

ENVIRONMENTAL MAINSTREAM TOOLS (EMT) PRACTICES IN MELAKA SMALL AND MEDIUM MANUFACTURING SECTOR: ADULT LEARNING APPROACH

Khoo N. K.¹, Hanipah H.^{2*}, Norida A.³

¹Institute of Technology Management and Entrepreneurship (IPTK), Universiti Teknikal Malaysia Melaka, Hang Tuah Jaya, 76100 Durian Tunggal, Melaka, Malaysia

^{2&3} Centre for Languages and Human Development, Universiti Teknikal Malaysia Melaka, Hang Tuah Jaya, 76100 Durian Tunggal, Melaka, Malaysia

*Corresponding e-mail: hanipah@utem.edu.my

Keywords: New Strategic, Self-Regulation, Environment Mainstream Tools

ABSTRACT – This study is including Strategies practices as a new parameter in order to improve the skill and knowledge in EMT at work place through adult learning approach as Andragogy. These research highlight the problems of skill and knowledge among employer and employees probably due to lack of non-compliance of the requirements Guided Self Regulation Environmental Mainstream Tools (EMT). There are four components as understanding, commitment, practice and behavior influence the improvement of this research towards green environment practices. At end of the researcher will development a new strategy focus on Andragogy approach to achieve the EMT practices. This study will support Melaka state new policy as Melaka Excellence through Melaka smart, green and clean towards EMT. This study is to promote several management practices such education & training Environment management, understanding on self-regulation, enforcement and auditing.

1. INTRODUCTION

OSH and Green environment movement in Melaka has been scrutinized due to lack of managing culture and non-compliance of the requirements of Environmental Act, This research compliance law, regulation practices and tools name Environmental Mainstream Tools (EMT)[12]. EMT has seven elements to measure the compliance of OSH manufacturing workplace towards green environment. The benefits of this practices and tools bring a solution for both parties (Melaka Government and Small and Medium manufacturing sector).

2. RESEARCH PROBLEM

The researcher is going to analyse the major problem in S & M manufacturing sector as Environment case keeps increase reported in S & M manufacturing rate 50% - 80% higher than big company[1], due to lacking management and conforming to the basic requirement.[2-3], poor connecting monitoring between industrial and enforcement department,[4-5]. No benchmarking on OSH and environment[6-7], lack of promoting safe work environment and culture practice at workplace[8-9]. Small and medium manufacturing sector is contribute 36% of carbon oxide exposure.

3. METHODOLOGY

Methods to carry up in this research it will use triangulation data from different material such interview, survey open-ended questionnaire, observation, document study example journal, literature review, e-book, the research approach is qualitative, exploratory descriptive and contextual. EMT analysis and practices regulation were used as a method for primary data collection and triangulation analysis were used as a method data collection for Department of Environment (DOE) enforcement officer effectively. Primary data from 20 S & M manufacturing sector in Melaka was taken through Phone call interview survey on 14-15/12/2017. These research highlight the problems in Melaka manufacturing sectors which are probably due to lack of non-compliance of the requirements of environmental act (EMT)(FIGURE 3)

4. RESULT AND DISCUSSION



Figure 1: Research Design (Dr Edwards Deming)

In this research, understanding the need for the requirement, commitment from top management and employees, practice the right procedure in workplace and behaviour to practice the safe and healthy procedure at the workplace. This framework created a strategic name Andragogy to strengthens the process continually. In this research, a Deming Circle theory be using , Plan (P) , Do (D) Check (C) Action (A) – PDCA by Dr W. Edwards to managing[10] green environment at workplace.(Figure 1). Andragogy is a process where is recognize adult learner to upgrade to lifelong learning process. Employees at workplace is adult learner, they need to been upgrade through Andragogy approach rather that pedagogy approach. Andragogy’ refers to the particular detection of efficient curricular design and coaching delivery for adults. The basic theories of Andragogy, as developed by Malcolm Knowles and others, are used comprehensively in the design of adult-oriented training programs, where this very suitable for adult learning as Knowles assumptions 1984 such self-concept, experience of adult learner, willing to learn, orientation to learning and motivation for adult to learn, this assumptions with 4 principles as :

1. Adults need to be involved in the development and valuation of their training
2. Understanding (including mistakes) provides the foundation for the learning performance.
3. Adults are most attracted in teach subjects that have direct significance and contact to their job or own life.
4. Mature education is problem-centred rather than content-oriented. (Kearsley, 2010)

Environment Mainstream Tools (EMT) has seven elements to measure the compliance of manufacturing workplace towards green environment as (figure 2).

- Seven Element Tools**
- 1.Environmental Policy (EP)
 - 2.Environmental Budgeting(EB)
 - 3.Environmental Monitoring Committee (EMC)
 - 4.Environmental Facility (FC)
 - 5.Environmental Competency (EC)
 - 6.Environmental Reporting and Communication (ERC)
 - 7.Environmental Transparency

Figure 2 :Major Tools. (www.doe.gov.my/emt)

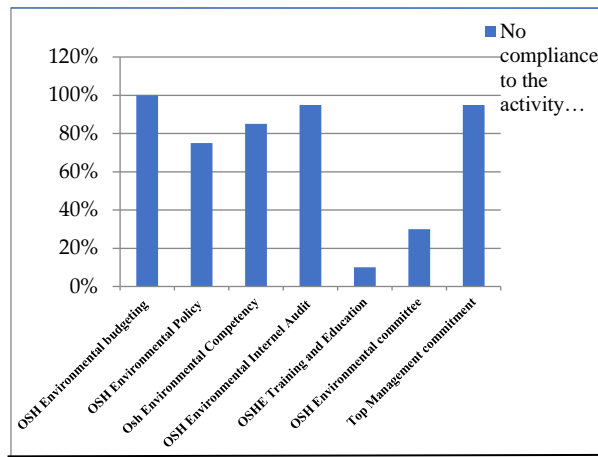


Figure 3 : Non Compliance To Activity

Environment policy is compulsory for organization (figure3 – 75% non compliance), OSH & environment committee is needed for most of the S&M Manufacturing (figure3- 30% non compliance), training and education in OSH& Environment is needed as requested by OSH Act 1994 Section 15, and DOE Act, including internal audit (figure3-95% non compliance). Top management commitment is the key words to the success of the EMT management system, the key index measurement on this matter is from their

Environment policy, environment committee and auditing is involve to all organization, it under Department of Environmental Director General Order through Guided of Self Regulation (GSR). To provided a skill and knowledge for employees, employers must understand the concept of Training Need Analysis (TNA) to achieve the goals of EMT towards green environment at work place

5. CONCLUSION

The research objective is to investigate the practice of managing conforming to compliance EMT and Environmental act, identify collaboration among employees, employers, enforcement department through new strategy (figure 1) of promoting EMT towards green environment. Data from figure 3 prove that S&M manufacturing sector need a transformation towards skill and knowledge improvement. Promote Adult learning Andragogy assumptions and principles with management practices such training and safety management, understanding on self-regulation, enforcement and auditing towards EMT practices. Through Andragogy learning, it can achieve Melaka Excellence, Smart, Green and clean, together we achieve more in Andragogy learning among Melaka Small and Medium manufacturing sector. In this matter, it very important for employer to train a competency person such in schedule waste management (Cepswam), Showing commitment through Environmental Policy, Environmental committee and others as mention in Figure2

REFERENCES

- [1] Kelly Koh, OSH stakeholders discuss ISO 45001 at Melaka meet. September 2017 Retrieved from : www.nstonline.com.my
- [2] Deros, B.M., Ismail, A.R., Ghani, J.A., Yusri, M., and Yusof, M. Conformity to Occupational Safety and Health Regulations in Malaysian Small And Medium Enterprises. *American Journal of Applied Sciences*, 11499504 (113), pp.499–504. ISSN: 1546-9239©2014 Science
- [3] Laurence, D. Safety rules and regulations on mine sites- The problem and a solution. *Journal of Safety Research*, (2005) 36, 39-50.

- [4] Mascini, P. The Blameworthiness of Health and Safety Rule Violations. *Law & Policy*,(2005) 27, 472-490.
- [5] Walker, D., Tait, R., Health and safety management in small enterprises: an effective low cost approach. *Safety Science*(2004) 42, 69–83.
- [6] Che Man , DOSH on SMI issues and solutions, AboutSafety.com, dated 20 January 2010.
- [7] Champoux, D., Brun, J.P.. Occupational health and safety management in small size enterprises: an overview of the situation and avenues for intervention and research. *Safety Science* (2003)41, 301–318.
- [8] Ali, H., Abdullah, N. A. C., & Subramaniam, C. Management Practice In Safety Culture And Its Influence On Workplace Injury: An Industrial Study in Malaysia. *Disaster Prevention and Management*, (2009) 18(5), 470-477.
- [9] Nielsen.. *Health and safety attitudes and behaviours in the New Zealand workforce: A study of workers and employers. 2014 Qualitative Research. Manufacturing report.* (A report to WorkSafe New Zealand)(2015). Wellington, New Zealand: Author.
- [10] Tinham, B. Check, Act, plan, do. *Plant Engineer*, (MARCH- APRIL)(2013), pp.18–19.
- [11] Knowles, M. (1984). *Andragogy in Action*. San Francisco: Jossey-Bass.
- [12] Department Of Environmental 2017 –Self guided regulation- Environmental Mainstream Tools. Retrieved from: www.doe.gov.my/gsr/emt