to be accountable.

Most experts agree that learning leadership is absolutely necessary to make an effective school, but schools still rarely make it a priority. For example, among the many tasks that principals do, only one tenth of their time is devoted to school leadership (Stronge, 1988). Among the reasons cited by experts for the lack of emphasis on learning leadership are lack of in-depth training, lack of time, increased administrative work, and community perceptions about the role of the principal as a manager (Flath, 1989; Fullan, 1991). Today, most school leaders seek balance in their roles as manager-administrators and learning leaders.

Learning leadership is different from the leadership of an administrator or school manager in several ways. Principals who pride themselves as administrators are usually too preoccupied with managerial tasks, while principals who become school leaders involve themselves in setting clear goals, allocating learning resources, managing the curriculum, monitoring learning planning, and evaluating teachers. In short, learning leadership reflects the actions taken by a school principal to encourage the growth/development of student learning (Flath, 1989). Learning leaders make learning quality the highest priority of the school and strive to make this vision a reality. With the shift in focus from teaching to learning, some experts propose the term "learning leader" to replace the "instructional leader" (DuFour, 2002).

The National Association of Elementary School Principals (2001) defines learning leadership as leaders of the learning community, where within the learning community teachers meet regularly to discuss their work, collaborate to solve problems, reflect on work, and are

responsible for what students learn. In the learning community, learning leaders make adult learning (teachers, staff, and other workers) a priority, set high expectations for performance, create a culture of sustainable learning for adults, and get community support for school success.

Blase and Blase (2000) mention learning leadership behaviour includes giving advice, giving feedback, being an effective learning model, asking for opinions, encouraging collaboration, providing professional development opportunities, and giving praise for effective learning. Learning leadership is the view that learning must be given the highest priority while everything else works around learning. Learning leaders need to know what is happening in the classroom. Without having this knowledge, they will not be able to appreciate some of the various problems faced by teachers and students. That is why, on any day, teachers and students will always see the principal walking around the school, praising the results of student work, giving recognition to what the teacher is doing. Learning leaders need to work closely with students, develop learning techniques and methods to understand the teacher's perspective, and to build a useful foundation for making decisions related to the curriculum.

Whitaker (1997) identifies four essential leadership learning skills. Foremost, an effective learning leader needs to be a resource provider. It is not enough for a school principal to simply know the strengths and weaknesses of teachers. They must also recognise the teacher's desire to be recognised and valued for work well done. Based on experience, teachers only seek a glimmer of praise and certainty that the principal is there to support them as a provider of resources.

Learning leaders need to be instructional resources (instructional resources). Teachers see the principal as a source of information about developing trends and effective learning practices. Learning leaders follow the development of issues related to curriculum, pedagogical strategies, and effective assessment. For example, teachers want to come to the principal's office every day to ask for advice on how to best handle students who do not understand the concept.

Effective learning leaders need to be good communicators (good communicators). They need to communicate essential beliefs about learning, such as the belief that all students can learn. Effective learning leaders need to show their existence. This includes focusing on learning objectives, modelling itself as a learning behaviour, and designing learning programs and activities. As an administrator, more than half of the principal's days are spent focusing on these goals. For example, a school principal who encourages learning in small groups for reading and mathematics lessons must provide support resources, explain how they work, and act as a model for teachers who are struggling to apply the concept. Learning leaders also need to have up-to-date knowledge about three domains of education: curriculum, learning

and assessment (DuFour, 2002). Principals need to know the changing curriculum concepts, educational philosophy and educational beliefs, curriculum sources and conflicts, and curriculum evaluation and improvement.

Principals need to know various learning models, theoretical reasons for adopting a particular learning model, and theories that underlie technology-based learning environments. Principals also need to know the principles of student assessment, assessment procedures with an emphasis on alternative assessment methods, and assessments aimed at improving student learning.

Regarding learning leaders skills, principals must have certain skills to carry out the tasks of a learning leader, namely: interpersonal skills, planning skills, and learning observation skills (Lashway, 2002).

Interpersonal skills can maintain trust, spread motivation, empower, and foster collegiality. Relationships are built on trust, and tasks are carried out through motivation and empowerment in which the teacher is involved in planning, designing, and evaluating learning programs. Empowerment can foster attitudes and commitment when teachers identify problems and design their own strategies. Collegiality encourages sharing, and collaboration in which the principals and teachers talk about teaching and learning (Brewer, 2001).

If principals as leaders take the role of learning leaders seriously, they must free themselves from the confines of bureaucratic tasks and focus on efforts to improve teaching/learning and learning/learning. Improving learning is an important goal, goals that need to be fought for, and goals that, when implemented, enable students and teachers to create a more meaningful learning environment. Achieving this goal requires more than a strong head of school with concrete ideas and technical expertise. It is necessary to redefine the role of the principal as a role that removes barriers to leadership by removing bureaucratic structures and re-arranging relationships.

Educational theorists often call this period the Education Industrial Revolution Era 4.0 to illustrate various ways to integrate cyber technology both physically and non-physically in learning. Education in the Industrial Revolution Era 4.0 is a phenomenon that responds to the needs of the industrial revolution by adjusting the new curriculum to the current situation. The curriculum is able to open the window of the world through its grasp for example utilising the internet of things (IoT). On the other hand, teachers also get more references and teaching methods.

However, this did not escape the challenges for teachers to implement it. Quoted from Kompasiana (2019):

There are at least 4 competencies that are expected to be possessed by teachers. First, critical thinking and problem-solving skills. It is the ability to understand a problem, get as much information as possible so that it can be elaborated and bring up various perspectives to solve the problem. Teachers are expected to be able to mix learning and export these competencies to students. Second, communication and collaboration skills. These skills are not immune to information technology-based abilities, so that teachers can implement collaboration in the teaching process. Third, the ability to think creatively and innovatively. It is hoped that new ideas can be applied by teachers in the learning process so that it spurs students to think creatively and innovatively. For example, in doing tasks by utilising technology and information. Fourth, technology and information literacy. Teachers are expected to be able to obtain many references in the use of technology and information to support the teaching and learning process.

For the world of education, the Industrial Revolution 4.0 is expected to be able to realise smart education through enhancing and equalising the quality of education, expanding access and relevance in realising world class. This learning interaction can be realised through blended learning (through collaboration), project-based learning (through publication), and flipped classroom (through public interaction and digital interaction). Covid-19, better known as the Coronavirus, is a new type of coronavirus that is transmitted to humans. This virus attacks the respiratory system. This disease is caused by a viral infection and is called COVID-19. Coronavirus can cause disorders of the respiratory system, acute pneumonia and death. Indonesia is currently fighting against COVID-19, even the Minister of Administrative Reform and Bureaucratic Reform (Minister of PAN-RB) has issued a new statement, which essentially states the extension of the period of work from home (Work From Home) and adjustments to the work system.

This also applies to education. With the abolition of the National Examination, studying at home through certain applications, online lectures, online tutoring and seminars are examples of educational services that accelerate the implementation of Revolutionary 4.0 Education. Both teachers and students are encouraged to understand at least the use of digital technology. On the other hand students are also forced to explore technology and information and channel their creativity through innovations in given tasks.

Collaboration Opportunities Amid Covid-19 Outbreaks:
Of course, adjustments are needed in implementing Revolutionary 4.0 Education. However, it is inevitable that the COVID-19 outbreak will be one of the drivers of the implementation of this system. On the other hand, apart from being demanded to understand technology and

information and how to implement it, there are problems that arise that are related to adequate infrastructure. Beyond this, students are required to be able to adjust and utilise Revolutionary 4.0 Education by implementing the internet of things (IoT). This can develop creativity and innovation through joint tasks (collaborations), individual tasks, and certain projects that are useful amid this plague situation.

Amid the outbreak of COVID-19, Education in the Industrial Revolution era 4.0 can be applied with certain adjustments without putting aside things that need more technical attention, such as their impacts and weaknesses. On the other hand, the demands of the role of students are expected to be able to bring positive change in the middle of the situation through the understanding instructions given by the instructor. It is time for us to collaborate in realising the "opportunity" to serve during this pandemic.

Methods

This study aims to look at the assessment criteria of teachers in schools and the role of education, and policy stakeholders in supporting the achievement of teacher programs at the district or city level. The respondents in this study were principals and teachers from five schools in the provinces of Jakarta, Banten and West Java. Data was also obtained from the Directorate of Teachers and Education Staff from the Ministry of Education and Culture. The schools are Bandung Pajagalan 03 Primary School, Tangerang 7 Sukasari Primary School, Negara, Menteng 1 Primary School, Jakarta, Al-Azhar Primary School, Al-Salam, and Pondok Labu Jakarta Elementary School.

This research uses a qualitative method with a multi-site approach. Data collection was carried out through interviews, documentation, observation, and group discussion forums. Data analysis consists of data reduction, display, and verification (Miles, Huberman, & Saldaña, 2014). While data validity is done through credibility, transferability, dependability, and accuracy (Miles et al., 2014).

Discussion and Analysis

In the world of education, primary school teachers who excel are teachers who have pedagogical competencies, personal competencies, social competencies, and professional competencies that can meet national education standards. These educators also have a performance record that exceeds other teachers, have noble character, and become role models for students, fellow teachers, and the community. The teacher program target participants are all teachers from 34 provinces. This was provided that the participants in the achievement of primary school teachers in the sub-district are elementary school teachers at the education unit level, high school, or district teachers in the district or municipality. First

place for primary school teachers at the sub-district level. Participants in the selection of elementary school students at the provincial level are ranked one primary school student at the district or city level. Participants in the selection of elementary school students at the national level are the best elementary school teachers of the three finalist participants (ranked 1, 2 and 3) in each province and was based on evaluation results by two assessors from the Ministry of Education and Culture of the Republic of Indonesia and one assessor from the representative of the local provincial education office.

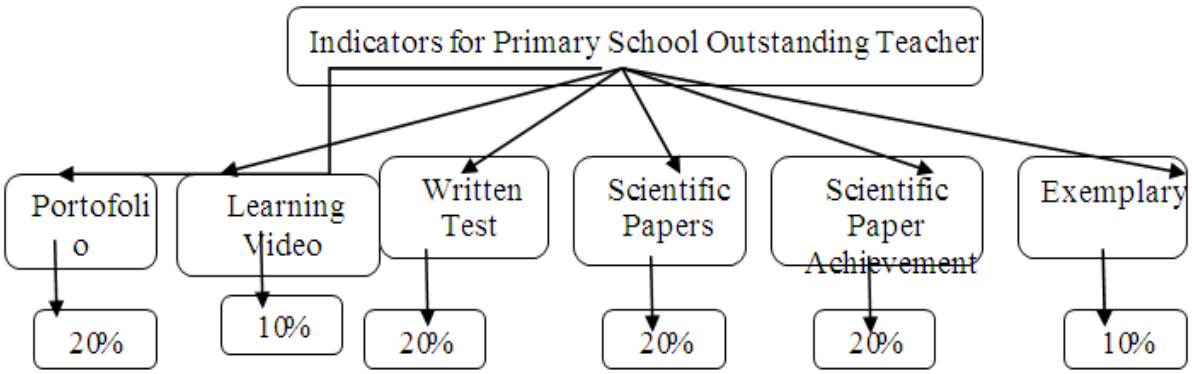
The Government of the Republic of Indonesia provides an outstanding teacher selection program for elementary school teachers with the aim of (1) increasing the degree of teachers as respectable and dignified professionals, (2) increasing teacher motivation and professionalism in their duties, (3) increasing teacher competency through competition that is healthy with an appreciation of education. The benefits of choosing teachers are: (1) motivating teachers to improve performance, for example, dedication and loyalty to achieve high quality educational goals, (2) increasing teacher dignity, image and professionalism, (3) fostering teacher creativity and innovation in improving quality learning in accordance with the changing demands of the Industrial Revolution Era 4.0, (4) building interaction between teachers to exchange experiences in educating students, (5) fostering a sense of national unity and unity through education.

The principles of implementing a teacher program are: (1) competitive: namely, the selection of teachers based on fair competition (selection) at all levels, not based on appointment or equity, (2) objectives: which refers to the process of assessing and determining primary school teacher titles which at all levels, whether at the school, sub-district, district or city, provincial and national levels, is conducted fairly, is non-discriminatory, and meets the assessment standards, (3) transfusion: which refers to a process that provides opportunities for all stakeholders to obtain access to information on the assessment and determination of the title of primary school teachers at all levels, as a system that includes inputs, processes and results of assessments, (4) accountable: which refers to the process of assessing and determining the high-level honours of school teachers at all levels can be accountable to all educational stakeholders, both academically and administratively.

The criteria for evaluating teachers in the Ministry of Education and Culture in 2018 consist of six aspects, namely, portfolio assessment, learning videos, written tests, scientific papers, presentation of scientific papers, and examples (Islami et al, 2019; Nurtanto, et al, 2020; Rabiman et al, 2020). First: portfolio assessment is a document in the form of information about various activities that have been taken by prospective teachers during their time as teachers in the education unit. Second: the assessment of learning videos is one part of the assessment of planning and implementation of learning that is always done by prospective teachers. Third: written test assessment is part of the assessment criteria for teachers. Written

test material consists of teacher competency components, which include professional competencies, pedagogical competencies, personality competencies, social competencies, and educational insights. Fourth: the assessment of scientific papers compiled by the teacher is the result of Classroom Action Research or Best Practices that have been conducted by the teacher during the learning process in class. The fifth evaluation of the presentation of the article is scientific writing that includes aspects of exposure consisting of clarity or mastery of the material, the attractiveness of exposure or appeal, time management of presentation, the appropriateness of the media used, the relevance of the answer to the question. Sixth: exemplary and noble moral assessments are carried out using two types of questionnaires, namely, the exemplary questionnaire and the noble moral questionnaire.

Picture 1. The six assessment indicators are then divided into a number of presentation points



Educational stakeholders in achieving elementary school teacher programs at the district or city level are (1) the education office, (2) supervisors, (3) principals, (4) tertiary institutions, and (5) teacher working groups. Each stakeholder has a role based on the capacity of the institution.

Table 1: The role of education stakeholders in supporting outstanding elementary school teacher programs

Stakeholder s	Education Department Supervisor	Principal	Principal	Higher Education	Teachers Working Group
Indicator of assessment					
Portfolio	Help provide the required documents	Help provide required document	Help docu ment needed	m X	X
Video Learning	Helps facilitate reward in the for budget-making instructional video	X	Play a role as giving feedback content, provide motivation and budget-making instructional videos	Acting as an expert and coach in providing input video learni ng content	Acting as a peer group teaching
Written test	X	Helps mast er competency teachers	Acting as a mentor in applying the competency of teachers	Help content and knowledge material competence	Acting as a peer group discussion
Scientific Writing	X	X	Providing feedback content	Providing guidance for writing scientific papers	X
Presentation ns, Scientific Writing	X	X	Provides feedback on technical presentations	Assessing and guiding presentations	As an audience conducting presentation s

Modeling	Good examples in behaviour inside and outside the school environment	Giving examples of good behaviour in dealing with all stakeholders	Giving examples of good behavior so that it becomes teachable	Giving arrangements and skills in behaviour (the winning attitude)	Become a partner and feedback on daily activities

The main purpose of teacher assessment and evaluation is to strengthen knowledge, skills, dispositions, and practice in the classroom as professional educators. The current policy discourse on teacher evaluation falls within the framework of rewards and punishments that too often aims to: 1) measure the effectiveness of each teacher, 2) categorise and rank teachers, 3) give rewards to those at the top, and 4) fire those under. Such a simple approach not only ignores the complexity of teaching, but also ignores the true purpose of teacher assessment and evaluation (Fantini, 2018). Teacher assessment is a comprehensive development and growth. The National Education Association in Teacher Assessment and Evaluation states "The core purpose of teacher assessment and evaluation is to strengthen the knowledge, skills, dispositions, and classroom practices of professional educators" (Arifin et al, 2020). This goal serves to promote student growth and learning while also inspiring great teachers to remain in the classroom (Cowan & Goldhaber, 2016).

Achievements lead students and provide quality learning experiences that have long been dreamed of by educational institutions. Teacher skills and competencies have the most important variables that influence graduate competencies. Therefore, regular teacher performance assessments are needed to determine teacher quality levels. Assessment must determine the gap between the expected quality required by students and society and reality. Teacher assessment can be an important lever to increase focus on teaching quality, "and understanding of various aspects of successful performance appraisal is very important" (Elliott, 2015). While a performance appraisal can be defined as an ongoing process used to identify, measure, and develop individual performance following an organisation's strategic objectives (Elliott, 2015).
Competent teachers are those who give teachings that inspire, love, and enrich. Qualified teachers are those who place students as part of the community. Competent teachers are those who want to teach and train to inspire, excite, and enrich students from all sections of society. Competent teachers also want to provide skills for a modern economy and contribute to the cohesion and regeneration of local communities (Dixon & Pilkington, 2017).

The criteria for evaluating elementary school teachers in Indonesia are the concept of teachers in the world with portfolio assessment categories, learning videos, written tests,

scientific writing, presentations, scientific papers, and examples. That's because the portfolio will provide complete information about what teachers will convey to the public through archived documents. Portfolios are one alternative that can be used to write assessments (Eridafithri, 2015). This study introduces the function of e-Portfolios as storage, workspace, and showcase to support Competency Certification in Indonesia (Sensuse & Purwandari, 2018). E-portfolio is a promising approach to develop teachers into reflective practitioners who show that they can adapt to new technologies, new criteria, and new environments (Alshumaimeri, 2017). Often administrators look for alternative methods to evaluate staff while staff often look for methods to represent the breadth and quality of their efforts. One method of proving to be effective for collecting and organising the product of teacher activities is a portfolio. Teacher portfolio development requires planning, time management, and cooperation from students, colleagues, parents, and supervisors. The portfolio format can vary from individual to individual and is based on personal choice. Portfolios provide useful insights both in the content and teaching methods used by teachers and, in doing so, add significant qualitative dimensions to many existing teacher evaluation systems (Gelfer, Hara, Krasch, & Nguyen, 2015).

Meanwhile, the use of instructional videos can motivate teachers to use technology effectively in the learning process, together with students in class. Our focus is to enable teachers to use technology effectively to question the progress of their students' learning (Luckin et al., 2016). Scientific papers can provide information about the prospective teacher's track record. On the other hand, adult scientific literacy has been measured primarily from the perspective of mastery of scientific knowledge and skills (Naganuma, 2017; Nurtanto et al, 2019). Cross-case analysis revealed that regardless of the program and context of teacher preparation that was very different, the assignments were very similar and focused on developing candidates as authors or writing teachers.

Scientific presentations can explain the ability of teachers to present learning material. Argumentation skills are recognised as an important factor for teacher success in schools and beyond. The ability to integrate knowledge and ideas, describe and evaluate claims and arguments, and assess the reasons used in arguments is at the core of the State Core Standards (Frey, Ellis, Bulgren, Hare, & Ault, 2015). Based on the results of our assessment, the researchers propose that the seminar described can effectively complement existing approaches to teaching critical scientific thinking (Ferenc, Cerven, Birc, & Sevc, 2017). The scientific thinking skills investigated are questioned-posing, explanations, graphs, investigations, and metacognition (Dori, Zohar, Carmi, Zohar, & Carmi, 2018).

The role of the principal as a leader becomes important for the successful implementation of the achievement program for elementary school teachers. The results of the study state that given the results that have been achieved, the researchers recommend the following:

Activate the role of principals by giving them greater authority to take steps that enhance the concept of intellectual security (Waswas & Gasaymeh, 2017). In the education unit, the principal will select potential and qualified teachers to take part in the selection of teachers by considering academic requirements, administrative requirements, and special requirements held by the teacher. Additionally, the principal will then propose potential teacher candidates at the sub-district level (Ministry of Education and Culture, 2019).

Conclusion

The Industrial Revolution Era 4.0 demanded that teachers become the front guard in education and become more qualified, ready to compete both at a national, regional, and international level. The position and role of teachers is increasingly strategic in preparing human resources to face the era of the Industrial Revolution 4.0. The selection of elementary school teachers that can increase motivation, dedication, loyalty, and professionalism of teachers has a positive effect on improving performance and achievement that can be seen from the quality of graduates of education units. The criteria for evaluating teachers are the benchmarks in providing transparent teacher competition results. The role of education stakeholders will make teachers have motivation and enthusiasm to continue to develop.

REFERENCES

Alshawi, A. T. and Alshumaimeri, Y. A. (2017). Teacher electronic portfolio and its relation to efl student teacher performance and attitude. International Journal of Education and Literacy Studies, 5(1), 42-54. https://doi.org/10.7575/aiac.ijels.v.5n.1p.42

Arifin, Z. Nurtanto, M. Warju, W. Rabiman, R. and Kholifah, N. (2020). The TAWOCK conceptual model for content knowledge for professional teaching in vocational education. International Journal of Evaluation and Research in Education (IJERE), 9 (3), 156-166. Article https://doi.org/10.11591/ijere.v9i3.20561

Baker, M. (2019). Playing, talking, co-constructing: Exemplary teaching for young dual language learners across program types. Early Childhood Education Journal, 47(1), 115-130. https://doi.org/10.1007/s10643-018-0903-0

Blase, J. and Blase J. (2000). Effective instructional leadership: Teachers' perspectives on how principals promote teaching and learning in schools. Journal of Educational Administration, 38 (2), 130-141.

Brewer, H. (2001). Ten steps to success. Journal of Staff Development, 22 (1), 30-31.

Brookover, W. B. and Lezotte, L. (1982). Creating effective schools. Holmes Beach, FL: Learning Publications.

Cosner, S. (2018). What makes a leadership preparation exemplary program? Journal of Research on Leadership Education, (Mc 147), 1–18. https://doi.org/10.1177/1942775118819661

Cowan, J. and Goldhaber, D. (2016). National board certification and teacher effectiveness: Evidence from Washington State. Journal of Research on Educational Effectiveness, 9 (3), 233–258. https://doi.org/10.1080/19345747.2015.1099768

Dixon, F. J. and Pilkington, R. (2017). Poor relations? Tensions and torment, a view of excellence in teaching and learning from the Cinderella sector. Teaching in Higher Education, 22(4), 437-450. https://doi.org/10.1080/13562517.2017.1301912

DuFour, R. (2002). Learning-centered principal. Educational Leadership, 59 (8), 12-15.

Dori, Y. J. Zohar, A. Carmi, M. Zohar, A. and Carmi, M. (2018). Gender-fair assessment of young gifted students' scientific thinking skills. International Journal of Science Education, 0 (0), 1–26.

Elliott, K. (2015). Teacher performance appraisal: More about performance or development? Australian Journal of teacher education, 40(9), pp. 144-152.

Eridafithri, (2015). The application of portfolios to assess progress in writing of EFL students at secondary schools in Banda Aceh. Studies in English Language and Education, 2, 1, 1–16.

Flath, B. (1989). The principal as instructional leader. ATA Magazines, 69 (3), 19-22, 47-49.

Fullan, M. (1991). The new meaning of educational change. New York: Teachers College Press.

Johnson, S. M. (1996). Leading to change. San Francisco: Jossey-Bass.

Lashway, L. (2002). Developing instructional leaders. ERIC Digest 160.

Mendez-Morse, S. (1991). The principal's role in the instructional process: Implications for at-risk students. Issues about Change, 1 (2), 1-5.

Kruit, P. M. Oostdam, R. J. Berg, E. Van, D. Schuitema, J. A. Kruit, P. M. Oostdam, R. J. Schuitema, J. A. (2018). Assessing students' abilities in performing scientific inquiry: instruments for measuring science skills in primary education. Research in Science & Technological Education, 5143, 1–27. https://doi.org/10.1080/02635143.2017.1421530

Loeb, S. (2019). Effective schools: Teacher Hiring, assigment, development and retention. Association for Education Finance and Plolicy, 7 (3). 269-304.

Luckin, R. Clark, W. Avramides, K. Hunter, J. and Oliver, M. (2017). Using teacher inquiry to support technology-enhanced formative assessment: a review of the literature to inform a new method. Interactive Learning Environments, 25(1), 85-97. https://doi.org/10.1080/10494820.2015.1121152

Minister of National Education, (2007). Academic qualification standards and teacher competencies (pp. 1–32). Ministry of National Education of the Republic of Indonesia.

Miles, M. B. Huberman, M. A. and Saldaña, J. (2014). Qualitative data analysis. A Methods

Ministry of Education and Culture, (2019). Guidelines for Selection of basic education teachers edicated national levels. Jakarta.

Naganuma, S. (2017). An assessment of civic scientific literacy in Japan: development of a more authentic assessment task and scoring rubric. International Journal of Science Education, Part B, 7(4), 301-322. https://doi.org/10.1080/21548455.2017.1323131

National Association of Elementary School Principals, (2001). Leading learning communities: Standards for what principals should know and be able to do. Alexandria, VA: Author.

Sensuse, D. I. and Purwandari, B. (2018). Defining e-portfolio factor for competency certification using fuzzy delphi method. TOJET: The Turkish Online Journal of Educational Technology, 17 (2), 25–33.