

THE ROLE OF LEARNING ORGANIZATION IN DEPARTMENT OF SKILLS DEVELOPMENT (DSD) TO ENHANCE THE IMPLEMENTATION OF NATIONAL DUAL TRAINING SYSTEM (NDTS) IN MALAYSIA

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ABSTRACT

The establishment of Learning Organisation (LO) practices in the DSD is significant in term of providing the necessary impetus for the implementation of National Dual Training System (NDTS). This study investigated how LO capability could be enhanced from within and embraced to support DSD's competitiveness and vision. Within DSD the initiative will greatly foster its culture of learning, provide procedure of learning, strengthen leadership capabilities for learning, enforce good policy for learning, establish the learning processes and ICT utilization for learning. Thus the purpose of this study is to investigate the significant variables that contribute to the level of practice of LO (organization knowledge and performance), to measure the relationships between the variables, to identify the level of LO practice in DSD and to propose improved method for the enhancement of NDTS implementation. This research is categorised as under the broad heading of descriptive quantitative research, using survey, interview and structured questionnaires to collect data from respondents. Questionnaire forms were distributed to 111 out of the total 250 DSD officers and 3 subject matter experts were interviewed. Frequency test, mean test, ANOVA test, Spearman's rho test, Multiple Linear Regression, G-Power test and factor analysis test were used to measure the inter-relationships between the variables and the level of LO practice in DSD. The results eventually provide the answers to all the research questions. The study revealed that 45 percent of LO practice is at satisfactory level. This implies that the practice of LO in DSD needs to be further intensified. The research also confirmed that the level of LO practices are dependent on the culture of learning, procedure of learning, leadership capabilities, learning policy, learning processes, and ICT utilization. Consequently the level of LO practice in DSD could potentially enhance its functions through its active role in the learning culture and procedure of learning. The value of Adjusted R Square of 0.427, tells us that culture and procedure of learning contribute 43% variance in the level of LO practice. Finally the Model of the Roadmap for the Development of LO in DSD is devised to enhance NDTS implementation so that DSD can transform itself into an agile LO to meet the demands of the 21st century.

TRANSFORMING DSD INTO LEARNING ORGANIZATION TO ENHANCE NDTs IMPLEMENTATION: STAKEHOLDERS' EXPECTATION

Dynamic globalisation and rapid changes in information and communication technology had drastically changed the global economic scenario. Responding to the global challenge, the quality of Malaysia's human capital had increasingly factored in as the most critical element contributing to the achievement of the National Mission. The nation human capital development became the key thrust in the Ninth Malaysian Plan (EPU 2006a). Malaysia could only develop and progress with high skilled and knowledgeable workforce. Given Malaysia's plan for rapid growth, the country needed knowledge workers (K-workers) in order to develop a knowledge-based economy (K-economy) (Onn 2005). Only then could the government's economic goals be realized.

Report from Boston Consulting Group (BCG 2009) revealed that "Malaysia's workforce is still relatively low skilled". In 2007, 80% of the workforce was only educated up to the Sijil Pelajaran Malaysia (SPM) level or equivalent. Only 25% of Malaysian jobs were in the higher skill brackets. Even though this was a substantial improvement over the 1990 figure (16%), the current level is still much below that of regional peers, such as Singapore (49%), Taiwan (33%) and South Korea (36%).

Malaysia must change its economic industry structure and improve its labor productivity levels for the nation to move to a high income economy. The country's main focus need to be on up-grading the skill level of the majority semi-skilled workforce, and improvement of the educational level of up and coming workers.

Malaysia must ensure a strong supply of adequately skilled workers into the labor market in order to improve its workforce quality. Simultaneously, it must also upgrade the skills of its existing workforce.

Low skilled workers were dominant across almost all industry sectors, with the exception of the government, finance & insurance and mining sectors, which together account for only 15% of the total workforce.

Since DSD had been entrusted as the coordinating agency to implement NDTs, it must now strategically profile itself as a LO of 21st century. It is therefore extremely significant that DSD embarks on LO concept and approach in implementing development programs as well as monitoring and evaluating its effectiveness. DSD also need to work on enhancing the public delivery systems and mechanisms to create total satisfaction among its customers and stakeholders. It is therefore necessary for all parties, lead by DSD as a coordinating agency, to have full understanding of the term LO that relates to training based on Anglo Saxon system (NOSS based training) and the NDTs (work process knowledge). In this respect, the focus of this research was to identify and investigate the variables that contribute to LO practices (organization knowledge and performance), and to facilitate the success of NDTs implementation.

PROBLEM STATEMENT

The establishment of DSD as LO is critical both for the sake of its existence, and destiny. Therefore, as an introductory insight, the central theme of this research was to identify the variables contributing to LO practices, and the enabling effect to NDTs implementation. It investigated how learning organization capability could be enhanced from within and embraced to support DSD's competitiveness and vision.

Since 1971, demand and expectation from the public regarding skill training, accreditation of centre and certification had been overwhelming and continued to grow with renewed challenges. This phenomenon, however, was not surprising since the requirement of human capital development continued to increase and became the main focus of the Ninth Malaysia Plan. DSD's customers had grown more sophisticated. Compelled to meet those demands, DSD was meeting the challenges as the coordinating agency for the implementation of National Dual Training System (NDTS).

DSD had over the years made tremendous changes either in its approach or system application to maintain its position as the main agency to coordinate and formulate skills training activities in Malaysia. However considering DSD's manpower strength, the changes initiated by the Economic Planning Unit (EPU), Ministry or Departmental level, were is not well internalized, understood and shared by many. It has to be said that such 'flaw' must be addressed to give way to close comradeship cemented by common vision relating to the very existence of DSD which should amount to the implementation of NDTS.

It is critical that the task of envisioning DSD's purpose of existence be flexible in nature; and this could possibly be developed through the establishment of a LO. This study was mainly geared to investigate the significant LO variables that will positively influence the level of LO practices (organization knowledge and performance) in DSD and to propose a method that will enhance its effectiveness to carry out the NDTS' implementation.

RESEARCH QUESTIONS

- i. What was the significant variables that contributes ti the level of practice of LO in DSD which will enhance NDTS implementation?;
- ii. To what extent were the LO practice prevailed in DSD?

LEARNING ORGANISATION AT DSD

LO practices in public sector are a continuous and life long journey. This was not entirely new and had been observed in many early writings on organizational development and change. It is an initiative by Malaysian government through Public Service Department (PSD) to make sure LO was implemented in every agency. An officer in DSD is a Vocational Training Officer (VTO) at various levels. All VTOs are overseen by the Director General of Public Service Department (DGPSD). Public Service Department (PSD) is the

central agency responsible for human resources management for the public services. Even though DSD has its own Director General (DG), but management of officers' promotion, transfer and training are the charges of DGPSD.

PSD introduced and implemented a system call Competency Level Assessment (CLA) – introduced on 1st November 2002 and implemented in 2003. One of the CLA's objectives was to establish LO in public sectors to conform and to focus on producing knowledge workers. Such move had proven the facts that there was an initiative in PSD to promote and establish LO practices at all government agencies. Considering the importance of LO practices in every organisations, PSD had manifested the clear intention to move in the right direction in order to become more efficient, and to develop productive public service officers. Any agencies applying CLA are in essence applying LO because the ultimate objective of CLA was to implement LO practices. Awareness among public agencies regarding LO was most crucial because most agencies were not aware about its concept and practices. CLA appeared with little elaboration when it was published at PSD web page, and only for very short period. Lack of knowledge about LO among officers in PSD was another issue which must also be resolved.

WHY LEARNING ORGANIZATION FOR DSD?

The idea of advocating a new road map that could provide DSD with a route towards a more successful implementation of NDTs, is a clear admission that its current set up and arsenal do not have sufficient power to live up to the task its facing. In other words, DSD needs overhauling. DSD must change. It needs to reinvent itself by embracing new ways of doing things. This study advocates LO as the tool to bring that change. The followings are some of the reasons why LO is the chosen one for DSD:

- i. LO is a most viable change alternative for DSD because it is most conducive to implement and easiest to follow;
- ii. It focuses on the officers and bring the best out of them;
- iii. LO brings change in a wonderful way as it embraces the officers, not threatening them. Change becomes easier once fear is taken out of the equation;
- iv. It improves the officers by promoting learning and sharing. They feel empowered by greater knowledge and sense of understanding about their work environment;
- v. It does not compete with other tools but incorporate them;
- vi. LO promotes quality and innovativeness;
- vii. It energizes the officers and brings commitment out of them;
- viii. LO creates sustainable change because it transform the culture and procedure;
- ix. It is most likely to get popular support because it promotes new type of leadership, policy, and process to working and learning.

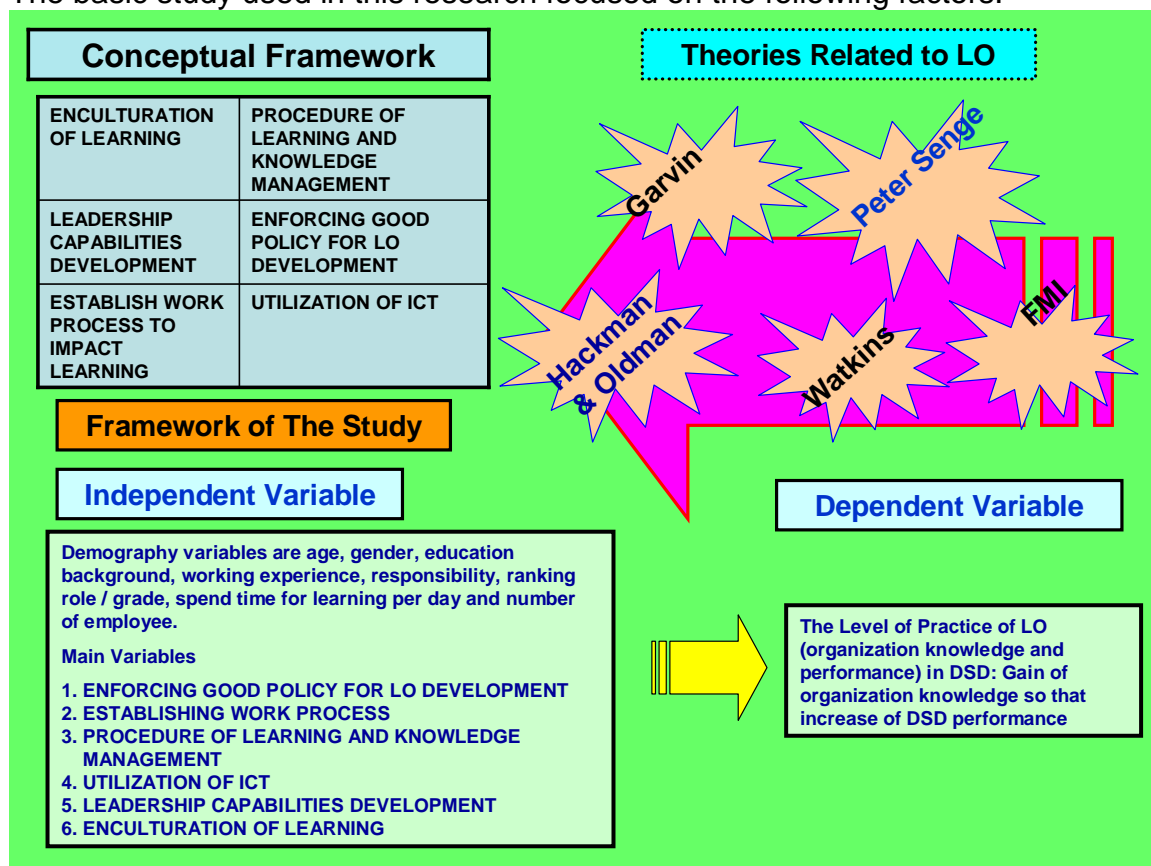
RESEARCH METHODOLOGY

It is a descriptive research that described data and characteristics of the population or phenomenon being studied. It answers the questions, who, why, what, where, when and how. It uses frequencies, averages, and other statistical calculations.

This research focus on relation between various factors which relate to the level of understanding and practices of LO. This study used One-Way ANOVA Test, the Spearman's rho, G-Power Test, Multiple Linear Regression Test, and Factor Analysis Test.

THEORETICAL FRAMEWORK

The basic study used in this research focused on the following factors:



Framework of the Basic Study

As indicated in Figure, the dependent variables were the level of understanding and practices (organizational knowledge and performance) and the independent variables were the leadership capabilities development, enculturation of learning, enforcing good policy for LO development, utilization of ICT, procedure of learning and knowledge management and establishing work process to impact learning.

Renowned models were used in the development of study instruments and all models for the development of the questionnaires.

The six variables were chosen after rigorous discussion with the subject matter experts. The selection was justified after intensive reference of relevant works written by Peter Senge, Watkins, Hackman and Oldman, Garvin, and Australian Government's initiative in Frontline Management Competencies (FMI).

SCOPE / LIMITATION OF STUDY AND RESEARCH POPULATION

The respondents in this study were officers of DSD. Total number selected were 111 officers from senior management, middle management and non-management levels.

The Centre of Instructor and Advance Skills Training (CIASST) is an advance skills training institution whose main function is to train instructors. Established under DSD, its responsibility is also to ensure a successful implementation of NDTs. Both DSD and CIASST maintained flexibility of staff movement and the two organisations craved for a successful implementation of LO in order to be more effective in achieving their performance objectives.

RESEARCH INSTRUMENT

According to Ary et al. (1990), "definition of measurement is the process representing by number or level for unit analysis to be used in concept analysis". Questionnaire form was used as a tool to collect two parts data as per the following:

Part I consisted of four items related to respondents' demographic variables. The data was needed to identify relations between level of organizational knowledge and performance with the identified variable. The variables in Part I were age, sex, education background and work experience. Other variables were about primary responsibility, role/grade, time spent per day on work related learning and number of employees in each division.

Part II consisted of 135 items related to six (6) predicted variables, namely policy, processes, procedure, ICT, leadership and culture. Distribution of items referred to each variables were 25 on policy, 16 on process, 13 on procedure, 11 on ICT, 30 on leadership, and 29 on culture. The level of LO practices was considered as an output of the study as represented by the 11 items.

Likert scales were used collect respondents' responses and identify factors that influenced the level of LO practices. A Likert item is a set of statements for respondents to select and reflect their agreement or disagreement responses.

The purpose of the above rating scale was to allow respondents expressed both the direction and strength of their opinion. The study chose to have respondents making definite choices rather than being neutral or took intermediate positions of the scale. For this reason a scale without a mid-point was preferred. Thus the Six-level Likert was used to avoid centre tendency.

On the other hand, several interviews were conducted during the entire research study. For understandable reasons, interviews were done only to selected individual with authority on the subject matter of LO. Some of the interviews were done during the formative stage of the study.

Furthermore, appended in the reference page was the list of literature that inspired this study to shape up the idea of LO for DSD. Literature review is one of the type in instrument used in this study, In addition to the list was numerous source of reference about LO in the websites.

Table 1: Five (5) Renowned Models Used in The Development of the Instrument

No	Peter Senge Five Disciplines	Karen E. Watkin Seven (7) Dimension of LO	Hackman & Oldman Job Characteristic Model (JCM)	David Garvin LO Best Practices	Australian Government Frontline Management Competencies (FMI) Frontline Management Competencies (FMI)
1	Personal Mastery	Create continuous learning opportunities	Task identity	Systematic problem solving	Leading by example
2	Mental Models	Promote inquiry and dialogue	Task significance	Experimenting with new approaches	Leading, Coaching, facilitating, and empowering others
3	Shared Vision	Encourage collaboration and team learning	Feedback through work	Learning from past experiences	Creating best practice
4	Team Learning	Empower people toward a collective vision	Skill variety	Learning from best practices	Creating an innovative culture
5	Systems Thinking	Connect the organisation to its environment	Autonomy	Transferring knowledge quickly and efficiently/ effectively throughout the organization	
6		Establish systems to capture and share learning	Cooperation		
7		Provide strategic leadership for learning	Feedback through peers		

DATA COLLECTION

Data collection was an integral part of the survey activity. Questionnaire forms were used to collect the survey data described earlier. Data collection using interviews were also devised for officers from BiBB and the Institute of Education, UK. For all the interviews, audio recordings and notes were secured to preserve the information. The interview sessions were conducted using guidelines and questions covering various aspects of LO. The semi-structured design for the interviews was very useful in collecting information and as well as maintaining cordial atmosphere. The focus of each interview was to introduce the subject matter of the research, to ask the main and supplementary questions and to seek clarification.

TEST USED FOR DATA ANALYSIS

Data analysis used computer software for statistical analysis called Statistical Package for the Social Sciences (SPSS). The research also utilized the One-Way ANOVA Test, Spearman's rho, G-Power Test, Multiple Linear Regression Test, and Factor Analysis Test. Respondents' data were analyzed using frequency, percentage, mean, and standard deviation analysis.

The qualitative data analysis was done through academic discussion and consensus. This data support the study based on interview and rigorous reading about LO. This is especially for identifying variable used in this study.

The data collected were of a mixture of a categorical or nominal nature, and ordinal to interval. The study chose parametric test in data analysis. As Bryman and Cramer (1994:114) pointed out, "parametric test are appropriate when the data fulfil the following three conditions: (1) Level or scale of measurement is of equal interval or rating scaling; (2) Distribution of the population score is normal; and (3) Variance of both variable are equal or homogeneous". Several tests were done with the results described below.

ANALYSIS OF MEAN AND STANDARD DEVIATION ON FACTORS AND INDEPENDANT VARIABLES

Summary Report Statistic on mean and standard deviation between factors such as age, gender, education background, work experience, primary responsibility, role/grade, time spent per day on work-related learning, unit/division staffing, and independent variables on policy, process, procedure, ICT, leadership and culture.

RELIABILITY OF THE PRE-TEST DATA VARIABLE

Alpha (α) coefficient analysis for reliability test was used to check the reliability of every item in the questionnaire regarding independent variable policy, process, procedure, ICT, leadership and culture.

LEVEL OF UNDERSTANDING AND PRACTICE OF LO

The most important part of this survey was to measure the level of LO practices (organization knowledge and performance) in DSD using scientific descriptive method known as composite score and categorized classes. The same score of 1 to 6 were used to measure the level. Calculation of composite score was measured by using highest total score and lowest total score. This section consisted of item F125 to item F 135. The total score were between 11 to 66. The difference between each group was 22. Refer to **Table** below for information on the category for the score composite.

Data from eleven items were regrouped into three levels which were “highly satisfactory, fairly satisfactory and not satisfactory” and analysed using frequency. The percentage of every level indicated and reflected the level of LO practices (organization knowledge and performance) in DSD.

Calculation of Score Composite

Category	Score Composite
High (highly satisfactory)	Above 49
Middle (fairly satisfactory)	30 to 48
Low (unsatisfactory)	Less than 29

ASSOCIATION BETWEEN THE LEVEL OF LO WITH INDEPENDENT VARIABLES

Correlation analysis method was very useful to identify the focus and relationship magnitude between two variables. According to Ary et al. (1990), “correlation procedure tells about how far the changes of variable relate with the changes of other variables. Correlation coefficient state between -1 and + 1 ($-1 < r < +1$). Adding and subtracting explain the correlation perfectness between two variables. The different is the direction of correlation. And the figures explain about the strength and (+/-) are the polarity of the correlation”.

Spearman’s rho method and G-Power were used to measure the correlation between factors which had influence on the level of LO practices (organization knowledge and performance) because the sample collected was not parametric data. Ary et al. (1990) explained from Guilford Guide (1956) on the strength of correlation between two variables in **Table** below:

Guilford Guide : Correlation Magnitude

R	Correlation Magnitude
< 0.20	No correlation
0.20 - 0.40	Low correlation; weak relationship
0.40 - 0.70	Moderate correlation; significant relationship
0.70 - 0.90	High correlation; strong relationship
> 0.90	Very high correlation; very strong relationship

CONDUCTING THE RESEARCH: THE LITERATURE RESEARCH

Appended in the reference page was the list of literature that inspired this study to gel the idea of LO for DSD. In addition to the list was numerous source of reference about LO in the websites. The significant six variables, underpinning theories and model for best practices, were all grounded and found in those literatures. In fact more reading was done even after the list was made to seek reference, confirmation and even to freshen the understanding of the forces that contribute to an efficient and effective LO. Reading was done while preparing questions for the interview and after its completion. Yet more reading was done before the survey amidst the anxiety of trying to prepare the right questionnaires, and still more of the same after the pre-test and the actual survey itself. The meaningful discussion with supervisors and subject matter expert would not have been possible without prior reading and even after to crystallize understanding of the issues at hand. Even during the entire writing and editing this thesis more reading were needed.

Thus literature review had served as the main thrust for the entire effort of conducting this research.

CONDUCTING THE INTERVIEW

Several interviews were conducted during the entire research study. For obvious reasons, interviews were done only to selected individual with authority on the subject matter of LO. Some of the interviews were done during the formative stage of the study. subject matter expert the likes of Prof Dr Elias Awad and Prof Dr Alias Masood were interviewed for their opinion on the choice of the significant variables and direction of the study. As the study mature there was a need to look at some LO best practices to benchmark for DSD. The obvious choice was to interview the officers from BiBB, Germany. The study simply must tap the expertise and experience of BiBB officers to look for a good model for best LO practices. Besides, both DSD and BiBB shared similar functions and roles for their respective countries. "Ask, and you will get" was perhaps the right maxim that prompted the study to diligently prepare appropriate questions to get maximum result from the interviews. For Dr Matthias Waltre and Mr Michael Wiechert of BiBB the interview focus was on their LO implementation, and issues relating to creating continuous learning opportunities, promoting inquire and dialogue, encourage the organisation to environment, establishing system to capture and store learning and providing strategic leadership for learning. An interview that was very informative. And very satisfying one too since it shed lots of answers for all the research questions. There were nagging questions that were left unanswered after the interview with the German officers, but with followed up communication through emails managed to get them sorted out.

CONDUCTING THE SURVEY

The main purpose of conducting the survey was to collect and publish real live data that could make sense of the dependent and independent variables for LO practices. The study could then analyze the data and use them to support the recommended model for LO practices in DSD.

RESPONDENTS FOR THE SURVEY

Respondents that were involved in the survey sessions were 111 officers from all levels of management in DSD. Why only DSD officers were selected as survey respondents? Obviously they were the critical equation in the success formula of LO practices in DSD. Any transformation work that will need to take place centred on DSD officers. They are the organisation that is DSD with the mission to successfully implement NDST.

The data were analysed in the form of percentages (frequency). The results revealed the respondents' degree of understanding when interfaced with the questionnaires. The 20 selected officers were not included as respondents during the actual survey sessions.

or ambiguity. It took every respondent a good 90 minutes to complete the survey. All completed filling their survey questionnaire forms successfully.

THE SIGNIFICANCE OF THE VARIABLES

Alpha (α) coefficient analysis for reliability test were used to check the reliability of every item in the questionnaire regarding the identified significant independent variables.

Alpha coefficient analysis for reliability research tools (111 respondents)

Part	Analysis	No. of Items	Alpha (α)
A	Demography	4	-
B	Policy	25	0.882
B	Processes	16	0.846
B	Procedure	13	0.836
C	ICT	11	0.944
D	Leadership	30	0.929

E	Culture	29	0.929
F	Organizational knowledge and Performance	11	0.845
G	Demography	4	-
TOTAL		143	

RESEARCH FINDING AND REFLECTING ON THE RESEARCH QUESTIONS

The outcome of this study will provide the model for for the development of LO in DSD, Ministry of Human Resource, Malaysia. The development of this model was based on the analysis of the research questions described below:

WHAT WAS THE SIGNIFICANT VARIABLE THAT CONTRIBUTES TO THE LEVEL OF PRACTICE OF LO IN DSD WHICH WILL ENHANCE NDTS IMPLEMENTATION?

Six (6) variables were selected for this study. All the identified significant variables were screened through meticulous discussion with the authorities on the subject matter available locally as well as outside of the country. Rigorous references were also done using text books by famous author, thesis, articles, journals, papers as well as those available at the websites. The six identified significant variables chosen were enculturation of learning, leadership capabilities development, procedure of learning and knowledge management, enforcing good policy for LO development, establishing work process to impact learning and utilization of ICT. All the six variables were tested and found to be significant and had influence on the level of LO practices in DSD.

By using associated analysis Spearman's rho test, the result revealed that the level of LO practices (organization knowledge and performance) was influenced by the identified significant variables. All value of association was significant and moderate. Generally the level of LO practices (organization knowledge and performance) improved depending on the improvement outputs of the identified significant six variables. The association of every variables and the level of LO practices (organization knowledge and performance) can be described by **Structural Model Coefficients** for LO in DSD.

Six identified significant variables had positive correlation and strong association with LO practices. Generally this association revealed that the level of LO practices (organization knowledge and performance) depended on the intensity of the six identified significant variables.

The findings of this study generally concurred with the theory on **culture** in LO by Kofman (1993), Peter Kline and (Aiken 1998) The finding also reflected similar results as those found in the literature referred in this study, like the theory of procedure by (Aiken 1998) and (Ahmad 2003). “The level of LO practices depended on enculturation of learning” (Kofman (1993), 32). The finding of the study was also similar with the notation by Kofman (1993), 32, “the level of LO practices must be grounded in three foundations: (1) A culture based on transcendent human value of love, wonder, humility, and compassion; (2) A set of practices for generative conversation and coordinated action; and (3) A capacity to see and work with the flow of life as a system”.

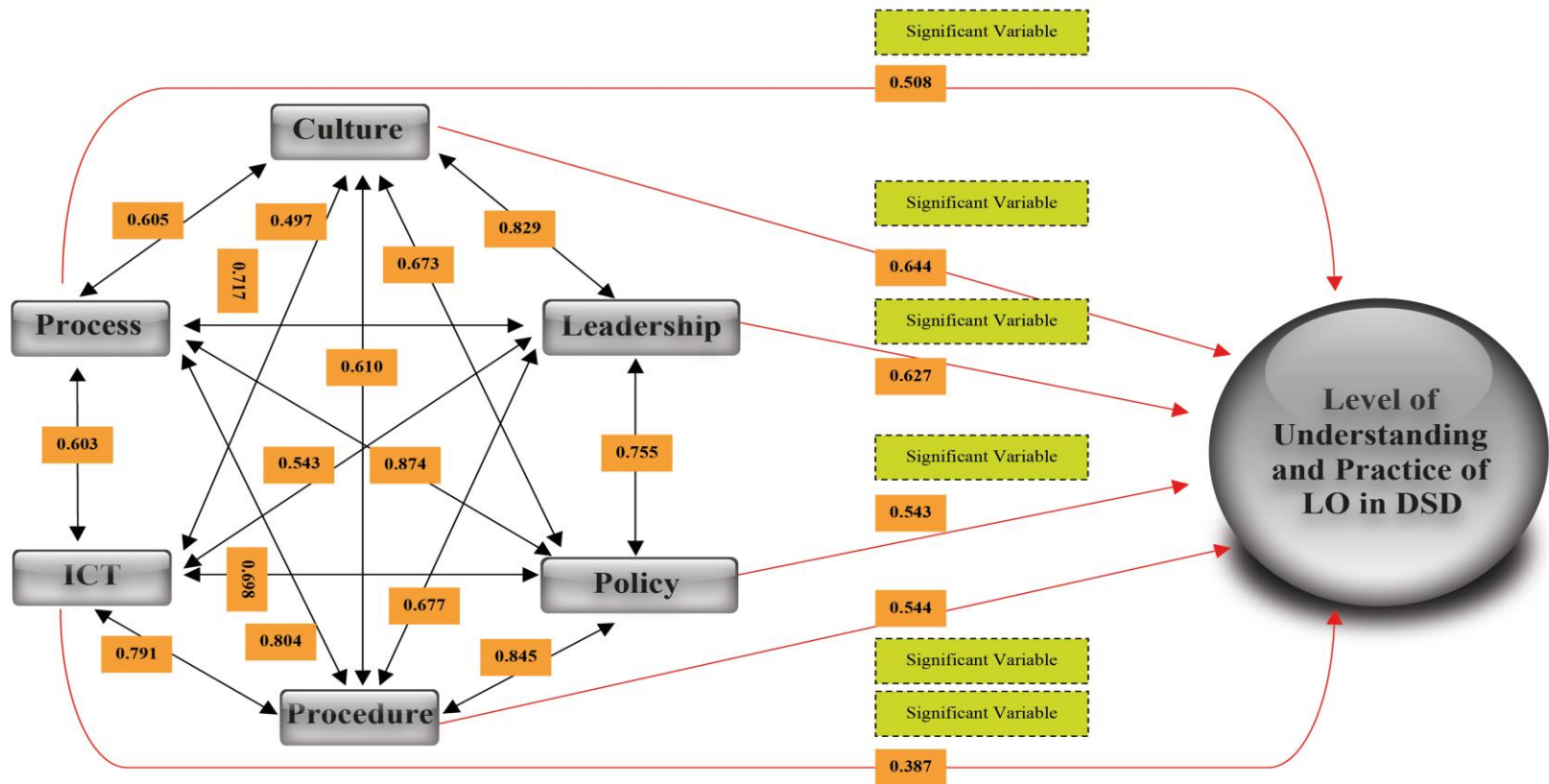
“One way of building lessons learned into the fabric of an organization is to develop **policy, procedures** and practice expectations which reflect organizational learning” (Aiken 1998) “Under policies, dedicated learners who enhance learning in others are promoted to supervisory positions” (Marquardt J. M , 2002: 85).

The fifth variable is **establishing work process to impact learning**. For example, Marsick V.J. 1999 mentioned that “work processes were purposefully altered so that front-line employees who actually performed the work assumed responsibility for their implementation instead of leaving this to administrative staff and management”. Work processes are crucial for development of NOCC. Work processes knowledge is vital as main requirement for companies involve in training with regard to the NDTs implementation.

In establishing work **process** to impact learning in the organization there is no teacher who speaks from platform of authority, but rather staff are given time to support learning about NDTs (item B1), teams/groups are given opportunities to attend courses about NDTs (item B4), individuals/teams access and participation in learning opportunities is facilitated (item B46) and workplace activities are used as opportunities for learning (item B47). In short, my conception of learning process in DSD is this: a cooperative venture is non-authoritarian, informal learning, the main purpose of which is to discover the meaning of experience; an expedition of the mind which digs down to the roots of the preconceptions which formulate our conduct; a technique of learning in DSD which makes education coterminous with life and hence elevates living itself the level of adventurous experiment.

The sixth variable is the **utilization of ICT**. ICT was significant and has influence to the level of LO practices in DSD with relation to the implementation NDTs in Malaysia. The conclusion regarding the steps taken in implementing LO was the establishment of information network. The uses of information technology to obtain and distribute information were very crucial in terms of promoting the learning processes among employee. According to Tan (1996), “in this digital age, where the power of information technology is creating explosive changes in every area of work, LO are leveraging on this powerful tool to increase their productivity. For the information to be effective it has to reach and get feedback from every employee in the organization”. Therefore the information network is essential in the DSD. Some

people have the level of LO practices (organization knowledge and performance) through the usage of ICT in DSD. “A LO needs mechanisms which effectively enable an individual’s memory to be ‘down-loaded’ into an information system so that everyone can continue to access that person’s experience and their analysis of that experience long after the individual has left the organization” (Aiken 1998)



Structural Model Coefficients for LO in DSD

TO WHAT EXTENT WERE THE LO PRACTICES PREVAILED IN DSD?

There were two tests used for this question:

(a) These research found the level of LO practices (organization knowledge and performance) in all activities in the position of high category (satisfactory/highly agreeable) which is 45% (mean = 2.4234) and for the middle category (fairly satisfactory) is 52.3% and 2.7% at low category (unsatisfactory/not agreeable). It served as the evidence the level of LO practices (organization knowledge and performance) still need to be improved in the DSD.

The analysis that reflected 45% for level of satisfactory may be acceptable by some quarters, but as an organization with high responsibility and expectation, DSD must be super sensitive about the 52.3% and 2.7% in its public service rating. Another challenge would be consistency. The target needs to be consistently surpassing 80% level if Malaysia wanted to be reckoned as a major player regionally or globally.

(b) Item F125 to F135 were the items about the level of LO practices and performance. The analysis using mean value and standard deviation were used to explain the level. In this category the score composite was between 30 to 48. The result showed of calculation for **Mean was 46.7657**. This figure fell under category of 'fairly satisfactory' and the standard deviation is 1.0164. The lower the standard deviation of their ratings in each category, the more balanced and consistent they will tend to be. The team with a higher standard deviation will be more unpredictable.

The results of both the tests using the percentage and mean calculation indicated that the prevailing LO practices in DSD to be fairly satisfactory. DSD officers may not realized that they may already be doing things that conform to LO practices. Such situation can only proved positive to any LO effort since the healthy momentum was already in motion. To infuse more of LO practices would not prove to be too difficult after all.

As mentioned in Chapter I the official directive were sent to all government agencies to install LO practices at their respective places. On the same token some form of 'LO practices' may already be in their places except nobody was conscious of it and that no one knows to what extent the levels were. Anyway the official directive was only meant to be taken as voluntary. Besides no form of implementation mechanism and special budget were made available with the directive. At this point none of the government agencies had initiated any deliberate LO program. Such directive may only be taken to mean as a buzz word of the month and a token not to be viewed seriously.

Like all things in life, the research and development in LO is continual and it is important for DSD officers to keep abreast with new thinking and practices of LO in order to develop the 'muscle' to push the big numbers.

THE ANTICIPATED OUTCOME OF LO TRANSFORMATION IN DSD

Transformation of DSD into LO practitioner is essentially to transform two of its most basic requirements:

- a) The mindset, leadership and capabilities of DSD officers.
- b) Its enabling system, process and technology.

THE MINDSET, LEADERSHIP AND CAPABILITIES OF DSA OFFICERS

It is the officers who make up the means to achieve an end in the form of the successful NDTs implementation. Against the looming expectation of the stakeholders, the moment of truth whether the officers can live it up, can only be known after 3 to 5 years of LO practices in DSD. The clock starts ticking as soon as the LO intervention gets into gear, but what possible transformation does this study anticipate to see in the profile an average DSD officers. What will be the learning outcome of LO for the DSD officers?

LO in DSD and all the interventions that come along with it must be able to transform its average officers into possessing the profile that strongly reflects the mindset, leadership and capabilities to carry out the role of DSD in NDTs.

LO in DSD and all the interventions that come along with it must be able to transform its average officers into possessing the profile that strongly reflects the mindset, leadership and capabilities to carry out the role of DSD in NDTs.

THE ENABLING SYSTEM, PROCESS AND TECHNOLOGY

The anticipated transformation of DSD personnel would not count much without the enabling system, process and technology. This is to reflect on the hardware and software that are much needed to consolidate the enculturation of learning in DSD. The finding already indicated the strength of establishing work process to impact learning, utilization of ICT, procedure of learning and knowledge management system. The rest were not so obvious. Those will include the need for new system relating to assessment, reward, learning and experience sharing, coaching and mentoring, information sharing, quality control, certification and accreditation, teaching faculty and licensing, curriculum development, verification, skill standards database, etc.

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