

# Exploring the role of transformational leadership in human capital effectiveness

## Empirical evidence from the Malaysian healthcare sector

Role of TL in human capital effectiveness

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### Abstract

**Purpose** – Malaysia has set year 2020 as a targeted year to become the most developed nation and to transform the economy into knowledge based. Issue is to become developed nation, but without human capital development (HCD) process, the achievement of this vision would be difficult. Numerous studies articulated the direct impact of human capital on the country economic growth. Human capital is a significant factor to get competitive advantage, which is the need of the day for all countries as well as for organizations to survive in today's tough competitive environment. Major objective of this research was to find the role of transformational leadership (TL) in human capital effectiveness with the effect of knowledge management (KM) strategies. The paper aims to discuss these issues.

**Design/methodology/approach** – A mixed research method is deployed in this study. Data are collected with the help of self-administrated questionnaire and a semi-structured interview. The structural equation modeling technique is used in the data; data are analyzed with the help of AMOS and Nvivo software.

**Findings** – The results revealed that transformation has a positive effect on KM strategies. Further, this study also identified that knowledge codification strategy and personalization strategy have a positive impact on human capital effectiveness.

**Research limitations/implications** – The results revealed that KM strategies play a vital role in human capital effectiveness. Therefore, the Malaysian healthcare industry should introduce KM strategies in order to enhance employees' knowledge skills and ability. This study is only conducted in Malaysia; the future researcher can use a different method to test the current research model.

**Practical implications** – Knowledge codification and knowledge personalization strategy can contribute to the HCD process. This study can be generalized in the Malaysian healthcare industry. This kind of effort will add value into human capital. Hence, organization can get a competitive advantage with the help of human capital. TL style is the most appropriate style in the current era; this leadership has the ability to transform the system, which is the need of the day. Due to rapid changes in technology, a leader who believes in change can meet the challenges of twenty-first century.

**Originality/value** – KM strategies and their use have been a research issue for some time. Companies have also adopted knowledge management strategies tools to support and stimulate knowledge sharing in their organizations and to help employees to find the expertise they are looking for. But no research has been performed on the importance of KM strategies. This paper describes a unique and new framework that the authors devised to help companies to do just that.

**Keywords** Malaysia, Transformational leadership, Codification strategy, Healthcare sector, Human capital effectiveness, Personalization strategy

**Paper type** Research paper



## 1. Introduction

### 1.1 Background of study

Great Greek philosopher Aristotle stated that all men strive for knowledge by nature. In the past, factors of productions were mainly land, finance and technology but in the current scenario of business, human itself is a capital for organization (Bontis, 1998). If we look at the business history after the World War II, organizations focused on mass production to get profit; in 1960, business realized that the quality of products also boosts profit, then the total quality management concept aroused at that time. After 1990, globalization and revolution of information technology (IT) came, and organizations got competitive advantage through IT. Current era of business depends on human capital, through human capital organization getting competitive advantage, as they bring innovation, productivity and quality. In recent times for the country development, the government has given more importance for the human capital development (HCD), the economy exists for and belongs to the people, and at all times the general well-being of all the people shall be the overriding objectives of the government and the proper measure of performance (Edesiri and Samuel, 2014). When the human capital level in the developing country is sufficiently small, manufactured goods firms do not conduct FDI and the economy in the developing country is trapped in poverty (Morita and Sugawara, 2015).

Throughout the human history, education and training have been charged with turning out viably skilled people who could assume productive roles in their respective societies (Mays, 2015). The HCD refers to the process of acquiring and increasing the number of people who have the skills, education and experience which are critical for the economic and the political development of a country (Oladele Ayodeji and Fatai Adebayo, 2015). Human capital becomes a valuable resource, and investments in it become a source of individual future profit and enterprise profit as a result of human potential capitalization (Podra, 2015). The study by Monday (2015) concluded that the local content policy had achieved significant success in enhancing the development of human capital, which, in turn, positively influenced the business performance of indigenous companies.

According to Edesiri and Samuel (2014), in today's world, nation's economies are driven by knowledge. Pak (2014) report on Dengue Virus is also very critical in Malaysia; in 2014, dengue patients became tripled as compare to 2013 and in 2014, daily 250 patients reported in hospitals. Hashim and Taib's (2012) study recommended that Malaysia has to focus on the HCD and management. Birasnav *et al.* (2011) presented a theoretical framework and suggested to test it empirically in future; they recommended that transformational leadership (TL) could bring the knowledge management (KM) system, which can further enhance human capital effectiveness. This study is contributing to the existing theory of HCD and TL by implementing new variables to enlarge the scope of both theories.

The Knowledge-based Economy Plan for Malaysia was encouraged by the former Prime Minister, Dr Mahathir Mohammad in year 2000, the aim was to transform Malaysia into knowledge-based economy with the help of strong human resource development and to transform the industry to high level of productivity by developing the IT industry (Ishak *et al.*, 2010). The objective of this vision is to transform Malaysia into superior knowledge-based economy nation by year 2020. In the 10th Malaysian Health Plan, discussion was done to cultivate a national strategy on health employees and to shape operative direction for HCD and planning (10th Malaysian plan 2011-2015). TL style is one of the prominent leadership styles; this study interrogates the role of TL in human capital effectiveness with the mediating effect of knowledge codification and knowledge personalization strategy. This study tested the model in the Malaysian healthcare industry; the aim of this study was to develop a theoretical framework, which can enhance human capital effectiveness. This can improve the Malaysian healthcare sector and will be able to transform Malaysia into knowledge-based economy.

This research can help Malaysia to become the top healthcare tourism place in the world. If we talk about development, then we cannot neglect HCD; the framework of this study can improve the Malaysian healthcare industry.

## 2. Literature review

### 2.1 *Underpinning theories*

The aim of this study is also to prolong the scope of TL theory (Bass, 1985) and human capital theory (Schultz, 1961; Becker, 1962). Bass (1985) argued that TL can also help in employee development, but theory is silent about the framework, which can lead organization to develop employee. To bridge this gap, this research proposed a theoretical framework, which will lead the HCD. Human capital theories focused on investment in human capital, and linked this factor with the economic growth of the country. This study is intended to contribute in the literature empirically by exploring the role of TL with the mediating effect of KM strategies in human capital effectiveness. Future theory explains that organization should adopt proactive strategies, in order to face the changes in future. Therefore, human capital effectiveness can help organization to compete with rivals.

### 2.2 *Human capital effectiveness*

Human capital effectiveness can help organization to get scarce resource in terms of scarce knowledge, skills and abilities and with the help of scarce skills, organization can get competitive advantage. A learning culture of any organization can help to enhance the knowledge, skills and abilities of employees. Different countries have different natural resources; similarly, all human beings have distinctive skills, which add value to organization as well as to the nation's economy.

In the current business world, organizations are surrounded by tough competitors; in the current scenario of business, competitive advantage is most powerful tool that organization can use to survive. To get competitive advantage, talented and skillful workforce is the main source. Strategies for developing human capital got attention in the twenty-first century, the reason is to improve the knowledge and skills of workforce. This includes investments in the HCD as part of an overall effort to achieve cost-effective and timely results (Lai Wan, 2007).

Robert (1991) created a framework for human capital, which was illustrating that human capital creating and investment in education both contribute to labor productivity and technology development. In East Asian contexts, economic growth and development are observed due to huge investment in the HCD, more important thing is investment in education. An extraordinary rate of economic growth has been achieved by Singapore, Taiwan and Hong Kong, which is output of investment in education. Garba (2002) tested a theory in a cross-country and found a positive correlation between high economic growth and investment in education.

An HCD program has a significant positive impact on macro and micro levels of any country or organizational economy. In changing environment, many organizations realized that human capital is good competitive advantage that can boost organizational performance (Ukenna *et al.*, 2010). A number of researchers conducted research and identified the link of human capital with organizational performance (Becker, 1993; Schultz, 1993; Marimuthu *et al.*, 2009; Katou, 2009). Katou (2009) stated that HCD has a significant positive effect on organizational performance.

### 2.3 *TL*

Bass (1985, 1996) built Burns's (1978) original ideas of transforming leadership. He began empirically examining the theory and posited the formal concept of transformational leadership. However, there is an important distinction in that, whereas Burns's theory focused more on social reform by moral elevation of follower's values and needs, Bass's TL focused

more on attaining practical organizational objectives (Yukl, 2010). So far, the most research is undertaken to differentiate among different leadership styles and mostly the research focus was to identify best research style. From the past study, we can conclude that among different leadership styles, TL style is more productive and worth full. Bass (1985) identified four characteristics of TL; the objective of this thesis is to prolong the scope of TL style.

Other studies explained the impact of transformational leaders' behaviors on organizational outcomes differently. One study found that transformational leader behaviors directly affect employee psychological capital (Gooty *et al.*, 2009). These capacities include the dimensions of hope, self-efficacy, resiliency and hope optimism. Psychological capital then increases employee's willingness to improve job performances and organizational citizenship behaviors directed at individuals and the organization (Gooty *et al.*, 2009). TL was first presented as an idea by Downton (1973), Rebel Leadership study conducted in sociological field (Simic, 1999). After this, the concept of TL was used by "James McGregor" in his book *Leadership* (1978). After this, a formal theory of TL was developed by Bass (1985). A TL style has the ability to motivate subordinates to achieve the goal in an efficient way and sometimes more than the expected outcomes (Bass, 1985). This leadership style is identified as a procedure in which leader builds high motivation and trusts between subordinates and leader (Burns, 1978). Therefore, in the current study, role of TL is investigated in building human capital effectiveness with the mediating effect of KM strategies.

Researcher Vigoda-Gadot (2007) identified that TL is directly connected with demanding work attitude and behavior, suchlike organizational commitment and citizenship behavior. It has also been noted that TL relates to KM and innovation (Bryant, 2003). Based on this, the current research developed the following hypothesis that is further empirically tested also.

2.4 KM

To compete with rivals in the era of globalization, KM is an effective tool for organization worldwide (Bhagat *et al.*, 2002). This is also essential to become successful organizations in terms of performance (Martin, 2000; Popadiuk and Choo, 2006); further, more researchers investigated that KM is also useful to build human capital (Brown and Woodland, 1999). Extensive work has been done by researcher "Nonaka" in the field of KM, he highlighted the significance of KM (see Table I).

Kanellopoulos (2012) stated that management could be considered as awareness that is also important to keep eye on changing environment. The importance of KM systems in the healthcare sector cannot be neglected; this is because of dynamic changes in the healthcare sector. Reason for these changes is global environmental changes, appearances of new virus, latest technology for medical treatment and specialization, these factors arise the need of KMS in the healthcare sector to develop the employees and to cope with new challenges. KM in the

**Table I.**  
Knowledge  
management system

Key dimensions	Description
Leadership and support	Leadership support is essential for creating the knowledge management system
Technology and infrastructure	KM is based on information technology to disseminate, acquire and store the knowledge, further more knowledge management is also worth full for the IT sector
Knowledge creation	New knowledge creation at workplace
Acquisition and learning	Creating a learning culture, to look for new knowledge
Dissemination and transfer	To share the knowledge to make it useful
Application and exploitation	Implement new knowledge into practices to get benefit
People competency	KM enhances the knowledge skills and abilities of workers
Sharing culture	Create a positive culture where everyone strives to share the knowledge

**Source:** Chu *et al.* (2011)

health sector can help to develop human capital, which can ensure the system effectiveness. Recently, the proper KM system is not installed in the healthcare sector despite only in research area; the proper KM system in departments can improve the efficiency.

KM and intellectual concept (IC) are closely related concepts, and both captured attention at academic, business, organization and at government level. If we search these concepts on Google search engine, we can find thousands of websites and millions of links for these concepts, which show the importance and usage of these emerging concepts. The definitions and arguments of the KM and IC fields are multifaceted, and are frequently marked by much controversy, but little clarity (Spender, 1996).

Martina *et al.* (2007) described two strategies of “KM” that are codification strategy and personalization strategy. The main objective of codification strategy is to gather the available knowledge, store it in e-databases, library or books in written form and explicit it for further usage. This process enables knowledge for reuse purpose and problem-solving purpose that can definitely save time and finance. Documents management, workflow management and designing of databases can be taken as part of the codification strategy. This strategy can be more useful and effective for those organizations which require reusing of knowledge (Hansen *et al.*, 1999; Malhotra, 2004). As compared to the codification strategy, the personalization strategy uses the knowledge which cannot be codified; therefore, for knowledge sharing, this strategy urges to use IT to share the knowledge via online conference, training and mentoring, these can help to communicate online to share the knowledge (Martina *et al.*, 2007).

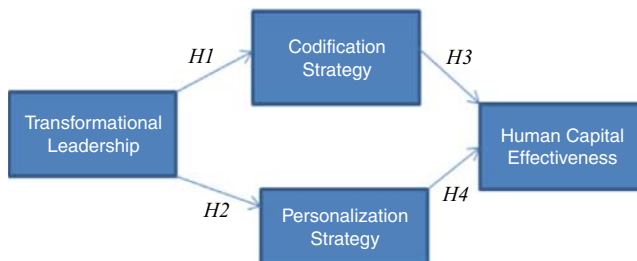
The study conducted by Zhao (2009) in China suggested that KM and organizational learning culture lead to teacher professional development. Birasnav (2009) conducted a conceptual study and identified the relationship between KM and human capital benefits, and recommended to test the model empirically in future. Based on these justifications, the current study developed a theoretical framework (see Figure 1) and tested the following hypotheses:

- H1. TL has a significant and positive relationship with knowledge codification strategy in the Malaysian healthcare sector.
- H2. TL has a significant and positive relationship with knowledge personalization strategy in the Malaysian healthcare sector.
- H3. Codification strategy has a significant and positive relationship with human capital effectiveness.
- H4. Personalization strategy has a significant and positive relationship with human capital effectiveness.

### 3. Research methodology

#### 3.1 Sample frame and data collection

To extend the breadth or range of inquiry by using different methods for different inquiry components (Creswell, 2006), researcher can deploy more than one basic research design



**Figure 1.**  
Theoretical framework

(Malhotra and Peterson, 2006). To validate the results of quantitative and qualitative triangulation methods is an effective approach in social science research. Therefore, the current study adopted a mixed research method to collect the data and analyzed the data separately with quantitative and qualitative software. This research was conducted in Malaysian Public Sector Hospitals and the top-level managers were selected, as a similar study was conducted in the Memorial Health sector, American researcher also selected the top-level managers (Borkowski *et al.*, 2011). The questionnaire of this study is adopted from the past studies, to measure TL 13 items were adopted from Castiglione (2006), for variable KM strategies ten items were adopted from René Filius *et al.* (2000) and to measure human capital effectiveness eight items were adopted from Jamal A. Nazari *et al.* (2011) and Nick Bontis (1998).

In this study, the data were collected from managers, senior administrators and policy makers. In total, 52 public sector hospitals were selected Anon (n.d.). For qualitative data, a non-probability sampling technique is used and sampling frame is convenient sampling. Creswell (2012) mentioned that for qualitative data, sampling size depends on saturation, and it can be between 20 and 30, for interview. In this study, 20 interviews were conducted; all interviews were based on structure interviews. Qualitative data were analyzed by the help of the 10th Nvivo software version, coding was done by the software and query test was used to find the major themes.

Table II shows the demographic profile of qualitative data, the table shows ( $n=20$ ) the respondents were nine of males and 11 of females.

Table III shows the profession of interviews of qualitative data. Among 20 interviewees, four were managers, seven were directors and nine were senior administrators.

For quantitative data, a probability sampling technique is used, as this study is generalized to the Malaysian healthcare sector; therefore, researcher suggested that in case of high generalization, probability sampling in quantitative data is appropriate (Sekaran, 2000). Population's size was 6,000 and total sample size for this study was 408. On average 508 questionnaires were analyzed by quantitative data collection; 408 questionnaires were filled. A five-point Likert scale is used to measure the variables.

Table IV shows the demographic profile gender classification for quantitative data.

**Table II.**  
Demographic profile  
for qualitative  
data gender

	Frequency	%	Valid %	Cumulative %
Male	9	45	45	45
Female	11	55	55	100
Total	20	100	100	

**Table III.**  
Demographic profile  
for qualitative data,  
profession of  
respondents

	Frequency	%	Valid %	Cumulative %
Manager	4	20	20	20
Director	7	35	35	55
Senior administrator	9	45	45	100
Total	20	100	100	

**Table IV.**  
Demographic profile  
of quantitative  
data, gender

	Frequency	%	Valid %	Cumulative %
Male	248	60.8	60.8	60.8
Female	160	39.2	39.2	100.0
Total	408	100.0	100.0	



toward thematic analysis. From this test, the most common appearing words in interview were derived.

Figure 3 shows the results of word frequency query. This test is similar to word count test, but only difference is that this test also identifies the frequency of words, which are most often appeared in interview. This test also helps to make coding and derive themes from data (Table VI).

As with quantitative data analysis, it is proven that TL has a significant effect on KM strategies, and these strategies have a positive impact on human capital effectiveness (see Section 4). This result is also supported by qualitative data. Interviews mentioned that

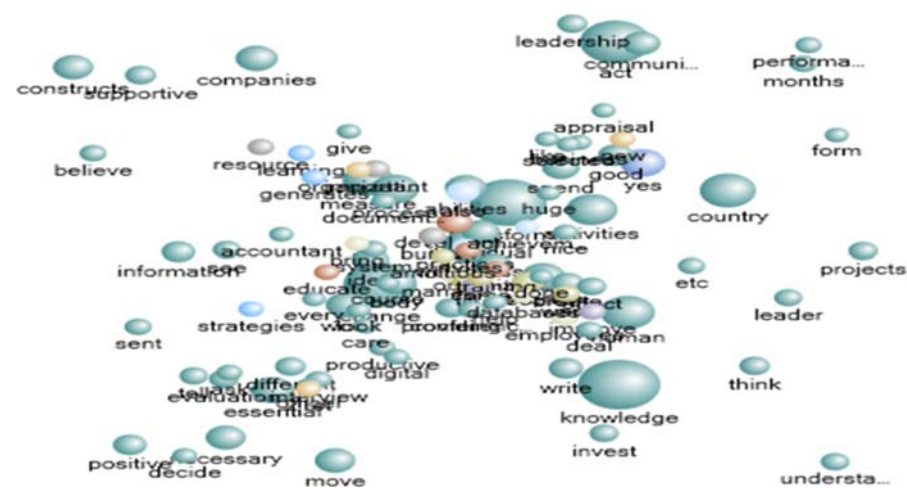


Figure 3.  
Word frequency query

Table VI.  
Thematic analysis  
of interview

Transformational leadership	Knowledge management system	Human capital effectiveness
Leader with a clear vision and ambitious and to look at changes	KMS must be understood	To enhance capacity
Resistance to change, a leader must cope with resistance	Different MNC using the process and getting benefit in terms of improving quality	
Change is for creativity and innovation that give competitive advantage	This process provides knowledge which can definitely improve the service and working style of employees	Government must invest in the human capital development
Transformational leadership can obviously stimulate the environment	Knowledge management can be built with IT, online databases can help to share knowledge	To build nation HCD is significant. But first to find the required KSA
Transformational leaders can help in human capital	Seminars and conferences are the sources of knowledge sharing	Twenty-first century is challenging and competent HCD can help to cope with competitors
	KMS implementation is not an easy step; in fact, transformational leaders can bring this process but need proper strategy	In the healthcare industry, it is important due to new virus. Health is more crucial for any government strategy. A healthy nation can progress



TL is the most effective style and has ability to transform the working environment. If leaders adopt this style, then they can develop KM strategies, which further enhance the knowledge skill and abilities of employees.

#### 4.2 Quantitative data analysis

It is absolutely necessary to establish convergent and discriminant validity, as well as reliability, when doing a CFA. If your factors do not demonstrate adequate validity and reliability, moving on to test a causal model will be useless. There are a few measures that are useful for establishing validity and reliability: CR, average variance extracted, maximum shared variance (MSV) and average shared variance (ASV). Table VII shows the constructs reliability and internal validity of all variables. CR of all variables is above 0.7 and construct validity of all variables is above 0.50; similarly, MSV and ASV values of all variables are above 0.5 and below the value of MSV. Hence, it is proved that there is no issue with scale validity and reliability. Table VIII shows that there is no issue of skewness and kurtosis, as for all variables the data fall between  $\pm 2$ , this shows data normality.

Table VIII shows the data normality test results. The results of skewness and kurtosis show data normality.

Figure 4 shows the structural equation model results; it has been observed that a model is obtained as per threshold mentioned in Table IX. The adjusted  $R^2$  value for dependent variable is also above 0.20. Therefore, the model fit index in this study is achieved.

Table X shows the results of hypotheses testing. All hypotheses of this study are accepted. Thus, the current study concludes that TL has a positive relationship with codification strategy and personalization strategy. The codification strategy and personalization strategy also have significant and positive impacts on human capital effectiveness. Thus, the current study was proven that KM strategies are effective to enhance knowledge skills and abilities of employees. Knowledgeable employees can work efficiently and can cope with challenges; they can also improve the services and satisfy customer's needs.

### 5. Conclusion and discussion

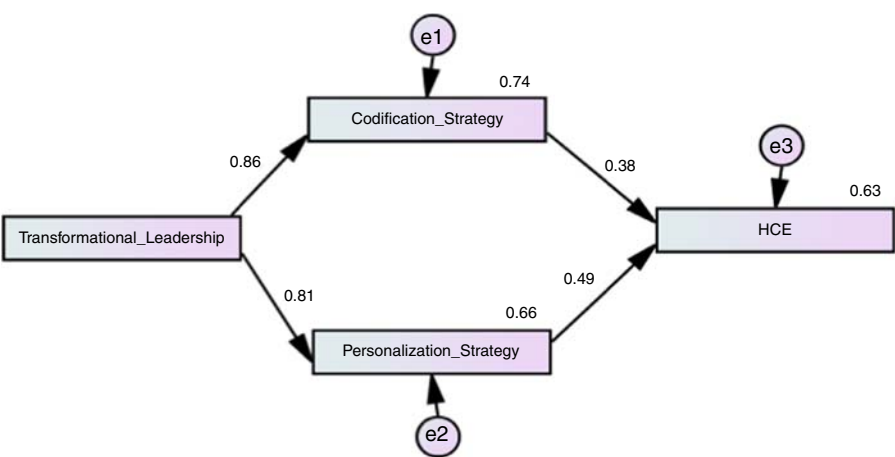
In the healthcare sector, the HCD is an important factor, as the technology is changing rapidly and also new diseases and viruses have been observed. Employee knowledge advancement ensures to give a better service to patients and this also helps employees to develop their career. In this study, KM strategies are also discussed. The codification strategy and personalization strategy are important to store the knowledge and to

Variable	Cronbach's $\alpha$	CR	AVE	MSV	ASV
Transformational leadership	0.95	0.82	0.56	0.55	0.52
Codification strategy	0.946	0.7	0.65	0.59	0.54
Personalization strategy	0.949	0.78	0.72	0.69	0.62
Human capital effectiveness	0.949	0.84	0.82	0.72	0.59

**Table VII.**  
Reliability and  
validity

	Transformational leadership	Codification strategy	Personalization strategy	Human capital effectiveness
Skewness	-0.295	-0.510	-0.522	-0.113
Kurtosis	-1.413	-1.364	-1.389	-1.490

**Table VIII.**  
Skewness and  
kurtosis



**Figure 4.**  
Hypothesized  
model testing

**Notes:** Model fit indexed:  $\chi^2/\text{df}=2.98$ ; RMESA=0.04; GFI=0.97; AGFI=0.89; PCLOSE=1

**Table IX.**  
Model fit index

Measure	Threshold
$\chi^2/\text{df}$ (CMIN/DF)	< 3 good; < 5 sometimes permissible
<i>p</i> -values for the model	> 0.5
CFI	> 0.95 great; > 0.90 traditional; > 0.80 sometimes permissible
GFI	> 0.95
AGFI	> 0.80
SRMR	< 0.09
RMSEA	< 0.5good;0.5-0.10 moderate; > 0.10 bad
PCLOSE	> 0.5
<b>Notes:</b> Reliability: CR > 0.7; convergent validity: AVE > 0.5; discriminant validity: MSV < AVE and ASV < AVE	
<b>Source:</b> Hair <i>et al.</i> (2010)	

**Table X.**  
Hypothesis testing

Path	Estimate	Adjusted $R^2$	<i>p</i>	Label
Codification strategy ← transformational leadership	0.86	0.74	0.000	Accepted
Personalization strategy ← transformational leadership	0.81	0.66	0.000	Accepted
Human capital effectiveness ← codification strategy	0.38	0.63	0.000	Accepted
Human capital effectiveness ← personalization strategy	0.49	0.63	0.000	Accepted

disseminate the knowledge in organization. If leaders of healthcare industry adopt TL style, it would be beneficial for human capital effectiveness. Consequently, it will improve the services of healthcare industry. KMS two strategies codification and personalization can help the healthcare industry to acquire new knowledge, store, and share with all staff; it will update employee's knowledge.

It has also been noted that TL has a relationship with KM and creativity (Bryant, 2003). Crawford (2005) identified the relationship between TL and KM. In the study conducted by Song *et al.* (2012) in Korea, researcher explored a positive relationship between TL and KMS. The results of the Han *et al.*'s (2016) study showed a significant direct effect of TL on

psychological empowerment and organizational commitment, which, in turn, had a significant influence on employees' knowledge sharing intention. J. Barbuto and R. Gottfredson (2017) suggested that servant leadership is likely the optimal leadership style for creating an organization rich in the HCD and for making an organization a preferred workplace for the millennial generation. Thus, the current result with respect to TL and KM systems is also supported in the light of past literature. In addition to the past literature of TL and KM strategies, the results of the current study are consistent with the past literature, as this research finds that TL has a significant positive impact on codification strategy and personalization strategy. A 1 percent change in TL has 0.86 percent change in the codification strategy; similarly, 1 percent change in TL brings 81 percent change in personalization strategy. Results show that codification strategy has a significant positive impact on human capital effectiveness, i.e. 1 percent change in codification strategy brings 38 percent change in human capital effectiveness. Similarly, personalization strategy also has a significant positive relationship with human capital effectiveness, 1 percent change in personalization strategy brings 49 percent change in human capital effectiveness.

## 6. Limitation and recommendation

However, this study has obtained its aims and objectives; however, there are few unavoidable limitations, which are realized to discuss in this section to fulfill these limitations in future by any research scholar. First, research can be generalized only in the Malaysian healthcare industry because of short-time framework and limited resources data collected in Malaysia only. Therefore, to generalize the study at the international and larger scale, future study should have to involve in more participants from around the world to extend the scope of research.

The implementation of KM system in the Malaysian healthcare sector will enhance the knowledge skill and abilities of employees. This will help all staff to update their knowledge, and this, in turn, will help them to provide best services. KM strategies, namely, the codification strategy and personalization strategy, will help employees to access the knowledge from anywhere. To implement an online KM system, the healthcare sector of Malaysia needs to invest, because from the literature in chapter 2, it has been proved already that investment will give benefit to organizations to improve employees as well as organizational performance.

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