Aligning Learning Through Digital Devices to an Organizational Capability (A Case Study of Fishing Boat Industries in Pekalongan City)

Hari Susanta Nugraha[1], Saryadi[2], Widayanto[3]
{harisusantanugraha@lecturer.undip.ac.id[1]}

Universitas Diponegoro, Indonesia[1, 2, 3]

Abstract: The background of this case study is the existence of the global pandemic which obstructs the connection between the firm and stakeholders in the fishing boat industries in Pekalongan City. Moreover, the lack of capability in digital literacy in the fishing boat industries are reduce the ability to relate the stakeholders. The aim of this research is to recognize the ability of the fishing boat industries to obtain, analyze, and manage information through digital devices. The problem of this case study is that the relationship between the industries and the stakeholders which results in the working process on fishing boats taking longer. The method is using the in-depth interview to determine the process of using digital devices in organizational change. The result is that fishing boat industries in Pekalongan City spend less time for analyzing information through digital devices, resulting in a lot of distortion in their work. The recommendation of this case study is the firm should widening the industries capability of digital devices.

Keywords: Digital Devices, Organizational Change Capability, Analyzing Information

1 Introduction

Organizational learning begins to develop, in the context of managing by optimizing the ability to select, store, collect and communicate information that is essential for business in a company in a framework that increases competitive power [1]. As a result of economic pressures that are implemented in the declining purchasing power of consumers, it is necessary to adapt as well as the ability to adopt digital technology. Therefore, the focus of the research is on how to apply the organizational learning model [2]. In this study, the unit of analysis is the fishing boat industry business unit in Pekalongan City. In this pandemic era, customer contact has decreased. This is due to the reduced dynamics of the industry. Ownership of worker resources and capabilities of digital technology devices to accommodate information, and information flow. In the development of the fishing boat industry, it is still small with the growth of results from the industry not proportional to the amount of economic value. Research contributes to the problem of growing understanding of digital devices in the fishing boat industry in Semarang City. The problem is limited to the management of knowledge capital management with a focus on the influence of the characteristics of SMEs on organizational development, because in practice, the management of digital device capabilities in SMEs greatly helps business competitiveness [3]. This is done so that in principle it can take place effectively with good management [4]. Due to the rapid flow of information from various sources from the era of globalization, it encourages good companies.

ICISPE 2021, September 14-15, Semarang, Indonesia
Copyright © 2022 EAI
DOI 10.4108/eai.14-9-2021.2321390

In the context of knowledge management, digital devices are a booster in innovation [5]. Knowledge management system, has the view that it includes various kinds of technology tools and implements the above-mentioned learning organization [6].

2 Method

The research was conducted on 50 fishing boatyard business units in Pekalongan City, Batang Regency and Pekalongan Regency. Respondents were selected based on the criteria, the owner of a fishing boatyard business with a maximum number of workers up to 25 people. The unit of observation is the owner of the shipyard. Observations on digital literacy levels focus on the aspects of obtaining, disseminating, and understanding information through the digital devices used, namely cell phones. The next observation unit made organizational changes in 4 indicators, that are; (1) ownership and organizational structure, (2) the ability to serve customers, (3) systems and procedures, and (4) employee management. For research is to analyze the contribution of each variable in the process of organizational change. The systematic analysis in diagram 1 is related to the learning process in the organization which is observed through 4 indicators.

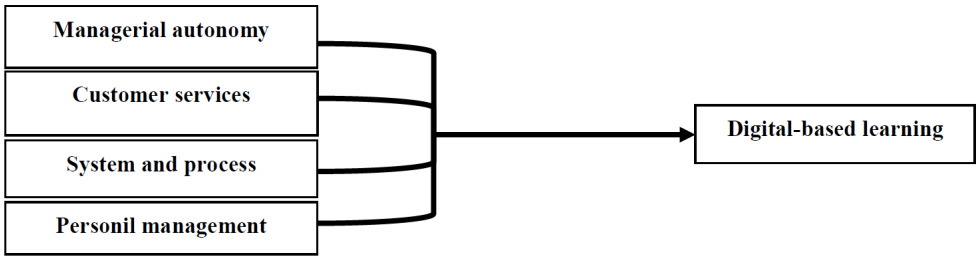

Fig 1. Scheme of research analysis on digital literacy usage on learning organization

3 Finding and analysis

Implementation of digital literacy in organizational learning, implemented through intervention and habituation of workers in using digital devices for activities. Based on the profile of the observation unit as many as 50 business owners of fishing boats are described in table 1. Where overall the business actors are men with the status of business ownership being their own. Then out of the 50 respondents distributed, there are 52.00% using digital cellular telephone devices based on independent networks to carry out their work, while 30.00% rely on shared network-based cellular telephones. This indicates that the learning process is carried out using independent devices.

Tabel 1. Base characterictics of responden

Gender	%

	Male	100.00
	Female	0.00
Profil		
	Business owner	90.00
	Joint Proprietorship's owner	10.00
Digital devices		
	Personal-based network celuller phone	52.00
	Firm-based network celuller phone	30.00
	Laptop-based personal network	12.00
	Laptop-based firms network	6.00

Data analysis was conducted on 50 respondents who met the criteria for data processing. The analysis of the processed cross data tables is the result of the average respondents' answers from each research variable. Then crossed with the conditions assessed by the respondents themselves. There are 4 criteria in the use of cross data analysis techniques, namely organizational structure, customer service, process and structure criteria, and employee management.

Tabel 2. Analysis on learning organizational proccesses that supported by indicators

Device	Structure	Customers	Proccess	Human	Means
HP_man	0.5562	0.5512	0.5732	0.7002	0.58
HP_per	0.5023	0.5015	0.5923	0.8023	0.57
KOM_man	0.6537	0.6531	0.6037	0.6537	0.65
KOM_per	0.7087	0.7026	0.7087	0.8087	0.73

Based on table 2, all indicators of digital devices have a contribution to the development of learning abilities. Device 1 is a standalone network-based cellular phone, where this device provides an average of 58.00% input in learning activities. Device 2 is a cellular phone based on the company's network, where this device provides an average of 57.00% input in learning activities. Device 3 is a mobile laptop based on a standalone network, where this device provides an average of 65.00% input in learning activities. Device 4 is a mobile laptop based on the company's network, where this device provides an average of 73.00% input in learning activities. The results of the analysis show that organizational learning in fishing boat companies shows that activities are more than 50.00% relevant using digital devices. The results of this study are consistent with the research of Me-Nie [7], which shows that organizational learning is influenced by the ability to access digital devices. The results of this study indicate that 4 basic criteria of digital literacy are used in the organizational learning process.

4 Conclusion

Digital devices use to empower the process of ship building. Adaptive learning, namely changes that have been made in reaction to changes in environmental conditions and proactive learning, namely organizational changes that have been made on a more difficult basis to change. This is simple learning that goes beyond reacting to a changing environment.

References

[1] T. Avermaete, J. Viaene, E. J. Morgan, and N. Crawford, "Determinants of innovation in small food firms," *Eur. J. Innov. Manag.*, 2003.

[2] W. Keogh, A. Mulvie, and S. Cooper, "The identification and application of knowledge capital within small firms," *J. Small Bus. Enterp. Dev.*, 2005.

[3] M. Boisot, "The Creation and Sharing of Knowledge. V knjigi: Choo, C., W., Bontis, N. The Strategic Management of Intellectual Capital and Organisational Knowledge, str. 65-78." Oxford University Press, 2002.

[4] M. Clarkson, M. Clarkson, M. Fink, and S. Kraus, "Industrial clusters as a factor for innovative drive—in regions of transformation and structural change: A comparative analysis of East Germany and Poland," *J. East Eur. Manag. Stud.*, pp. 340–364, 2007.

[5] C. W. Choo and N. Bontis, *The strategic management of intellectual capital and organizational knowledge*. Oxford University Press, 2002.

[6] S. Bhaskaran, "Incremental innovation and business performance: small and medium-size food enterprises in a concentrated industry environment," *J. Small Bus. Manag.*, vol. 44, no. 1, pp. 64–80, 2006.

[7] Mei and Nie, "A strategic management framework for leveraging knowledge assets," *Int. J. Innov. Learn.*, vol. 1, no. 2, pp. 115–142, 2007.