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Leveraging Intellectual Capital Dimensions for Promoting Learning Organization in a Rural Development Agency

Amiruzie Ramli and Roziah Mohd Rasdi*

Department of Professional Development and Continuing Education, Faculty of Educational Studies, Universiti Putra Malaysia, 43400 Serdang, Selangor, Malaysia

ABSTRACT

Given the considerable intangible resources within organizations in the public sector must be put to good use, e.g. to enhance organizational learning. This study examined three intellectual dimensions of intellectual capital (human, structural, and relational) in a rural development organization and their contributions to a learning organization. Using simple random sampling, research data were obtained from 153 managers, including Heads of Department at the Headquarters and at Regional and Settlement Offices covering Peninsular Malaysia's Northern, Southern, Central, and Eastern regions. Pearson Product Moment Correlation Coefficient and Multiple Linear Regression were carried out and the results supported the hypotheses that the dimensions of intellectual capital, namely human, structural and relational capital, were positively correlated with the learning organization, with structural capital being the most significant predictor.

Keywords: Human capital, intellectual capital, learning organization, relational capital, rural development organization, structural capital

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E-mail addresses:
amiruzieramli@gmail.com (Amiruzie Ramli)
roziah_m@upm.edu.my (Roziah Mohd Rasdi)
*Corresponding author

INTRODUCTION

The agricultural sector plays a vital role as it not only provides employment opportunities for rural folk but is also tasked with the management and utilisation of natural resources for national economic development (Mamat et al., 2016). Dynamic agricultural activities provide an important foundation for the nation, generating strong

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linkages to various economic sectors. Hence, the government has to ensure that rural development is properly managed. Rural livelihoods are enhanced through promoting the learning culture in government or public organizations that are established to strategize and manage development in rural areas. The learning capacity of an organization stems from the interaction of resources (individuals and fixed capital), processes (how things are done), and values (including the organizational culture and mission) (Ekboir et al., 2009).

The definition of learning in an organization has been defined by various writers using different words in many ways (Bhaskar & Mishra, 2017). Training is important for preparing effective strategies for organizational growth, organizational change, the advancement of human resources, and strategic management (Pokharel & Choi, 2015). The emerging concept is called learning organization, coined by Senge (2006) and strongly associated with Bhaskar and Mishra (2017) and Örtenblad (2018). The term "organizational learning" is used in much of the literature for the same purpose as for the learning organization. Palos and Stankovicic (2016) pointed out that some authors often used both terms interchangeably. According to Watkins and Kim (2018), most scholars see organizational learning as a mechanism and equate it with the acquisition of information, whereas learning organizations refer to organizations that are skilled in developing, acquiring, and transmitting knowledge. Örtenblad (2018) suggested that learning organization was a transformation of the term organizational learning, i.e. it was just a paraphrase. In the late 1970s and early 1980s, this paraphrasing occurred interchangeably in the literature on organizational learning and learning organization. In this study, however, we make a distinction between the two terms. Our focus is not on the process of learning; rather it is on learning organization, i.e. the organization where learning is enabled because this study examines the contextual factor of "organization" as a unit of analysis.

Numerous studies on learning organizations have been conducted, particularly in business organizations where shareholder value and profitability are the main concerns (Visser & Van der Togt, 2016). A study by Jarvie and Stewart (2018) highlighted the difficulty of fostering organizational learning in public organizations. The legal and regulatory environment that operates within the bureaucratic structure limits organizational learning. Within the bureaucratic hierarchy, individual learning is limited to the responsibility of a particular position (Jarvie & Stewart, 2018). According to Palos and Stancovici (2016), and there is little training of employees in public sector organizations owing to the constraints of a fixed budget. On top of that, employees have limited time and organizational support for informal learning at the workplace to improve their skills. However, Pedler and Burgoyne (2017) proposed that learning would benefit from a hierarchy in public institutions if top executives took a well-informed summary of the situation and guided

operations accordingly. The trouble is that the upward flow of information is often limited and distorted by junior staff, who often do not want to pass on bad news as they want to protect their territories (Pedler & Burgoyne, 2017). In countries where public organizations have a large number of stakeholders, they continuously face pressure to enhance their effectiveness and quality, albeit with limited resources (Khan & Nouman, 2019). To ensure successful and efficient delivery of services, public organizations need to engage the public as customers. According to Ramírez (2010), while the idea is similar to that of a customer in a business organization, the lack of competition and little need to accommodate customers' demands make learning in a public organization different from that in a business organization.

In this study, we examined a public organization in Malaysia that was established by the Malaysian government some six decades ago specifically to eradicate rural poverty by helping rural communities raise their agricultural productivity as well as to improve their socio-economic status (Sutton, 2001). While the organization has administrative and financial powers, it is regulated by the Government and operates in the same way as in the typical bureaucratic hierarchy of public organizations. The 1987 World Bank report described this organization as one of the most successful land settlement organizations in the world, responsible for managing around 723,394 hectares (or 16%) of Malaysia's total land area (Barau & Said, 2016).

Given these complexities in the public organization, a more realistic, analytical approach is needed to examine it as a learning organization. With a strict hierarchical organizational structure, there are limited opportunities for its employees to learn from one another and to apply one's ideas. Coupled with a non-competitive consumer market, public sector organizations have been perceived as having difficulty in developing as learning organizations. This is where intellectual capital comes into the picture. However, the idea of the learning organization was inspirational in the design of Malaysian national Agricultural policy (Ministry of Agriculture and Agro-Based Industry, 2011); although it was not clear to designers or implementers how to translate it into practice.

According to Busenan et al. (2018), intellectual capital is a valuable tool that public entities have within their organization to achieve their goals. Public sector organizations have much more intangible resources than business organizations (Busenan et al., 2018). Guthrie (2001) pointed out that work on intellectual capital in the public sector organization was one of the least discussed. Sharabati et al. (2010) opined that intellectual capital was a newly emerging concept that needs to be theoretically explicated. Chahal and Bhaksi (2015) stressed the need to know how intellectual capital was created. Kamukama et al. (2011) highlighted the importance of enhancing the impact of intellectual capital on organizational learning.

The resource-based theory implies that assets must be important, rare, inimitable, and difficult to replace in order to gain and maintain competitive advantage (Barney et al., 2001). Smith et al. (1996) pointed out that organizational learning and the resource-based theory had the same objective of creating and sustaining competitive advantage. The resource-based theory emphasizes the use of internal resources, both tangible and intangible assets (physical, human, and organization) to achieve competitive advantage (Barney et al., 2001). Thus, in this present study, human, structural, and relational resources are identified as intellectual capital that drives the competitive advantage of the learning organization.

Based on recent literature research, there seems to be a lack of literature on factors that influence the learning organization. Tuggle's (2016) reviewed of '*The Learning Organization Journal from 2003 to 2013*' identified several issues related to critical contextual factors affecting the learning organization, *viz.* how organizations made the transition to learning organizations, where learning processes were centered within the organization, and when one should try to build a learning organization. Empirical research is, therefore, necessary to investigate the intangible resources in public organizations that can contribute to enhancing learning culture in public organizations. Thus, the present study investigates the impact of three dimensions of intellectual capital, namely human, structural, and relational capital on the learning culture of a public sector organization.

This study extends the existing literature on learning organizations, focusing particularly on how intellectual capital as intangible resources within the organization could foster organizational learning, a notion that is underpinned by the resource-based theory.

The paper is structured as follows: The paper begins with an introduction to the concept of the learning organization, focusing on a public organization. This is followed by a discussion on the selected learning organization which is a rural development agency, and the influence of intellectual capital on the learning organization. Next, we explain the methods. This is followed by the results and findings of the study. The paper ends with a discussion on the implications of the findings, limitations, and suggestions for future studies.

The Rural Development Agency as a Learning Organization

This study examined a rural development organization completely under the management and supervision of the Malaysian government, thus making it a public organization. Concerning the hierarchical structure, the staff is predominantly Malays. Over the years, the organization has managed to achieve its goal of national rural poverty reduction, decreasing the rate of rural poverty from 49.3% in 1970 to 0.6% in 2014 (Economic Planning Unit, 2017). Besides, Hall and

Jones's (1999) study demonstrated the important effect of human capital on economic development. Their results showed that the level of learning had an impact on the differences in GDP per capita between countries.

According to Barau and Said (2016), in the context of rural development, this organization has successfully transformed poor rural areas since its inception in the 1950s into more liveable towns surrounded by valorised agricultural lands. The organization has also experienced the ups and downs of economic turmoil, social and political changes in Malaysia (Mamat et al., 2016). All these changes in the micro and macro contexts of the organization have influenced the structure of the organization, the people, and the dynamism of the employees who have enabled this organization to successfully face various challenges over the years. Besides, operations within the organization are typically focused on intangible assets in terms of human capital and relational capital with a large number of participants and employees. The organization also enjoys fiscal autonomy and has intact structural capital.

LITERATURE REVIEW

Intellectual Capital

The concept of intellectual capital is evolving and, although it has been discussed for decades, there is neither a unified definition (Durrah et al., 2018) nor a consensus on its definition and its sub-components (Kozak, 2011). Intellectual capital can be characterised as the amount of formalised, acquired, and used intangible assets to produce higher-value assets (Mikula, 2020). According to Stewart (2010), intellectual capital is characterised as information, data, intellectual property, or experience that can be used to build wealth. Busenan et al. (2018) and Edvinsson and Malone (1997) referred to intellectual capital as a collection of intangible assets such as competencies, capabilities, and resources that increased the performance of organizations, thus creating value. In this study, intellectual capital is operationalized as a set of intangible resources or assets and capacities owned or controlled by the organization (Albertini, 2016).

While previous studies suggest different dimensions of intellectual capital, the most common and standard classification appears to be Bontis's (1998) three dimensions of intellectual capital, comprising human, structural, and relational capital (Albertini, 2016; Asiaei et al., 2018; Durrah et al., 2018). Human capital is the most fundamental, basic resource, and assets. It encompasses employees' characteristics such as skills, knowledge, capabilities, and educational qualifications. Human capital comprises the knowledge stock of an organization, but it does not belong to the organization (Bontis et al., 2000). Although human capital leaves the company after office hours, structural capital, including any non-human knowledge storage or institutional knowledge within the organization remains in the office at night (Albertini, 2016). Structural capital applies to all non-human

storehouses of information within the corporation. Databases, organizational maps, method manuals, methods, and routines are included (Bontis et al., 2000). The third dimension of intellectual capital is relational capital, also known as social or customer capital in some literature. Relational capital refers to the knowledge embedded in the relationship with customers, suppliers, industry associations, or any other stakeholder that affects the sustainability of the organization (see Figure 1) (Cabrita & Bontis, 2008).

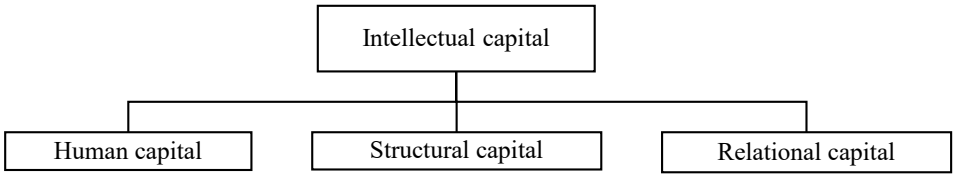

Figure 1. Elements of intellectual capital

Intellectual Capital Dimensions and Learning Organization

Intellectual capital is a crucial asset in any organization's value creation process and is a source of lasting competitive advantage. Moghadam et al. (2013) examined the relationship between intellectual capital and organizational learning and found that there were a positive relationship and significant correlation between all the intellectual capital dimensions with organizational learning. However, a study by Durrah et al. (2018) and Yusoff et al. (2019) found that not all intellectual capital dimensions were positively and significantly related to organizational learning in a hospital in France; they found that relational capital had no relationship with organizational learning. Yusof et al. (2019) offered a different perspective on the concept of intellectual capital by combining a green technology element with intellectual capital and referring to it as Green Intellectual Capital with organizational learning. Yusof et al.'s (2019) study showed that only green relational capital had a positive relationship with organizational learning while Omar et al.'s (2019) study showed that there was a positive relationship between green human capital and green structural capital and organizational learning.

Human Capital and the Learning Organization

Busenan et al. (2018) referred to human capital as the behavior of employees, intellect, talent, skills, tacit knowledge, the workers' experience, and attitude. Workers with a high level of knowledge and skills are an important asset to their organizations (Yusoff et al., 2019). Organizations with knowledgeable workers always have a competitive advantage; they help their organizations promote a culture of learning,

knowledge creation, and innovation (Akhtar et al., 2017; Wong et al., 2017). At the same time, learning organizations provide the space and opportunity for employees to improve their ability to achieve organizational efficiency, good communication skills, self-confidence, creativity, and vision (Salehzadeh et al., 2014). Such employees are constantly striving to acquire more knowledge and are always motivated to learn and improve themselves. Sable and Dave (2016) found that workers who were constantly acquiring new skills and knowledge, learning for education and growth, and tapping on people's commitment and ability to learn were factors contributing to the learning organization. Previous studies conducted by Farsani et al. (2012) in the petrochemical industries, and Durrah et al. (2018) in a public hospital, and Moghadam et al. (2013) in the water service industry found that there was a positive relationship between human capital and the learning organization. Therefore, we hypothesize that:

H_1: Human capital has a positive and significant impact on the learning organization.

Structural Capital and Learning Organization

Structural capital encompasses the knowledge and intangible assets within the organization, such as governance and operations of the organization, its policies, and codes of ethics and technology systems (Ramírez et al., 2013). An organization with strong structural capital has a supportive culture that lets people try, fail, learn, and try things again (Kunasegaran et al., 2016). Formalization, specialization, and standardization of employees' work impact employees' search for knowledge, the learning style, and the learning loops they implement at work (Sitar & Škerlavaj, 2018). Wu et al. (2012) pointed out that it was impossible to achieve a learning organization without organizational management structures. This argument, supported by studies in China and Austria. Wu et al. (2012) found that the organizational structure had a significant impact on organizational learning. In a study on the tourism industry, Kanten et al. (2015) found that both organic and mechanical organizational structures had a significant impact on the learning organization. On the other hand, a study among hospital administrative staff showed that structural capital did not have a significant impact on the learning organization (Durrah et al., 2018). An empirical study by Moghadam et al. (2013) showed that structural capital was related significantly to organizational learning. The above discussion leads to the following hypothesis:

H_2: Structural capital has a positive and significant influence on the learning organization.

Relational Capital and Learning Organization

In any organization, trained, educated and skilled employees are in a better position to

serve or respond to the needs of customers (Chahal & Bakshi, 2015). Employees with higher levels of relational skills with the external environment are eager to acquire more knowledge. Akhtar et al. (2017) conducted a three-dimensional social-capital study comprising structural social capital, cognitive social capital, and relational social capital. These dimensions were derived from the interrelationship of individuals, organizations, and the community. They found that of the three dimensions, social capital was the strongest factor influencing the learning organization in the context of higher education institutions. In a different setting, i.e., in the Malaysian public sector organizations, Sulaiman et al. (2015) found that social capital was correlated with organizational learning. Hsu and Fang (2009) examined the effect of intellectual capital dimensions on organizational learning in regards to new product development. The results indicated that relational capital had a positive relationship with organizational learning. Relationships between organizations create a learning climate in which organizations learn and improve by competing with one another. Therefore, we hypothesize that:

H_3: Relational capital has a positive and significant impact on the learning organization.

According to Bontis et al. (2000), the quality of staff, organizational structure, and relationships of staff give the organization the competitive edge in a knowledge-based economy. Quality workers develop internal and external identities and behaviors within their organization while the management helps put in place structural and regulating procedures (Palos & Stancovici, 2016). Various literature suggests that a diverse range of benefits can be derived from intellectual capital, such as improved productivity, strategic positioning, innovation, customer loyalty, efficiency, and competitive advantage (Khan & Nouman, 2019). As both the learning organization and resource-based theory aim at creating and sustaining competitive advantage, it seems logical that the learning organization and intellectual capital dimensions should be identified as strategic resources from a resource- centred perspective. Based on the three main study hypotheses (H_1, H_2, and H_3), this study postulates the proposed regression model of learning organization fits the data. Hence, we hypothesize:

H_4: The data support the proposed multiple linear regression model for learning organization i.e., the three dimensions of intellectual capital (human, structural, and relational) contribute significantly towards the learning organization.

METHODS

Participants and Procedures

The study samples consisted of 153 participants, comprising the Heads of Department at the Headquarters, and at Regional, and Settlement Offices covering the North, South, Central, and East of Peninsular Malaysia, involving 310

settlement offices in 10 Regional Offices and the Headquarters altogether. In this study, a random cluster sampling procedure was used to select the participants. All the managers from the selected offices were eligible to participate in the study. The unit of analysis in this study was the organization, and therefore, the Heads of Department at settlement offices and regional offices were considered the best representatives of the organization. Managers at settlement offices and regional offices were tasked with the management of estates and economic activities as well as community development, while at the same time managing employees at the settlement and regional level. Since they were in charge of the overall operations in their area, they should be aware of the extent of learning within their organizations.

The questionnaire was a translated version of the original, which was in English. Since the mother tongue of the respondents was the Malay language, this was the language used so that the respondents would not have difficulty in understanding the questions. Two independent bilingual translators translated the original instrument to the Malay language using Brislin's (1970) back-to-back-translation. The questionnaires were distributed to and collected from senior managers from various parts of Peninsular Malaysia who attended the monthly meetings and assemblies at Regional Offices. Data were also collected using an online survey to gauge responses from the samples at the headquarters. Cumulatively, the total number of samples resulted in 153 ready-to-use responses, following the elimination of incomplete data and outliers. Thus, a response rate of 84.53 percent was achieved.

Of the total respondents, 93.5 percent (n=143) were males, and 6.5 percent (n=10) were females. The fact that the majority of the respondents were males indicated a dominant masculine culture in the organization. Furthermore, the nature of work in rural and agricultural areas, specifically in estates and settlement areas, was more suited to males. Concerning work experience, 48.4 percent (n=74) of the respondents had worked in the organization for 11 to 20 years, 29.4 percent (n=45) 21 to 41 years, and 22.2 percent (n=34) less than 10 years. The average age of the respondents was 42.23 years (SD=9.06 years) and the average work experience was 18.08 years (SD=10.06 years). The average length of time in the current management role was 6.74 years (SD=6.66 years). This indicated that all respondents had extensive work experience, especially as managers.

Instrumentation

Intellectual capital was measured using an intellectual capital questionnaire developed by Bontis (1998). The questionnaire consisted of 20 items relating to human capital, 15 items on relational capital, and 12 items on structural capital. After a content expert validated the contents, it was found that six of the original questions had to be removed because they did not apply to the public sector context. The questions omitted included two items on relational capital and

four on structural capital. The two items that were omitted from the relational capital questions were: "Our market share has been continually improving over the past few years" and "Our market share is the highest in the industry." Examples of items excluded from structural capital questions were: "Our company has the lowest cost per sale of anyone in the industry" and "We have consistently increased our costs per revenue dollar." These items were eliminated because they did not represent the context of the public sector organization involved in the study; they were more relevant to business organizations. Each item was rated on a seven-point Likert-like scale ranging from 1= "strongly disagree" to 7 = "strongly agree". To check the reliability of all constructs, an internal consistency test of the Cronbach Alpha coefficient was used. The previous study reported internal reliability for each of the three constructs to be greater than .85 (Bontis, 1998). The reliability of each of the constructs was satisfactory, according to previous studies, because the Cronbach alpha values for each were substantially greater than the prescribed .70. The values ranged from .74 (human capital) to .97 (structural capital) and showed that the instrument was reliable (e.g., Bontis et al., 2000). In a separate study, the internal reliability reported in the analysis was .85 for human capital, .89 for institutional capital, and .90 for relational capital (Firer & Williams, 2003). These scores thus met the recommended threshold value of .70 for the three constructs.

The learning organization was assessed using the shorter version of the 21-item *Dimensions of the Learning Organization Questionnaire (DLOQ)* by Yang et al. (2004). DLOQ covers seven dimensions, *viz.* continuous learning, inquiry and dialogue, collaboration and team learning, a system of shared learning, empowerment, connection to the environment, and strategic leadership. A six-point scale where 1 was scored for "Almost never" and 6 for "Almost always" was used to measure the scale. Sample item: "In my organization, people are rewarded for learning". This instrument was utilized in studies by Palos and Stancovici (2016) and Lau et al. (2016). They reported that the internal reliability for seven dimensions varied between .90 and .95 (Palos & Stancovici, 2016) and the overall reliability reported in Lau et al.'s (2016) study was .93. In this study, the internal reliability was .94.

Data Analysis

The assumptions of the residuals distributed in data normality, variance homogeneity, linearity, and normality were tested for proper application of statistical analysis. It was found that all preliminary assumptions were met. Besides, the data were also checked for multicollinearity to determine that the independent variables had high correlations with the dependent variable, but not with each other. In this study, multicollinearity was assessed using the tolerance and variation inflation factor (VIF). The results indicated that the tolerance statistics ranged from 0.429 to 0.527, and the VIF statistics ranged from 1.899 to

2.331, thus showing that multicollinearity was not a potential issue in this study. To test the hypotheses of the study, Pearson Product Moment Correlation Coefficient and Multiple Linear Regression were conducted.

FINDINGS

The means (M), standard deviation (*SD*), and the effects of the Pearson Product Moment Correlation Coefficient analysis of the variables used in this study are presented in Table 1. The three-dimensional levels of intellectual capital yielded the following results: human capital (M=4.87; SD=0.99), relational capital (M=5.14; SD=0.93), and structural capital (M=5.12; SD=1.00); all were found to be high except for human capital. In the same vein, the level of learning organization (M=4.76; SD=0.83) was also high. Scores for six of the seven learning organization dimensions were also considered high in the range between 4.41 and 4.64, except for the moderate score for the item, empowerment (M=4.26; SD=0.85). The three levels of intellectual dimensions were categorized as follows: low (1-2.99); moderate (3-4.99); and high (5-7) while those for learning organization level were categorized as follows: low (1-2.66); moderate (2.67-4.33); and high (4.34–6.00). Class interval width is the highest scale value minus the lowest scale value divided by the number of classes determined (Bluman, 2001).

H_1, H_2, and H_3 postulated that human capital, structural capital, and relational capital would have a positive and significant relationship with a learning organization. The correlation analysis revealed that all three dimensions of intellectual capital were found to be positively influenced the learning organization. According to Guildford's Rule of Thumb, structural capital *($r=.742$, $p<.05$)* showed a strong relationship while relational capital *($r=.640$, $p<.05$)* and human capital (*$r=.589$, $p<.05$)* indicated moderate relationships (Guildford, 1956). The high association between the structural capital and the learning organization indicated that the organization's structure, processes, and culture allowed the workers to learn continually. Thus, based on these findings, three hypotheses, H1, H2, and H3 were supported.

Table 1

Mean, SDs, and correlation result

Variables	Mean	SD	Y	X_1	X_2
Y Learning Organization	4.76	0.83			
X_1 Human Capital	4.87	0.99	0.589*		
X_2 Relational Capital	5.14	0.93	0.640*	0.667*	
X_3 Structural Capital	5.12	1.00	0.742*	0.575*	0.674*

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

H_4 postulated that the data fully supported the proposed multiple linear regression model for a learning organization. Table 2 provides further details on the multiple regression analysis to testing the H_4 hypothesis. The R^2 value indicates that 59.5 percent of the variance in learning organization was explained by all dimensions of intellectual capital, namely human capital, structural capital, and relational capital. Further analysis showed that structural capital (ß=.439, p<.05) was the strongest predictor variable, followed by relational capital (ß=.150, p<.05) and human capital (ß=.144, p<.05). Thus, H_4 was supported. The findings explained the predictability of intellectual capital dimensions factors on learning organization with the estimated model for learning organization as follows:

$$Y = 1.039 + .144(X_1) + .150(X_2) + .439(X_3),$$

where X_1=human capital, X_2=relational capital and X_3=structural capital.

Hence, for every one-unit increase in human capital, relational capital, and structural capital, the learning organization would increase by .733.

Table 2

Multiple regression analysis

Variables	B	t	p-value
Constant	1.039	4.005	.001
Human Capital (X_1)	0.144	2.432	.016*
Relational Capital (X_2)	0.150	2.128	.035*
Structural Capital (X_3)	0.439	7.375	.000*

Notes: R = .776; R^2 = .603; *Adjusted* R^2 *= .595; F= 75.282; p =.000;* *significant at .05 level of significance

DISCUSSION

The study aimed to examine the influence of the three dimensions of intellectual capital, namely human, structural, and relational capital on the learning organization, which in this study, was a public organization. First, the analysis found that six dimensions, *viz.* system connection, providing leadership, team learning, continuous learning, inquiry and dialogue, and the embedded system had high mean values, except for the moderate mean value for one dimension, namely empowerment. This indicated that this public sector organization met the criteria of a learning organization. This organization had its organizational authority and financial control as in a business organization and was able to create a learning environment within the organization. As this organization has met the criteria of being a learning organization, we shall now discuss the factors that influence it as a learning organization.

The results of the study supported all the assumptions that the three dimensions were significantly related to, and had an impact on the learning organization. The results also showed that all the dimensions of intellectual capital explained more than half of the variance of the learning organization. One of the factors that contributed to this model making intuitive sense was the appropriate selection of respondents. Our respondents consisted of Managers and Heads of Department representing the unit of analysis which was the organization itself. According to Edwards et al. (2014) and Heide et al. (2018), top members of organizations who have the competence to answer questions that have to do with the strategic issues of the organizations can respond to questions meant for the organizations.

Respondents with experience in the organization and positions held are symbolic of human capital. Through such wisdom and experience, the respondents were able to provide a clear understanding of the organization's structure and culture, besides being more positive in charting the organization's learning practices and processes (Borge et al., 2018). Besides, the respondents, particularly the settlement managers, were responsible for providing information and feedback on agricultural and social activities, acting as extension agents to keep in touch with the community. Other possible reasons for such findings of the study may be explained by the selection of the organization in this study, i.e., a rural development organization. This large long-standing organization had built a strong, fundamental framework and created an environment that fostered information sharing and learning, organizational engagement, and empowerment in decision-making (Salahzadeh et al., 2014). In addition, a study by Borge et al. (2018) showed that respondents in larger organizations valued their organization as a learning organization more than smaller organizations did.

The established relationship between human capital and the learning organization indicated that the organization had employees who were competent, creative, and experienced, constantly coming up with great new ideas as its employees cooperated. Through dialogues and discussions, the management was able to foster a continuous learning culture within the organization. Despite being a public sector organization, this rural development agency had to compete with private companies in the agricultural sector. Hence, the organization employed robust recruiting strategies to employ the best candidates and, at the same time, support their employees through the continuous development of skills and training in various areas. In this study, the public service organization was perceived as having a stable organizational structure and its employees were optimistic about career development (Rasdi et al., 2012). As such, it was able to achieve a high level of quality human capital.

Formalization or standardization of the public sector organizational system makes workers uncreative and unresponsive to customers' needs (Rupčić, 2018). It does

not, however, mean that such an organization does not encourage learning. In this study, the organization prioritized customers' needs by using technology and data system development efficiently to reduce customer transaction time. The organization also helped to develop new ideas and perspectives and to put in place systems and methods to promote creativity and shared learning. According to Bunderson and Boumgarden (2010), such an organization provides a sense of ownership and responsibility. With increased organizational flexibility and decreased external intervention, employees become more appreciative of the learning organization. This demonstrates that structural organization facilitates the empowerment of collective vision.

Investigations on the relationship between the relational capital and the learning organization indicated that the public organization in this study had successfully maintained a positive value-added service to customers by constantly meeting with them to find out their needs. As pointed out by Hsu and Fang (2009), organizations gain knowledge from the exchange and sharing of knowledge with other parties, and that knowledge has an impact on the development of new products. In the context of this study, the organization had the advantage of having broad networking of stakeholders, between settlers and their families, and inter-organizational relationship with other public sector organizations, business organizations, and non-governmental organizations. In fulfilling the aspirations of various parties, the organization took note of the demands and needs of the stakeholders and strived to accommodate them.

Overall, the proposed regression model fitted the data at a .05 level of confidence, with all the dimensions having significant contributions towards the learning organization. The findings of this study provide support for the resource-based theory which states that human, structural and relational capital are valuable resources for organizational sustainability. At the same time, these three dimensions also support the social learning theory whereby individual learning takes place in the form of social activities when employees interact with colleagues, managers, customers, suppliers, and others. Interestingly, the regression model in this study showed that structural capital had a strong influence on the learning organization. Structural capital is made up of organizational culture, management philosophies, organizational processes, systems, and information resources (Benevene & Cortini, 2010).

In this study context, the organization had a high degree of autonomy and was able to develop a learning culture, facilitate knowledge sharing of ideas, and promote innovation. The sophistication of this organization that had endured hard times such as global, economic, and internal problems made it important for the organization to maintain the organizational philosophy of manuals, procedures, and processes.

The value of such structural capital is often overlooked. In one report, for

example, one-third of the 1970 losses among *Fortune 500* companies concentrated only on the material assets of the company without examining the mechanism behind circumstances (Senge, 2006).

Implications for Practice

The study examined the impact of intellectual capital on a rural development organization and its contributions to the learning organization. Our findings suggest that the three dimensions of intellectual capital, viz. human, structural, and relational capital, have significant relationships with the learning organization, with structural capital being the most significant predictor. The organization's long establishment is reflected in its strong structural capital, with intact governance, function, and strategies that help workers achieve maximum organizational learning. By integrating the resource-based theory, intellectual capital model, and learning organization, this study adds supportive value to the existing literature on the learning organization. The result gives a new dimension to the resource-based theory by showing how human, structural, and relational capital can contribute to the learning organization.

Based on structural capital scores, organizations need to enhance the capabilities of the data system to facilitate the achievement and sharing of information within the organization. They should take the initiative to improve facilities and infrastructure to support the sharing of data and knowledge through the latest technological capabilities, particularly in the era of the Industrial Revolution 4.0. Perhaps an online knowledge sharing and learning platform based on artificial intelligence should be set up to ensure the content is constantly updated. Furthermore, the use of social media often facilitates the exchange of information among social media users by providing an informal network for open expression. Organizations should also take advantage of the opportunity to expand customer information through social media. Qi and Chau (2016) found that social media influenced knowledge management and organizational learning, thus lending support to the underlying assumption of the social capital theory that the social network could benefit knowledge creation and knowledge sharing.

The findings in this study highlight the importance of human capital development to improve organizational learning capabilities. HRD practitioners and managers should therefore work together to enhance human capital capabilities. Organizations need to develop new recruitment methods to ensure that those hired would have a high level of knowledge, skills, and positive attitude. At the same time, policies and practices, such as good career planning, salary, incentives, and opportunities that improve workers' knowledge and skills would attract talented workers to the organization. To improve organizational learning and enhance performance, the essential infrastructure needs to be in place to support employees' networking, information sharing, individual career management initiative, and organizational socialization activities (Rasdi et al., 2011).

Limitations and Future Research

There are few drawbacks to this study. First, the study was limited to only one public sector agency related to the rural development sector, and thus the study results may not be generalized to other industries or sectors. It would be enlightening to compare learning organizations in other sectors or other industries, such as the public health sector, universities, and non-government organizations. Second, data from this study were obtained based on what the respondents themselves perceived of the learning organization. Apart from bias, the responses were also subjected to social desirability limitations. Future studies may want to include a 360-degree viewpoint that takes into consideration responses from others such as stakeholders and individual employees. This may provide a better picture of the factors influencing the learning organization. Third, the results showed that structural capital was the strongest factor influencing learning organization. Thus, qualitative studies are suggested to unravel the intricacies of these relationships. Moreover, future qualitative studies can be carried out to explore the process of how intellectual capital dimensions influence organizational learning. Fourth, this present study was based on data collected in a Malaysian setting. As such, the results of the study may be unique to this cultural context and may not be directly relevant to an individualistic society, such as in Western countries. Future studies can include different types of organizations in different countries for comparative analyses. In this way, the impact of cultural influence on the learning organization can be investigated.

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