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CONCEPT OF KNOWLEDGE TRANSFER TOWARDS SUSTAINABLE DEVELOPMENT IN CONSTRUCTION INDUSTRY'S PERSPECTIVE

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ABSTRACT

Sustainable development was introduced to generate a balanced national development from the economic growth, environmental protection, and social equality. However, the development demands implemented in Malaysia have been causing various damages and destructions to the environment, inviting social problems and economic imbalances. Rapid development in construction industries observed only for profiting and ignores the well-being of the environment. Hence, initiatives should be taken to overcome the growing crisis and arouse awareness in sustainable development. Therefore, knowledge of sustainable development is important to all relevant parties in the industries. Knowledge transfer is a medium and the best platform to convey the information and knowledge about the sustainable development of individual, department, organization and agencies. However, the knowledge transfer practices are still needed room for improvement and need more efforts to turn it out as a culture among the players. In relation to that, the objective of this study to observe the existing method of knowledge transfer practices, understanding the existing method, the application of the methods used in carrying out the tasks of every department and improvements can be made to strengthen the current practices for achieving the goal of sustainable development at the local authority level.

Keywords: Sustainable Development, Construction Industry, Knowledge Transfer, Local Authorities

INTRODUCTION

Sustainable construction is a new concept that requires considering the objective of sustainability for construction. A good implementation can emulate even though the concept of sustainable development has different priorities in a country.

Basic theory construction has already introduced the basic concepts, the potential for new methods and tools for sustainable construction. Various parties have to work together and cooperate to stimulate development to improve the quality of life through sustainable (Huovila and Koskela 1998). Its shows that the collaboration with all relevant parties in construction industries are important to ensure the effectiveness of basic concept on sustainable construction.

To drive performance and competitiveness of the organization, the staff in the organization should have the awareness to contribute to achieving the goals of sustainable development. Specialization relies on information in an organization is managed and shared. The staff in the organization needs to know how to absorb, transfer and build knowledge to foster a competitive environment. To realize this goal is a need to create an enabling environment to generate communication in the transmission of knowledge (Mohamed, Seow and Goh, 2014). Knowledge transfers are the medium to connect and share the important information for the development of knowledge.

Many organizations in the public sector across the globe have started to realize the importance of knowledge sharing in streamlining their operations. For large organizations, like Malaysian local authorities, knowledge sharing is a fundamental knowledge management process. The reasons are because the ability to share knowledge effectively across organizations can lead to improved service delivery, and the achievement of best practices (Mohamed and Egbu 2010). The interaction between these aspects, managing and improving the administration of knowledge is essential to getting better results. Local authorities' roles in the development involve decision-making process such as setting goals, developing alternative strategies and also responsible for the administration and management of local initiatives (Hawkins and Wang 2011). Therefore, the participation of local authorities is very important to lead the efforts in developing knowledge transfer practices among players.

Moving forward to achieve the sustainable development goals in Malaysia construction industry, the factors affect the equilibrium of the sustainability in the construction industry must be identified. Thus, knowledge transfer is very important as the

medium to spread the aims and importance of sustainable development for the future generation.

BACKGROUND

Sustainable development is clearly mentioned in the 7th Malaysia Plan-Based as Malaysia's policy. Among the measures that have taken during the 7th Malaysia Plan (1996-2000) is to enhance the ability to develop in a sustainable manner (EPU 1996).

Sustainable Development requires a broad interpretation to involve more engagement of all parties, not only of those who identify as the founder of the construction industry alone. It focuses on aspects of environmental protection, and social growth of the quality of life of individuals and society includes non-technical aspects related to social and economic sustainability (Du Plessis 2007).

The construction industry is essential to generate the economic growth of a country (Khan, Liew, and Ghazali 2014, Goh, Yap, Seow, Masrom, Goh and Tey 2015). However, this development has to be a balance between human capital developments with integrity, ethical and committed as well as the care and conservation of the environment which in turn became the foundation for sustainable development.

There are many issues reflect constraints, policies, influence, recommendations and best practices that help describe sustainable construction. Therefore, contributions from all sectors, i.e. industry, designers, manufacturers, users, regulatory authorities to gain an overview of global on the concept and to assess actions can contribute to this challenge. Current practice varies depending on how the sustainable building concept developed in a country. There is a difference between a developed market economy, economic transition and developing countries. More mature economy pays attention more to the sustainable building design existing either new developments or by upgrading existing buildings. In transition markets, the emphasis is given to the development of new and making improvements to the transportation network and social justice is higher than environmental agenda. The industry must adapt to reforms introduced in the market for construction which unites environmental and social. The construction industry will be expected to integrate and to consider in more detail the key issues

at the national level, the regional level and of the community that pioneered by the mix of political forces, social and market, which requires products that respond to the needs and concerns (Bakens, 2010).

All the arising issues should be handled properly to ensure that improvement can be made to the construction industry to achieve the sustainability. The relevant construction key players must team up to brainstorm the root cause and find the solution. The best method to gather all information about the practice of knowledge transfer is through the sharing session, meeting, discussion and other effective platforms.

The role of local government in the transfer of knowledge is to apply sustainable development and resolve matters relating. Thus, factors that can generate and affect sustainable development knowledge in the local Government of Malaysia must be known. Also, the local Government must have staff with the skills required in respect of sustainable development to manage the process of development planning. As a result, the Organization must understand the context of the new knowledge generated. For example, the role of sustainability taking into account the increase of knowledge employees and policy makers when viewing in the context of development and as the solution for future generations. Even if they have the skills required, it can't reflect sustainable development because the documentation or policy does not specifically mention the elements of sustainability (Mohamed, Abd Rahim, Seow and Goh 2014).

Therefore, the relationship between the public and private sectors is also important in the practice of knowledge transfer as it can provide advisory expertise and network to overcome weaknesses in the realization of sustainable development in local government (Mohamed, Seow, Goh, and Masrom 2014).

This study demands to observe the existing method of knowledge transfer practices, understanding the existing method, the application of the methods used in carrying out the tasks of every department and improvements can be made to strengthen the current practices for achieving the goal of sustainable development at the local authority level.

Hence, knowledge mastering aspects highlighted in sustainable development should be given special attention and practiced primarily by the local authorities in Malaysia. By the

case, therefore, the process of transfer of knowledge should be noted as the best enhancer and guidance for future development.

PROBLEM STATEMENT

Sustainable construction is seen as the application of sustainable practices to the activities of the construction industry (Shelbourn, Bouchlaghem, Anumba, Carillo, Khalfan, and Glass 2006).

Although construction demand has increased substantially, worker productivity remained slow-moving, safety performance did not improve, export of construction services declined as many companies reduced their presence overseas (Chan and Theong 2013). Therefore, the deep analysis has to conduct to investigate the key factors that affect the performance. Knowledge transfer will be the main factors in this study to observe the impacts towards the construction performance which not increase parallel to construction demand

In the study of Du Plessis (2002), has identified the obstacles to sustainable development in the construction industry such as lack of capacity in the construction sector, the economic environment of uncertainty, the lack of accurate data, poverty, and urban investment low. Stakeholders are less interested in sustainability issues, inertial technology and dependency, lack of the code and international standards and the lack of integration of research. The consultation process is expected to identify more issues and recommendations for action which will lead to a final blueprint for action.

In addition, The Malaysian Insider (The Malaysian Insider) reported the preparation of documentation with relevant agencies is crucial as not to result in any problems when development activities performed. Development efforts or conservation infrastructure are difficult when no complete plan related infrastructure. Infrastructure documentation such as drainage, utilities, electrical wiring and telephone cable should have and MBJB should look to make it complete was developed. Its shows that the archive processes are very important to ensure the important information from past project are well kept for future development. The information also must be transfer from pier to the pier during transaction period due to any circumstances.

There are some of the frequently raised issues in meetings, conferences, workshops and seminars by clients and stakeholders in Malaysia such as lack of knowledge on building systems and green construction. The quality of finishes on buildings and infrastructures are the low and poor performance by contractors. There is a need to improve on procurement strategy, and lack of partnering initiatives (Hamid and Mohamad Kamar 2010). The challenges in the construction industry to adapt with knowledge transfer still need the room for improvement towards sustainability.

To resolve the problem, the factors to build knowledge transfer must be known from the several aspects such as the construction industry capacity, the data and information available, the participant and relationship of the construction industry players and local authorities, and the effective medium of knowledge transfers.

To make the transfer of knowledge from the authorities, information concerning a construction or development can collect in a centralise and serve as a reference for the development to implement in the future. Information from all related departments should be combined to get a clear picture of development in an area particularly network infrastructure mutually correlated.

This study is expected to find the best way to promote the creation of knowledge, how to record, and also to ensure that existing knowledge is ready to be transferred to individuals, project teams and the company (Shelbourn, Bouchlaghem, Anumba, Carillo, Khalfan, and Glass 2006). How to facilitate knowledge transfer and minimize productivity loss can significantly improve organizational performance (Argote, Ingram, Levine, and Moreland 2000). The adoption of knowledge transfer improvement will foster the construction sector to achieve sustainable development in the future.

METHODOLOGY

This study will use the knowledge transfer framework. The methodology is the way to obtain the results of a study. Meanwhile, research is a scientific and a systematic search for important information about a particular topic. It is also one of the search methods of knowledge through objective and systematic method to find a solution to the problem. The research refers to

the systematic method that consists of problem statements, formulating hypotheses, collect data, analyze the fact or facts and research specific conclusions either in the form of solutions to problems or particular generalization for some theoretical formulations (Mustafa 2012).

In this study, questionnaires and interviews with the staff of local government in different expertise are used to provide information on the concept of sustainable development that exists in local government in Malaysia to obtain the understanding of the current tourism plans and strategy, employed staff in local government (Gorica, Kripa, and Zenelaj 2012).

This study will use the knowledge transfer framework introduced in the study of Patricia et al. (Carrillo, Robinson, Anumba and Bouchlaghem 2004) which this framework allows an organization act more productive in managing knowledge transfer. 3 stages can produce action plans for an organization as below:

Stage 1- Focus Evaluation

At this stage, the structured approach available to review current knowledge transfer practices used by the Government identifies the scope has been practiced to improve the current practices and identify best practices to use.

Stage 2-Mapping knowledge

At this stage, knowledge map requires to identifying knowledge gaps, characteristics, and barriers to investigating issues of knowledge transfer regarding features, the transfer mechanism, and obstacles. The effectiveness of the policies, processes and procedures existing under review. The study also will look at the level of understanding of the development work carried out by the Government sector, the private sector, investors and developers regarding overall impact, technical development area, the potential risks ahead, and so on.

Stage 3 - Action plan

At this stage, the action plan needs to develop to address the issue of the transfer of existing knowledge and identify the improvement.

This framework suit to this study which leads to answer the objective by exploring the current knowledge transfer practices, identifying the knowledge gaps and the finally to find the best practices for knowledge transfer

SCOPE OF RESEARCH

Survey questions will be distributed to the target respondents. Target respondent will select from the list of technical agencies (Malaysia Local Authorities) and a private company from construction industry namely officers, employees who have background tasks that relate directly to sustainable development.

This study would like to identify the level of understanding of the respondent, the application in practice of knowledge transfer use the relationship between the Departments of information related to a project in an area. The contribution of department and its towards project development. The information from each department can be used as a reference to the main plan for development to view the entire development in future.

DISCUSSION AND CONCLUSION

Questionnaires will distribute to the construction industry's player to give us the information about the knowledge transfer practices towards sustainable development that exists in the organization. To gain an understanding of current plans and strategies, those are working in the construction industry. The questionnaire had different sections which consist of knowledge transfer, construction industry and sustainable development. The question will be based on the challenges faces on the related issues which have been identified in the literature review.

The data collected from the questionnaire survey carried out from construction industry key players. Selection of the indicators is highly significant in the context of a knowledge transfer practices by the contractors.

The result of the analysis in this study is sorted and classified by the knowledge management methods, technologies and practices by linking them to different phases of the flow of knowledge, targeted and check the flow of knowledge to understand the interactions and dependencies between information presented and other factors related (Newman and Conrad 2000).

Strategic measures to improve the construction industry sustainability record based on a framework of measurable sustainability indicators. Indicators ' census ' will allow researchers, this study is an attempt to lay down the basis for

identifying the framework and indicators. A survey of local authorities and the private sector used to test acceptance and completeness indicators for improvements. (Augenbroe and Pearce 2010).

To improve existing practices for implementing construction towards sustainable development, three dimensions, including issues of economic, social and environmental, should focus on fully in carrying out a feasibility study of the project (Shen, Tam, Tam, and Ji 2010).

The outcome of this study expected to identify the key issue in a beginning stage that need addressing regarding knowledge transfer. It also identifies current knowledge transfer practices, how these may be improved and the scope for learning and knowledge transfer. The type of knowledge that should be transferred, the characteristics of this knowledge, current practices and barriers to transferring knowledge to other stages and projects will be identified. Finally, techniques and technologies would improve knowledge transfer and resolve current issues will identify for improvement of knowledge transfer practices.

This study anticipated to find the best framework for knowledge transfer practices in the construction industry in Malaysia.

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DECLARATION

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