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THE EFFECTIVENESS OF THE IMPLEMENTATION OF EXPLICIT KNOWLEDGE IN QUANTITY SURVEYING FIRMS

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Abstract:
Nowadays, knowledge sharing (KS) and knowledge management (KM) is an essential element to be implemented in an organization. Knowledge has to be managed in order to make it accessible to others within an organization. Most knowledge exists in the minds of an individual until it is encoded into a medium as to enable other people in the organization to understand the information. One of the challenges in retaining knowledge is when an employee leaves an organization for retirement, resignation or for other various reasons. This can affect the effectiveness on the implementation of Explicit Knowledge (EK) in an organization. Hence, it is necessary for knowledge management to be implemented as to being able to retain the knowledge of the coming and going of employees. There are factors that contribute to the effectiveness on the implementation of EK. Thus, the aim of this research is to investigate the factors that contribute to the effectiveness on the implementation of EK in Quantity Surveying firms. Meanwhile, the objectives of this study are to identify the factors that contribute to the effectiveness of the implementation of Explicit Knowledge, to identify the challenges faced by QS in transferring Tacit Knowledge (TK) into Explicit Knowledge and to propose strategies to enhance the implementation of Explicit Knowledge in QS Firms. Unit of analysis in this research is Quantity Surveyors and Assistant Quantity Surveyors available in QS Firms located in Klang Valley. The sampling method used is purposive sampling. This research used the questionnaire survey to collect the primary data. For data analysis, this research using the Statistical Package for the Social Science (SPSS) Version 26.0 where a descriptive analysis is done. Overall, this research found that there are still room for improvements regarding the implementation of EK in QS firms.

Keywords: *Knowledge Management, Knowledge Sharing, Explicit Knowledge*

1.0 INTRODUCTION

Knowledge can be defined as information and skills that is mainly acquired through experience or education, theoretically speaking, the practical understanding of a subject. According to Zhang et al., (2009) and Belay et al., (2016), the value of knowledge can be rather vague if it is not used often. Furthermore, Forcada et al. (2013) defines knowledge management as the recognition, optimization, and effective management of cognitive assets to create value, increase work rate and acquire and assist competitive advantage. Knowledge management has long invaded the world of management and organizing (Heisig et al., 2016). Firms should contemplate knowledge management as part of their strategies in order to implement knowledge successfully in construction projects (Belay et al., 2016). Construction organizations are known to use an abundance of knowledge workers in project teams consisting of project managers, engineers and technical staff from different backgrounds who work together in order to attain the desired project performance outcomes. In fact, the knowledge of project team members has been deemed the most critical asset leading to successful project performance outcomes (Idris & Kolawole, 2016). Sharing knowledge can undoubtedly be a challenge in the project-based construction industry (Lundberg & Lidelöw, 2015). Knowledge can be categorized as tacit and explicit. Nonaka and Konno (1998) argue that explicit knowledge can be expressed in words and numbers and can therefore be transmitted between individuals formally and systematically.

1.1 Aim

This study attempts to propose the strategies to enhance the effectiveness of explicit knowledge in the Quantity Surveyor firms.

1.2 Research Objectives

i. To identify the factors that contribute to the effectiveness of explicit knowledge in QS firms.
ii. To determine the challenges faced by QS in transferring tacit to explicit knowledge.
iii. To propose the strategies to enhance the effectiveness of explicit knowledge in QS firms.

1.3 Research Questions

i. What are the factors that contribute to the effectiveness of explicit knowledge in QS firms?
ii. What are the challenges faced by QS in transferring tacit to explicit knowledge?
iii. What are the strategies to enhance the effectiveness of explicit knowledge in QS firms?

1.4 Scope of Research
The scope of the research is to identify the effectiveness of explicit knowledge as a means of knowledge management in the construction sector mainly focusing on consultants in quantity surveyor firms located in Klang Valley.

2.0 LITERATURE REVIEW

2.1 Knowledge
Knowledge can be defined as information and skills that is mainly acquired through experience or education, theoretically speaking, the practical understanding of a subject. According to Zhang et al. (2009), and Belay et al. (2016), the value of knowledge can be rather vague if it is not used often.

2.2 Knowledge Management
Furthermore, Forcada et al. (2013), states that Knowledge Management can be defined as the recognition, optimization, and effective management of cognitive assets to create value, increase work rate and acquire and assist competitive advantage. This definition is further supported by Martensson (2000), whereby the author states that Knowledge Management (KM) is about possession and storage of workers' knowledge and enabling the information accessible to the employees in an organization. Firms should contemplate knowledge management as part of their strategies in order to implement knowledge successfully in construction projects (Belay et al., 2016). Construction organisations are known to use an abundance of knowledge workers in project teams. These project teams normally consist of project managers, engineers and technical staff from different backgrounds who work together for the purpose of attaining the desired project performance outcomes. In fact, the knowledge of project team members has been deemed the most critical asset leading to successful project performance outcomes (Idris & Kolawole, 2016). Hence, KM is a process that emphasizes on knowledge related activities to assist knowledge creation, capture, transformation and use, with the vital aim leveraging organisation intellectual capital to achieve organisation objectives (Chen & Mohamed, 2004).

2.3 Dimensions of KM
Knowledge can be categorized into two different types which are tacit (that which is in people's heads) and explicit knowledge (coded knowledge). Tacit knowledge is embrained knowledge and is made possible through networking among those who possesses it (Omotayo, 2017). Tacit knowledge can be explained as a part of human skills that an individual has acquired through many experiences that they have picked up throughout their career. So tacit knowledge basically consists of the skills and competencies, experiences, and any added values on the beliefs which are complex to verbalize and codify. According to Nonaka et al., (2000), tacit knowledge is non-transferable without the exchange of key personnel and all the systems that support them, thus difficult to transact. Unlike tacit knowledge, explicit knowledge can be described as a type of knowledge that is formal and systematic which means that it can be codified, collected and stored. An individual is not bound to it and it is commonly known to have the characteristics of data (Omotayo, 2017). Explicit knowledge represents the rational part of our knowledge which can be expressed and explained easily in words and numbers thus enabling it to be communicated and processed to other individuals with much ease. According to Nonaka and Takeuchi (1995), states that in order for tacit knowledge to be communicated throughout an organization, it has to be converted into a coded message that anyone can understand. Omotayo (2017), also further defines explicit knowledge in an explanation stating that explicit knowledge is actually a part of tacit knowledge that can be verbally expressed and does not represent the entire body of knowledge.

3.0 METHODOLOGY
The type of research used for this research is quantitative approach only. According to Muijs (2010), quantitative research is where the data collected are numerical and it can be calculated to obtain a more accurate and clearer results. The purpose of this research is to answer the research questions mentioned before in chapter 1. This can be done through analysing the data obtained from the questionnaires distributed to the respondents. The data gathered is usually gathered using structured research instruments such as google forms. The data is organised in the form of numbers and statistics and is displayed in graphs, tables, percentages or other non-

textual forms. Considering quantitative research's high reliability, the research study may normally be reproduced, or referred to.

A self-administered questionnaire comprised 12 variables for Section B, 10 variables for Section C and 9 variables for Section 9 were distributed to the targeted respondents which consists of the Quantity Surveyors in QS Firms. Rating scale is used to measure the variables. Close ended questions were formulated which includes nominal choice and Likert Scale. All the data from the study were analyzed using descriptive analysis (SPSS V26) with average index method (AIM). The data were presented in tabulated form for ease of understanding.

4.0   ANALYSIS AND FINDINGS

A total of 100 questionnaires were distributed to Quantity Surveyor and Quantity Surveyor firms that are available in that location and were given in random. The questionnaires were distributed to 100 firms due to researcher have opted to select firms that have been established for a longer period. This is to ensure that the firms selected have a more proper understanding of EK and have a more systematic flow of knowledge in their firms. As a result, only 76 sets of questionnaires were returned while the other respondents did not reply the email and not giving any feedback. Each set of questionnaire has 4 sections which comprises of Section A, Section B, Section C and Section D. For sections B, C and D, the average mean method or average index analysis is used to analyse the obtained data from the Likert scale questions.

4.1 Factors that contribute to the effectiveness of explicit knowledge in QS firms.

Table 1: Factors that contribute to the effectiveness of explicit knowledge in QS firms.

Ranking	Factors that contribute to the effectiveness on the implementation of explicit knowledge in QS firms	Average Index
1	Improvement in client's satisfaction	3.70
2	Improvement in decision making	3.61
3	Improvement in knowledge flow	3.61
4	Improve management learning	3.57
5	Increase in competitive advantage	3.55
6	Improve sharing of best practices	3.51
7	Higher quality and productivity of works	3.51
8	Tendency to increase flexibility and adaptability to changes	3.50
9	Improvement in innovations	3.47
10	Make reduction regarding costs	3.45
11	Improvement in the efficiency of people and operations	3.43
12	Increase chances of avoiding repetition of tasks	3.29

From the calculation of the average index, the highest average is for the variable of improvement in client's satisfaction at 3.70. This is followed by improvement in decision making and improvement in knowledge flow in which both sits at 3.61. The lowest ranked variable is regarding the increase in chances of avoiding repetition of tasks sitting at 3.29.

4.2 Challenges faced by QS in transferring tacit to explicit knowledge.

Table 2: Challenges faced by QS in transferring tacit to explicit knowledge.

Ranking	Challenges faced by QS in transferring tacit to explicit knowledge	Average Index
1	Lack of understanding explicit knowledge/knowledge management	3.66
2	Lack adequate education or training regarding explicit knowledge	3.55
3	Lack of structure for knowledge capture initiatives	3.49
4	High turnover rate	3.43
5	Poor record management of knowledge	3.41
6	Lack of motivation	3.34
7	Lack of mission and strategy	3.33
8	Lack of vision	3.33
9	Lack systematic method of learning and sharing processes	3.26
10	Lack of financial	3.13

For the calculation of average index for the challenges faced by QS in transferring Tacit Knowledge into Explicit Knowledge, the highest average index is regarding lack understanding of explicit knowledge or KM which sits at 3.66. This is followed by lack of adequate education or training regarding explicit knowledge at 3.55 while lack of structure for knowledge capture initiatives sits at 3.49. This is then followed by turnover rate sitting at 3.43 while poor record management of knowledge sitting at fifth with an average index of 3.41. Lack of motivation is at 3.34 while both lack of mission & strategy and lack of vision have the same average index of 3.33. The lack of systematic method of learning and sharing processes has the second lowest average index of 3.26 while the least amount of average index is regarding the lack of financial which sits at 3.13.

4.3 Strategies to enhance the Implementation of Explicit Knowledge in QS Firms

Table 3: Strategies to enhance the Implementation of Explicit Knowledge in QS Firms

Ranking	Strategies to enhance the Implementation of Explicit Knowledge in QS Firms	Average Index
1	Using IT to produce software and databases	3.62
2	Face-to-face interaction	3.62
3	Retain employees that possess valuable knowledge	3.57
4	Brainstorming	3.54
5	Writing documents and reports	3.53
6	Recruitment	3.53
7	Job Rotation	3.45
8	Mentoring	3.45
9	Forming communities of practice	3.42

For the calculation of average index regarding proposed strategies to enhance the implementation of explicit knowledge in QS firms, the highest average index is on using IT to produce software & databases and face-to-face interaction where both variables have an index of 36.2. This is followed by retaining employees that possess valuable knowledge sitting at 3.57 while brainstorming having an index of 3.54. This is then followed by writing documents and reports and recruitment where both variables have an index of 3.53. Job rotation

and mentoring also share the same spot at 3.45 while the least amount of average index is regarding forming communities of practice which sits at 3.42.

5.0   CONCLUSION
From the analysis of the first objective, it was identified that improvement in client's satisfaction, improvement in decision-making and improvement in knowledge flow are the top three ranked factors that contributes to the identification of the effectiveness of implementing explicit knowledge according to the data collected from questionnaires distributed to QS firms located in Klang Valley.

From the ranking for the second objective in this research, it can be concluded that the respondents feel that there may be a bit lacking in fully understanding the true concept of explicit knowledge. There are also concerns regarding the training and education provided for the explicit knowledge or knowledge management made available in a QS firm. It may be due to this that there are problems concerning the lack of structure for knowledge capture initiatives as no training or education is prepared for such a thing.

Based on the ranking for the third objective, it can be concluded that the respondents feel that with proper training and education on using IT to create software or databases, the firms are able to store the knowledge in a safe and easy to remember source that can later on be used for future reference. Face-to-face interaction is also favoured due to its form of easy implementation strategy. Firms are also choosing to retain employees that still possess valuable knowledge because as we all know experience matters most in an organisation in order to gain a competitive edge.

6.0 RECOMMENDATIONS
Upon the completion of this research along with reviewing the literature review, there are a few recommendations to be made for this research. Some recommendations were brought up to assist future study on this specific field of research.
Research on Other Sectors
The research can try to focus on other types of organization firms or sectors not just QS. For instance, they can dive into architect or engineer project-based organization or even a contractor's company and provide some insights regarding KM to the company.

Method of Data Collection
Since this research uses quantitative questionnaire survey, another method that can be recommended for future individuals is through the use of qualitative means. For example, the individuals can opt to use an interview method for an in-depth view of the people in the QS Firms regarding Knowledge Management.

Focus on Tacit Knowledge
Since this research has already done focusing on Explicit Knowledge, future researchers can opt to put more emphasis on explaining Tacit Knowledge. These two types of knowledge need to coexist with each other in order to build a solid Knowledge Management system.

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