The Influence of Organizational Culture on E-Learning Readiness

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Abstract. The advances of information technology have many impacts on all aspects of organizational life including higher educational institutions. Colleges or universities can use it in a variety activities such as academic management, finance management and even the learning process that is known as e-learning. The implementation of e-learning can be done whether all the influence factors in a ready state. The existence of organizational culture is estimated to have an influence on e-learning readiness. Research on organizational culture is done by using the Competing Value Framework (CVF). This research also uses a model that builds from combination of Rosenberg's model and Rautenbach's model in order to know about organization's e-learning readiness. From the analysis that has been done about organizational culture and e-learning readiness in Padang State Polytechnic can be given a recommendation that can assist institutions to develop a strategic plan to e-learning implementation.

Keywords: Competing Value Framework, e-learning readiness, OCAI, organizational culture, Padang State Polytechnic.

1 Introduction

Along with the need for learning's concepts and methods that more effective and efficient, the utilization of information technology for education is inevitable. The concept known as e-learning influences educational transformation process into digital forms, both in contents and the systems.

The basis of strategic e-learning success is the understanding of the educational institution that is based on the utilization of the system. Based on the observations of Moore and Kearsley in 1996 that put forward by Nichols, M and Anderson B[1] concluded that there is a common misconception among educators who are not familiar with the system approach and they assume that they will get the benefit by using technology without making any change about the way and pattern of learning.

The organizational readiness to e-learning adoption can be defined as the organizational mental and physical preparation to e-learning's act and experience. These matters include business readiness, technology readiness, content readiness, training readiness process, culture readiness, human resources readiness, and financial readiness [2].

Padang State Polytechnic is one of the colleges in Indonesia that implement e-learning in order to help learning process. The use of e-learning applications is one of the strategical steps

to improve educational service to students, especially in the learning process and increase competitiveness in educational world.

So far, the development of function and application quality of e-learning in Padang State Polytechnic was only based on what desired on institution and not focus on what is desired by the lecturer and students as the users. It makes the use of e-learning applications is still very low, especially among students. Although the course material has been provided in the e-learning site, the students still asked for it directly from the lecturer because they do not take it online.

Therefore, there should be an analysis of the readiness of Padang State Polytechnic in implementing e-learning (e-learning readiness). The assessment of the readiness factors is reviewed in terms of organizational culture that identified in the Padang State Polytechnic.

The results of this research are expected to provide knowledge inputs about cultural influences on organizational readiness assessment to implement e- learning and provide recommendations for implementing e-learning strategies in the Padang State Polytechnic.

2   Research Method

This research is correlational and quantitative with the primary objective to determine the relationship between identification variables. In order to achieve these objectives, a hypothesis put forward to be able to answer the research problem, and then a statistical analysis used to prove it [3].

The research methodology used in this research is :

Literature review on the concept of culture, e-learning, e-learning readiness, transformation and change management are derived from various resources and previous studies.

Creating a conceptual research model that combines organizational culture factors, regulatory implementation of higher education, organizational readiness in the implementation and development of e-learning.

Create a hypothesis as a temporary response to the research problems.

Determine the instrument and measurement scales.

Take measurements of a research sample in Padang State Polytechnic by using instruments that have been previously determined.

Analyze the results and prove the truth of the hypothesis.

Make some recommendations that contain specific things that need Padang State Polytechnic's management concerns in developing e-learning in the future.

Make conclusions and give suggestions for further research

The stages that undertaken in this study follow a systematic quantitative study that had been presented before by Sugiyono [4] and can be seen in Figure 1.
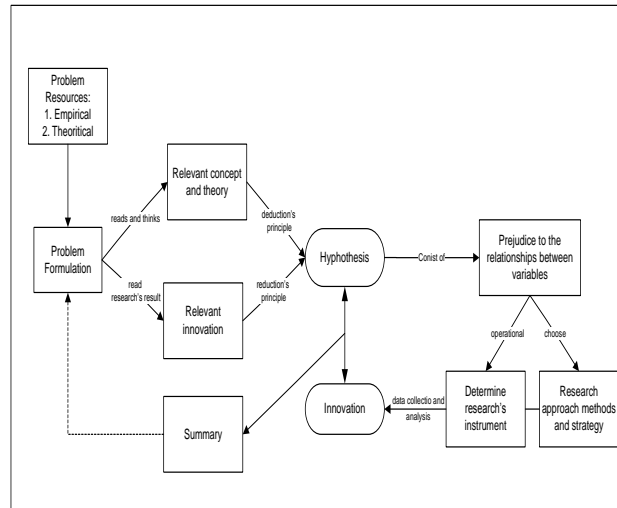
Figure 1. Quantitative research process

3 Analysis And Design of Conceptual Model

The research was conducted in several stages, such as analysis, design, and evaluation. The analysis stage consists of analyzing the organizational culture, analyzing the dominant organizational culture assessment model and analyzing the comparison of models of e-learning readiness. From the results of this analysis will set the variables that can be made as the basis for the hypothesis research.

There are two variables that can be obtained from the analysis process and used for this research, such as :

1.   Organizational culture (independent variable)

Organizational culture is a set of habits and beliefs that are understood and implemented within an organization and is considered to have meaning and value of its own and became the basis of the rules of behavior.

2.   E-learning readiness (dependent variable)

The readiness of organizational members to accept e-learning as a form of learning transformation.

A hypothesis was made from both variables as a temporary research's response and it had been presented in Figure 2. Research hypothesis consists of descriptive hypothesis H1: there is a dominant organizational culture in Padang State Polytechnic and associative hypothesis H2: there is an influence between organizational culture and e-learning readiness.
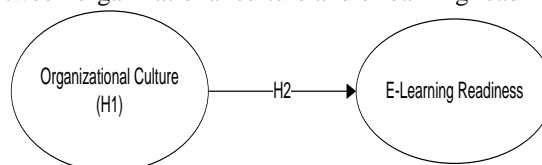
Figure 2. Research hypothesis

After research variables and hypotheses are being identified, the next step is to define a conceptual model of research. The model that can be seen in Figure 3 is frame of thinking's reference in developing the research instruments and to prove the hypothesis of the study.
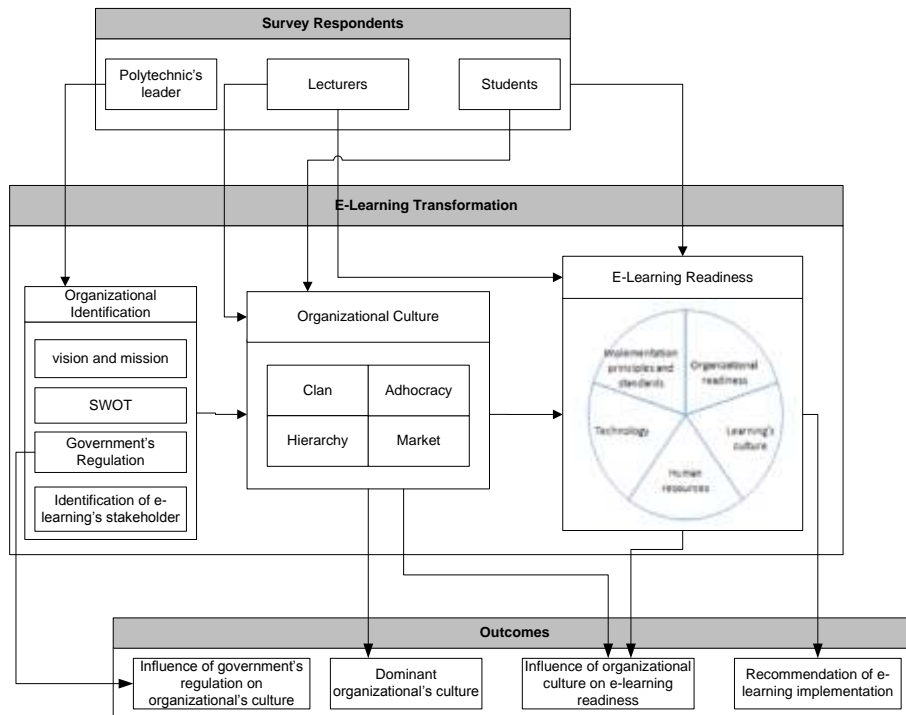
Figure 3. Conceptual model of research

The instrument to assess a dominant organizational culture on Padang State Polytechnic is created by adopting Competing Value Framework (CVF) that develop by Cameron and Quinn [5] to classify organizational culture into four main groups. Later, this cultural group will become the attributes of organizational culture variables in this research.

Assessment of the cultural elements derived from the six main OCAI's dimensions (Organizational Culture Assessment Instrument), which is the dominant characteristics, organizational leadership, management of employees, organizational glue, strategic emphases and criteria of success.

Meanwhile, the instrument to measure e-learning readiness is obtained by comparing Rosenberg's model[6] and Rautenbach's model [7] and produce five measurement criteria such as organizational readiness, learning's culture, human resources, technology, and implementation principles and standards.

4 Research Results

The evaluation of the conceptual model of research conducted by an assessment of primary and secondary research data. Primary data was obtained by distributing survey questionnaires to research samples that have been previously determined and consist of 335 student samples and 33 lecturer's samples that spread across seven departments in Padang State Polytechnic. While the secondary data obtained from observation and literature review.

From the questionnaire research on the organizational culture show the clan culture was obtained as the current dominant culture in Padang State Polytechnic with a dominance score of 2.68. Clan culture is still expected as organizational dominant culture in the future with a higher dominance score that is 3.02. This result can be seen in Figure 4.
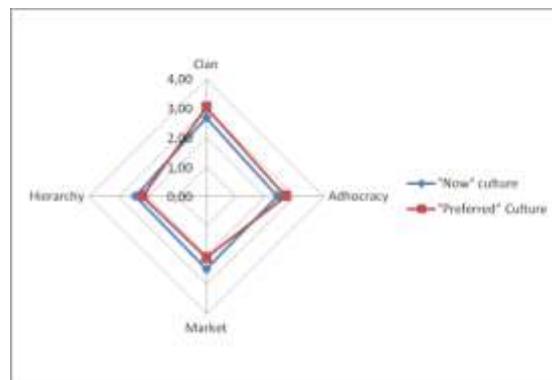
Figure 4. Profile of Padang State Polytechnic's organizational culture

The dominance of clan culture has been seen in four of OCAI dimensions: dominant characteristics, organizational characteristics, management of employees and criteria of success. While organizational glue's dimension show dominance of adhocracy means that organization has a commitment to innovations and future development. This research also shows that market culture was dominance on strategic emphasis's dimension, which means Padang State Polytechnic has healthy competitive environment in order to achieve better performance.

This result shows clan culture dominance in "now" and "preferred" culture comes from both students and lecturer's sample in Padang State Polytechnic.

By knowing the clan culture as the dominant culture makes that the descriptive hypothesis H1: There is a dominant organizational culture in Padang State Polytechnic has been proven true.

While the results of questionnaires on e-learning readiness, show that the readiness of both students and lecturers in accepting the e-learning is still limited (2nd state). The acquisition value shows that students' e-learning readiness is higher than lecturers. The score of e-learning readiness from students in Padang State Polytechnic based on this research is 102.09 and the lecturers obtained readiness score is 98.48. These results show that students in Padang State Polytechnic feel more prepared to accept e-learning as a form of learning's transformation.

Table 1 shows the readiness score from each assessment dimensions of e-learning readiness.

Table 1. Assessment result of e-learning readiness

Assessment Criteria	Score		
	Students	Lecturers	Polytechnic
1. Organizational readiness	24.66 (2nd state)	22.82 (2nd state)	24.49 (2nd state)
2. Learning's culture	18.12 (2nd state)	16.61 (2nd state)	17.99 (2nd state)
3. Human resources	21.99 (2nd state)	21.58 (2nd state)	21.96 (2nd state)
4. Technology	17,96 (2nd state)	19,24 (3rd state)	18,07 (2nd state)
5. Implementation principles and standards	19.36 (3rd state)	18.24 (3rd state)	19.26 (3rd state)
Total	102.09 (2nd state)	98.48 (2nd state)	101.77 (2nd state)

Table 1 shows that almost all of the dimensions of evaluations showed limited readiness condition (2nd state), only the fifth dimension -late implementation principles and standards- that show mature readiness (3rd state) both students and lecturers. On the dimensions of technology, there is a different state of readiness between students and lecturers. The readiness of students on this dimension is in 2nd state (limited readiness), while lecturers on the better state that is 3rd state (mature readiness).

In order to prove the associative hypothesis H2: there is an influence between organizational culture and e-learning readiness, a correlation test of significance was performed in this research [7]. The tests carried out by using bivariate correlation techniques/correlation of Pearson's product-moment with SPSS 18.0 as the tools. The test shows some results that can be seen in Table 2.

Table 2. The correlation results between organizational culture and e-learning readiness

Correlations

		Organizational Readiness	Organization Learning Culture	Human Resources	Technology	Implementation Principle and Standard
Clan	Pearson Correlation	0.014	0.063	-0.001	0.004	-0.005
	Sig. (2-tailed)	0.783	0.231	0.983	0.936	0.921
	N	368	368	368	368	368
Adhocracy	Pearson Correlation	0.086	0.137**	0.026	0.076	-0.004
	Sig. (2-tailed)	0.099	0.008	0.616	0.146	0.943
	N	368	368	368	368	368
Market	Pearson Correlation	-0.013	-0.029	-0.025	0.004	-0.002
	Sig. (2-tailed)	0.810	0.584	0.629	0.944	0.972
	N	368	368	368	368	368
Hierarchy	Pearson Correlation	-0.059	-0.116*	0.017	-0.069	0.008
	Sig. (2-tailed)	0.259	0.026	0.741	0.188	0.881
	N	368	368	368	368	368

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Based on Table 2 can be summed up that the probability of significant value is obtained that adhocracy culture has a significant correlation with dimensions of learning's culture because the probability value is 0.008 and smaller than 0.025.In addition, based on the * sign that given from SPSS 18.0, is obtained another correlation besides adhocracy culture and dimension of learning's culture. The sign shows that the hierarchy culture also has a significant correlation with the similar dimension at the 0.05 level (2- tailed).

Because evidently there are two types of organizational culture has a significant correlation with one of e-learning readiness's dimension, then the associative hypothesis H2 has been proven true and acceptable. It means that there is an influence of organizational culture on e-learning readiness.

The correlation value between the dimension of learning's culture with adhocracy culture is 0.137 (positive correlation) and hierarchy culture is -0.116 (negative correlation). These results associated with the typical characteristic from both culture that has a little contradictory. Organizations with adhocracy as dominant culture are more dynamics, creative and innovative, so the organizations can assist and direct the members towards ready state to accept thet transformation of learning. While organizations with hierarchy as dominant culture are bound by formal structures, rules, procedures, and policies that have to be followed. These conditions have a bad impact on organizational learning's culture and it weakens the organization's readiness to accept e-learning.

5   Conclusions

This research has successfully created a conceptual model to assess the influence of organizational culture on e-learning readiness. Of this research was obtained that clan culture as the dominant culture both for now or preferred culture for the future in Padang State Polytechnic. This research also identified the readiness of organization in implementing e-learning as a form of learning transformation. This research is expected can make some benefits from both scientific and practical aspects as the base for determining the strategy for e-learning implementation. A suggestion for further is expected that specific research and further assessment of the various case is needed to monitor the consistency of results so that the better and appropriate model for e-learning implementation can be created.

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