CHAPTER 4 RESEARCH RESULTS

This chapter organizes the findings of the survey and presents the research results. Firstly, this chapter describes the summary statistics of respondents and characteristics of industry, followed by the analysis and testing of hypotheses and end up with an overall summary of the key findings.

4.1 SUMMARY STATISTICS OF RESPONDENTS

A total of 139 responses were received from the fieldwork. Out of the total responses received, 8 were not valid or incomplete and hence were rejected. 131 usable responses were used for the analysis representing 44% response rate. Cronbach's alpha was computed again and it can be concluded that the instruments were acceptable in terms of reliability (refer to Tables 2-8).

The demographic profile of respondents is presented from Table A.1 through Table A.3, whereas, Tables A.4 through A.6 describe the characteristics of the business being examined in this research.

4.1.1 DEMOGRAPHIC PROFILE OF RESPONDENTS

Table A.1. Ethnically, Malays comprised the largest group (54.2%) of the respondents, followed by Chinese (38.9%), and Indians and others (6.9%), as shown in Figure 7.

Table A.2. Majority of the respondents in the database has been with their business for more than six years (see also Figure 8). These data support the use of these respondents as key informants. In general, their perceptions of organizational practices are based on long-term relationships with the businesses. They should be able to speak with some insight about the business's learning process.

Table A.3. Most of the respondents in the research are at least a Degree holder (77.9%), 19.8% is Diploma holders and another 2.3% of the respondents are with Certificate or below (see also Figure 9). The research is targeted on executives above, and with their strong educational background and broad knowledge of the organizational processes; they can provide a true insight of their business.
In brief, the respondents are generally executives above who have been with the business for more than six years and with a strong educational background. These people are more likely to have accurate perceptions of the learning processes of the organization.

4.1.2 CHARACTERISTICS OF THE BUSINESS

Table A. 4. Figure 10 illustrates the sample profile in terms of the nationality of organization those respondents attached to. Respondents for the survey are mostly attached to Japanese-base company (34.4%), followed by Malaysian-base organization (28.2%). Apart from that are respondents from American- and European-base company (13.7%) and Taiwanese-base organization (9.9%).

Table A. 5. There is a large range of industries within the data set. "Electronic and Electrical Appliances" had the biggest share (59.5%), followed by "Packaging and Plastic Products" (11.5%). "Chemical Products" and "Industrial Machinery and Equipment" had a share of 7.6% respectively and other groups are "Food & Beverage" (5.3%), Metal (3.8%) and Textile and Leather (4.6%).

Table A. 6. In this research, Central Region of Peninsular Malaysia consists of Selangor and Wilayah Persekutuan; Northern Region consists of the states of Perak, Penang and Kedah; and Southern Region comprises of the states of Malacca, Negeri Sembilan and Johor. The sample is heavily weighted to Central Region (71%), 16% from the Northern Region and 13% from the Southern Region.

In brief, the sample is from Western part of Peninsular Malaysia, it is quite diverse in term of the industry type and from five different nationalities.

4.2 ANALYSIS AND TESTING OF HYPOTHESIS

H 1: Asian- and Western-base of Malaysian organizations do not differ in term of organizational culture

The survey shows organization culture of Asian- and Western-base of Malaysian organizations is different significantly (see Table 1). Most of the respondents (42.6%) from Asian-base companies think that his / her company emphasizes on the hierarchical cultures, followed by market cultures (38.3%).
This means that most of the Asian-base organization practice tight control and focus internally on stability and management of the existing bureaucracy. On the other hand, 61.1% of respondents from Western-base organizations perceive that the company stress on market-oriented cultures that have tight control with external focus on market competitiveness, productivity and efficiency. Hence, H1 is rejected.

H 2: Organization culture does not influence significantly the learning disciplines and learning types of Malaysian organizations

On a five-point scale, the extent to which the respondents focused on the five learning disciplines is as shown in Table 2. The result indicates that personal mastery is the most dominant learning discipline, followed by shared vision (see Table 3) and team learning. It means that most of the respondents see that their organizations are committed to lifelong learning, invest and provide an environment in which individuals can develop their capacity to learn. On the other hand, mental model is the least dominant learning discipline, meaning that the individuals are undisciplined in reflective thinking.

The result also suggests that most of the respondents perceive that their organizations emphasize on single-loop learning rather than double-loop learning (see Table 2). This implies that people always seek for error detection and correction rather than having forward thinking in analyzing and reflecting on the real problem and questioning what is going wrong with existing system of the organization.

From the survey, business cultures appear to have a strong influence on the learning disciplines and learning types of an organization. Cultures that focus externally (adhocracy and market cultures) are most the effective in enhancing learning disciplines (see Table 39). Market cultures promote a customer-oriented value system with a focus on productivity, efficiency and market competitiveness, and adhocracy cultures encourage innovativeness, creativeness and market expansion. Generally, these organizations realize that to survive and expand in the more and more competitive market, they have to invest heavily in continuous learning, encourage self-managed learning and share their vision of being a learning organization with the employees. Additionally, they encourage the
employees to expand their knowledge via inquiry and reflection; promote team
learning and systems thinking that enable the transformation of reflection-inquiry
skills into organizational capabilities.

Clan organizations emphasize human resource values like morale,
involve ment, cohesion and openness. Clan cultures have significant influence on
all learning disciplines, except personal mastery. A hierarchical-based culture is
characterized by tight, centralized control and internal focus. Hence, it was
assumed that the companies with hierarchical cultures are not or less effective in
enhancing learning disciplines and finding of the survey supports this
assumption.

Furthermore, the finding indicates that clan and adhocracy cultures are
effective in enhancing double-loop learning. People ideas are assessed and
appreciated in clan organizations, whereas, adhocracy companies focus
externally value innovative and change. Both cultures appreciate loose control.
Therefore, people in both of these organizations tend to reflect on the actual
problem and dare to question the weaknesses of existing system and carry out
innovative changes. Apart from that, we can notice that adhocracy- and
hierarchical-based companies have significant effect on single-loop learning,
especially those hierarchical organizations. Hierarchical companies emphasize
on routinization, formalization and structure, and hence involving in error-and-
correction process and adapt themselves to existing operational systems.

In addition to the above findings, “shared vision”, “team learning” and
“systems thinking” are found different significantly against the four business
cultures (see Table 15) but, there is no significant different of learning types
against the four cultures (see Table 16).

Overall, above findings suggest that H2 is rejected.

H 3: Organization culture does not have significant influence on the ability
of organization to transform itself into learning organization

Table 3 shows that most of the respondents see that his / her organization
possesses learning culture that value and support continuous learning and learn
from failures as well as successes.
From the survey, companies with adhocracy and market cultures are most capable to transform itself into learning organization. Clan-based companies are also able to transform itself into learning organization, but not as dramatically as companies with adhocracy and market cultures. Market cultures have the greatest influence on optimizations of strategies that incorporate the learning experience into company actions, followed by a streamlined, flat, boundaryless structure that maximizes information flow and collaboration.

The survey also indicates that hierarchical companies do not have such transformation capability (see Table 40). Thus, we can conclude that business cultures do have significant effect on the organization’s ability to transform itself into a learning organization, and thus **H3 is rejected**.

Furthermore, the result shows that vision, supportive learning culture, strategy that incorporate learning into operation and organization structure that designed to enhance organizational learning are vary over the four different business cultures (see Table 16).

**H 4: Organization culture does not have significant effect on empowerment of leaders, customers, suppliers and community group to learn**

As indicated in Table 4, “customers” is the group of people that Malaysian organizations empower most to participate in learning activities. However, we found that these organizations hardly participate in joint learning with suppliers, community groups, professional associations and academic institutions.

Referring to result as shown in Table 41, managers / leaders have substantial influence in the organizational learning process regardless which types of business cultures an organization practices. This shows the critical roles of leaders in learning activities and this is aligned with the findings by Kaiser (2000) where he found the roles of leadership explain the learning activities. Furthermore, the survey finds that adhocracy- and market-based organizations are the most effective in encouraging leaders, customers, suppliers and community groups to participate in the learning activities. This is supported by empirical result of Yeung et al. (1999) that these organizations learn through competency acquisition by involving key customers in training programs;
experimentation occur via customer requests or challenges: and continuous improvement happens through feedback from customers. In fact, suppliers and community groups are playing vital roles as customers in learning activities in these organizations.

Apart from this, the survey finds that hierarchical-based organizations are not effective at all in involving suppliers, customers and community groups in the learning activities. The same applies to clan organizations, but, surprisingly; the finding shows a negative effect of clan cultures on customers’ participation in learning process. This might be because of this culture focus internally and do not realize the significant roles of suppliers, customers and community in the organizational learning process.

The extent of organizations empowers leaders and customers in learning process are different significantly across the four business cultures (see Table 17). Overall, result demonstrates that adhocracy and market cultures are most the effective in empowering people to participate in learning process. This suggests that H4 should be rejected.

**H 5: Organization culture does not affect significantly organization's knowledge management**

The survey indicates that knowledge acquisition is the most preferred type of knowledge management while knowledge creation is the least preferred (see Table 5). In other words, most of the respondents see that people in the company always collect data and information from within and outside the organization in order to improve their work, but this people rarely have the skills of creating new knowledge within the organization and new ways of developing products.

Finding suggests that companies with adhocracy and market cultures are most capable in knowledge acquisition, storage, transfer and utilization (see Table 42). Adhocracy and market cultures emphasize on external focus. External focus makes these firms particularly aware of the importance on acquisition of external and internal information with the aim of improving and benchmarking the best practices. Knowledge acquired is stored in order to transfer and utilize across groups, departments and divisions.
In addition, result shows that organizations with adhocracy and clan cultures are effective in knowledge creation. These kinds of organization value loose control and creative thinking; this might enable their people to be more innovative where new knowledge is much easier being created and generated. Whereas, hierarchical and market-oriented organizations stress on tight control causes new knowledge hardly being created and experimented. Besides, demonstration projects which are usually complex and involved holistic, system-wide changes that are undertaken with the goal of developing new organizational capacities seldom encouraged in hierarchical- and market-based organizations.

Other than capability in knowledge creation, clan-based organizations are capable as well in knowledge storage, transfer and utilization. Clan cultures focus on cohesion, participation and openness, and therefore it is expected that these firms are willing to invest in coding and storage of knowledge, and share such knowledge with each other to ensure cohesion and full participation of every employee. Nonetheless, finding indicates that clan-based organizations are not effective in knowledge acquisition. Internal focus of this culture might cause to the people does not realize the importance of collecting and transferring external information within the organization in order to perform benchmarking.

Another important finding of this research is that hierarchical organizations with emphasis on bureaucracy do not have significant effect on knowledge management.

As shown in Table 18, the extent that organizations acquire and create knowledge are not vary significantly, but knowledge storage, transfer and utilization differ significantly across the four kinds of business cultures. Generally, adhocracy cultures have the greatest positive effect on knowledge acquisition, creation, storage, transfer and utilization. As a result, H5 is rejected.

H6: Organization culture does not have significant effect on the application of technology in learning activities

Table 6 demonstrates that information technology which refers to the computer-based technology to gather, code, store, and transfer information across organizations is the tool emphasized most. Whereas, technology-based learning that involves utilization of video, audio, and computer-based multimedia
training for the purpose of delivering and sharing knowledge and skills is the least emphasized tool.

The result in Table 43 presents that business cultures have significant influence on technology application in supporting learning activities. Firms with adhocracies and market cultures are effective in promoting the application of technology in learning activities. Adhocracy-based organizations focus on flexibility and decentralization, while market-oriented firms emphasize on task focus and efficiency, hence these firms utilize information technology such as effective and efficient computer-based information systems, LAN, internet and groupware to facilitate learning, manage the group processes and transfer information in ways best suited to meet the organizational needs.

Additionally, companies with clan, adhocracy and market cultures are effective in utilizing technology-based learning and electronic performance support systems (EPSS). This means that these organizations basically provide the learning facilities (e.g.: training and conference rooms) that incorporate electronic multimedia support, computer learning programs and full access to the data their people to do their jobs effectively and enable them to learn better.

Extent of organizations applies technology-base learning and electronic performance support system is differed significantly over the four different types of business cultures (see Table 19). Finding shows that adhocracy and market cultures are most the effective in promoting technology in the learning activities. Thus, H6 is rejected.

H 7: **There is no significant relationship between organization culture and the organization's learning opportunity**

**Formal Learning**

Formal learning is the least offered learning opportunity since this learning is often expensive and time-consuming, and they do not produce immediate results to the organizations. Among all, organizations conduct "seminars or conferences externally" most frequently, followed by "seminars or conferences internally", but organizations seldom offered "tuition reimbursement to attend formal university courses" and "videotapes on job function related topics" (see Table 7). In general, formal learning is not varied across the four business
cultures (see Table 20). The survey exhibits that clan, adhocracy and market cultures have significant relationships with overall formal learning. However, regardless of the business cultures, Malaysian organizations rarely offer tuition reimbursement to attend formal university courses. This is proven via insignificant relationship between business cultures and tuition reimbursement to attend such courses (see Table 9).

Another finding which is consistent with what we found earlier, where adhocracy- and market-based organizations are effective in knowledge acquisition. These companies may acquire knowledge from external sources, for example external seminars or conferences. Additionally, from the survey, we can conclude that firms with hierarchical cultures seldom invest in formal learning.

**Informal Learning**

"Job aids, checklists, tools, etc. from peers and supervisor to improve one's job" is the most preferred informal learning, while "formal monitoring from supervisors on professional and career development" is the least preferred (see Table 7). Informal learning is not varied over the four business cultures (see Table 20). With reference to Table 10, the four kinds of business cultures are related significantly with the overall informal learning.

Performance planning where the employees are getting performance expectations from supervisors based on strategic organizational goals and setting performance objectives for personal development needs are commonly practiced in an organization regardless the business cultures it applied. This is proven through the significant relationship between the four types of business cultures with performance planning (see Table 10).

Clan and adhocracy cultures emphasize on loose control and hence, the employees are encouraged to learn and develop themselves through referring to professional journals and books. The survey also points out that those firms with clan, adhocracy and market cultures provide computerized information bases to support the employees' work and conducting structure critiquing sessions on one's own or others' work with peers or supervisors.
Incidental Learning

Incidental learning is the most preferred learning opportunity (see Table 7). This indicates that most of the learning occurs in the organizations are not planned and occur spontaneously. This might be because that incidental learning is the least expensive and time-consuming, which can produce immediate results. Respondents learn through “working with peers on joint tasks”, “problem solving with peers or supervisors” and “benchmark best practices” frequently, however, they seldom “getting performance feedback from peers”.

Generally, incidental learning does not deviate across the four business cultures (see Table 20). Adhocracy, hierarchical and market cultures have significant relationships with incidental learning (see Table 11). Basically, “getting performance feedback from supervisor” is practiced in an organization regardless the business cultures the organization owns. Once again, this proves the critical roles of leaders in the learning process.

The survey shows that firms with clan, adhocracy and market cultures commonly identify and discuss the best practices used in other organizations, divisions and department; and individuals also always discuss quality improvement suggestions with peers and supervisors. Additionally, there is a negative significant relationship between clan cultures and “observing supervisor in the process of performing tasks”. This is might be because of clan cultures empower the employees to act and the relationship between leaders and subordinates are basically based on trust and openness, therefore, people might not learn through observing supervisor in the process of performing tasks.

As a whole, companies with adhocracy and market cultures are most effective in providing the three types of learning opportunities. Consequently, we reject H7.

H 8: Learning disciplines / types do not affect significantly individuals' self-rated competency, satisfaction with development and organizational innovativeness

The survey shows that self-rated competency can be further enhanced by strengthening personal mastery and vision shared within the organization. This is supported by research of Tannenbaum (1997) where he found that respondents
report greater self-competence if they have greater awareness of the firm’s vision and if individuals felt that their organization is committed and invest in continuous learning to enhance their skills and knowledge. Nonetheless, this survey indicates that ability to understand the complex connection within the organization, ability to reflect and inquire, process of aligning and developing capacity of a team to create learning are not effective in enhancing self-rated competency (see Table 44).

Research by Tannenbaum (1997) found that shared understanding of what organization is trying to accomplish and how their unit and their job relates to others in the organization was related to satisfaction with development. He also found that supportive continuous learning environment was positively related to satisfaction with development. This is consistent with the finding of this research. Personal mastery requires an organization committed itself to lifelong learning in order to develop the expertise of its staff and therefore able to enhance one’s satisfaction with development. One’s satisfaction with development can also be enhanced through shared vision and systems thinking because shared vision creates a sense of purpose that binds people together and systems thinking enable people to see the whole and complex relationships among a set of organizational factors and issues. Additionally, double-loop learning is having significant influence on one’s satisfaction with development (see Table 44). This might be because that individual has the chance to question the weaknesses and strengths of existing organization systems itself and are empowered to make necessary changes, and thus they have the opportunity to learn and develop themselves during the change process.

From the result obtained, personal mastery, mental model and team learning are the most effective among the five learning disciplines in increasing organizational innovativeness and also. Double-loop learning is found having substantial effect on organizational innovativeness (see Table 44). Personal mastery requires continuous learning, mental models involve reflection-inquiry skills, and team learning align and develop the capacity of a team to create the learning and results its members truly desire, all these causing the people more willing to experiment and take risks, therefore more innovative.
Broadly speaking, firm's commitment to continuous learning and self-managed learning is the most effective in enhancing self-rated competency, satisfaction with development and organizational innovativeness. Furthermore, individuals who are trained and coached in questioning the organization system itself and why the errors or successes occurred in the first place are more satisfied with development since joining the organization. At the same time, organizations are more innovative too. This indicates that learning disciplines and learning types do affect learning consequences. Thus, H8 is rejected.

When we divided the sample into high-, medium- and low-performers based on the three performance outcome, we find that shared vision is the only learning discipline that significantly differentiated the high and low performers (see Table 21, Table 22, Table 23).

H9: Ability of organization to transform itself do not influence significantly individuals' self-rated competency, satisfaction with development and organizational innovativeness

Table 45 shows that supportive learning cultures, strategy that incorporate learning opportunities into operations and reward learning, and flat and boundary-less organization structure do not affect one's self-rated competency. But, these factors do affect significantly one's satisfaction with development and organizational innovativeness.

Finding shows that organization structure that designed to strengthen collaboration within the organization is most effective in enhancing one's satisfaction with development, followed by the strategy that incorporating learning into operation and rewarding people to learn. While learning cultures that support continuous learning and experimental learning is the most effective factor in strengthening organizational innovativeness. Therefore, H9 is rejected.

H10: People that organization empowered to learn do not affect significantly individuals' self-rated competency, satisfaction with development and organizational innovativeness

Involvement of leaders in learning activities is the most effective in enhancing one's self-rated competency, satisfaction with development and
organizational innovativeness (see Table 46). This is consistent with the finding of Tannenbaum (1995) where individuals who attributed a greater percentage of their learning to supervisors reported stronger self-competence and greater satisfaction with development.

Customers and suppliers participation in learning activities do not affect one's self-rated competency, satisfaction with development and organizational innovativeness. This might due to people cannot see the long-term benefits of customers and suppliers participation in the learning activities. Nonetheless, individuals that have chances to participate in joint learning with community groups tend to be more satisfied with development since joining the firm and those firms that provide such learning chances also demonstrate to be more innovative. Hence, people that an organization empowers to learn do affect self-rated competency, satisfaction with development and organizational innovativeness. Consequently, H10 is rejected.

When we divided the sample into high-, medium- and low-performers based on the three performance outcome, we find that leader is the only people that able to make a significant different between the high and low performers in the learning activities (see Table 27, Table 28, Table 29).

H 11: Knowledge management of organization does not have significant effect on individuals' self-rated competency, satisfaction with development and organizational innovativeness

The survey exhibit that knowledge transfer and utilization influence self-rated competency significantly (see Table 47). Knowledge transfer and utilization involve mechanical, electronic, and interpersonal movement of information and knowledge, both intentionally and unintentionally, throughout the organization. Movement of such knowledge might help one understand well about his / her task and assist one to perform his / her job more effective and efficient. Thus, improve one's self-rated competency.

Knowledge storage, and transfer and utilization are effective in enhancing one's satisfaction with development in the organization. Knowledge storage involves coding and preserving of the organization's valued knowledge for easy retrieval, transfer and utilized by any staff member, at any time, and from
anywhere. Therefore, one can learn and develop via the knowledge stored and transferred within the organization.

The survey demonstrates that knowledge creation, storage, transfer and utilization affect organizational innovativeness significantly. To be innovative, an organization needs to have willingness to experiment and take risks; hence, new knowledge has to be created within the organization. Moreover, as an innovator, an organization needs to have the capability to store knowledge created, transfer and apply the newly created knowledge across groups, departments and divisions (see Table 47). **The finding proposes that H11 should be rejected.**

When we divided the sample into high-, medium- and low-performers based on the three performance outcome, we find that knowledge storage, knowledge transfer and utilization differentiate high and low performers significantly (see Table 30, Table 31, Table 32).

**H 12: Technology applications for learning activities do not influence significantly individuals' self-rated competency, satisfaction with development and organizational innovativeness**

The finding shows that application of information technology has significant effect on one's self-rated competency because effective and efficient computer-based information systems can act as an aiding tool for one to carry out his / her tasks more effectively and efficiently. Accessibility to the essential information via local area networks (LAN), internet and utilization of groupware in project management, team processing and meeting management cause one more knowledgeable and proficient on his / her job, thus enable him / her to carry out the job efficiently and effectively.

Additionally, the survey indicates that application of technology-based learning and electronic performance support systems (EPSS) affect significantly one’s satisfaction with development. Such firms are more committed and invested heavily in providing a supportive learning environment with integrated high-technology learning systems aiming at developing one’s skills and knowledge. Moreover, EPSS use data and knowledge bases to capture, store, and distribute information throughout the organization helping its employees to
achieve their highest level of performance in the fastest possible time and hence people is more satisfied with their development in such environment.

As explained earlier, to be innovative, an organization needs to have willingness to experiment and take risks; hence, new knowledge has to be created and stored within the organization. With technology-based learning and EPSS, storage, delivering, distribution and sharing of knowledge and skills across groups, departments and divisions can be easily achieved. This is evident through the result of this research where application of technology-base learning and electronic performance support system influence significantly organizational innovativeness (see Table 48).

Hence, technology applications do have significant influence on individuals’ self-rated competency, satisfaction with development and organizational innovativeness, so, we reject H12.

When we divided the sample into high-, medium- and low-performers based on the three performance outcome, we find information technology, technology-base learning and electronic performance support system significantly differentiated the high and low performers (see Table 33, Table 34, Table 35).

H 13: There is no significant relationship between learning opportunities and self-rated competency, satisfaction with development and organizational innovativeness

The finding indicates that self-rated competency is related significantly with informal and incidental learning (see Table 12). Self-rated competency has insignificant relationship with formal learning. This might due to the perception of respondents that this type of learning does not enhance their job-related knowledge and does not provide necessary practical knowledge in enhancing their proficiency. Moreover, formal learning seems like unable to train them to coach other people to perform better. It is the quality and appropriateness of formal learning opportunity and use of appropriate training policies and practices that determine how well it contributes to the self-rated competency. In term of informal learning, “performances planning where individuals get the performance expectations from supervisors based on strategic organizational goals and set performance objectives for personal development” are able to strengthen one’s
self-rated competency. Additionally, one will have higher self-rated competency if job aids, checklists and tools from peers and supervisor are available (see Table 13).

Analyzing the data of correlation between incidental learning and self-rated competency, one tends to have higher self-rated competency if there are chances to work with peers on joint tasks, peers or supervisors are willing to provide informal performance feedback, share their "war stories", providing tips in completion of a task and reviewing errors with individual. Besides, one who has the chance to benchmark the best practices internally or externally and discussing improvement suggestion with peers and supervisors also tends to have higher self-rated competency. This shows the key role of supervisors and peers in enhancing one's self-rated competency (see Table 14).

Formal, informal and incidental learning opportunities are significantly related to one's satisfaction with development and organizational innovativeness. Internal seminars or conferences might enhance team learning and enable people to share their skills and experiences across groups, departments and divisions. Videotapes with on job function related topic is able to enhance personal development and expand one's understanding and view, thus, people tends to have higher satisfaction with development and the organizations are more innovative. Besides, external seminars or conferences, web-based or computer-based training material and formal university courses enable one to collect useful external information and knowledge that can convert to innovative ideas practiced within the organization.

As explained earlier, informal learning – performance planning and checklist from peers and supervisors do increase one's self-rated competency and these kinds of learning opportunities are able to enhance one's satisfaction with development and organizational innovativeness. In addition, formal mentoring from supervisors on professional and career development, and computerized information to support one's work can further improve one's satisfaction with development and organizational innovativeness. While the availability of professional journals and books for development and structured critiquing sessions on one's own or others' work with peers or supervisors are effective in enhancing organizational innovativeness.
In term of incidental learning, getting performance feedback from supervisors and peers, identification and discussion of the best practices and discussing quality improvement suggestions with peers and supervisors are effective in increasing one's satisfaction with development and organizational innovativeness. Additionally, individuals' satisfaction with development can be further enhanced by observing peers in the process of performing tasks and getting tips in completion of a task from peers or supervisors. Whereas, if there are chances to work with supervisor on joint tasks, innovative ideas are easier to accept and might cause to shorter cycle time for innovation. Working on new projects or working with new clients definitely can provide valuable inputs for an organization to be more innovative. Therefore, we reject H13.

When we divided the sample into high-, medium- and low-performers based on the three performance outcome, we find informal learning and incidental learning opportunities significantly differentiated the high and low performers (see Table 36, Table 37, Table 38).

4.3 SUMMARY OF KEY FINDINGS

From the survey, Asian-based organizations seem to be more hierarchical-oriented, while majority of Western-based organizations are market-oriented.

Generally, organizations with adhocracy cultures (which value creativity, innovation, expansion and growth) and market cultures (focus on customer and market competition) are most the effective in enhancing organizational learning capability. Whereas, clan-based organizations possess moderate organizational learning capability and hierarchical organizations are the least capable in term of organizational learning. Firms with adhocracy and market cultures focus externally and committed to lifelong or continuous learning and encourage self-managed learning in order to enhance one's expertise and proficiency. The importance of being a learning organization is shared throughout the organization and team learning, reflective and systems thinking are encouraged. These organizations provide a supportive learning environment where formal, informal and incidental learning opportunities are incorporated into the organization operations and learning programs. Basically, learning is rewarded in these firms and organization structure is designed in such a way to maximize learning

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throughout the organization. Leaders, customers and suppliers play a vital role in the learning activities. Knowledge is acquired, created, stored, transferred and fully utilized throughout the organization. In order to increase the effectiveness and efficiency of learning, these organizations rely heavily on information technology, technology-based learning and electronic performance support systems.

One’s self-rated competency and satisfaction with development tend to be higher if the organization is committed to continuous learning, sharing its vision throughout the organization, involvement of leader in the learning process, knowledge is transferred and fully utilized in the organization, and technology is applied to improve effectiveness and efficiency. Additionally, one’s satisfaction with development can be further enhanced with systems thinking and double-loop learning. Satisfaction with development tends to be increased if one thinks that the organization supports learning with a flat or boundary-less structure to encourage sharing of learning and incorporate learning opportunities into operations. Utilization of technology-based learning and electronic performance support system can also enhance one’s satisfaction with development.

Continuous learning, self-managed learning, learning via experiments, reflective-inquiry skills, team learning and double-loop learning are all able to help an organization to be more innovative. Leaders are the key persons in any organization that make the innovative and creative ideas realized. Organizational innovativeness tends to increase if leaders are risk-taker and encourage experimentation. Furthermore, an organization tends to be more innovative if it is capable in creating and storing new knowledge, share and utilize such knowledge via technology-based learning and EPSS.

In general, formal learning is the least offered learning opportunity since this learning is often expensive and time consuming, and they do not produce immediate results to an organization. While incidental learning where learning occur spontaneously in the organizations, is the most preferred learning opportunity because it is less costly and less time consuming. From the survey, we can conclude that Malaysian organizations seldom offer their employees tuition reimbursement to attend formal university course. As a whole, the result
shows that companies with adhocracy and market cultures are most effective in providing formal, informal and incidental learning.

Formal learning seems to be not able to increase one's self-rated competency and this might because that formal learning cannot enhance one's job-related knowledge and unable to provide practical knowledge in assisting one's job. However, formal learning can enhance one's satisfaction with development and organizational innovativeness.

Even though tuition reimbursement to attend formal university course are the least offered formal learning by Malaysian organizations, but result suggests that such tuition reimbursement can increase an organizational innovativeness tremendously.

One's self-rated competency and satisfaction with development, and organizational innovativeness are likely to increase if the informal and incidental learning opportunities are provided. These three performance indicators can be increase via performance planning – getting performance expectations from supervisors based on strategic organizational goals and setting performance objectives for personal development needs; job aids, checklists, tools, etc. from peers and supervisors; getting performance feedback from supervisors; identifying and discussing best practices used in other organizations / divisions / departments; and discussing quality improvement suggestions with peers and supervisors.

Overall, the factors that significantly differentiated the high and low performers in the three areas (self-rated competency, satisfaction with development and organizational innovativeness) are: shared vision; organization structure; leader's participation in learning; knowledge storage, transfer and utilization; information technology, technology-based learning and EPSS; informal and incidental learning opportunities.