

Antecedents Of Competence, Digital Learning and The Influence On Teacher Performance of Senior High School

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Manuscript received 16 Nov 2021; revised 20 Nov 2021; accepted 1 Jan 2022. Date of publication 10 Jan 2022

Abstract

This study aims to determine two antecedent variables of competence, digital learning, and the impact on teacher performance of senior high school Aceh Province. The data is used by distributing questionnaires to 180 respondents of teacher old high school Aceh Province. The data source is primary, the dissemination of questionnaires to respondents; the data collection technique used in this study uses questionnaires is a series of submitted written questions and disseminated to respondents to get answers in writing from the teacher senior high school Aceh Province. The statistical analysis used structural equation modeling and was processed with the help of the application Amos to analyze the data. In this study, the authors use the structural equation model method to test hypotheses; the structural equation model is a set of statistical techniques that allows the simultaneous testing of a relatively complex series of relationships. What is meant by complicated is that simultaneous models are formed through more than one dependent variable simultaneously acting as independent variables for other tiered relationships. The variables measured include digital leadership effect toward competence and digital learning. Then an analysis of statistical test is digital leadership, competence, and digital learning effect toward senior high school Aceh Province. The resulting job satisfaction variable effect of partial mediated on work characteristics toward to apparatus Performance of National Narcotics Agency Aceh Province.

Keywords: Digital Leadership, Competence, Digital Learning, Teacher Performance.

1. Introduction

The development of the world of education has had an impact on the development of human resource management today, causing competition in all fields, including the world of education, is increasingly competitive, both nationally and internationally, the world of education both privately owned and state-owned, there is tremendous growth, this is certainly more profitable for the community and the government because there will be more and more alternatives to choose the world and education level as needed [1].

Some tang problems arise during the Aceh Province High School it is seen that the role of human resource management plays an important role in the development of the world of education, the role of human resource management in the organization is the key to the success of educational organizations, the importance of the role of human resources in Aceh Provincial High School, Aceh state school organizations have goals to be achieved, namely goals for organizational development and plans for improving performance. State High School teacher of Aceh province performance [2].

The teacher is a professional profession in which teachers are required to make the best effort to carry out their work as best as possible in educating their students; as a professional, then the duty of teachers as educators, teachers, and coaches should be able to impact their students. Performance is the overall result or level of success of a person during a specific period in carrying out a task compared to various possibilities, such as the standard of work results, targets or goals, or criteria that have been predetermined and have been mutually agreed upon. [3] The teacher is a professional profession in which he is required to do his best to carry out his profession as best as possible, as a professional then the duties of teachers as educators, teachers, and coaches should be able to impact his students at the State High School of Aceh province.

Performance is the overall result or level of success of a person over a certain period of the task compared to various possibilities, such as standards of work, targets or objectives, or criteria that have been predetermined and agreed upon.

Aceh Provincial High School has worked in various fields to advance community education in North Aceh Regency, while the progress of Aceh Provincial High School education, inseparable from hard work and community assistance, the government and the performance of teachers who prioritize skills and knowledge that aim to create graduates who are ready to plunge into the community and bring good knowledge directly applied in people's lives.



2. Literature Review

2.1. Theory of Digital Leadership

The term Industry 4.0 e-leadership was introduced by Avolio, Kahai, and Dodge through a scientific article titled E-leadership; Implications for Theory, Research, and Practice published in the scientific journal *Leadership Quarterly* in 2000 [4] [5]. In the article that became the primary reference of leading researchers in the digital era, e-leadership occurs in the e-environment where work is done through information technology, primarily through the internet. Digital leaders direct people remotely to do work to achieve organizational goals; digital leaders use new technologies to improve their work, find new business models, and communicate with their followers [6]; traditional face-to-face interaction has been replaced with electronic media.

2.2. Theory of Competence

In general, understanding competence is a skill each individual possesses in performing a task or job in a particular field by the position that has been given [7]. Competence is a skill or capacity of everyone to perform tasks in a job, where the ability is based on physical and intellectual factors. There is stated that competence is a character that puts a person in touch with the effectiveness of individual performance in doing his work. Work competence is a job skill owned by everyone that includes elements of knowledge, skills, and work attitudes that are by the standards previously set [8].

2.3. Theory of Digital Learning

Information technology and communication as part of technology are also developing very rapidly at this time, affecting various lives and providing changes to the way of life and daily human activities [9], including in the world of education, education is experiencing very rapid development, including digital learning, (digital learning). Digital learning can be formulated as an extensive collection of computers in networks tied together so that many users can share their vast resources'. Digital learning includes aspects of hardware information in the form of a set of computers that are interconnected and can transmit data, whether in the form of text, messages, graphics, video, or audio [9]. With this ability, digital learning can be interpreted as a computer network interconnected with other computer networks to all corners of the world; however, the notion of digital learning is related to hardware and includes software digitally [10].

2.4. Theory of Teacher Performance

According to [11], employees' work in carrying out tasks is assigned based on the employees' skills, experience, sincerity, and time. Performance is a combination of three critical factors: the ability and acceptance of the explanation of task delegation and the role and level of motivation of a team member. The higher the numbers for these three factors, the greater the performance of the employees concerned. Meanwhile, "the performance is the work produced by employees or real behavior displayed." Another opinion expressed is that performance is "the quality work achieved by a team member performing their duties following the responsibilities given to him, [12].

Teacher performance is dynamic and can significantly impact the overall performance of any organization and its sustainability [13]. Companies understand this, and human resource management departments are responsible for measuring the performance of the employees. One of their key objectives is developing methods and policies for constantly improving their performance [14].

3. Methods

The location in this study is the senior high school Indonesia / city in Aceh Province. In contrast, the object in this study is the entire teacher of old high school Aceh Province Indonesia.

3.1. Population and Sample

The population is a generalization area consisting of objects/subjects with specific qualities and characteristics set by researchers to study and draw conclusions. So the person in this study is the teacher of senior high school Aceh Province Indonesia / City in Aceh Province. The sampling technique is carried out by stratified random sampling method. This sample withdrawal technique was carried out in strata populations in this study with a sample size of 180 respondents (20 indicators x 9 observations) according to sem model requirements in this study sample back from the spread of questionnaires amounting to 180 respondents at the teacher of senior high school Aceh Province Indonesia.

3.2. The Technique of Data Collection

This study uses primary data obtained by disseminating questionnaires to respondents, where respondents will respond in writing in response to statements given to the variable analysis [15] of the National Narcotics Agency District / City in Aceh Province. In this study using the structural equation modeling (SEM) analysis model based on the evaluation of interdependence relationships, path diagram compiled will make it easier to see the causality relationship of the construct to be tested, based on the study of existing theoretical theories and theoretical frameworks then made a diagram of causality relationship path between variables and indicators, as for the form of complete model flowcharts with mediation variables of this research [15]. It's like in Figure 1 below.

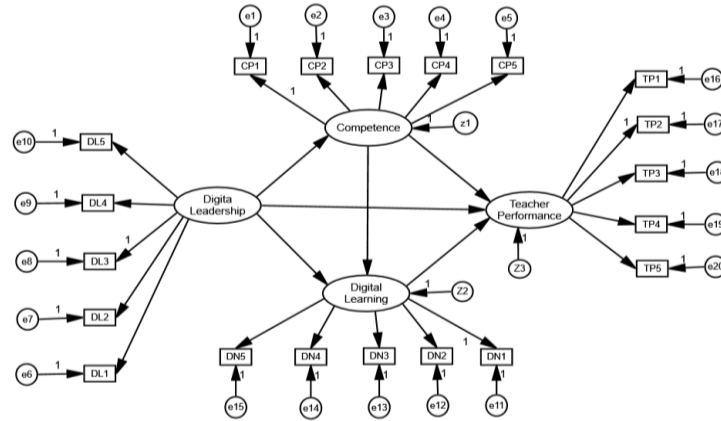


Fig 1. Full model structural equation modeling

3.3. The Technique of Data Analysis

In this case [16], inferential statistics are a method related to the sample analysis for concluding population characteristics, after collecting data and information in the field, then to manage the data and information research [17]. The authors use the method of the Structural Equation Model (SEM) in the model and hypothesis testing. SEM or structural equation models are statistical techniques that allow testing a series of close relationships complicated cumulatively. In this study, two types of analytical methods are used, namely to [18] :

1. Confirmatory factor analysis in SEM is used to confirm the most dominant factors in a group of variables.
2. Regression Weight in SEM is used to examine how much influence between the variables

Structural equation modeling (SEM) was formulated to state causality relationships between various constructs, the formula developed is as seen below :

$$CP = b_1DL + Z_1$$

$$DN = b_1DL + b_2CP + Z_2$$

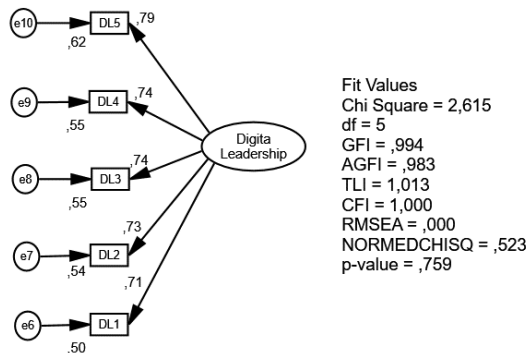
$$TP = b_1DL + b_2CP + b_3DN + Z_3$$

Information :

- CP = Competence
- DN= Digital learning
- DL= Digital leadership
- TP= Teacher performance
- b₁-b₃ = Estimation coefficient
- Z₁-Z₃= Residual value

4. Results and Discussion

Confirmation analysis of exogenous construction factors can be concluded that the value of loading factor of digital leadership indicator loading factor >0.60 so that all indicators are following the CFA model, for more details can be seen in Figure 2 below :



Fit Values
 Chi Square = 2,615
 df = 5
 GFI = ,994
 AGFI = ,983
 TLI = 1,013
 CFI = 1,000
 RMSEA = ,000
 NORMEDCHISQ = ,523
 p-value = ,759

Fig 2. Exogen confirmatory factor analysis

Confirmation analysis of endogenous construct confirmatory factor analysis can be concluded that the loading factor value of the competence, digital learning indicator and the teacher performance of senior high school all loading factors >0.60 so that the indicator is following the requirements of the CFA model, for more details can be seen in Figure 3 below:

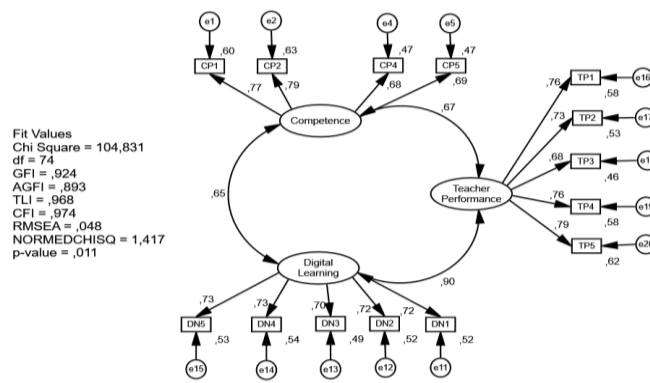


Fig 3. Endogen construct confirmation factor analysis

Based on Figure 4 it can be explained that the goodness of fit structural model as required in the structural equation modeling model the results of data analysis with the structural equation modeling as seen in Figure 4 below, it can be explained that all exogenous variables have a significant effect on endogenous variables so that this model has been able to test the research hypothesis that has been formulated in the previous part of this study.

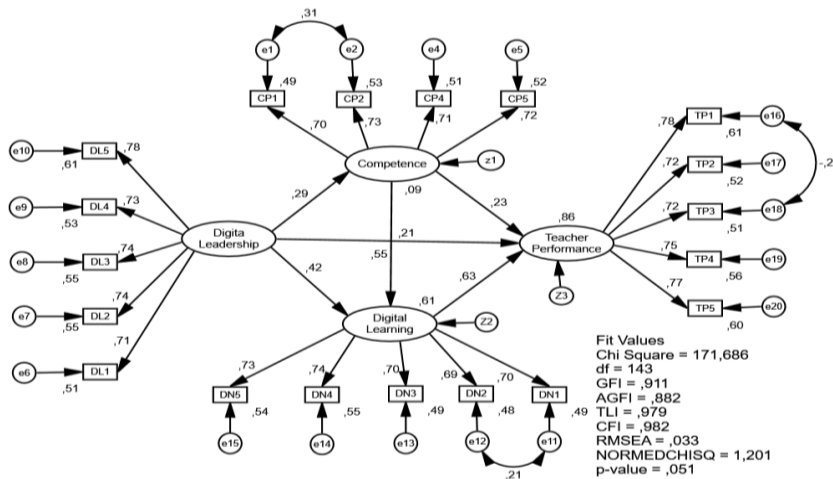


Fig 4. Structural Equation Modeling.

Table 1. Goodness of Fit Index t results

The goodness of Fit Index	Cut-off Value	Results of analysis	Model evaluation
X ² -Chi-Square	Expected Small	171,686	Good
Probability	≥ 0.05	0.051	Good
GFI	≥ 0.90	0.911	Good
AGFI	≥ 0.90	0.882	Marginal
CFI	≥ 0.95	0.982	Good
TLI	≥ 0.95	0.979	Good
CMIN/DF	≤ 2	1.201	Good
RMSEA	≤ 0.08	0.033	Good

Based on Table 1 of the results of the AMOS analysis, it can be explained that all exogenous variables have a significant effect on endogenous variables; the results of this study can already test the hypothesis of the study.

Table 2. Effect of exogen variables on endogen variables

Endogen Variable	Exogen Variabel	Std.Est.	Est	S.E.	C.R.	P
Competence	<--- Digital leadership	0.293	0.313	0.100	3.142	0.002
Digital learning	<--- Competence	0.550	0.498	0.089	5.610	0.000
Digital learning	<--- Digital leadership	0.418	0.404	0.081	5.018	0.000
Teacher performance	<--- Competence	0.227	0.233	0.090	2.580	0.010
Teacher performance	<--- Digital leadership	0.210	0.229	0.079	2.918	0.004
Teacher performance	<--- Digital learning	0.628	0.711	0.138	5.157	0.000

Sources: Primary data processed Amos (2021)

After analysis based on the primary data that has been collected as mentioned above, this discussion will be explained in more detail to the results of research that has been analyzed through the analysis of the structural equation modeling. This discussion will be associated

with the theory and results of the previous study and emphasize testing the hypothesis that has been prepared before; as for this research discussion to get answers to the research hypothesis statement, It can be delivered as follows.

1. The Effect of Digital Leadership on Competence

The results of the data analysis in this study proved that digital leadership has a positive and significant influence on competence, the analysis of results prove that the P-value value resulting from the SEM model is $0.002 < 0.05$ so it can be stated that there is a significant influence of digital leadership on competence, this means that the digital leadership in senior high schools to run bain and in line with teacher competence. The results of this study are also in this line with research conducted by [19], [20], and [21] found a significant influence between digital leadership and competence senior high schools of Aceh Province.

2. Influence of Digital Leadership on The Digital Learning

Based on the results of the research proved that the digital leadership had a positive and significant effect on the digital learning senior high school Aceh Province, the results of the analysis proved that the value of the P-value produced was $0.000 < 0.05$ so that there can be a significant influence of digital leadership of the digital learning senior high school Aceh Province, this means that it is more following this results of this study show that digital leadership has a direct relationship with digital learning in senior high schools of Aceh Province. The results of this study support the research of [19], [22], and [23]; if the results of this research are associated with actual reality or conditions in the institution or organization senior high school Aceh Province, then the results of the study show that the digital leadership can affect digital learning of old high school Aceh Province.

3. Effect of Digital Leadership on The Teacher Performance

Based on the results of research that digital leadership has a positive and significant effect on the teacher performance of the senior high school Aceh Province, the results of the analysis prove that the value of P-value produced in the model is $0.004 < 0.05$ so that there is a significant influence on digital leadership on the teacher performance on the senior high school Aceh Province, the results of this study show that digital administration with the measurement of several indicators has a direct relationship with teacher performance. This research supports the results of [24], [25], and [6]; the results of this study are supported by several previous studies that support the results that have been done in this study.

4. Effect of Competence on Digital learning.

Based on the results of research that competence has a positive and significant effect on the digital learning of the senior high school Aceh Province, the results of the analysis prove that the value of P-value produced in the model is $0.000 < 0.05$, so that there is a significant influence on competence on the digital learning of the senior high school Aceh Province, the results of this study show that competence with the measurement of several indicators has a direct relationship with digital knowledge of the old high school Aceh Province. This research supports the results of [20], [24], and [7], Luthans (2015); the results of this study are supported by several previous studies that support the results that have been done in this study.

5. Effect of Competence on Teacher Performance.

Based on the results of research that competence has a positive and significant effect on the teacher performance of the senior high school Aceh Province, the results of the analysis prove that the value of P-value produced in the model is $0.010 < 0.05$ so that there is a significant influence on competence on the teacher performance of the senior high school Aceh Province, this means that the more competence, the results of this study show that competence has a relationship in the direction of teacher performance. This research supports the results of [24], [21] and [26], and [27], the results of this study show that competence is supported by several previous studies so that the results of the research support some of the theories that have been studied before.

6. Effect of Digital Learning on Teacher Performance.

Based on the results of research that digital learning has a positive and significant effect on the teacher performance of the senior high school Aceh Province, the results of the analysis prove that the value of P-value produced in the model is $0.000 < 0.05$ so that there is a significant influence on digital learning on the teacher performance of the senior high school Aceh Province, In this study digital learning has a direct relationship with teacher performance of the old high school Aceh Province. This research supports the results of [28], [29] and [2] and [2]; the results of this study are supported by previous research and digital learning that has been studied with several measurement indicators that affect the performance of teachers of the senior high school Aceh Province.

5. Conclusion

Based on the formulation of the problems, objectives, and research hypotheses that have been outlined before, it can be put forward some conclusions in this study as follows :

1. Digital leadership has a positive and significant effect on the competence of the senior high school of old high school Aceh Province a.
2. Digital leadership has a positive and significant effect on the digital learning of senior high school Aceh Province.
3. Digital leadership has a positive and significant effect on the teacher performance of senior high school Aceh Province.
4. Competence has a positive and significant effect on the digital learning of the senior high school of old high school Aceh Province.
5. Competence has a positive and significant effect on the teacher performance of senior high school Aceh Province.
6. Digital learning has a positive and significant effect on the teacher performance of the senior high school in Indonesia.

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