Adaptation of Knowledge Transfer Model in Social Commerce

Yuhanis Yusof, Mazida Ahmad, Maslinda Mohd Nadzir, Noorizuana Abdul Hamid

Abstract: ***The rapid advancement of internet provides various digital opportunities especially through social media. However, without proper training and knowledge, online business newbies could not fully utilize internet technology to expand their business. Most of these business newbies tend to market their product using flyers and word-of-mouth only. Such a strategy may not attract customers of young age as these customers are found to be online at most of their time. Hence, the limited number of customers affects income generation of the business newbies. Even though these business newbies do have social media accounts such as Facebook, they have yet to fully utilize social media to create digital business opportunities. Hence, this study adapts the knowledge management model which is SECI (Socialization, Externalization, Combination, Internalization factors) in transferring knowledge on social commerce from the expert to the business newbies. Methodology of the study includes 4 phases: instrument design, 2 phase of training and data analysis. A group of 61 trainees were involved in this study and they are of two business groups. The effectiveness of the knowledge transfer is measured via three (3) performance indicators; amount of sales, number of followers and number of friends. The result has shown that, upon the completion of the knowledge transfer, majority of the trainees has secured larger sales in their business. Furthermore, their number of followers and friends has also increased. Such findings indicate the success of SECI adaptation in transferring knowledge on utilizing social media in creating business opportunities.***

Keywords: knowledge management, knowledge transfer, SECI model, social commerce, social media

I. INTRODUCTION

Tacit knowledge is very important in the domain of knowledge management[1]. This is due to the fact that tacit knowledge is the relevant information residing in an individual's head. It is not formally documented (i.e written), as the knowledge is built upon one's experience. The more experience a person is, the more tacit knowledge is embodied in him. However, tacit knowledge is often untapped even though it is priceless and may build up one's knowledge. An alternative to gain tacit knowledge is by knowledge transfer that allows knowledge from an expert to be passed to a novice. In this study, tacit knowledge which refers to the digital opportunities in business that domain experts have gained and experienced, yet to an extent, is articulated through training programmes.

Thus, the key to successfully include tacit knowledge in training is by developing training module(s) that accelerates the novice businessman/women's' abilities to make full use of internet technology through social media for their business marketing strategy.

To date, even though internet penetration rate in Malaysia has been reported to be increased[2], the mechanism on how people use the internet for business opportunities can still be improved. Most of the business newbies tend to market their product using flyers and word-of-mouth only. They rely on printed advertisement/marketing strategy which may not attract customers of young age as these customers are found to be online at most of their time. Hence, the business newbies could not generate high income. Even though, these business newbies are aware of the internet, their use of social media was only focused on causal communication. They have yet to make full use of social media to create digital business opportunities.

In this, study, a knowledge management model which is SECI [3] (Socialization, Externalization, Combination, Internalization) is adapted in transferring knowledge from the expert to the business newbies. The SECI model has been used in many knowledge transfer process. Within the context of Higher Learning Institution, several studies have been conducted on managing knowledge [4-6] and emphasis is given on transferring tacit and explicit knowledge [7, 8]. The 'Socialization' is a process of transferring expertise from consultant to new businessman/woman via face to face or online workshop training. The transfer process ensures that the knowledge from the consultant (as an expert) to the new businessman/woman (as a novice) is successfully transferred in a platform such as training workshop.

The 'Externalization' component refers to the process of explaining/transforming the tacit knowledge into writing format (explicit knowledge) but inconsistent form so that it can be shared with the new businessman/woman as the basis of new knowledge. On the other hand, 'Combination' refers to the process of collecting inconsistent explicit knowledge such as training module and external sources into a group of complex and systematic explicit knowledge. During the process of 'Internalization', the experience acquired through previous process is converted into a valuable knowledge for new businessman/woman in term of learning, thinking and decision making skills for business marketing strategy.

II. RELATED WORK

Learning and knowledge management are increasingly similar in terms of input, outcome, processes, activities, components,

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tools, concepts, and terminologies and can thus be viewed as two sides of the same coin. Nonaka and Takeuchi [3] adopt a dynamic model of knowledge management, view knowledge as activity rather than object and focus on knowledge creation, collaboration and practice. This knowledge creation model has been referred to as the SECI model (Refer Figure 1).

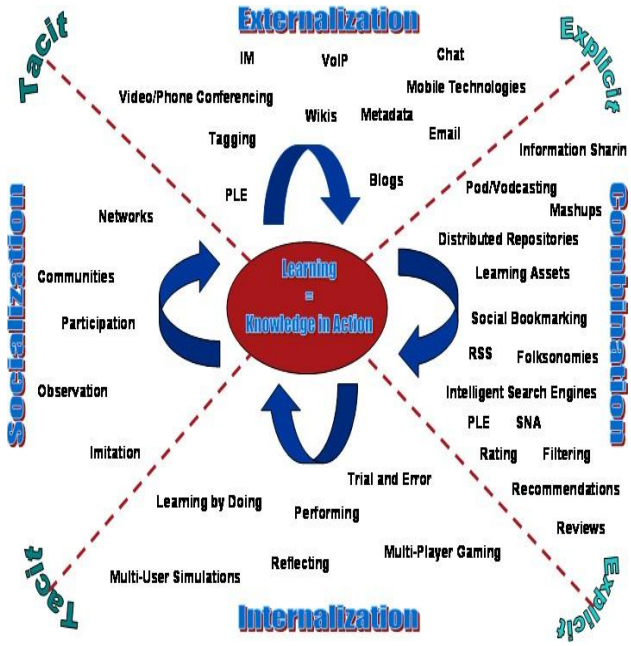

Fig. 1 SECI Model Based Learning Process [3]

SECI model consists of Socialization, Externalization, Combination and Internalization factors that associates the interaction and transaction of tacit as well as explicit knowledge. These factors should be implemented in sequence to ensure tacit knowledge is delivered from expert to novice [3].

III. APPLICATIONS OF SECI IN KNOWLEDGE TRANSFER

A study conducted by Kutay and Aurm[9] for Software Engineering (SE) bachelor program at University of New South Wales (UNSW) revealed that prior to their study, SECI processes have not been implemented in educational context. They later analyse the KM supported by different technologies within a SECI framework and how this may support learning. Results indicated that the SECI model was an incomplete representation of KM where an increased understanding of the technology that supports each aspect of the model would contribute to KM and thus constructive aspects of learning at universities as they move to mobile modes of learning. Similar work was then reported by Ahmad et. al [1] in a study investigated in Universiti Utara Malaysia. They realized SECI processes in problem based leaning teaching (PBL) method. However, both of the studies [1, 9] did not discussed the effectiveness of knowledge transfer in PBL from performance perspective. Prior to that, Ahmad et. al[10] investigates the process in transferring the tacit knowledge from lecturer to students via PBL teaching method. In PBL, the lecturers are not only trying to develop knowledge which is important in every learning process, but the lecturers are trying to develop the soft skills that will help the students during the learning process and their professional life.

In a recent study [11], the use of SECI has shown that Java local culture such as Slametan was able to assist the process of creating and transferring knowledge among crackers entrepreneurs. Slametan process could make crackers entrepreneurs to be more open to information and communication process was become easier between the enterpreneurs or with a facilitator who helped the process of knowledge transfer. So the SECI model of knowledge transfer model expressed by Nonaka and Konno [12] is expected to use the local culture approach in the application of each stage so that the communication process may be well performed.

A country case study utilizing SECI was also investigated [13] where the aim was to investigate challenges in transferring knowledge between organizations belonging to different cultures (i.e country). Researchers used a comparative case study that includes success and failure factors. In addition, the study also depends on Latour controversies to account for the context and contradictions. The outcome of the study shows that knowledge transfer fails due to the lacking in socialization. Participants of the process did not share relevant context via verbal communication. A similar case study was reported recently [14] where the study was to examine the knowledge transfer that may have happened between entrepreneurs between Malaysia and Indonesia during their interaction every weekend. It is learned that the transfer of knowledge among fellow entrepreneurs (between Indonesian cross-border entrepreneurs and Bidayuh entrepreneurs) is still very minimal. This is due to the very limited time and space for them to have interaction.

Knowledge transfer in the domain of engineering has also applied SECI model. A study in 2016 [15] integrates the SECI modelwith key processes of remanufacturing engineering management. The study wanted to determine relationships between remanufacturing engineering management and knowledge transfer and sharing. It is then reported that knowledge transfer and sharing activities have improved the remanufacturing engineering management processes.

IV. METHODOLOGY

The methodology involves five phases namely theoretical study, instrument design, data collection, data analysis and documentation (refer to Figure 2). In theoretical study, a literature review is conducted to understand SECI model and knowledge transfer in business domain. The outcomes are SECI factors and performance factor.

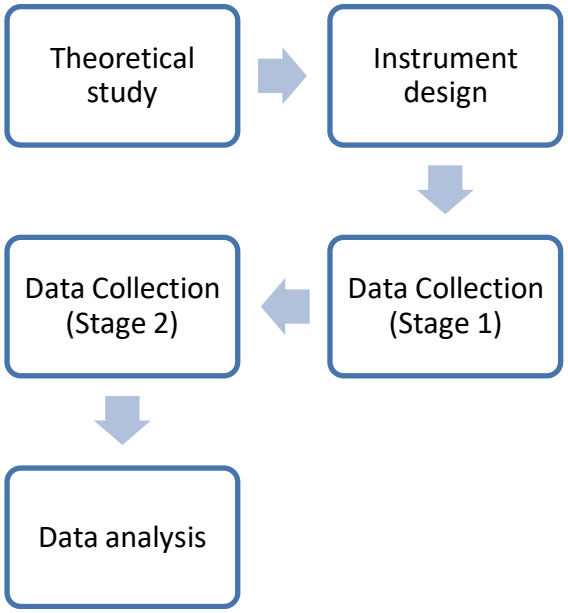

Fig. 2 Research Methodology

In the second phase (i.e instrument design), the study focuses on creating instrument to be used in data collection. The instrument is based on the outcome of phase 1. The instrument is designed to represent the factors of the four components of SECI; Socialization, Externalization, Combination, Internalization. Once the instrument is ready, data collection is performed on 61 trainees who has been involved in multi-level marketing (MLM). The data collection (face to face) is divided into 2 stages where stage 1 includes the identification of socialization and externalization factors and stage 2 produces the factors for combination and internalization. Following the data collection phase is the Data Analysis which was performed using Smart PLS software and SPSS. Smart PLS is employed as it allows the analysis of all the factors simultaneously. Based on the analysis, the study then proposed a SECI model to be used in transferring knowledge in social commerce domain (Figure 3).

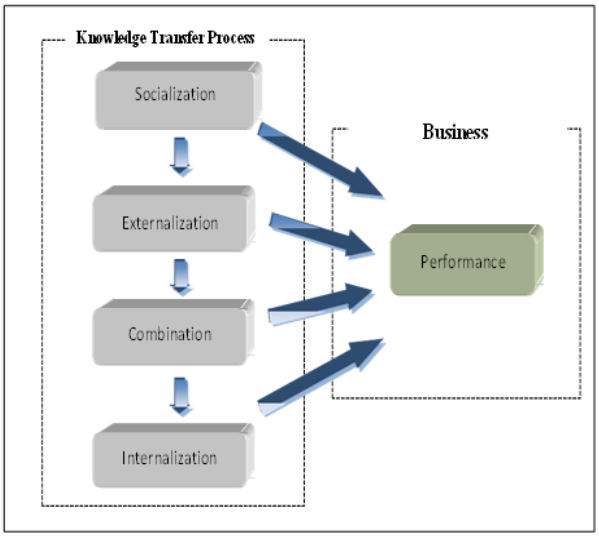

Fig. 3 SECI Model in creating Digital Opportunities for Business Newbies

V. RESULTS

This section presents the outcome of adapting SECI in social commerce knowledge transfer. Discussion is made based on the demographic information of the trainees. A group of 61 trainees were involved in this study and they are of two business groups. Table 1 shows the gender composition of trainees and it is learned that most of them are female (90.2%). Number of trainees based on their type of occupations is depicted in Table 2. Majority of the trainees (80.3%) involved in Business for full time while 8.2% of the respondent are student. The remaining trainees work in the public sector.

Table. 1 Respondent: Gender

	Frequency	Percentage
Female	55	90.2
Male	6	9.8
Total	61	100

Table. 2 Respondent: Occupation

	Frequency	Percentage
Business	49	80.3
Students	5	8.2
Public sector	7	11.5
Total	61	100

Table. 3 Experience of trainees

	Frequency	Percentage
< = 1 year	29	47.3
2 – 5 years	19	31.1
6 – 9 years	9	14.8
>= 10 years	4	6.6
Total	61	100

Data in Table 3 denotes the years of experience that the respondent had. These trainees have different experience in business; <=1 year of experience (47.3%), with 2 – 5 years of experiences (31.1%), 14.5% of the trainees belong to category 6 – 9 years of experiences while the category with experience more than 10 years has the percentage of 6.6%.
Table 4 shows the significance values for variables Occupation, Experiences, Friends, Followers, Sales and Gender for the trainees (with p=5%). Based on the data, only two variables (i.e Friends and Gender)show significance difference between the two types of business. As for other variables, there is no significance difference between these two business.

Table. 4 *T*-Test For Equality Of Means Between Types Of Business

		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	*t*	df	Sig. (2-tailed)
OCCUPATION	Equal variances assumed	.244	.623	-.012	59	.990
	Equal variances not assumed			-.013	58.423	.990
EXPERIENCE	Equal variances assumed	1.563	.216	1.024	59	.310
	Equal variances not assumed			1.025	58.509	.310
FRIENDS	Equal variances assumed	7.667	.008	4.017	59	.000
	Equal variances not assumed			3.951	50.084	.000
FOLLOWERS	Equal variances assumed	3.865	.054	-.951	59	.345
	Equal variances not assumed			-1.000	31.000	.325
SALES	Equal variances assumed	4.356	.041	1.056	59	.295
	Equal variances not assumed			1.035	47.588	.306
GENDER	Equal variances assumed	59.117	.000	2.842	59	.006
	Equal variances not assumed			2.703	28.000	.012

Table. 5 Correlation Between Variables

		FRIENDS	FOLLOWERS	SALES	GENDER	OCCUPATION	EXPERIENCE
FRIENDS	Pearson Correlation	1	.320*	.173	.024	-.074	.378**
	Sig. (2-tailed)		.012	.184	.856	.569	.003
	N	61	61	61	61	61	61
FOLLOWERS	Pearson Correlation	.320*	1	-.063	-.043	-.060	-.113
	Sig. (2-tailed)	.012		.631	.744	.644	.387
	N	61	61	61	61	61	61
SALES	Pearson Correlation	.173	-.063	1	-.161	-.059	.307*
	Sig. (2-tailed)	.184	.631		.217	.652	.016
	N	61	61	61	61	61	61
GENDER	Pearson Correlation	.024	-.043	-.161	1	.259*	-.109
	Sig. (2-tailed)	.856	.744	.217		.044	.404
	N	61	61	61	61	61	61
OCCUPATION	Pearson Correlation	-.074	-.060	-.059	.259*	1	.287*
	Sig. (2-tailed)	.569	.644	.652	.044		.025
	N	61	61	61	61	61	61
EXPERIENCE	Pearson Correlation	.378**	-.113	.307*	-.109	.287*	1
	Sig. (2-tailed)	.003	.387	.016	.404	.025	
	N	61	61	61	61	61	61

Correlations between variables are shown in Table 5. There is positive significance correlation between Friends and Followers (0.32) and between Friends and Experiences (0.378). The values in bracket are the correlation values between the two variables. Their correlation are not so strong based on their correlation values which are only 0.3. When looking at the correlation values for Friends and Followers, it can be learned that there is a positive correlation between these two variables (i.e 0.32). This indicates that when the numbers of Friends increases, then the number of Followers also increases. The Sales and Experience also have significance correlation. Even though the correlation is not so strong, which is only 0.307, it is in the form of positive where the more experience the trainees are, the more Sales he/she will make. On the other hand, analyzing between Gender and Occupation, it is noted that there is a significance positive correlation (i.e 0.259) between these two variables. Occupation also has significance correlation with Experience (i.e 0.287).

This analysis also focuses on the factors of the SECI model; Socialization, Externalization, Combination and Internalization. The relationships between these factors are shown in Table 6. There is a positive significance relationship between Socialization and Externalization which is 0.662. A stronger relationship can be seen between Combination and Internalization (i.e 0.672). However, other factors do not show significance relationship between each other.

Table. 6 Correlation Between Factors

		Socialization	Externalization	Combination	Internalization
Socialization	Pearson Correlation	1	**.662****	.051	-.063
	Sig. (2-tailed)		.000	.694	.630
	N	61	61	61	61
Externalization	Pearson Correlation	**.662****	1	-.067	.045
	Sig. (2-tailed)	.000		.608	.729
	N	61	61	61	61
Combination	Pearson Correlation	.051	-.067	1	**.672****
	Sig. (2-tailed)	.694	.608		.000
	N	61	61	61	61
Internalization	Pearson Correlation	-.063	.045	**.672****	1
	Sig. (2-tailed)	.630	.729	.000	
	N	61	61	61	61

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

The most important measure on the success of the knowledge transfer is the sales made by the business newbies. Table 7 shows that for all pairs (Total Friends, Followers and Sales) for before and after training have significance correlation value. This indicates that there is a significance correlation between the outcome (number of friends, followers and sales) before and after the training. All pairs have high positive correlations which are higher than 0.8.

Table. 7 Correlation Between Variables (Friends, Followers And Sales) – Before And After Training

		N	Correlation	Sig.
Pair 1	Total Friends (Before) & Total Friends (After)	61	.847	.000
Pair 2	Total Followers (Before) & Total Followers (After)	61	.995	.000
Pair 3	Total Sales RM (Before) & Total Sales RM (After)	61	.880	.000

Table. 8 *T*-Test For Equality Of Means Between Variables (Friends, Followers And Sales) – Before And After Training

	Paired Differences					*t*	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1 Total Friends (Before) – Total Friends (After)	-755.902	697.140	89.260	-934.447	-577.356	-8.469	60	.000
Pair 2 Total Followers (Before) – Total Followers (After)	-113.180	122.104	15.634	-144.453	-81.908	-7.239	60	.000
Pair 3 Total Sales RM (Before) – Total Sales RM (After)	-300.689	302.198	38.693	-378.085	-223.292	-7.771	60	.000

The paired t-test has been also been used to determine whether there is significance difference for the measure (i.e before and after training). As can be seen in Table 8, all values are significance, which indicates that there is a difference between before and after training for number of friends, followers and sales. Such a finding shows that knowledge transferred during the training has helped the business newbies in generating more income (i.e making more sales). This study has shown that SECI model is beneficial in facilitating knowledge transfer in social commerce, specifically on the Facebook platform.

VI. CONCLUSIONS

This study focuses on the adaptation of SECI model in transferring knowledge on creating business opportunities to the business newbies. The aim is to educate the business newbies in utilizing social media to market their product and/or services. Knowledge on how to better use the social media, in particular, the Facebook, were transferred from the expert to the newbies. To ensure the success of knowledge transfer, four factors were analyzed on the selected trainees. This includes the socialization, externalization, combination and integration. In order to explicitly indicate the knowledge transfer success, comparison of performances (before and after completing the training) was performed. An important note of the study is that there is a difference in sales which is an increase after completing the knowledge transfer process. All of the trainees reported an increase in both number of followers as well as amount of sales. This includes an increment as low as RM50 to as high as RM1600 for the sales. Such a positive outcome indicates the success of knowledge transfer that was realized in creating digital opportunities for business newbies. As a continuity of the study, the SECI model will be extended to measure the practicality of the gained knowledge. This would then lead to the sustainability of the business which is very challenging in the evolving social commerce.

VII. ACKNOWLEDGMENT

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