

## Preliminary Concept of Knowledge Transfer Practices

Sulzakimin Hj Mohamed, Mohd Hilmi Izwan Abd Rahim, Seow Ta Wee and Goh Kai Chen  
Faculty of Technology Management and Business,  
Universiti Tun Hussein Onn Malaysia, Parit Raja Batu, Pahat, 86400 Johor, Malaysia

---

**Abstract:** Since the 1992, Earth Summit in Rio when Agenda 21 was formulated as the international blueprint for sustainable development, all sectors of society have been in the process of interpreting and pursuing sustainability and sustainable development within their specific contexts. The development handle by local governments start from inception until completion involved various stages and design inputs from various design consultants like architects, town planner and engineers. It is the onerous role of local governments to ensure that only qualified consultants are allowed to submit the relevant building plans for all sorts of approvals with regards to sustainable development. Importantly sustainability matter must be known by the local government's staff as well as the built environment professionals. In relation to that this study involves a look at the knowledge transfer practices towards sustainable development. Therefore, this study is to contribute to the enrichment of the role of local governments towards sustainable development.

**Key words:** Sustainable development, knowledge transfer practices, local government, design consultants, relevant building plans

---

### INTRODUCTION

Local governments are now experiencing continuous challenges in term of implementation of sustainable development as in the environmental, economic and social aspect (Edmiston, 2003; Meadowcroft, 2007). The general perception is that the introduction of sustainable principles practices will increase costs and reduce profit. The need to make additional investments in machinery, equipment and training is very often an excuse not to comply with standards and practices based on principles of sustainability. In contrast, the characterization on the economic, social and environmental development for sustainable development are specific to look into all issues. Accordingly, those issues are a major concern in local governments globally when dealing with development of a country. Essentially, the sustainability in local government's practices needs to be shown in providing the services to the public. In this study, the objective will be aimed on the local governments and its understanding of sustainable development. In relation to that the intended study is to provide an in-depth and better understanding of the influencing factors for sustainable development.

**Literature review:** When the activities are not properly managed by the local governments, the negatives impact

as in flooding are imminent and it will cause hazards to society, economy and environment. Public and local governments should be able to understand this and the awareness is important to minimize the hazardous environment to earth. According to UN, 80% of waste could be recycled and this in turn reduces demand on landfill waste management. Conventional way of development entails a lot of wastages and creates hazardous environment to living things. Therefore, local government authorities must protect and properly utilize the environment for sustainable development (Mohamed *et al.*, 2013). Sustainable development thus requires the participation of diverse stakeholders and perspectives with ideal and subsequent coordination of mutual action to achieve multiple values. The importance of local governments to acknowledge sustainable development especially in issues related to it and can be resolved accordingly. While the sustainability concept is being emphasised, managing knowledge at all levels in local government continues to fall short of knowledge when unmanageable waste of construction site, poor river management and unsustainable public sanitation are issues that community experienced for decades now. This means without proper and adequate knowledge of sustainable development when dealing with the approval of planning development those scenarios are the scenes that will continue for years to come. In this study, the

focus will be aimed at local governments and its factors in the implementing sustainable development. In relation to that another intended study is to provide an in-depth and better understanding the relevant factors in the framework related to the factors of implementation the sustainable development. This study is to contribute to the enrichment of knowledge on the role of the local government in sustainable development.

## **MATERIALS AND METHODS**

Research is fundamentally about understanding and explaining about “knowing” and a research methodology is a formal, systematic application of a scientific method to a study of problem and an orderly approach taken towards the collection of data. There is no definite rule as to which one to select when doing research as this study involved conducting a literature review and desk research. Information is gathered from academics journal, publication, related articles and documentary and government reports where available. Highlight research styles as in experiment, survey, action research, ethnographic research and case study. Moreover, it depends on the study’s need as well as the researcher ability to rationalise it with the research objectives. A detailed literature review including a web-based search and a review of academic and industrial literature was undertaken. As has been mentioned before this research seeks to know what is happening in the local government with regards to sustainable development. Moreover, it looks into the factors in implementation of sustainable development.

In other words this research is interested in knowing the factors in causation of that implementation. Literature reviews inform researchers of the background to their research projects and provide context and ideas for their studies. The preliminary information gathering was conducted by reviewing relevant literature which helped the researcher to understand and gain a wide view of possible research problems (Mayer *et al.*, 2013). There are good reasons for spending time and effort on a review of the literature before embarking on a research project. These reasons include to uncover the gaps in the literature to carry on from the point others have already reached (reviewing the field allows the research to build on the platform of existing knowledge and ideas) to identify information and ideas that may be relevant to the research and to identify methods that are relevant to the research.

## **RESULTS AND DISCUSSION**

Since, sustainable development is based on three elements namely social, economy and environment, this

study is to achieve the following objectives. To study the generating factors towards sustainable development in local governments.

The respondents selected at city council/municipal/modified local government are based on the unit/division/department related to the issues or agenda in sustainable development. Factors in generating knowledge of sustainable development at the local governments are important as awareness of the scope of social, economic and environmental problems grows. Local governments need to act accordingly in ensuring adequate knowledge transfer of sustainable development. This study, therefore, only uses a number of factors generating the implementation of sustainable development. The selection is based on the factors that influence the understanding of sustainable development forms of sustainable development and its implementation issues locally and globally as shown in Fig. 1 and 2.

The Brundtland report on definition of sustainability has open to interpretation which probably has helped popularise sustainability but has also made it difficult for groups with different priorities to agree on a common course of action (Mohamed *et al.*, 2014). Although, Brundtland’s definition of sustainability is both simple and clear cut, however, it should also be important to emphasise that this definition should be broken down so that it caters to other components of local community that local governments serve. In reality, the crisis on environment, social and economy exist in every city in the world. Therefore, different groups are thinking over dilemma from their own perspective according to their profession and attempted to find the best solutions to overcome those crises. The local government through the policy, programs, plans and strategies oriented people to choose sustainable development. However, sustainable development cannot develop without an appropriate knowledge in government. Hence, knowledge transfer can be thought of as a cycle where knowledge is communicated around in the organization and to the community via a variety of methods.

From the literature reviews, human resources absorb, transfer and create knowledge fostering the achievement of a competitive advantage of the organisation. In order to fulfil that objective it is necessary to create a feasible environment to knowledge communication. Sveiby (2001) iterates that people use their capacity-to-act in order to create value in mainly two directions by transferring and converting knowledge externally and internally to the organisation. Most models for knowledge transfer, although contextually different have strong similarities (Alavi and Leidner, 1999; Daniilidis *et al.*, 2010; Osterloh

Authors	(Zainul,2009)	(Shafii,2006)	(OECD,2011)	(OECD,2007)	(Olsson, 2009)	(Barrutia, Aguado&Echebarria, 2007)	(Sjostrom&Bakens, 1999)	Preliminary interviews	(Yuan & Yang, 2009)	(Saha& Paterson, 2008)	(Guo&Suo, 2011)	(Idris & Ismail, 2011)	(Adeloye, 2011)	(Stoner, 2009)	(Zakaria, Vikneswaran, Mohd Said, Saleh &Mustaffar 2012)	(Bueren&Heuvelhof, 2005)	(Milutinovic, 2010)	(Handzic, Lagumdzija&Celjo, 2009)
Knowledge	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Attitude	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Working experience	√	√			√						√	√						
Education	√	√	√	√	√			√		√							√	√
Through network/crdintio	√										√	√			√		√	√
Political influence	√							√										
Sending staff to seminar/training/workshop	√	√	√	√	√	√		√		√					√		√	√
Initiative/progra m								√			√	√						√

Fig. 1: Factors that influenced the implementation of sustainable development

Authors	(Zainul,2009)	(Shafii,2006)	(OECD,2011)	(OECD,2007)	(Olsson, 2009)	(Barrutia, Aguado&Echebarria, 2007)	(Sjostrom&Bakens, 1999)	Preliminary interviews	(Yuan & Yang, 2009)	(Saha& Paterson, 2008)	(Guo&Suo, 2011)	(Idris & Ismail, 2011)	(Adeloye, 2011)	(Stoner, 2009)	(Zakaria, Vikneswaran, Mohd Said, Saleh &Mustaffar 2012)	(Bueren&Heuvelhof, 2005)	(Milutinovic, 2010)	(Handzic, Lagumdzija&Celjo, 2009)
Budget	√	√	√	√	√	√		√								√		
Expert advice/counsel	√		√	√				√			√	√		√			√	√

Fig. 2: Factors that influenced the implementation of sustainable development (cont.)

and Frey, 2000). Apart from these models, some researchers attempt to relate the process of knowledge transfer using different theories and one of them is the translation theory (Bajo *et al.*, 2001). In addition, Boyce (2001) states that intermediate modes and voice-exit and game theory are also can be referred and essentially issues concerning knowledge, collaboration and learning are major concern in these theoretical approaches. This means that by introducing knowledge transfer practices, many organisations could improve the flows of knowledge around their organisation and make it accessible when and where needed. Hence, the knowledge transfer practices are used to add sustainability value such as through planning development, improved development processes or new products and services.

Knowledge transfer is not just about the transfer of information but also about passing on experience and learning. This arrangement, known as tacit knowledge is well recognised as something very difficult to articulate and record but it is invaluable in adding depth and context to information to give a richer understanding. Apart from that knowledge can be expensive in terms of time and resources to acquire and so exchange of that knowledge may come at a costly price for those who wish to use it (Tovey, 2009). The importance of local governments in knowledge transfer practices to acknowledge sustainable development is to resolve sustainability matter accordingly. Therefore, factors that can generate and influence the knowledge of sustainable development in Malaysian local governments must be known.

Moreover, companies create knowledge by reviewing their successes and failures as in evaluation and recording what is learned in a way that will be of beneficial for the organisation. All employees should be aware of the kind of knowledge that might benefit the organisation. Therefore, knowledge is transformed in applicable way in order to improve organisational performance. In addition, in terms of knowledge transfer practices, training is important and must appropriately done for learning enhancement, better management of knowledge, improvement of both individual and organisational performance so that the whole organisation stands a chance to function appropriately. Moreover, local governments must have the staff that equipped with necessary skill with respect to sustainable development to manage the process of planning development. It means that the organization must understand the context of the new knowledge generated. For example, the importance of sustainability takes on increased relevance to knowledge of the staff as well as the policy makers when viewed in the context of development and as a solution for next

generation. Moreover, it is crucial working at various levels of management to promote the sustainable development of local government.

Essentially, local government's practices needs to be shown in providing the services to the public. More importantly how can local governments become an effective machinery to facilitate local community and enhance the knowledge transfer practices towards building sustainability? It should be shown in the practices of local governments and skill involved in terms of education background, working experience and technological know-how are important. However, even though they have the necessary skills, it cannot reflect the sustainable development because the documentation or policy does not specifically mention sustainability elements (Mohamed *et al.*, 2014). The literature reviews that local governments have played some role in imparting awareness in sustainable development to the private sectors. Since, sustainable development issues have been around for >10 year now and local governments should already impart awareness with sustainable development principles.

Building and structures change the nature, function and appearances of towns and countryside. All the resources need to create, operate and replenish it, so to remain competitive and continue to expand and produce profits in the future the built industry must address the environment and economic consequences of its actions (Zainul, 2009; Saha and Paterson, 2008; Yuan and Yang, 2009). Moreover, that recognition is leading to changes in the way the building and respective owner's approach the design, construction and operation of the structures.

Malaysian builder nowadays are working towards creating a local built environment that is world class, benefits society is responsible to its surroundings and is aesthetically appealing (Shafii *et al.*, 2006; Zakaria *et al.*, 2012). Therefore, it is essential for the local government to keep abreast with the knowledge and new technology regarding sustainable development in order to equipped themselves, promote it as well as monitoring it. The commitment from all stakeholders can transform the Malaysian local governments into one that is not a threat to sustainable development but meets the human need for development in harmony with nature. Development will continue to expand to meet social, economic and environment obligations but the focus should also be on the quality of the organisational itself. Hence, the factors for this study are based on the selection of literature on social, environmental and economy. The result demonstrates that staffs need to increase their level of awareness in the role related to sustainable development. In view to that, it contributes to the lack of knowledge in

the practice of local governments in sustainable development. In particular, organizational knowledge depends on how human resources are managed and it is interconnected.

On the other hand, far greater collaboration or consolidation to introduce scale to various areas of delivery could be a game-changer on the part of local government towards sustainable development delivery. Thus, knowledge transfer practices as in training, on line learning on job training, mentoring and expert advice are essential part for the dissemination and acquiring knowledge at local governments. Development aspirations of countries respond to the expectations of local community and stakeholders in the economic, social, environmental and political dimensions, a vision on the goals of local governments that go beyond the limited objective of securing economic growth for a country. Hence, a reliable source of knowledge in sustainable development needed to properly establish knowledge transfer practices towards sustainable delivery.

Overall, from the derivation of literature reviews, these are the factors, namely, education, training, support from appropriate source, resources (budget and expertise), appropriate knowledge, needs (social and economy), incentives, environment issues, policy existence, human resource, technology and networking. The principle of sustainable development is widely recognised in the international community (Amundsen and Asheim, 1991; Barrutia *et al.*, 2007). It means that, even though it lacks a legally acceptable definition, it echoes a message of change and reform amongst all nations, a message that has been recognised by many nations and the respondents agree on what constitute sustainable development. The general community and construction industries which is probably the most important stakeholder in the activities, must also actively involve or participate in the solutions. The sustainable development concept relates the development objectives with planning that emphasis on the preservation and conservation of environmental resources without jeopardising the people to meet their social, cultural and spiritual needs as well as their economic needs. Moreover, the widespread concern that the knowledge base organisation to address the pressing problems facing environment or social or economy was not being generated quickly enough. Many felt that the problems will get progressively more challenging as population growth places more pressure on performance or productivity of local governments and on the natural resource base. Hence, knowledge transfer practices should exist to assist and inculcate knowledge towards sustainable development to improve the sustainability delivery. By applying knowledge of

sustainable development, it will sustain the communities and derive benefit from an increasingly complex future (Mohamed *et al.*, 2014).

The resources in terms of budget, people, technology and act/policy/rules should be able to face economic viability, deteriorating infrastructure, natural disasters, environmental pollution, social disintegration, loss of community, crime and violence, urban blight and unmanaged growth are can not be taken lightly (Mohamed *et al.*, 2013; OECD, 2011; Shafii *et al.*, 2006; Zainul, 2009). Furthermore, employees of local governments can benefited from these activities in knowledge transfer practices. In addition, various ministries, public administration institutions and local governments should have the networking and the experience gained at local level is fed into national reform processes, e.g., advice on national strategies or amendments to laws for implementation and enforcement or monitoring. Therefore, it is crucial to take into account every socioeconomic aspect in all its developmental planning and implementation of sustainable development.

## CONCLUSION

It is apparent from the various studies reviewed that knowledge transfer practices which comprises training, on-line learning, seminar and hands-on job have great influence on the awareness of sustainable development. If sustainable development is to achieve its potential, it must be integrated into the planning and measurement systems of business enterprises. Sustainable development is an idea in ensuring a better quality of life for everyone in present time as well as in the future. Moreover for that to happen, the concept must be articulated in the implementation that is familiar to the organizations. The local community infrastructure underpins the nation's economy and provides significant support for state and national development project. Local Agenda 21 at Malaysian local governments has highlighted that the issues on society and environment as well as economy are the factors to be considered in the context for the realisation of human settlements and the creation of infrastructure to be considered by the local government. Therefore, the activities for public should be sustainable and adhere to the principles of Agenda 21. This eventually can lead to the sustainable development which is the bigger picture on the sustainability for the development for society.

Based on other researches, the findings are that local governments must establish good governance in the development of social, economy and environment. Hence,

it revolves on transport, housing, environment, society and construction aspects which are among the function of local governments in providing good services to the public. Therefore, departments such as the building, engineering, planning and health departments within the local governments as well as external departments responsible for schools, drainage and irrigation, commercial buildings, sewerage, roads, environment and telecommunications are important to acknowledge the importance of sustainable development. Thus, early consideration in the implementation of sustainable development has become an essential factor.

Sustainable development has added new dimensions to the management in local government. With ever increasing dependency on fossil-fuels and a diminishing supply of resources, human need innovative, cutting-edge approaches and technologies to make a real difference. Malaysia is aiming to achieve sustainable urban development in its cities. Since early 2002, many efforts were carried out by various authorities at the federal, state and local levels such as introducing the concept of a healthy city, liveable city harmonious city and many other concepts in the planning and development of towns and cities in the country. Sustainable development has added new dimensions to the management in local government. With ever increasing dependency on fossil-fuels and a diminishing supply of resources, human need innovative, cutting edge approaches and technologies to make a real difference. The sustainable development concept relates the development objectives with planning that emphasis on the preservation and conservation of environmental resources without jeopardising the people to meet their social, cultural and spiritual needs as well as their economic needs. All countries should not repeat the mistakes by generating wealth only and ignore the negative impact on social, environment and economy. Innovators, leaders and decision makers should create a vision to have the knowledge transfer practices as in to educate and train everybody in order to create the next generation that have positive impact socially, economically and environmentally. Hence, the factors in generating knowledge transfer practices towards sustainable development at local governments are crucial to be acknowledged.

#### **ACKNOWLEDGEMENT**

The researchers would like to thank Ministry of Education (MOE), Office of Research, Innovation, Commercialisation and Consultancy (ORICC), UTHM for supporting this research under the Research

Acculturation Collaborative Effort (RACE: No. 1517) Grant Scheme Universiti Tun Hussein Onn Malaysia.

#### **REFERENCES**

- Alavi, M. and D.E. Leidner, 1999. Knowledge management systems: Issues, challenges and benefits. *Commun. AIS.*, Vol.1,
- Amundsen, E.S. and G. Asheim, 1991. The notion of sustainable development. *Environ. Econ.*, 2: 10-14.
- Bajo, M.T., P. Padilla, R. Munoz, F. Padilla and C. Gomez *et al.*, 2001. Comprehension and memory processes in translation and interpreting. *Quaderns Rev. Traducci*, 6: 27-31.
- Barrutia, J.M., I. Aguado and C. Echebarria, 2007. Networking for local agenda 21 implementation: Learning from experiences with udaltalde and udalsarea in the basque autonomous community. *Geoforum*, 38: 33-48.
- Boyce, G., 2001. *Co-operative Structures in Global Business*. Routledge, London, England,
- Daniilidis, C.I., T. Lamperstorfer, R. Kirschner, A. Kain and U. Lindemann, 2010. A systematic approach to design a knowledge transfer framework for process improvement projects. *Proceeding of the IEEE International Conference on Industrial Engineering and Engineering Management*, December 7-10, 2010, IEEE, Munich, Germany, ISBN:978-1-4244-8503-1, pp: 183-187.
- Edmiston, K.D., 2003. State and local e-government: Prospects and challenges. *Am. Rev. Public Administration*, 33: 20-45.
- Mayer, I.S., V.C.E. Daalen and P.W. Bots, 2013. Perspectives on Policy Analysis: A Framework for Understanding and Design. In: *Public Policy Analysis*, Thissen, W.A.H. and W.E. Walker (Eds.). Springer, Berlin, Germany, ISBN:978-1-4614-4601-9, pp: 41-64.
- Meadowcroft, J., 2007. National sustainable development strategies: Features, challenges and reflexivity. *Environ. Policy Governance*, 17: 152-163.
- Mohamed, S., S.T. Wee and G.K. Chen, 2014. Participation in acquiring knowledge towards sustainable development at Malaysian local government. *Int. Rev. Manage. Bus. Res.*, 3: 1325-1337.
- Mohamed, S., T.W. Seow and K.C. Goh, 2013. The management of sustainable development: The practices at Malaysian local government's role. *Proceeding of the 2nd International Conference on Technology Management, Business and Entrepreneurship*, December 4-5, 2013, Universiti Tun Hussein Onn Malaysia, Melaka, Malaysia, pp: 1-10.

- OECD, 2011. State of penang. Organisation for Economic Co-operation and Development, Malaysia.
- Osterloh, M. and B.S. Frey, 2000. Motivation, knowledge transfer and organizational forms. *Organ. Sci.*, 11: 538-550.
- Saha, D. and R.G. Paterson, 2008. Local government efforts to promote the three Es of sustainable development: Survey in medium to large cities in the United States. *J. Plann. Educ. Res.*, 28: 21-37.
- Shafii, F., Z.A. Ali and M.Z. Othman, 2006. Achieving sustainable construction in the developing countries of Southeast Asia. Proceedings of the 6th Asia-Pacific Structural Engineering and Construction Conference, September 5-6, 2006, Kuala Lumpur, Malaysia, pp: C-29-C-44.
- Sveiby, K.E., 2001. A knowledge-based theory of the firm to guide in strategy formulation. *J. Intellectual Capital*, 2: 344-358.
- Tovey, H., 2009. Sustainability: A platform for debate. *Sustainability*, 1: 14-18.
- Yuan, M. and J. Yang, 2009. A knowledge management framework to promote infrastructure project sustainability. *Manage. Real Estate*, 16: 2480-2486.
- Zainul, A.N., 2009. Sustainable construction in Malaysia developers awareness. *World Acad. Sci. Eng. Technol.*, 2009: 807-814.
- Zakaria, R., M. Vikneswaran, M.I.M. Said, A.L. Saleh and M. Mushairry, 2012. Sustainable neighbourhood planning and design in Malaysian perspective. *Appl. Mech. Mater.*, 209: 1690-1693.