Journal Homepage: -www.journalijar.com

INTERNATIONAL JOURNAL OF ADVANCED RESEARCH (IJAR)

Article DOI:10.21474/IJAR01/18824
DOI URL: http://dx.doi.org/10.21474/IJAR01/18824

RESEARCH ARTICLE

KNOWLEDGE TRANSFER PRACTICES AND STRATEGIES IN HIGHER EDUCATION

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Manuscript Info

Manuscript History
Received: 31 March 2024
Final Accepted: 30 April 2024
Published: May 2024

Key words:-
Knowledge Transfer, Practices, Strategies, Performance

Abstract

This study aims to investigate knowledge transfer practices and strategies measured by knowledge vision, leadership, sharing culture, strategies, and IT infrastructures. It also examines how the variables affect organizational performance. By involving 118 respondents collected through an online survey and analyzed using descriptive statistics and multiple linear regression, the study found that knowledge-sharing and IT infrastructure significantly influence organizational performance, while knowledge vision, knowledge leadership, and knowledge-sharing culture do not significantly affect organizational performance. Practices such as public lectures, seminars, workshops, collegial interchange, internships, and research collaborations are considered effective in supporting knowledge transfer activities in higher education. In addition, the knowledge creation process through socialization, externalization, combination, and internalization, and factors such as vision, leadership, culture, and IT infrastructure must be managed properly to support the knowledge transfer process and formulate appropriate strategies.

Introduction:-

Knowledge transfer is essential to manage properly in higher education institutions to improve educational practices (Love, 1985; Huberman, 1990; Willmot, 1994). In the era of information and communication technology (ICT) development where massive digital technology is implemented in everyday life, knowledge transfer activities are much easier to support learning in research and community service activities. Practitioners and the public can easily access university research results. Even though the ICT implementation is quite significant, the main problems still exist, especially in learning, research, and community service processes. These problems are network connections and individual factors related to technology mastery and absorptive capacity possessed by students while involved in the learning process.

Specifically in the learning process, the transfer of knowledge to higher education institutions is essential in determining student success even the university performance and competitiveness. Nonaka and Takeuchi (1995) define knowledge transfer as a concept of sharing information and as a learning process based on experience, transfer of knowledge at the individual level has meaning as duplicating knowledge from the source of knowledge to the recipient. According to them, the knowledge transfer process can be explained through the SECI model which includes the processes of socialization (tacit to tacit), externalization (tacit to explicit), combination (explicit to explicit), and internalization (explicit to tacit), where the four processes describe the conditions of knowledge

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transfer. which is highly dependent on understanding between knowledge owners and users. The knowledge transfer process in the SECI model can be used to explain the knowledge transfer process in education.

Several recent studies related to knowledge transfer practices and strategies in higher education have been conducted (Jeyanthi & Shrivastava, 2019; Cheng, 2020). The study conducted by Jeyanthi and Shrivastava (2019) aims to investigate the factors influencing the process of knowledge transfer in higher education institutions, the significance of knowledge transfer, strategies to encourage knowledge transfer, and strategies to identify barriers to knowledge transfer. Using the t-test, the results of the study show that knowledge transfer activities are scarce, as well the knowledge archives, and there is a lack of awareness of the importance of knowledge transfer activities in organizations.

Cheng's (2020) study aims to identify strategies and practices to increase the absorptive capacity of human resources in higher education organizations in Hong Kong. Data are collected through a questionnaire survey to test the effectiveness of the knowledge transfer project. Pre and Post-test questionnaire surveys were used to evaluate changes in the absorptive capacity of the respondents. The results of the study showed that there were significant differences between the pre-and post-test in all elements of absorption capacity. The processes of knowledge acquisition, contextualization, internalization, and externalization are identified as effective knowledge transfer strategies. Meanwhile, training programs, workshops, consultations, and study-based work and presentations are important practices to increase the absorption capacity of transferees/recipients.

Due to the importance of knowledge transfer in higher education institutions, especially during the learning process, this research was conducted to examine important practices and strategies to be applied in responding to the needs and rapid developments in the environment and technology. The focus of this research is to identify higher education practices and strategies as measured by several measurement variables including knowledge vision, knowledge leadership, knowledge sharing culture, knowledge strategies, and IT infrastructures.

In addition, this research was also conducted to test several factors that influence organizational performance. It is expected that information can be obtained, and evaluations related to knowledge transfer practices and strategies that have been implemented so far can be identified as aspects that need to be developed and improved. It is also expected that factors influencing organizational performance can be identified so that insight into practices and strategies that support knowledge transfer activities can be formulated.

Literature Review:-

Hypothesis Development

To formulate an effective knowledge transfer strategy in higher education several factors must be considered such as knowledge vision, knowledge leadership, knowledge sharing culture, knowledge sharing, and IT infrastructure (Cheng, 2020). Knowledge vision is related to the university's vision of developing teaching and learning using knowledge-based information and communication technology, the vision of knowledge-based development with stakeholders, and the university's moral duties and responsibilities to become a campus that can create knowledge and focus on the teaching vision.

Cheng (2020) stated that knowledge leadership refers to leadership that supports the idea of knowledge management, can direct teaching staff to share knowledge with students and other communities, creates a conducive knowledge-sharing environment, and leads teaching staff to apply knowledge. Meanwhile, the knowledge-sharing culture is related to the university's encouragement and support for teaching staff to share knowledge, building a culture of sharing knowledge, and realizing the importance of knowledge-sharing activities in determining organizational competitiveness and awareness of decision-makers within the university to share experiences and knowledge.

The knowledge-sharing activity itself relates to how the university manages these activities to support university development, develop teaching staff competencies, promote learning communities, support various relevant knowledge activities to meet the needs of developing the competence of teaching staff and evaluate every formal activity that has been conducted. While information technology infrastructure refers to the ownership of information technology facilities, the absence of gaps in the ability of teachers to apply information technology, the building of collaborative technologies to share knowledge, and university support to develop virtual learning communities (Cheng, 2020).

Previous empirical studies have proven that variables such as knowledge vision (Zhu, 2011), knowledge leadership (Sayyadi, 2019), knowledge-sharing culture (Tseng, 2010; Olan et al., 2019), knowledge sharing (Al Kashari & Al Taheri, 2019; Tabara, 2022), and IT infrastructure (Jabbouri& Zahari, 2015) have a significant influence on organizational performance. Although the study conducted by Cheng (2020) did not examine the effect of each of these variables on organizational performance, in this study the researchers formulated several hypotheses based on the previous studies findings as follows:

H1: Knowledge vision effect on organizational performance.
H2: Knowledge leadership effect on organizational performance.
H3: Knowledge-sharing culture effect on organizational performance.
H4: Knowledge sharing effect on organizational performance
H5: IT infrastructure effect on organizational performance

Method:-

This research was conducted on students of the Management Study Program and the Master of Management Study Program. Data collection was carried out through online surveys using Google Forms. The variable measurement used in this study was adapted from Cheng (2020) and included knowledge vision (KV) measured by 4 statements, knowledge leadership (KL) measured by 4 statements, knowledge sharing culture (KSC) measured by 4 statements, knowledge sharing (KS) measured by 5 statements, IT infrastructure (IT) measured by 4 statements, and organizational performance (OP) measured by 7 statements. All of the indicators used 5 points Likert Scale, namely 1 refers to strongly disagree while 5 refers to strongly agree.

Validity and reliability testing was conducted using Pearson Correlation and Cronbach Alpha while the hypothesis testing was carried out through multiple regression analysis. Classical assumption testing will focus on testing normality, multicollinearity, and heteroscedasticity. Descriptive statistical testing will be conducted to provide an overview and characteristics of the data related to each variable tested in this study and the respondent's characteristics involved in the study.

Results:-

Respondent Profile

The characteristics of the respondents in this study were identified based on their gender, age, preference for information sources, and information channels used in their learning process. Based on gender, 44.9% were male, and 55.1% were female. Based on age, 28.8% were 15-20 years old, 39% were 21-25 years old, 19.5% were 26-30 years old, and 12.7% were >30 years old.Based on preferences for information sources, most respondents prefer the internet as their information source (87.3%), 7.6% preferred information from lecturers, 2.5% preferred information from friends, 1.7 preferred libraries and supporting literature, and 0.8% preferred both the internet and lecturers.Based on the information channels preferred, most of the respondents prefer face-to-face (64.4%) and 35.6% preferred online. All the respondents involved in this study were students of the Faculty of Business, Maranatha Christian University Bandung, Indonesia.

Descriptive Statistics

The average responses of the respondents to each question to measure the research variables include knowledge vision (KV), knowledge leadership (KL), knowledge sharing culture (KSC), knowledge sharing (KS), IT infrastructure (IT), and organizational performance (OP). The results of descriptive statistical tests showed that the average responses for KV (3.87-4.23), KL (4.12-4.23), KSC (4.03-4.27), KS (3.83-4.08), IT (4.01-4.23), and OP (3.93-4.17).

Validity and Reliability Testing

The results of the validity and reliability testing are summarized. Based on the validity test, shows that all measurement items are valid, therefore no measurement items are excluded in the subsequent analysis. The validity test results with Pearson Correlation showed all values of r count > r table with a significance value of 0.00. The homogeneity values for each variable in this study are as follows: KV (.852-.906), KL (.870-.960), KSC (.875-.914), KS (.756-.882), IT (.831-.867), and OP (.756-.932). The reliability test showed that Cronbach's Alpha value ranges from 0.866-0.948.

Hypotheses Testing

To test hypotheses 1 to 5 whether knowledge vision (KV), knowledge leadership (KL), knowledge sharing culture (KSC), knowledge sharing (KS), and IT infrastructure (IT) significantly affect organizational performance (OP) used multiple regression analysis. The estimation parameter is obtained through multiple regression analysis with the value of t, and the coefficient of determination (R2). The value of the regression coefficient must be significant at $p < 0.05$ to conclude that the independent variables have a significant effect on the dependent variable. The adjusted R2 shows how good the model is in explaining the variation of the dependent variable.

Table 1 shows the results of the hypothesis testing. Normal probability plots, scatter plot diagrams, and statistical collinearity assessed from tolerance and VIF are used to test all deviations from classical assumptions including normality, homoscedasticity, and non-multicollinearity. Based on the results of partial model testing using multiple regression analysis, it can be concluded that only knowledge-sharing, and IT infrastructure have a significant effect on organizational performance, while knowledge vision, knowledge leadership, and knowledge-sharing culture do not have a significant impact on organizational performance.

Simultaneously, it can be concluded that knowledge vision, knowledge leadership, knowledge sharing culture, knowledge sharing, and IT infrastructure have a significant influence on organizational performance. The adjusted R2 value in this study is 0.748, this means that 74.8% of organizational performance is influenced by the factors tested in the model while the remaining 26.2% is explained by other factors outside the research model.

This study also identified several knowledge transfer mechanisms that were considered effective by students. Based on the responses given, it can be identified that public lectures, seminars, workshops, the collegial interchange between universities and other institutions, internships or practical work, and research collaboration are knowledge transfer practices that are considered effective in supporting knowledge transfer activities in higher education. For example, collegial interchange programs, seminars, and publications involving external parties such as industry can be conducted through informal activities where the exchange of information and knowledge can be carried out through presentations in seminars, publication of writings in scientific journals and magazines,

Table 1:- Hypotheses Testing.

Constant	Standard Coef. of Beta	t	sign	F change	F sign	Adjusted R square
Constant	-	.522	.602	66.329	.000	.748
KV	-080	-.661	.510			
KL	-.048	-.329	.743			
KSC	.292	1,866	.065			
KS	.313	2.330	.022			
IT	416	4.523	.000			

Dependent Variable: Organizational Performance
Source: Processed Data

Regarding the effective strategy formulation in supporting knowledge transfer activities in higher education, the organization must manage the knowledge creation process that refers to the SECI model (Socialization, Externalization, Combination, and Internalization). In addition, factors such as vision, mission, leadership, culture, and information technology infrastructure must be managed properly to support the knowledge transfer process running well in higher education institutions.

Discussion:-

This study adopted a study conducted by Chen et al. (2020) which aims to identify effective knowledge transfer strategies and practices within higher education institutions to increase the absorptive capacity of recipients towards the knowledge transferred. By using survey and interview methods and involving 1014 participants from 20 campuses, the study found that there was a significant difference between the absorptive capacity between the pre and post-tests. The researcher found that practices such as workshops, consultations, work-based studies, and seminar presentations were effective knowledge transfer practices to increase the absorptive capacity of respondents.

This study aims to identify some knowledge transfer practices and policies based on the perspective of students of the Faculty of Business. In addition, this study also tested several factors that were considered to affect organizational performance including knowledge vision, knowledge leadership, knowledge-sharing culture, knowledge-sharing, and IT infrastructure. The results of partial hypothesis testing show that among the five independent variables, there are only two variables that have a significant influence on organizational performance, namely knowledge sharing and IT infrastructure. The logical explanation that can be given regarding this finding is based on the measurement items and the sample selected to be the respondents in this study.

Statement items related to knowledge vision, knowledge leadership, and knowledge-sharing culture are more related to vision and mission, leadership style, and knowledge-sharing culture applied by decision-makers and policies on campus with the target of academics or lecturer so that students lack understanding related to the things asked in the survey. Meanwhile, the knowledge-sharing and IT infrastructure variables are directly related to the services received and experienced by students through the learning process on campus.

The results of studies related to knowledge vision show that among several indicators that measure knowledge vision related to the duties and moral responsibilities of institutions to become a campus that can create knowledge has the highest average answer of 4.23, followed by having the vision to develop teaching and learning using information technology and knowledge-based communication with an average answer of 4.16, the university turn vision into teaching assignments with an average answer of 4.00, and the university share knowledge-based development with stakeholders with an average answer of 3.87.

Regarding knowledge leadership, it shows that among several indicators that measure knowledge leadership, the respondent's answer with the highest average is that the board supports the idea of knowledge management, namely 4.23, the leader directs teaching staff to share teaching experiences with students, and other communities with an average answer 4.18, faculty and study program leaders can create a conducive knowledge-sharing environment with an average of 4.17, and faculty and study program leaders can lead teaching staff to implement knowledge management with an average answer of 4.12.

Regarding knowledge-sharing culture, the highest average answer, which is 4.27, is related to statements that the university encourages and supports teaching staff to share their knowledge, followed by statements that the university agrees that knowledge management and sharing are important activities in determining organizational competitiveness on average of 4.17, the university often shares teaching experience and knowledge with an average answer of 4.13 and the university has succeeded in building a culture of sharing knowledge with an average answer of 4.03.

Regarding knowledge sharing, the highest average respondent's response, namely 4.08, is related to the statement that the campus places knowledge sharing as a campus development effort that needs attention. Furthermore, two statements have the second highest average answer, namely 4.03. The statement is that the campus adopts action learning to develop teaching staff and the campus organizes activities and introduces relevant professional knowledge to meet faculty development needs. The response with the highest average is then related to the campus promoting learning communities to encourage knowledge-sharing activities and finally with an average answer of 3.83 related to the statement stating that the campus stipulates that evaluation results for each activity must be made in text format and recorded.

Regarding IT infrastructure, the highest average answer is 4.23 regarding the statement that the university has information technology facilities to support knowledge-sharing activities. Furthermore, the statement that the university builds collaborative technology to enable knowledge-sharing is conducted by utilizing the internet with an average answer of 4.17, the university provides support so that teaching staff can build virtual learning communities with an average answer of 4.02, and the university ensures that there is no gap between the abilities to teach by applying information technology with an average answer of 4.01.

Conclusion:-

The findings show that knowledge-sharing and IT infrastructure have a significant effect on organizational performance, while knowledge vision, knowledge leadership, and knowledge-sharing culture do not have a significant effect. The study also found that effective knowledge transfer practices in supporting knowledge transfer activities in higher education might include public lectures, seminars, workshops, the collegial interchange between

universities and other institutions, internships or practical work, and research collaborations. To formulate an effective knowledge transfer strategy, higher education needs to focus on the knowledge creation process which refers to the SECI model (Socialization, Externalization, Combination, and Internalization). In addition, factors such as vision, mission, leadership, culture, and information technology infrastructure must also be managed properly.

This study has a limitation in sampling, where the sample is only taken from one faculty, while the university which is the object of this research consists of nine faculties. In addition, this study only involved students as respondents so there were several indicators that students might not understand, resulting in a perceptual bias in the assessment. Future research can be conducted by involving respondents from all faculties and respondents from academia to provide accurate assessments based on an academic perspective, especially those related to knowledge vision, knowledge leadership, and knowledge-sharing culture variables.

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