Chapter 4

Results of the Study

The results of the data were guided by three objectives:

1. To analyze theories, principles, and practices of a learning organization.

2. To develop a learning organization model via HRD unit as an extension of higher education.

3. To test the model through a case study of Thai Airways International Public Company Limited.

This is a quantitative research. The results comprise data from documentary research, the questionnaire and model testing through a case study. These results are presented in 3 parts:

Part 1 Analysis of Theories, Principles and Practices of Learning
Organization as Related to HRD as a Change Agent

Part 2 Process of Model Development
2.1 Survey Results
2.1.1 Socio-demographic Data
2.1.2 Results of the 12 Sub-systems
2.1.3 Results of Individual Characteristics and
Supportive Characteristics for Learning
Organization Development
2.2 Conceptualization of Model Development
2.2.1 Integration of Survey Results
2.2.1.1 Prioritization of the 12 Sub-system for
Learning Organization Development
2.2.1.2 Ranking of Thai and Western Supportive
and Non-Supportive Characteristics

2.2.2   Designing the Model

Part 3 Results of Model Testing through a Case Study

3.1 Summary of Pre-test and Post-test

Part 1   Analysis of Theories, Principles and Practices of Learning Organization as Related to HRD as a Change Agent

From the documentary research, theories, principles and practices of a learning organization as related to HRD, a change agent, were analyzed and integrated With the 12 sub-systems and Thai characteristics that support learning organizations. For each sub-system, theories, principles and practices from various researchers and management consultants were integrated and summarized.

A. Vision and Strategy

Theorists /Researchers	Theories / Principles / Practices
1. Argyris and Schon (1978) 2. Urich, Jick and Glinow (1993) 3. Watkins and Marsick (1992) 4. Peter Senge (1990) 5. Johnson (1996) 6. Bennett and O'Brien (1994) 7. Schwandt's (1974) 8. Slater and Narver (1995) 9. Luthans (1998) 10. Sharratt and Field (1992) 11. Guns (1996) 12. Marquardt (1996)	Organization learning is not new, but it is new for managers to build competitive enterprises. Learning Organization needs to move toward substantial learning where fundamental values and culture not only shape employees but the organization as a system. Learning Organization is progressive and evolutionary . Learning is a continuous process achievable in any sustained or transformative fashion. Building a shared vision is the fifth discipline. Leadership can be shared through strategic planning. Strategy and vision are the key factors that influence learning organization. Members must have a vision of where they want to go. Broad strategy is needed for reaching the companies goals. If learning organization becomes an integral part of the company, the vision and strategy must support and promote it. Creative tension serves as a catalyst or motivational need to learn. Gap between the organization is vision and strategies. The "system" characteristic of learning organization refers to the shared vision of employees throughout the organization and the openness of new ideas. A clear organization direction is a prerequisite for learning organization. Lack of an explicit organizational vision is one of the barriers for applying rhetoric learning organization. Vision is one of the four dimensions for building a learning sub-system. The literature reviewed illustrated clearly that vision and strategy are prerequisite for clear organization direction for learning organization. They provide the force that drives individual motivation for continuous learning and change. It will inspire people to act and make commitment to learning and change as a way of life.

B. Executive Practices

Theorists/ Researchers	Theories / Principles / Practices
1. Bennett and O'Brien (1994) 2. Meyer (1982) 3. Slater and Narver (1995) 4. Marquardt (1996)	To ensure that learning and change take place, executives need to do and support continuous learning. They need to inspire their employees to follow the vision. Learning organization changes the belief or mental models of its members through ideology and structure. It is through the ideology and structure, executives can see new relationships and change the framework. By changing the ideology and/or the structure, the organization can be transformed. Learning facilitates change and leads to improved performance. The development of new knowledge or insights influence behavior. Behavior will change when learning becomes meaningful. Executives need to encourage, expand diversity, and have multicultural and global mindset and learning. They need to support and champion learning projects. It can be summarized that continuous learning strategies alone are not sufficient to create learning organization. Executives must model the behavior, which they desire of their employees. They must engage in professional development and speak often about the connection between continuous learning and organizational results.

C. Managerial Practices

Theorists /Researchers	Theories / Principles / Practices
1. Luthans (1998) 2. Ulrich, Jick and Gilnow (1993) 3. Argyris and Schon (1978) 4. Southern (1997) 5. Johnson (1996) 6. Bennett and O'Brien (1994) 7. Senge (1990) 8. Slater and Narver (1995) 9. Marquardt (1996)	Managerial practice is a critical component for supporting the vision and strategy of a learning organization. The basic concept of organization as learning systems can be traced to the work of Frederick Taylor. He pointed out that learning can be transferred to employees and thus improve the efficiency of the organization. Senge viewed learning organization as being more holistic. New expansive patterns of thinking are nurtured. Collective aspiration is set free and is continually expanding its capacity to create its future. To Argyris and Schon, Deutero learning is necessary for learning organization because it stresses on the process in which the organization learns how to learn while double loop learning involves inquiry and restructuring of the organizational norms. Learning matters for overall corporation's ability to complete and for creating new products and services. Managers can make learning happen and build learning capability. Learning comes from small failures. Failures have a positive influence on long-term performance by increasing risk tolerance, information searching, problem recognition, and information processing and motivational adaptation. Management actions to improve learning capability need to be identified, tested and assessed through multiple research methods. Managers who want to build learning organization must focus on both individual and organizational learning. They need to support their staff to grow and develop and take learning seriously. Managers help people integrate what they have learned and share new ideas with executives. The

Theorists/ Researchers	Theories / Principles / Practices
	Discipline of dialogue is needed in the organization.
	Overall, it can be concluded that managerial practices must support vision and strategy of a learning organization. Without it, the effort of the rest of the organization can fail. Managers also provide a key link between executives and employees. They can directly influence the ways in which the vision, strategy and resulting business are implemented.

D. Climate

Theorists/ Researchers	Theories / Principles / Practices
1. Slater and Narver (1995) 2. McGill and Slocum (1994) 3. Ulrich, Jick and Glinow (1993) 4. Stickney (1997) 5. Owens' (1996) 6. Mullern and Ostergren (1995) 7. Bennett and O'Brien (1994) 8. Senge (1990) 9. Luthans (1998) 10. Sharratt and Field (1992) 11. Guns (1996) 12. Marquardt (1996) 13. Schermerhorn, Jr., et. al, (1997)	Another critical component that supports learning organization is the climate, atmosphere, or culture. Learning organization is a brain-like culture. It is the process by which an organization becomes aware of qualities, pattern and consequences of its own experiences and develops mental models to understand experiences. By enlarging organization capacity to learn, it increases the chance for success. The ability to learn will help the ability to adapt quickly as well as the ability to assimilate new ideas and to transfer these ideas into action faster than a competitor. A climate is composed of trust and people who are unafraid to share ideas and speak their minds. Barriers between managers and employees are eliminated. Ideally, everybody works together to support the collective well being. There are three elements of climate, facilitate leadership, organic and open structure and decentralized approach to planning. All have synergistic influence on learning and performance. Culture is one of the dimensions that are conducive to learning. The culture of organization places a high value on the processes of learning and sets the mechanism for

Theorists/ Researchers	Theories / Principles / Practices
14. Schein, Edgar (1992)	suggestions, teams, empowerment and empathy. Studies by various researchers show that organizational inflexibility and lack of innovation due to conservative values are barriers to the development of learning organization. This empathy is reflected in the genuine concern for and interest in the employee's innovations that can be operationalized through reward systems. Through the literature review, it can be concluded that the first step of learning organization is to develop a strategy that creates a climate for faster learning which will focus on breaking down opposition to learning. Supportive atmosphere is needed to enhance corporate climate for continuous learning. Organizational culture is system of shared actions, values, and beliefs that develops within organization. When people join an organization, they bring with them the values and beliefs they have been taught. Cultural differences may impede significantly on organizational performance and the quality of the worklife of employees. Indeed, it can be said that the organizational culture of a company is often reflected in the cultural values and beliefs of its people. Therefore, in developing a learning organization model for Thai organizations, it is of importance to recognize elements of corporate culture pertinent in most Thai organizations nowadays. Through the study of the psychology of Thai people the concept of Thai culture may be more easily understand.

E. Organizational and Job Structure

Theorists /Researchers	Theories / Principles / Practices
1. Slater and Narver (1995) 2. Ulrich, Jick andGlinow(1993) 3. Peter Senge (1990) 4. Watkins and Marsick (1992) 5. Bennett and O'Brien (1994) 6. Marquardt and Reynolds (1994) 7. Marquardt (1996)	The learning organization is an interconnected system. It requires fluid job descriptions that respond to the changing demands of the external environment, using self-directed, cross-functional work teams that promote this flexibility. Bureaucratic policies and rules that inhibit or impede the flow of information must be kept to a minimum. Senge's five disciplines not only lead to an organization for adaptive capacity but also generative capacity. Generative capacity is the ability to adapt and create an alternative future. Systemic thinking is critical for generative thinking. It is necessary for an organization to reengineer policies and structure that support learning. Strategies for encouraging team mixing and job rotation to maximize knowledge transfer across the organization are important for the success of learning organization.

F. Information Flow

Theorists/ Researchers	Theories / Principles / Practices
1. Luthans (1998) 2. Ulrich, Jick and Glinow (1993) 3. Shrivastava (1983) 4. Bennett and O'Brien (1994) 5. Marquardt and Reynolds (1994)	In learning organizations, information systems support the continuous flow of information to all employees. This includes feedback and debriefing to all in the system. Learning organization changes people's thinking and uses technology to create alternative futures, to connect people throughout the organization at all levels and in all places, to make information available at the point of action and to make systemic problem solving viable. Learning oriented

Theorists/Researchers	Theories / Principles / Practices
6. Marquardt (1996) 7. Guns (1996) 8. Madden (1994) 9. March (1995)	Companies use of technology to obtain and distribute information. Computer systems promote easy communication among employees and ensure that all workers get company data relevant to their jobs. Everyone is responsible for collecting and transferring knowledge, organizing learning events within the organization to capture and share knowledge. Everyone needs to develop a knowledge base around the values and learning needs of the organization and create a mechanism for collecting and storing learning. The ability to learn faster becomes more significant as corporations become more knowledge based. Therefore, technological networks and information tools must be integrated in order to allow access to and exchange of information and learning.

G. Individual and Team Practices

Theorists/ Researchers	Theories / Principles / Practices
1. Bennett (1994) 2. Marquardt and Reynolds (1993) 3. Slater and Narver (1995) 4. Luthans (1998) 5. Ulrich, Jick and Glinow (1998) 6. De Geuss (1998) 7. March (1995) 8. Kramlinger (1992) 9. Guns (1996) 10. Scott (1997)	Individuals and teams must be in alignment with the principles and practices of continuous learning to ensure success. Shared knowledge can be a terrific asset. Individuals and teams share learning when they see mistakes as learning opportunities and not as reasons to blame or punish when they discuss problems honestly and work toward solutions. The utilization of combined resources and energies of individuals, teams and the organization is what creates the learning organization. Group learning is fulfilled through shared experiences. Learning taking place at all levels of the organization is one of the consistent themes. Empowerment should be promoted throughout the structure.

Theorists/Researchers	Theories / Principles / Practices
11. Barron (1997) 12. York (1996) 13. Chotinucht (1997) 14. Neely (1997) 15. Marquardt (1996) 16. Munaker (1997)	Institution learning is the process whereby management changes their mental models of their company, their market and their competition. They also learn by encoding inferences from history into routines that guide behavior. Individual and team learning demands competence, reflection and transformation that can thrive only in a faster learning atmosphere stimulated by challenging and supporting leaders and entrepreneurial teams. Findings from various researchers, which highlight on individual and team practices show that dialogues represent a significant shift in the supervisory relationship. Lack of appropriate information inhibits systems thinking. Interruptions curtail dialogue. Absence of discussion impairs the development of a shared vision. Stage of career determines personal mastery and ineffective leadership affects all dimensions. In conclusion, individuals and teams must openly and honestly discuss the issues and work toward solutions together. Cross-functional team is beneficial and supportive to learning organization. It will help to minimize blame, fear and conflicts throughout the organization.

H. Work Processes

Theorists/ Researchers	Theories / Principles / Practices
1. Bennett (1994) 2. Marquardt (1996) 3. Simon (1975)	Work processes are necessary for supporting the implementation of learning organization successfully. Work processes which enhance learning organization should incorporate systematic problem-solving techniques,

Theorists/Researchers	Theories / Principles / Practices
4. Watkins and Marsick (1992) 5. Argyris and Schon (1978) 6. Genthon (1996) 7. Meyer (1982) 8. McAnally (1997)	allow for experimentation and new approaches, encourage learning from sharing with others and promote a systemic view of the organization. From the literature reviews, the work of Argyris and Schon illustrated that errors occur and often recur persistently because organizations do not dig deeply enough into the underlying values governing actions. A gap occurs between formulation of plans and their implementation. A gap that individuals may not see cannot be eliminated. Gap is the difference between espoused theories and theories-in-use. To Argyris and Schon, single loop learning works well in most ordinary situations where assumptions about cause and effect are correct. Double loop learning is needed when expected results are not achieved. Learning organization creates a system which helps managers test the accuracy of their assumption about the lesson of experience . Finding ways to surface and capture the knowledge talent in experience is an important feature of Learning organization model. In conclusion, work processes which enhance Learning Organization should incorporate systematic problem solving techniques, allow experimentation, encourage learning from others and promote a systemic view of the organization. Single loop learning works well in most ordinary situations but double loop learning is needed when expected results be not achieved.

I. Performance Goals and Feedback

Theorists/ Researchers	Theories / Principles / Practices
1. Bennett and O'Brien (1994) 2. Marquardt and Reynolds (1994) 3. Slater and Narver (1995) 4. Marquardt (1996)	Performance goals and feedback essential for the focal point of any business that intends to succeed must be its customers. The value of learning lies in its ability to help the organization better serve its customers. Performance goals and performance appraisal system support the needs of the customers. Employees need to get regular informal and formal feedback on how they are meeting their goals. Information from customers, suppliers and competitors is needed to improve the quality , which will drive many other improvements throughout the organization. It can be summarized that performance goals and feedback from internal and external customers are necessary in order to meet their needs and focus the learning in the right direction for performance improvements.

J. Training and Education

Theorists/ Researchers	Theories / Principles / Practices
1. Slater and Narver (1995) 2. Ulrich, Jick and Gilnow (1993) 3. Munaker (1997) 4. Bennett and O'Brien (1994) 5. Guns (1996) 6. Marquardt (1996) 7. Hutt (1997)	From the customer's feedback and clear individual goals, employees are given appropriate training and education to improve performance. Training and education must support the principles of organizational learning. Development of new knowledge or insights has potential to influence behavior. Behavior change leads to improved performance. The concept of learning organization is worthwhile and the roles of HRD need to encompass organizational development and establish a framework. The role of the HRD practitioner is to facilitate self-discovery and learning. To take on this role demands a considerable

Theorists/Researchers	Theories / Principles / Practices
	shift in thinking. It is necessary to produce more flexible and adaptable individuals who can think independently and cope with high levels of ambiguity. Learning can be transferred to other employees and thus the organization can become more efficient.
	Formal training programs focus on helping people learn from their own and others' experiences and become more creative problem solvers. Individual development includes team training, study teams, demonstration projects, peer mentoring, and business-based learning projects. Advanced communication technology can provide training via satellite and computer.
	Marquardt suggests many strategies for training and development. Some of these are: system thinking, mental model, personal mastery, team learning, shared vision and dialogue. They are necessary to maximize organizational learning. Development of action learning programs throughout the organization, establish centers of excellence and demonstration projects, transfer classroom learning to the job and acquire and develop competencies in groupware and self-learning technology.
	The conclusion can be made that training and education must support the principles of organizational learning. New knowledge or insights have potential to influence behavior and thus behavior change leads to improved performance. A shift in thinking of HRD practitioners is required in order to facilitate more self-discovery and learning for employees to become flexible and adaptable and think independently to cope with high levels of ambiguity.

K.   Rewards and Recognition

Theorists/ Researchers	Theories / Principles / Practices
1. Luthans (1998) 2. Bennett and O'Brien (1994) 3. Marquardt (1996)	In a learning organization, people are rewarded for continuous learning and change. A system must be set up to support the philosophy and practices of organizational learning. New ideas are important. Mistakes or failures should be viewed as learning opportunities. Individual employees who take risks should be honored. Organizations need to encourage and reward innovations and inventions. Supportive managerial practices and climate will encourage employees to take risks. Mistakes or failures will be viewed as learning opportunities. New ideas should be encouraged and recognized.

L. Individual and Team Development

Theorists/ Researchers	Theories / Principles / Practices
1. Watkins and Marsick (1992) 2. Southern (1997) 3. Marquardt and Reynolds (1994) 4. Mitchell (1996) 5. Castleberg (1994) 6. Bennett and O'Brien (1994) 7. Sangjan (1997) 8. Marquardt (1996)	An organization's success also depends on individual and team development. People need to grow and develop continually. Training is developmentally conceived to enhance the generic problem-solving capacity of the organization through individual and organizational self-development. Learning is viewed as the key developable and tradable commodity of an organization. Learning and working are synonymous in an organization staffed by colleagues and companions rather than bosses. Subordinates and workers are continually searched and examined for newness, new ideas, new problems and new opportunities for learning. Barriers to the learning process fall under the categories of fear, lack of meaning and structure. From one of the

Theorists/Researchers	Theories / Principles / Practices
	studies, it was found that participants felt that the process skills, especially the models of inquiry used outside of work were easier than in their jobs. Organizations can learn collectively, forming "Communities of Practice" that continuously reinvents their work. True teamwork and individual empowerment represent radical shifts in thinking for the business world, but are essential for fully realizing the learning capacity of an organization. No doubt, organizations need to support individuals and teams through high quality development plans including formal and on-the-job learning opportunities.

Part 2   Process of Model Development

2.1 Survey Results

2.1.1   Socio-Demographic Data

The questionnaire was sent to 320 samples. There were 303 (94.7%) respondents who answered the questionnaire. The demographic data of the respondents are shown in Table 1 and 2.

Table 1   Socio-Demographic Characteristics of the Respondents from Thai and Multinational Enterprises and Institutions

Status	No. of samples	Percent
1. Sex		
1.1 Male	170	56.1
1.2 Female	133	43.9
2. Age		
2.1 20-25 years	-	-
2.2 26-30 years	12	4.0
2.3 31-35 years	35	11.6
2.4 36-40 years	73	24.1
2.5 41-45 years	73	24.1
2.6 46-50 years	53	17.5
2.7 51-55 years	38	12.5
2.8 Over 56 years	19	6.3
3. Marital Status		
3.1 Single	68	22.4
3.2 Married	221	72.9
3.3 Divorced	10	3.3
3.4 Separated	1	0.3
3.5 Widowed	3	1.0

Table 1 (Continued)

Status	No. of samples	Percent
4. Education		
4.1 Lower than Bachelor's Degree	24	7.9
4.2 Bachelor's degree	119	39.3
4.3 Master's degree	135	44.6
4.4 Doctorate	25	8.3
5. Level of Position		
5.1 First-Line Manager	94	31.0
5.2 Middle Manager	143	47.2
5.3 Top Manager	66	21.8
6. Enterprises/Institutions		
6.1 Bank (Thai)	40	13.2
6.2 Bank (Multinational)	37	12.2
6.3 Hotel (Thai)	34	11.2
6.4 Hotel (Multinational)	28	9.2
6.5 Insurance (Thai)	39	12.9
6.6 Insurance (Multinational)	39	12.9
6.7 State Enterprise	38	12.5
6.8 University(Government)	21	6.9
6.9 University (Private)	27	8.9
7. Years in Current Position		
7.1 1-5 years	96	31.7
7.2 6-10 years	48	15.8
7.3 11-15 years	38	12.5
7.4 16-20 years	42	13.9
7.5 Over 20 years	79	26.1
Total	**303**	**100.0**

Table 1 indicates that there were a total of 303 samples in the study. 170 or 56.1% were male. 146 or 48.2% were between 36 and 45 years old. 221 (72.9%) were married. 135 (44.6%) had a Master's degree. 143 (47.2%) were middle managers. 199 (65.7%) Thai enterprises and 104 (34.3%) multinational enterprises were surveyed. Of the Thai enterprises, 59 (29.6%) were public and 14 (70.4%) were private. 79 (26.1%) of the samples had more than 20 years' work experience.

Table 2 Number of Managerial Staff in Different Enterprises and Institutions

	Top Manager		Middle Manager		First-Line Manager		Total	
	NO.	Percent	NO.	Percent	NO.	Percent	NO.	Percent
1. Bank (Thai)	14	35.0	22	55.0	4	10.0	40	100.0
2. Bank (Multinational)	7	18.9	17	45.9	13	35.1	37	100.0
3. Hotel (Thai)	9	26.5	18	52.9	7	20.6	34	100.0
4. Hotel (Multinational)	5	17.9	13	46.4	10	35.7	28	100.0
5. Insurance (Thai)	15	38.5	18	46.2	6	15.4	39	100.0
6. Insurance (Multinational)	10	25.6	18	46.2	11	28.2	40	100.0
7. State enterprise	12	31.6	24	63.2	2	5.3	38	100.0
8. University (Governmental)	13	61.9	4	19.0	4	19.0	21	100.0
9. University (Private)	9	33.3	9	33.3	9	33.3	27	100.0
Total	94	31.0	143	47.2	66	21.8	303	100.0

Table 2 indicates that there were a total of 199 samples in Thai enterprises in this study. The largest group were middle managers, 95 (47.74%). The second largest group were top managers, 72 (36.18%). There were a total of 104 respondents in multinational enterprises in this study. The largest group were middle managers, 48 (46.15%). The second largest group were first-line managers, 34 (32.70%).

2.1.2 Results of the 12 Sub-systems

Results from the questionnaire regarding 12 sub-systems are analyzed according to the following categories:

- Comparison between current reality and future possibility from all the respondents.
- Comparison among Thai and multinational enterprises and institutions regarding current reality and future possibility.
- Comparison between the public and private sectors of Thai enterprises and institutions regarding current reality and future possibility.
- Comparison among the 3 managerial levels regarding current reality and future possibility.

The results of these data are presented in Tables 3, 4, 5 and 6.

Table 3 Comparison of Survey Opinion between Current Reality and Future Possibility of the 12 Sub-systems from All the Respondents

Sub-system	Sub-data	Current Reality		Future Possibility		
		$\bar{X}$	S.D.	$\bar{X}$	S.D.	t
A. Vision and Strategy	1. The vision and strategy are continually updated, based on changes in the business environment and customer's needs.	3.68	0.77	4.31	0.65	-18.32**
	2. People take into accounts the organization's long-term goals and strategies as they plan and execute their work.	3.26	0.75	3.99	0.67	-20.77**
	3. We discuss trends and forces that drive current and future changes in our marketplace and industry as a normal part of our work.	3.54	0.87	4.16	0.73	-16.08**
	4. We have a vision of ourselves as an organization in which learning and purposeful change are expected.	3.54	0.90	4.10	0.74	-13.91**
	5. People have a broad understanding of our organization's structure, processes, and systems and how they are related.	3.23	0.74	3.98	0.66	-16.10**
	Total	**3.48**	**0.61**	**4.11**	**0.53**	**-23.82****
B. Executive Practices	6. We are inspired to follow our executives toward our organizational vision.	3.44	0.85	4.02	0.73	-15.73**
	7. Executives visibly lead and facilitate problem-solving efforts or special projects.	3.65	0.89	4.15	0.75	-13.18**
	8. Executives speak about the connections between continuous learning, continuous improvement, quality, and business results.	3.64	0.88	4.14	0.75	-13.52**
	9. We believe that our executives are proud of us.	3.50	0.80	3.97	0.77	-13.44**
	10. Executives hold managers accountable for supporting the development of their employees.	3.86	0.75	4.22	0.71	-10.79**
	Total	**3.62**	**0.68**	**4.09**	**0.62**	**-17.99****
3. Managerial Practices	11. Managers encourage us to pursue personal development as part of our jobs and to learn by doing.	3.46	0.79	4.00	0.75	-14.73**
	12. Managers help their people integrate what they have learned in development or training programs by discussing business applications.	3.05	0.79	3.74	0.75	-17.08**
	13. Managers communicate effectively with their employees about the employees' developmental needs and progress.	3.20	0.85	3.92	0.78	-17.00**
	14. Managers encourage people to contribute ideas for improvements through individual conversations and/or group meetings.	3.37	0.91	3.98	0.84	-15.48**
	15. Managers admit their own mistakes.	3.06	0.91	3.60	0.90	-12.99**
	Total	**3.22**	**0.68**	**3.84**	**0.67**	**-19.68****

Table 3 (Continued)

Sub-system		Sub-data	Current Reality		Future Possibility		t
			$\bar{X}$	S.D.	$\bar{X}$	S.D.	
D. Climate	16.	We are not afraid to share our opinions and speak our minds.	3.25	0.82	3.93	0.76	-17.04**
	17.	We have a healthy sense of "play" about our work; it's O.K. to enjoy our jobs.	3.29	0.70	3.74	0.80	-11.45**
	18.	We work hard to eliminate "we/they" mindsets; we cooperate and collaborate whenever possible.	3.34	0.90	3.95	0.90	-14.14**
	19.	We treat one another as adults-as people who can think for themselves and be responsible.	3.41	0.75	3.95	0.74	-13.41**
	20.	People are interested in and care about one another.	3.38	0.74	3.84	0.80	-12.36**
		Total	**3.33**	**0.59**	**3.88**	**0.64**	**-18.37****
E. Organizational and Job Structure	21.	Job rotation, ad hoc assignments, and/or cross-training (for other jobs) are used to build work-force flexibility.	3.10	0.87	3.79	0.86	-17.57**
	22.	We utilize self-directed work teams that have responsibility for work processes from start to finish.	3.35	0.87	3.89	0.77	-13.70**
	23.	Our work spaces are designed to allow for easy and frequent communication among those who work together most often.	3.50	0.88	3.99	0.80	-12.48**
	24.	We routinely modify work processes in response to changing circumstances or priorities or to improve efficiency.	3.46	0.85	4.04	0.85	-15.83**
	25.	We are reducing the number of rules, policies, forms, and procedures, allowing more individual judgement.	3.12	0.87	3.84	0.88	-18.71**
		Total	**3.31**	**0.65**	**3.91**	**0.66**	**-20.72****
F. Information Flow	26.	We utilize advanced technology to improve the flow of information and to enhance our communication with one another (for example, satellite TV, computer networks, electronic mail, cellular phones, or pagers).	3.73	0.92	4.43	0.71	-17.87**
	27.	We communicate key business information to all employees through channels such as organizational newsletters, department meetings, and/or all-personnel meetings.	3.76	0.79	4.28	0.71	-14.78**
	28.	Those of us for whom it is appropriate have learned to use our computer system effectively.	3.54	0.86	4.21	0.74	-17.13**
	29.	All of our employees receive quality, productivity, cost, or sales data relevant to their jobs on a daily or weekly basis.	2.71	1.00	3.59	1.01	-19.60**
	30.	As our work groups or project teams solve business problems or create new approaches, we communicate our learnings and results throughout the organization (through things such as memos, presentations, E-mail, etc.).	2.97	0.99	3.80	0.91	-17.45**
		Total	**3.34**	**0.72**	**4.07**	**0.66**	**-22.97****

Table 3 (Continued)

Sub-system	Sub-data	Current Reality		Future Possibility		t
		$\overline{X}$	S.D.	$\overline{X}$	S.D.	
G. Individual and Team Practices	31. Individuals and teams are encouraged to identify and solve problems in their work areas.	3.23	0.74	3.92	0.67	-20.05**
	32. In conflict situations, blaming is minimized so that people can openly and honestly discuss the issues and work toward solutions.	3.12	0.76	3.77	0.78	-16.71**
	33. People and groups are encouraged to analyze mistakes in order to learn how to do it better the next time.	3.09	0.85	3.83	0.81	-18.17**
	34. We routinely ask one another for feedback on our performance so that we can continually improve our work.	3.29	0.85	3.94	0.76	-16.67**
	35. We share our expertise and learn from one another through informal conversations and "storytelling."	3.13	0.86	3.81	0.82	-16.61**
	Total	**3.17**	**0.66**	**3.86**	**0.66**	**-22.14****
H. Work Processes	36. We routinely and purposefully use systematic problem-solving techniques for solving difficult problems.	3.25	0.80	3.92	0.77	-15.48**
	37. We routinely experiment with new approaches to our work; we try out new ideas.	3.07	0.88	3.76	0.83	-16.50**
	38. When a group learns or discovers new information that would be helpful to others, that information is quickly disseminated throughout the organization (for example, through presentations, memos, computer networks, etc.).	2.97	0.89	3.75	0.84	-17.78**
	39. When we engage in problem solving, we consider the "ripple" effects that various solutions or actions may have throughout the organization.	3.17	0.87	3.83	0.84	-15.91**
	40. We learn from marketplace through studies of competitors and/or other industry leaders.	3.40	0.88	4.10	0.80	-17.20**
	Total	**3.18**	**0.68**	**3.87**	**0.66**	**-21.32****
I. Performance Goals and Feedback	41. The satisfaction of our internal and external customers is considered in our performance reviews.	3.61	0.95	4.21	0.82	-15.26**
	42. As appropriate, people periodically renegotiate their goals with their key customers, suppliers, and/or managers.	3.22	0.89	3.81	0.86	-15.49**
	43. We routinely give our suppliers (internal and external) feedback on the quality of the products and services they deliver to us.	3.52	0.85	4.06	0.78	-14.54**
	44. We set our individual-development goals during an annual goal-setting process, rather than during our performance appraisals.	3.50	0.87	4.07	0.82	-14.59**
	45. Individuals' performance goals are clearly aligned with the organization's strategic goals.	3.24	0.90	3.95	0.85	-16.05**
	Total	**3.41**	**0.73**	**4.01**	**0.67**	**-18.81****

Table 3 (Continued)

Sub-system	Sub-data	Current Reality		Future Possibility		t
		$\overline{X}$	S.D.	$\overline{X}$	S.D.	
J. Training and Education	46. Educational programs include skill training on "learning how to learn" from one's own experience and from others.	3.16	0.91	3.85	0.80	-17.01**
	47. Educational programs include skill training on becoming more creative problem solvers.	3.22	0.88	3.91	0.81	-17.63**
	48. We have diagnostic tools for individual development and/or developmental-planning processes available for everyone.	2.76	0.94	3.65	0.90	-18.85**
	49. We assign special work projects in which people are given the time and support to learn new skills and knowledge, as well as do the work.	2.90	0.93	3.67	0.91	-18.08**
	50. Formal training programs provide us with tools, job aids, or processes that enhance on-the-job performance.	3.23	0.97	3.87	0.86	-15.48**
	Total	**3.05**	**0.77**	**3.79**	**0.73**	**-21.49**
K. Rewards and Recognition	51. People are recognized for being courageous, that is, for experimenting and taking appropriate chances.	3.20	0.86	3.81	0.79	-16.20**
	52. Managers are rewarded for supporting the development of their employees.	3.36	0.85	3.89	0.79	-14.43**
	53. We share directly in the profits of the business through a profit-based reward system.	2.83	1.10	3.38	1.13	-12.59**
	54. We are not punished for making honest mistakes, for having tried something worthwhile and failed.	3.21	0.84	3.52	0.84	-9.58**
	55. We are recognized for solving business problems or successfully meeting challenges.	3.34	0.87	3.84	0.84	-12.97**
	Total	**3.18**	**0.65**	**3.67**	**0.66**	**-16.85**
L. Individual and Team Development	56. Much of our ongoing learning comes directly out of our work experiences rather than through formal training programs.	3.76	0.70	3.89	0.75	-3.25**
	57. Teams are given appropriate assistance with their development (e.g., process facilitation, team-building support).	3.35	0.77	3.92	0.73	-15.43**
	58. People have individual-development plans that impact their performance in a positive way.	3.03	0.85	3.77	0.79	-17.42**
	59. Work teams and long-term project teams have specific learning agendas.	2.84	0.88	3.57	0.86	-17.06**
	60. Taking responsibility for our own learning and development is considered part of our jobs.	3.32	0.90	3.97	0.82	-15.18**
	Total	**3.25**	**0.60**	**3.82**	**0.59**	**-19.01**

** p < 0.01
* p < 0.05

The t-test results in Table 3 for the sub-system of **vision and strategy** of current reality and future possibility show a strong significant difference (t = -23.82) at the confidence level of 99% (p = 0.01). When the sub-data was analyzed, it was found that the mean of all the sub-data of future possibility was much higher than that of current reality.

The t-test results in Table 3 for the sub-system of **executive practices** of current reality and future possibility show a significant difference (t = -17.99) at the confidence level of 99% (p = 0.01). When the sub-data was analyzed, it was found that the mean of all the sub-data of future possibility was higher than that of current reality.

The t-test results in Table 3 for the sub-system of **managerial practices** of current reality and future possibility show a significant difference (t = -19.68) at the confidence level of 99% (p = 0.01). When the sub-data was analyzed, it was found that the mean of all the sub-data of future possibility was much higher than that of current reality.

The t-test results in Table 3 for the sub-system of **climate** of current reality and future possibility show a significant difference (t = -18.37) at the confidence level of 99% (p = 0.01). When the sub-data was analyzed, it was found that the mean of all the sub-data of future possibility was higher than that of current reality.

The t-test results in Table 3 for the sub-system of **organizational and job structure** of current reality and future possibility show a strong significant difference (t= -20.72) at the confidence level of 99% (p = 0.01). When the sub-data was analyzed, it was found that the mean of all the sub-data of future possibility was much higher than that of current reality.

The t-test results in Table 3 for the sub-system of **information flow** of current reality and future possibility show a strong significant difference (t = -22.97) at the confidence level of 99% (p = 0.01). When the sub-data was analyzed, it was found that the mean of all the sub-data of future possibility was higher than that of current reality.

The t-test results in Table 3 for the sub-system of **individual and team practices** of current reality and future possibility show a strong significant difference (t = -22.14) at the confidence level of 99% (p = 0.01). When the sub-data was analyzed, it was found that the mean of all the sub-data of future possibility was higher than that of current reality.

The t-test results in Table 3 for the sub-system of **work processes** of current reality and future possibility show a strong significant difference (t = -21.32) at the confidence level of 99% (p = 0.01). When the sub-data was analyzed, it was found that the mean of all the sub-data of future possibility was much higher than that of current reality.

The t-test results in Table 3 for the sub-system of **performance goals and feedback** of current reality and future possibility show a significant difference (t = -18.81) at the confidence level of 99% (p = 0.01). When the sub-data was analyzed, it was found that the mean of all the sub-data of future possibility was higher than that of current reality.

The t-test results in Table 3 for the sub-system of **training and education** of current reality and future possibility show a strong significant difference (t = -21.49) at the confidence level of 99% (p = 0.01). When the sub-data was analyzed, it was found that the mean of all the sub-data of future possibility was higher than that of current reality.

The t-test results in Table 3 for the sub-system of **rewards and recognition** of current reality and future possibility show a significant difference (t = -16.85) at the confidence level of 99% (p = 0.01). When the sub-data was analyzed, it was found that the mean of all the sub-data of future possibility was higher than that of current reality.

The t-test results in Table 3 for the sub-system of **individual and team development** of current reality and future possibility show a significant difference (t = -19.01) at the confidence level of 99% (p = 0.01). When the sub-data was analyzed,

it was found that the mean of all the sub-data of future possibility was higher than that of current reality.

From analyzing the total mean of the 12 sub-systems at current reality, the highest one was found to be the mean of **executive practices** ($\overline{X}$ = 3.62). And when the total mean of the 12 sub-systems for future possibility was analyzed, the highest one was the mean of **vision and strategy** ($\overline{X}$ = 4.11). Table 5 shows that the total mean of future possibility was higher than that of current reality.

Table 4 Comparison of Survey Opinion on the 12 Subsystems between personnel of Thai Enterprises and Multinational Enterprises for the Current Reality and Future Possibility

Sub-system	Sub-data	The Current Reality				t	Future Possibility				t
		Thai		Multi			Thai		Multi		
		$\bar{X}$	S.D.	$\bar{X}$	S.D.		$\bar{X}$	S.D.	$\bar{X}$	S.D.	
A. Vision and Strategy	1. The vision and strategy are continually updated, based on changes in the business environment and customer's needs.	3.56	0.82	3.95	0.61	-4.65**	4.20	0.66	4.51	0.56	-4.06**
	2. People take into account the organization's long-term goals and strategies as they plan and execute their work.	3.20	0.80	3.46	0.68	-2.82**	3.98	0.67	4.01	0.66	-0.37
	3. We discuss trends and forces that drive current and future changes in our marketplace and industry as a normal part of our work.	336	0.88	3.92	0.73	-5.86**	4.11	0.74	4.26	0.69	-1.61
	4. We have a vision of ourselves as an organization in which learning and purposeful change are expected.	3.36	0.92	3.94	0.74	-6.01**	4.02	0.78	4.25	0.65	-2.50*
	5. People have a broad understanding of our organization's structure, processes, and systems and how they are related.	3.29	0.71	3.41	0.77	-1.34	4.01	0.65	3.91	0.68	1.23
	Total	3.35	0.64	3.74	0.52	-5.63**	4.07	0.55	4.18	0.49	-1.77
B. Executive Practices	6. We are inspired to follow our executives toward our organizational vision.	3.36	0.82	3.63	0.88	-2.62**	4.02	0.71	4.01	0.75	0.12
	7. Executives visibly lead and facilitate problem-solving efforts or special projects.	3.57	0.93	3.82	0.80	-2.31*	4.14	0.80	4.16	0.70	-0.19
	8. Executives speak about the connections between continuous learning, continuous improvement, quality, and business results.	3.55	0.91	3.88	0.76	-3.34**	4.13	0.79	4.16	0.69	-0.24
	9. We believe that our executives are proud of us.	3.42	0.79	3.67	0.79	-2.65**	3.97	0.78	3.97	0.77	0.04
	10. Executives hold managers accountable for supporting the development of their employees.	3.77	0.78	4.04	0.67	-2.96**	4.19	0.74	4.27	0.65	-0.94
	Total	3.53	0.69	3.80	0.61	-3.35**	4.08	0.64	4.11	0.58	-0.32

Table 4 (Continued)

Sub-system	Sub-data	The Current Reality				t	Future Possibility				t
		Thai		Multi			Thai		Multi		
		$\bar{X}$	S.D.	$\bar{X}$	S.D.		$\bar{X}$	S.D.	$\bar{X}$	S.D.	
C. Managerial Practices	11.Managers encourage us to pursue personal development as part of our jobs and to learn by doing	3.38	0.82	3.66	0.71	-2.99**	3.96	0.78	4.08	0.67	-1.25
	12.Managers help their people integrate what they have learned in development or training programs by discussing business applications.	2.97	0.77	3.24	0.81	-2.85**	3.72	0.77	3.77	0.70	-0.56
	13. Managers communicate effectively with their employees about the employees' developmental needs and progress.	3.12	0.83	3.34	0.86	-2.12*	3.92	0.81	3.92	0.71	-0.04
	14. Managers encourage people to contribute ideas for improvements through individual conversations and/or group meetings.	3.27	0.95	3.57	0.80	-2.77**	3.94	0.91	4.05	0.70	-1.11
	15. Managers admit their own mistakes.	2.93	0.94	3.28	0.79	-3.20**	3.58	0.97	3.65	0.75	-0.71
	Total	**3.14**	**0.70**	**3.42**	**0.61**	**-3.48****	**3.82**	**0.72**	**3.89**	**0.57**	**-0.90**
D. Climate	16. We are not afraid to share our opinions and speak our minds.	3.17	0.82	3.43	0.78	-2.62**	3.93	0.77	3.94	0.74	-0.13
	17. We have a healthy sense of "play" about our work; it's O.K. to enjoy our jobs.	3.25	0.67	3.36	0.74	-1.21	3.77	0.79	3.69	0.81	0.78
	18. We work hard to eliminate "we/they" mindsets; we cooperate and collaborate whenever possible.	3.23	0.92	3.57	0.80	-3.15**	3.92	0.93	4.02	0.83	-0.93
	19. We treat one another as adults-as people who can think for themselves and be responsible.	3.30	0.77	3.58	0.68	-2.75**	3.95	0.75	3.95	0.73	-0.01
	20. People are interested in and care about one another.	3.36	0.77	3.43	0.68	-0.78	3.87	0.81	3.78	0.77	0.87
	Total	**3.27**	**0.60**	**3.47**	**0.54**	**-2.79****	**3.89**	**0.66**	**3.87**	**0.61**	**0.18**

Table 4 (Continued)

Sub-system	Sub-data	The Current Reality				t	Future Possibility				t
		Thai		Multi			Thai		Multi		
		$\bar{X}$	S.D.	$\bar{X}$	S.D.		$\bar{X}$	S.D.	$\bar{X}$	S.D.	
E. Organizational and Job Structure	21. Job rotation, ad hoc assignments, and/or cross-training (for other jobs) are used to build work-force flexibility.	3.08	0.87	3.15	0.87	-0.72	3.80	0.87	3.77	0.86	0.23
	22. We utilize self-directed work teams that have responsibility for work processes from start to finish.	3.22	0.90	3.65	0.74	-4.48**	3.84	0.81	3.99	0.69	-1.60
	23. Our work spaces are designed to allow for easy and frequent communication among those who work together most often.	3.39	0.89	3.74	0.80	-3.38**	3.93	0.83	4.10	0.74	-1.70
	24. We routinely modify work processes in response to changing circumstances or priorities or to improve efficiency	3.32	0.84	3.75	0.80	-4.26**	3.96	0.86	4.20	0.80	-2.31*
	25. We are reducing the number of rules, policies, forms, and procedures, allowing more individual judgement.	2.99	0.89	3.34	0.83	-3.22**	3.77	0.91	3.95	0.81	-1.64
	Total	**3.20**	**0.66**	**3.53**	**0.56**	**-4.31****	**3.86**	**0.69**	**4.00**	**0.58**	**-1.81**
F. Information Flow	26. We utilize advanced technology to improve the flow of information and to enhance our communication with one another (for example, satellite TV, computer networks, electronic mail, cellular phones, or pagers).	3.51	0.94	4.17	0.69	-6.97**	4.34	0.71	4.60	0.69	-3.09**
	27. We communicate key business information to all employees through channels such as organizational newsletters, department meetings, and/or all-personnel meetings.	3.59	0.81	4.09	0.63	-5.95**	4.21	0.75	4.43	0.61	-2.72**
	28. Those of us for whom it is appropriate have learned to use our computer system effectively.	3.42	0.86	3.81	0.81	-3.79**	4.19	0.76	4.26	0.70	-0.73
	29. All of our employees receive quality, productivity, cost, or sales data relevant to their jobs on a daily or weekly basis.	2.52	0.95	3.14	1.02	-5.24**	3.49	1.01	3.80	0.99	-2.54**
	30. As our work groups or project teams solve business problems or create new approaches, we communicate our learnings and results throughout the organization (through things such as memos, presentations, E-mail, etc.).	2.77	0.96	3.37	0.92	-5.21**	3.75	0.93	3.89	0.87	-1.26
	Total	**3.15**	**0.70**	**3.72**	**0.60**	**-6.97****	**3.99**	**0.67**	**4.21**	**0.61**	**-2.67****

Table 4 (Continued)

Sub-system	Sub-data	The Current Reality				t	Future Possibility				t
		Thai		Multi			Thai		Multi		
		$\overline{X}$	S.D.	$\overline{X}$	S.D.		$\overline{X}$	S.D.	$\overline{X}$	S.D.	
G. Individual and Team Practices	31. Individuals and teams are encouraged to identify and solve problems in their work areas.	3.32	0.75	3.45	0.68	-3.51**	3.91	0.68	3.94	0.65	-0.35
	32. In conflict situations, blaming is minimized so that people can openly and honestly discuss the issues and work toward solutions.	3.08	0.77	3.23	0.76	-1.69	3.77	0.77	3.77	0.79	0.04
	33. People and groups are encouraged to analyze mistakes in order to learn how to do it better the next time.	2.92	0.87	3.42	0.73	-5.18**	3.76	0.80	3.96	0.81	-2.02*
	34. We routinely ask one another for feedback on our performance so that we can continually improve our work.	3.19	0.86	3.48	0.79	-2.78**	3.94	0.76	3.95	0.76	-0.08
	35. We share our expertise and learn from one another through informal conversations and "storytelling."	3.08	0.87	3.25	0.81	-1.61	3.84	0.82	3.76	0.83	0.82
	Total	**3.08**	**0.68**	**3.36**	**0.60**	**-3.62****	**3.84**	**0.65**	**3.88**	**0.67**	**-0.43**
H. Work Processes	36. We routinely and purposefully use systematic problem-solving techniques for solving difficult problems.	3.14	0.81	3.47	0.72	-3.46**	3.89	0.78	3.97	0.75	-0.84
	37. We routinely experiment with new approaches to our work; we try out new ideas.	2.96	0.88	3.32	0.84	-3.41**	3.74	0.86	3.80	0.76	-0.58
	38. When a group learns or discovers new information that would be helpful to others, that information is quickly disseminated throughout the organization (for example, through presentations, memos, computer networks, etc.).	2.78	0.87	3.35	0.81	-5.49**	3.72	0.84	3.81	0.85	-0.96
	39. When we engage in problem solving, we consider the "ripple" effects that various solutions or actions may have throughout the organization.	3.05	0.87	3.41	0.82	-3.50**	3.84	0.85	3.82	0.81	0.15
	40. We learn from marketplace through studies of competitors and/or other industry leaders.	3.24	0.87	3.72	0.81	-4.71**	4.02	0.81	4.25	0.76	-2.30*
	Total	**3.04**	**0.67**	**3.45**	**0.59**	**-5.36****	**3.84**	**0.68**	**3.93**	**0.63**	**-1.08**

Table 4 (Continued)

Sub-system	Sub-data	The Current Reality				t	Future Possibility				t
		Thai		Multi			Thai		Multi		
		$\bar{X}$	S.D.	$\bar{X}$	S.D.		$\bar{X}$	S.D.	$\bar{X}$	S.D.	
I. Performance Goals and Feedback	41. The satisfaction of our internal and external customers is considered in our performance reviews.	3.45	0.97	3.94	0.82	-4.38**	4.14	0.88	4.33	0.68	-1.99*
	42. As appropriate, people periodically renegotiate their goals with their key customers, suppliers, and/or managers.	3.07	0.88	3.53	0.85	-4.28**	3.77	0.92	3.87	0.73	-0.93
	43. We routinely give our suppliers (internal and external) feedback on the quality of the products and services they deliver to us.	3.35	0.89	3.87	0.66	-5.67**	4.02	0.84	4.15	0.65	-1.54
	44. We set our individual-development goals during an annual goal-setting process, rather than during our performance appraisals.	3.35	0.88	3.83	0.73	-5.06**	4.01	0.86	4.17	0.71	-1.69
	45. Individuals' performance goals are clearly aligned with the organization's strategic goals.	3.09	0.90	3.58	0.83	-4.57**	3.90	0.88	4.05	0.80	-1.42
	Total	**3.26**	**0.73**	**3.75**	**0.60**	**-6.20****	**3.96**	**0.72**	**4.11**	**0.56**	**-1.87**
J. Training and Education	46. Educational programs include skill training on "learning how to learn" from one's own experience and from others.	3.09	0.93	3.35	0.86	-2.42*	3.86	0.81	3.83	0.78	0.30
	47. Educational programs include skill training on becoming more creative problem solvers.	3.18	0.88	3.34	0.88	-1.48	3.93	0.78	3.89	0.86	0.39
	48. We have diagnostic tools for individual development and/or developmental-planning processes available for everyone.	2.61	0.94	3.09	0.86	-4.34**	3.62	0.91	3.70	0.88	-0.71
	49. We assign special work projects in which people are given the time and support to learn new skills and knowledge, as well as do the work.	2.83	0.95	3.07	0.89	-2.09*	3.68	0.94	3.65	0.87	0.30
	50. Formal training programs provide us with tools, job aids, or processes that enhance on-the-job performance.	3.13	0.94	3.43	0.96	-2.63**	3.84	0.84	3.92	0.90	-0.72
	Total	**2.97**	**0.77**	**3.25**	**0.75**	**-2.98****	**3.79**	**0.73**	**3.79**	**0.75**	**-0.04**

Table 4 (Continued)

Sub-system	Sub-data	The Current Reality				t	Future Possibility				t
		Thai		Multi			Thai		Multi		
		$\bar{X}$	S.D.	$\bar{X}$	S.D.		$\bar{X}$	S.D.	$\bar{X}$	S.D.	
K Rewards and Recognition	51. People are recognized for being courageous, that is, for experimenting and taking appropriate chances.	3.05	0.86	3.52	0.77	-4.68**	3.74	0.82	3.94	0.71	-2.00*
	52. Managers are rewarded for supporting the development of their employees.	3.24	0.85	3.60	0.81	-3.60**	3.86	0.82	3.94	0.73	-0.84
	53. We share directly in the profits of the business through a profit-based reward system.	2.68	1.17	3.08	0.92	-3.20**	3.29	1.21	3.56	0.95	-2.03*
	54. We are not punished for making honest mistakes, for having tried something worthwhile and failed.	3.08	0.89	3.42	0.73	-3.51**	3.47	0.88	3.62	0.75	-1.40
	55. We are recognized for solving business problems or successfully meeting challenges.	3.22	0.87	3.57	0.80	-3.41**	3.83	0.86	3.85	0.80	-0.18
	Total	**3.05**	**0.64**	**3.43**	**0.55**	**-4.90****	**3.62**	**0.70**	**3.76**	**0.57**	**-1.74**
L Individual and Team Development	56. Much of our ongoing learning comes directly out of our work experiences rather than through formal training programs.	3.69	0.74	3.88	0.60	-2.49*	3.87	0.77	3.94	0.71	-0.75
	57. Teams are given appropriate assistance with their development (e.g., process facilitation, team-building support).	3.23	0.74	3.58	0.77	-3.79**	3.91	0.72	3.93	0.75	-0.27
	58. People have individual-development plans that impact their performance in a positive way.	2.96	0.90	3.19	0.71	-2.38*	3.78	0.80	3.74	0.77	0.39
	59. Work teams and long-term project teams have specific learning agendas.	2.74	0.88	3.05	0.83	-2.90**	3.57	0.86	3.56	0.87	0.01
	60. Taking responsibility for our own learning and development is considered part of our jobs.	3.21	0.94	3.53	0.78	-3.13**	3.96	0.86	4.00	0.75	-0.41
	Total	**3.17**	**0.62**	**3.44**	**0.52**	**-3.76****	**3.82**	**0.60**	**3.82**	**0.58**	**-0.21**

** p < 0.01
* P < 0.05

In Table 4, the mean difference of the opinion in **vision and strategy** between personnel of Thai enterprises and multinational enterprises **at current reality** shows a high significant difference (t = -5.63) at the confidence level of 99%. This means that the mean score of the opinion of personnel in multinational enterprises is much higher than those in Thai enterprises. Of each of the sub-data surveyed, most shows a strong significant difference at the confidence level of 99% except for sub-data 5 that is non-significant. **For future possibility**, the mean difference of the opinion in **vision and strategy** between Thai enterprises and multinational enterprises shows no significant difference (t = -1.77) at the confidence level of 99%. Of each of the sub-data surveyed, most shows no significant difference at the confidence level of 99% except sub-data 1 and sub-data 4 show a strong significant difference at the confidence level of 99%.

In Table 4, the mean difference of the opinion in **executive practices** between personnel of Thai enterprises and multinational enterprises **at current reality** shows a significant difference (t = -3.35) at the confidence level of 99%. This means that the mean score of the opinion of personnel in multinational enterprises is much higher than that of those in Thai enterprises. Of each of the sub-data surveyed, most show a significant difference at the confidence level of 99% except for sub-data 7 that shows a significant difference at the confidence level of 95%. **For future possibility**, the mean difference of the opinion in **executive practices** between personnel of Thai enterprises and multinational enterprises shows no significant difference (t = -0.32) at the confidence level of 99%. All of the sub-data surveyed are non-significant.

In Table 4, the mean difference of the opinion in **managerial practices** between personnel of Thai enterprises and multinational enterprises **at current reality** shows a significant difference (t = -3.48) at the confidence level of 99%. This means that the mean score of the opinion of personnel in multinational enterprises is higher than that of those in Thai enterprises. Of each of the sub-data surveyed, most show a significant difference at the confidence level of 99% except for sub-data 13 that shows a significant difference at the confidence level of 95%. **For future**

possibility, the mean difference of the opinion in **executive practices** between personnel of Thai enterprises and multinational Enterprises shows no significant difference (t = -0.90) at the confidence level of 99%. All of the sub-data surveyed are non-significant.

In Table 4, the mean difference of the opinion in **climate** between personnel of Thai enterprises and multinational enterprises **at current reality** shows a significant difference   (t = -2.79) at the confidence level of 99%. This means that the mean score of the opinion of personnel in multinational enterprises is higher than that of those in Thai enterprises. Of each of the sub-data surveyed, most show a significant difference at the confidence level of 99% except for sub-data 17 and sub-data 20 that are non-significant. **For future possibility**, the mean difference of the opinion in **climate** between personnel of Thai enterprises and multinational enterprises shows no significant difference (t = 0.18) at the confidence level of 99%. All of the sub-data surveyed are non-significant.

In Table 4, the mean difference of the opinion in **organizational and job structure** between personnel of Thai enterprises and multinational enterprises **at current reality** shows a high significant difference (t = -4.31) at the confidence level of 99%. This means that the mean score of the opinion of personnel in multinational enterprises is higher than that of those in Thai enterprises. Of each of the sub-data surveyed, most show a significant difference at the confidence level of 99% except for sub-data 21 that is non-significant. **For future possibility**, the mean difference of the opinion in **organizational and job structure** between personnel of Thai enterprises and multinational enterprises shows no significant difference (t = -1.81) at the confidence level of 99%. Most of the sub-data surveyed are non-significant except sub-data 24 that shows a significant difference at the confidence level of 95%.

In Table 4, the mean difference of the opinion in **information flow** between personnel of Thai enterprises and multinational enterprises **at current reality** shows a significant difference   (t = -6.97) at the confidence level of 99%. This means that the mean score of the opinion of personnel in Multinational Enterprises is higher than that of those in Thai enterprises. All of the sub-data surveyed show a high significant

difference at the confidence level of 99%. **For future possibility,** the mean difference of the opinion in **information flow** between personnel of Thai enterprises and multinational enterprises shows a significant difference (t = -2.67) at the confidence level of 99%. Most of the sub-data surveyed show a significant difference at the confidence level of 99% except for sub-data 28 and sub-data 30 that are non-significant.

In Table 4, the mean difference of the opinion in **individual and team practices** between personnel of Thai enterprises and multinational enterprises **at current reality** showed a significant difference (t = -3.62) at the confidence level of 99%. This means that the mean score of the opinion of personnel in multinational enterprises is higher than that of those in Thai enterprises. Of each of the sub-data surveyed, most show a significant difference at the confidence level of 99% except for sub-data 32 and sub-data 35 that are non-significant. **For future possibility,** the mean difference of the opinion in **individual and team practices** between personnel of Thai enterprises and multinational enterprises shows no significant difference (t = -0.43) at the confidence level of 99%. Most of the sub-data surveyed are non-significant except sub-data 33 that shows a significant difference at the confidence level of 95%.

In Table 4, the mean difference of the opinion in **work processes** between personnel of Thai enterprises and multinational enterprises **at current reality** shows a high significant difference   (t = -5.36) at the confidence level of 99%. This means that the mean score of the opinion of personnel in multinational enterprises is higher than that of those in Thai enterprises. All of the sub-data surveyed show a high significant difference at the confidence level of 99%. **For future possibility,** the mean difference of the opinion in **work processes** between personnel of Thai enterprises and multinational Enterprises shows no significant difference (t = -1.08) at the confidence level of 99%. Most of the sub-data surveyed are non-significant except sub-data 40 that shows a significant difference at the confidence level of 95%.

In Table 4, the mean difference of the opinion in **performance goals and feedback** between personnel of Thai Enterprises and multinational Enterprises **at**

current reality shows a high significant difference (t = -6.20) at the confidence level of 99%. This means that the mean score of the opinion of personnel in multinational enterprises is higher than that of those in Thai enterprises. All of the sub-data surveyed show a high significant difference at the confidence level of 99%. **For future possibility,** the mean difference of the opinion in **performance goals and feedback** between personnel of Thai enterprises and multinational enterprises shows no significant difference (t = -1.87) at the confidence level of 99%. Most of the sub-data surveyed are non-significant except sub-data 41 that shows a significant difference at the confidence level of 95%.

In Table 4, the mean difference of the opinion in **training and education** between personnel of Thai enterprises and multinational enterprises **at current reality** shows a significant difference (t = -2.98) at the confidence level of 99%. This means that the mean score of the opinion of personnel in multinational enterprises is higher than that of those in Thai enterprises. Most of the sub-data surveyed show a significant difference at the confidence level of 99% except for sub-data 46 that shows a significant difference at the confidence level of 95% and sub-data 47 that is non-significant. **For future possibility,** the mean difference of the opinion on **training and education** between personnel of Thai enterprises and multinational enterprises shows no significant difference (t = -0.04) at the confidence level of 99%. All of the sub-data surveyed are non-significant.

In Table 4, the mean difference of the opinion in **rewards and recognition** between personnel of Thai enterprises and multinational enterprises **at current reality** shows a high significant difference (t = -4.90) at the confidence level of 99%. This means that the mean score of the opinion of personnel in multinational enterprises is higher than that of those in Thai enterprises. All of the sub-data surveyed show a high significant difference at the confidence level of 99%. **For future possibility,** the mean difference of the opinion in **rewards and recognition** between personnel of Thai enterprises and multinational enterprises shows no significant difference (t = -1.74) at the confidence level of 99%. Most of the sub-data surveyed are non-significant except sub-data 51 and sub-data 53 that show a significant difference at the confidence level of 95%.

In Table 4, the mean difference of the opinion in **individual and team development** between personnel of Thai enterprises and multinational enterprises **at current reality** shows a significant difference (t = -3.76) at the confidence level of 99%. This means that the mean score of the opinion of personnel in multinational enterprises is higher than that of those in Thai enterprises. Most of the sub-data surveyed show a significant difference at the confidence level of 99% except for sub-data 56 and sub-data 58 that show a significant difference at the confidence level of 95%. **For future possibility,** the mean difference of the opinion in **individual and team development** between personnel of Thai enterprises and multinational enterprises shows no significant difference (t = -0.21) at the confidence level of 99%. All of the sub-data surveyed are non-significant.

From analyzing the total mean of the 12 sub-systems of Thai enterprises at current reality, the highest one is found to be **executive practices** ($\overline{X}$ = 3.53). And of the total mean of the 12 sub-systems of multinational enterprises, the highest one is **executive practice** ($\overline{X}$ = 3.80). This shows that the total mean of the 12 sub-systems in multinational enterprises is higher than those in Thai enterprises at the current reality . From analyzing the total mean of the 12 sub-systems of Thai enterprises for future possibility, the highest one is **executive practices** ($\overline{X}$ = 4.08) and the total mean of the 12 sub-systems of multinational enterprises, the highest one is **information flow** ($\overline{X}$ = 4.21). This shows that the total mean of the 12 sub-systems in multinational enterprises is higher than those in Thai enterprises for future possibility. And Table 3 indicates that the total mean of the 12 sub-systems between personnel of Thai enterprises and multinational enterprises for future possibility is higher than those at current reality.

Table 5 Comparison of Survey Opinions on the 12 Sub-systems of Personnel in Thai Enterprises between the Private

Sector and the Public Sector for Current Reality and Future Possibility

Sub-system	Sub-data	Current Reality					Future Possibility				
		Public		Private		t	Public		Private		t
		$\bar{X}$	S.D.	$\bar{X}$	S.D.		$\bar{X}$	S.D.	$\bar{X}$	S.D.	
A. Vision and Strategy	1. The vision and strategy are continually updated, based on changes in the business environment and customer's needs.	3.56	0.91	3.65	0.77	-2.34*	4.11	0.69	4.24	0.66	-1.21
	2. People take into account the organization's long-term goals and strategies as they plan and execute their work.	2.98	0.73	3.29	0.82	-2.52*	3.88	0.63	4.02	0.69	-1.38
	3. We discuss trends and forces that drive current and future changes in our marketplace and industry as a normal part of our work.	3.05	0.94	3.50	0.83	-3.33**	3.89	0.76	4.20	0.72	-2.69**
	4. We have a vision of ourselves as an organization in which learning and purposeful change are expected.	3.14	0.94	3.45	0.90	-2.25*	3.80	0.90	4.11	0.70	-2.52*
	5. People have a broad understanding of our organization's structure, processes, and systems and how they are related.	3.14	0.66	3.36	0.72	-2.07*	3.93	0.57	4.04	0.68	-1.13
	Total	3.13	0.65	3.45	0.61	-3.24**	3.93	0.58	4.13	0.53	-2.24*
B. Executive Practices	6. We are inspired to follow our executives toward our organizational vision.	3.14	0.78	3.45	0.82	-2.54*	3.89	0.73	4.07	0.70	-1.60
	7. Executives visibly lead and facilitate problem-solving efforts or special projects.	3.44	0.92	3.63	0.93	-1.29	4.07	0.76	4.17	0.79	-0.77
	8. Executives speak about the connections between continuous learning, continuous improvement, quality, and business results.	3.34	0.90	3.63	0.90	-2.10*	3.95	0.76	4.21	0.79	-2.13*
	9. We believe that our executives are proud of us.	3.32	0.73	3.46	0.81	-1.10	3.88	0.81	4.01	0.76	-1.14
	10. Executives hold managers accountable for supporting the development of their employees.	3.59	0.87	3.85	0.72	-2.14*	3.96	0.83	4.29	0.69	-2.78**
	Total	3.37	0.71	3.60	0.68	-2.17*	3.93	0.67	4.15	0.62	-2.08*

Table 5 (Continued)

Sub-system	Sub-data	Current Reality				t	Future Possibility				t
		Public		Private			Public		Private		
		$\bar{X}$	S.D.	$\bar{X}$	S.D.		$\bar{X}$	S.D.	$\bar{X}$	S.D.	
C. Managerial Practices	11. Managers encourage us to pursue personal development as part of our jobs and to learn by doing.	3.36	0.78	3.39	0.83	-0.29	3.88	0.76	4.00	0.79	-1.01
	12. Managers help their people integrate what they have learned in development or training programs by discussing business applications.	2.85	0.69	3.02	0.80	-1.46	3.66	0.72	3.75	0.79	-0.72
	13. Managers communicate effectively with their employees about the employees' developmental needs and progress.	2.93	0.79	3.20	0.84	-2.09*	3.80	0.77	3.96	0.83	-1.25
	14. Managers encourage people to contribute ideas for improvements through individual conversations and/or group meetings.	3.12	0.87	3.33	0.97	-1.43	3.80	0.90	4.00	0.91	-1.37
	15. Managers admit their own mistakes.	2.73	0.91	3.02	0.94	-2.03*	3.54	1.01	3.59	0.95	-0.36
	Total	**3.00**	**0.67**	**3.19**	**0.71**	**-1.83**	**3.74**	**0.71**	**3.85**	**0.72**	**-1.04**
D. Climate	16. We are not afraid to share our opinions and speak our minds.	3.05	0.61	3.22	0.89	-1.50	3.78	0.71	3.99	0.78	-1.67
	17. We have a healthy sense of "play" about our work; it's O.K. to enjoy our jobs.	3.16	0.59	3.30	0.70	-1.34	3.73	0.76	3.78	0.81	-0.44
	18. We work hard to eliminate "we/they" mindsets; we cooperate and collaborate whenever possible.	3.00	0.96	3.33	0.90	-2.32*	3.93	0.86	3.91	0.96	0.10
	19. We treat one another as adults-as people who can think for themselves and be responsible.	3.09	0.78	3.43	0.74	-2.93**	3.87	0.72	3.98	0.76	-0.88
	20. People are interested in and care about one another.	3.07	0.77	3.47	0.74	-3.48**	3.85	0.68	3.87	0.86	-0.12
	Total	**3.07**	**0.57**	**3.35**	**0.60**	**-3.00****	**3.83**	**0.61**	**3.91**	**0.67**	**-0.70**

Table 5 (Continued)

Sub-system	Sub-data	Current Reality				t	Future Possibility				t
		Public		Private			Public		Private		
		X̄	S.D.	X̄	S.D.		X̄	S.D.	X̄	S.D.	
E. Organizational and Job Structure	21. Job rotation, ad hoc assignments, and/or cross-training (for other jobs) are used to build work-force flexibility.	2.61	0.82	3.27	0.82	-5.09**	3.51	0.72	3.92	0.90	-2.91**
	22. We utilize self-directed work teams that have responsibility for work processes from start to finish.	2.91	1.05	3.34	0.80	-2.80**	3.62	0.93	3.93	0.75	-2.40*
	23. Our work spaces are designed to allow for easy and frequent communication among those who work together most often.	3.05	0.92	3.53	0.85	-3.45**	3.70	0.92	4.02	0.77	-2.42*
	24. We routinely modify work processes in response to changing circumstances or priorities or to improve efficiency.	3.10	0.81	3.42	0.84	-2.41*	3.80	0.80	4.02	0.88	-1.62
	25. We are reducing the number of rules, policies, forms, and procedures, allowing more individual judgement.	3.02	0.89	2.99	0.90	0.23	3.84	0.81	3.75	0.95	0.59
	Total	**2.93**	**0.70**	**3.31**	**0.62**	**-3.74****	**3.68**	**0.68**	**3.93**	**0.68**	**-2.24***
F. Information Flow	26. We utilize advanced technology to improve the flow of information and to enhance our communication with one another (for example, satellite TV, computer networks, electronic mail, cellular phones, or pagers).	3.25	0.96	3.62	0.91	-2.53*	4.20	0.70	4.40	0.71	-1.80
	27. We communicate key business information to all employees through channels such as organizational newsletters, department meetings, and/or all-personnel meetings.	3.32	0.82	3.70	0.78	-3.06**	4.02	0.73	4.28	0.75	-2.26*
	28. Those of us for whom it is appropriate have learned to use our computer system effectively.	3.15	0.89	3.53	0.82	-2.91**	4.09	0.70	4.23	0.79	-1.18
	29. All of our employees receive quality, productivity, cost, or sales data relevant to their jobs on a daily or weekly basis.	2.31	0.95	2.61	0.93	-2.08*	3.78	0.93	3.53	1.04	-0.99
	30. As our work groups or project teams solve business problems or create new approaches, we communicate our learnings and results throughout the organization (through things such as memos, presentations, E-mail, etc.).	2.50	0.98	2.88	0.93	-2.60**	3.53	0.94	3.84	0.92	-2.12*
	Total	**2.90**	**0.76**	**3.26**	**0.65**	**-3.32****	**3.84**	**0.69**	**4.05**	**0.66**	**-2.00***

Table 5 (Continued)

Sub-system	Sub-data	Current Reality				t	Future Possibility				t
		Public		Private			Public		Private		
		$\overline{X}$	S.D.	$\overline{X}$	S.D.		$\overline{X}$	S.D.	$\overline{X}$	S.D.	
G. Individual and Team Practices	31. Individuals and teams are encouraged to identify and solve problems in their work areas.	2.90	0.72	3.24	0.74	-2.99**	3.73	0.65	3.99	0.68	-2.41*
	32. In conflict situations, blaming is minimized so that people can openly and honestly discuss the issues and work toward solutions.	2.98	0.76	3.12	0.77	-1.12	3.75	0.73	3.79	0.80	-0.32
	33. People and groups are encouraged to analyze mistakes in order to learn how to do it better the next time.	2.76	0.84	2.99	0.87	-1.73	3.62	0.71	3.82	0.83	-1.56
	34. We routinely ask one another for feedback on our performance so that we can continually improve our work.	2.98	0.91	3.28	0.83	-2.26*	3.78	0.74	4.01	0.77	-1.86
	35. We share our expertise and learn from one another through informal conversations and "storytelling."	2.95	0.91	3.13	0.86	-1.34	3.78	0.76	3.87	0.84	-0.66
	Total	**2.91**	**0.70**	**3.15**	**0.66**	**-2.22***	**3.73**	**0.62**	**3.89**	**0.66**	**-1.54**
H. Work Processes	36. We routinely and purposefully use systematic problem-solving techniques for solving difficult problems.	2.97	0.77	3.22	0.82	-1.98*	3.62	0.76	4.00	0.76	-3.14**
	37. We routinely experiment with new approaches to our work; we try out new ideas.	2.72	0.91	3.06	0.85	-2.46*	3.60	0.78	3.80	0.89	-1.48
	38. When a group learns or discovers new information that would be helpful to others, that information is quickly disseminated throughout the organization (for example, through presentations, memos, computer networks, etc.).	2.60	0.77	2.86	0.90	-1.87	3.60	0.68	3.76	0.89	-1.20
	39. When we engage in problem solving, we consider the "ripple" effects that various solutions or actions may have throughout the organization.	2.81	0.83	3.15	0.87	-2.55*	3.61	0.88	3.93	0.83	-2.35*
	40. We learn from marketplace through studies of competitors and/or other industry leaders.	2.75	0.87	3.43	0.79	-5.30**	3.61	0.94	4.18	0.70	-4.60**
	Total	**2.77**	**0.65**	**3.15**	**0.65**	**-3.71****	**3.60**	**0.69**	**3.94**	**0.65**	**-3.16****

Table 5 (Continued)

Sub-system	Sub-data	Current Reality				t	Future Possibility				t
		Public		Private			Public		Private		
		X̄	S.D.	X̄	S.D.		X̄	S.D.	X̄	S.D.	
I. Performance Goals and Feedback	41. The satisfaction of our internal and external customers is considered in our performance reviews.	3.28	0.87	3.52	1.00	-1.63	3.98	0.78	4.21	0.91	-1.62
	42. As appropriate, people periodically renegotiate their goals with their key customers, suppliers, and/or managers.	2.82	0.81	3.17	0.89	-2.55*	3.62	0.86	3.83	0.93	-1.43
	43. We routinely give our suppliers (internal and external) feedback on the quality of the products and services they deliver to us.	3.07	0.85	3.46	0.89	-2.80**	3.83	0.85	4.09	0.82	-1.91
	44. We set our individual-development goals during an annual goal-setting process, rather than during our performance appraisals.	3.12	0.95	3.44	0.84	-2.30*	3.78	0.97	4.10	0.80	-2.37*
	45. Individuals' performance goals are clearly aligned with the organization's strategic goals.	2.88	0.96	3.18	0.86	-2.17*	3.74	0.91	3.96	0.86	-1.56
	Total	3.03	0.73	3.35	0.72	-2.76**	3.78	0.74	4.04	0.70	-2.24*
J. Training and Education	46. Educational programs include skill training on "learning how to learn" from one's own experience and from others.	2.88	0.90	3.17	0.93	-2.05*	3.65	0.82	3.94	0.80	-2.24*
	47. Educational programs include skill training on becoming more creative problem solvers.	3.10	0.85	3.21	0.89	-0.77	3.78	0.71	3.99	0.80	-1.64
	48. We have diagnostic tools for individual development and/or developmental-planning processes available for everyone.	2.38	0.86	2.71	0.96	-2.29*	3.40	0.92	3.71	0.89	-2.17*
	49. We assign special work projects in which people are given the time and support to learn new skills and knowledge, as well as do the work.	2.53	0.96	2.96	0.92	-2.91**	3.49	1.02	3.76	0.89	-1.82
	50. Formal training programs provide us with tools, job aids, or processes that enhance on-the-job performance.	2.83	0.90	3.25	0.93	-2.94**	3.65	0.91	3.92	0.81	-1.99*
	Total	2.74	0.77	3.06	0.75	-2.66**	3.60	0.79	3.86	0.69	-2.32*

Table 5 (Continued)

Sub-system		Sub-data	Current Reality				t	Future Possibility				t
			Public		Private			Public		Private		
			$\bar{\mathrm{X}}$	S.D.	$\bar{\mathrm{X}}$	S.D.		$\bar{\mathrm{X}}$	S.D.	$\bar{\mathrm{X}}$	S.D.	
K. Rewards and Recognition	51.	People are recognized for being courageous, that is, for experimenting and taking appropriate chances.	2.91	0.82	3.10	0.87	-1.41	3.60	0.78	3.81	0.82	-1.60
	52.	Managers are rewarded for supporting the development of their employees.	3.09	0.84	3.30	0.84	-1.61	3.78	0.79	3.89	0.83	-0.83
	53.	We share directly in the profits of the business through a profit-based reward system.	2.64	1.30	2.69	1.11	-0.28	3.45	1.16	3.23	1.23	1.08
	54.	We are not punished for making honest mistakes, for having tried something worthwhile and failed.	3.13	0.92	3.06	0.88	0.47	3.51	0.93	3.46	0.86	0.38
	55.	We are recognized for solving business problems or successfully meeting challenges.	2.95	0.85	3.33	0.86	-2.84**	3.69	0.72	3.89	0.91	-1.59
		Total	**2.95**	**0.67**	**3.09**	**0.63**	**-1.38**	**3.59**	**0.69**	**3.64**	**0.70**	**-0.42**
L. Individual and Team Development	56.	Much of our ongoing learning comes directly out of our work experiences rather than through formal training programs.	3.62	0.77	3.71	0.72	-0.81	3.78	0.81	3.91	0.75	-1.02
	57.	Teams are given appropriate assistance with their development (e.g., process facilitation, team-building support).	3.03	0.73	3.31	0.73	-2.46*	3.84	0.71	3.94	0.72	-0.86
	58.	People have individual-development plans that impact their performance in a positive way.	2.76	0.90	3.04	0.89	-2.40*	3.67	0.77	3.82	0.81	-1.16
	59.	Work teams and long-term project teams have specific learning agendas.	2.65	0.86	2.78	0.89	-0.97	3.50	0.97	3.59	0.82	-0.66
	60.	Taking responsibility for our own learning and development is considered part of our jobs.	2.91	0.88	3.34	0.93	-2.94**	3.67	0.90	4.07	0.82	-2.96**
		Total	**3.00**	**0.61**	**3.24**	**0.62**	**-2.50***	**3.69**	**0.68**	**3.87**	**0.56**	**-1.89**

** $p < 0.01$ * $p < 0.05$

In Table 5, the mean difference of the opinion in **vision and strategy at current reality** of personnel in Thai enterprises between the private sector and the public sector shows strong significant difference (t = -3.24) at the confidence level of 99%. This shows that the opinion of the private sector is higher than that of the public sector. Of each of the sub-data surveyed, most show a significant difference at the confidence level of 95 % except for sub-data 3 shows a significant difference at the confidence level of 99%. **For future possibility**, the mean difference of the opinion in **vision and strategy** of personnel in Thai enterprises between the private sector and the public sector shows a significant difference (t = -2.24) at the confidence level of 95%. This shows that the opinion of the private sector is higher than that of the public sector. Of each of the sub-data surveyed, most are non-significant except for sub-data 3 shows a significant difference at the confidence level of 99% and sub-data 4 shows a significant difference at the confidence level of 95%.

In Table 5, the mean difference of the opinion in **executive practices at current reality** of personnel in Thai enterprises between the private sector and the public sector shows a significant difference (t = -2.17) at the confidence level of 95%. This shows that the opinion of the private sector is higher than that of the public sector. Of each of the sub-data surveyed, most show a significant difference at the confidence level of 95 % except for sub-data 7and sub-data 9 are non-significant. **For future possibility**, the mean difference of the opinion in **executive practices** of personnel in Thai enterprises between the private sector and the public sector shows a significant difference (t = -2.08) at the confidence level of 95%. This shows that the opinion of the private sector is higher than that of the public sector. Of each of the sub-data surveyed, most are non-significant except for sub-data 10 shows a significant difference at the confidence level of 99% and sub-data 8 shows a significant difference at the confidence level of 95%.

In Table 5, the mean difference of the opinion in **managerial practices at current reality** of personnel in Thai enterprises between the private sector and the public sector shows no significant difference   (t = -1.83) at the confidence level of 99%. This shows that the opinion of the private sector is higher than that of the public sector. Of each of the sub-data surveyed, most were non-significant except for sub-

data 13 and sub-data 15 show a significant difference at the confidence level of 95%. **For future possibility**, the mean difference of the opinion in **managerial practices** of personnel in Thai enterprises between the private sector and the public sector shows no significant difference (t = -1.04) at the confidence level of 99%. This shows that the opinion of the private sector is higher than that of the public sector. All of the sub-data surveyed are non-significant.

In Table 5, the mean difference of the opinion in **climate at current reality** of personnel in Thai enterprises between the private sector and the public sector shows strong significant difference (t = -3.00) at the confidence level of 99%. This shows that the opinion of the private sector is higher than that of the public sector. Of each of the sub-data surveyed, most show significant difference at the confidence level of 99% except for sub-data 18 shows a significant difference at the confidence level of 95% and sub-data 16 and sub-data 17 are non-significant. **For future possibility**, the mean difference of the opinion in **climate** of personnel in Thai enterprises between the private sector and the public sector shows no significant difference (t = -0.70) at the confidence level of 99%. This shows that the opinion of the private sector is higher than that of the public sector. All of the sub-data surveyed are non-significant.

In Table 5, the mean difference of the opinion in **organizational and job structure at current reality** of personnel in Thai enterprises between the private sector and the public sector shows a strong significant difference (t = -3.74) at the confidence level of 99%. This shows that the opinion of the private sector is higher than that of the public sector. Of each of the sub-data surveyed, most show a strong significant difference at the confidence level of 99 % except for sub-data 24 shows a significant difference at the confidence level of 95% and sub-data 25 is non-significant. **For future possibility**, the mean difference of the opinion in **organizational and job structure** of personnel in Thai enterprises between the private sector and the public sector shows a significant difference (t = -2.24) at the confidence level of 95%. This shows that the opinion of the private sector is higher than that of the public sector. Of each of the sub-data surveyed, most are non-significant except for sub-data 21 shows a significant difference at the confidence level of 99% and sub-data 22 and sub-data 23 show a significant difference at the confidence level of 95%.

In Table 5, the mean difference of the in **information flow at current reality** of personnel in Thai enterprises between the private sector and the public sector shows a strong significant difference (t = -3.32) at the confidence level of 99%. This shows that the opinion of the private sector is higher than that of the public sector. Of each of the sub-data surveyed, most show a strong significant difference at the confidence level of 99 % except for sub-data 26 and sub-data 29 show a significant difference at the confidence level of 95% . **For future possibility**, the mean difference of the opinion in **information flow** of personnel in Thai enterprises between the private sector and the public sector shows a significant difference (t = -2.00) at the confidence level of 95%. This shows that the opinion of the private sector is higher than that of the public sector. Of each of the sub-data surveyed, most are non-significant except for   sub-data 27 and sub-data 30 show a significant difference at the confidence level of 95% .

In Table 5, the mean difference of the opinion in **individual and team practices at current reality** of personnel in Thai enterprises between the private sector and the public sector shows a significant difference   (t = -2.22) at the confidence level of 95%. This shows that the opinion of the private sector is higher than that of the public sector. Of each of the sub-data surveyed, most are non-significant except for sub-data 31 shows a significant difference at the confidence level of 99 % and sub-data 34 shows a significant difference at the confidence level of 95% . **For future possibility**, the mean difference of the opinion in **individual and team practices** of personnel in Thai enterprises between the private sector and the public sector shows no significant difference (t= -1.54) at the confidence level of 99%. This shows that the opinion of the private sector is higher than that of the public sector. Of each of the sub-data surveyed, most are non-significant except for sub-data 31 shows a significant difference at the confidence level of 95% .

In Table 5, the mean difference of the opinion in **work processes at current reality** of personnel in Thai enterprises between the private sector and the public sector shows a strong significant difference (t = -3.71) at the confidence level of 99%. This shows that the opinion of the private sector is higher than that of the public

sector. Of each of the sub-data surveyed, most show a significant difference at the confidence level of 95% except for sub-data 40 shows a strong significant difference at the confidence level of 99 % and sub-data 38 is non-significant. **For future possibility**, the mean difference of the opinion in **work processes** of personnel in Thai enterprises between the private sector and the public sector shows a strong significant difference (t = -3.16) at the confidence level of 99%. This shows that the opinion of the private sector is higher than that of the public sector. Of each of the sub-data surveyed, most show a significant difference at the confidence level of 99 % except for sub-data 39 shows a significant difference at the confidence level of 95% and sub-data 37 and sub-data 38 are non-significant .

In Table 5, the mean difference of the opinion in **performance goals and feedback at current reality** of personnel in Thai enterprises between the private sector and the public sector shows a significant difference (t = -2.76) at the confidence level of 99%. This shows that the opinion of the private sector is higher than that of the public sector. Of each of the sub-data surveyed, most show a significant difference at the confidence level of 95% except for sub-data 43 shows a significant difference at the confidence level of 99 % and sub-data 41 is non-significant. **For future possibility**, the mean difference of the opinion in **performance goals and feedback** of personnel in Thai enterprises between the private sector and the public sector shows a significant difference (t = -2.24) at the confidence level of 95%. This shows that the opinion of the private sector is higher than that of the public sector. Of each of the sub-data surveyed, most are non-significant except for sub-data 44 shows a significant difference at the confidence level of 95 % .

In Table 5, the mean difference of the opinion in **training and education at current reality** of personnel in Thai enterprises between the private sector and the public sector shows a significant difference (t = -2.66) at the confidence level of 99%. This shows that the opinion of the private sector is higher than that of the public sector. Of each of the sub-data surveyed, most show a significant difference at the confidence level of 99% except for sub-data 46 and sub-data 48 show a significant difference at the confidence level of 95 % and sub-data 47 is non-significant. **For future possibility**, the mean difference of the opinion in **training and education** of

personnel in Thai enterprises between the private sector and the public sector shows a significant difference (t= -2.32) at the confidence level of 95%. This shows that the opinion of the private sector was higher than that of the public sector. Of each of the sub-data surveyed, most show a significant difference at the confidence level of 95 % except for sub-data 47 and sub-data 49 are non-significant .

In Table 5, the mean difference of the opinion in **rewards and recognition at current reality** of personnel in Thai enterprises between the private sector and the public sector shows no significant difference (t = -1.38) at the confidence level of 99%. This shows that the opinion of the private sector is higher than that of the public sector. Of each of the sub-data surveyed, most are non-significant except for sub-data 55 shows a   significant difference at the confidence level of 99 % . **For future possibility,** the mean difference of the opinion in **rewards and recognition** of personnel in Thai enterprises between the private sector and the public sector show no significant difference (t = -0.42) at the confidence level of 99%. This shows that the opinion of the private sector is higher than that of the public sector. All of the sub-data surveyed are non-significant .

In Table 5, the mean difference of the opinion in **individual and team development at current reality** of personnel in Thai enterprises between the private sector and the public sector shows a   significant difference (t = -2.50) at the confidence level of 95%. This shows that the opinion of the private sector is higher than that of the public sector. Of each of the sub-data surveyed, most show a significant difference at the confidence level of 95% except for sub-data 60 shows a significant difference at the confidence level of 99 % and sub-data 56 and sub-data 59 are non-significant. **For future possibility,** the mean difference of the opinion in **individual and team development** of personnel in Thai enterprises between the private sector and the public sector shows no significant difference (t = -1.89) at the confidence level of 99%. This shows that the opinion of the private sector is higher than that of the public sector. Of each of the sub-data surveyed, most are non-significant except for sub-data 60 shows a significant difference at the confidence level of 99 % .

From analyzing the total mean of the 12 sub-systems of the public sector in Thai enterprises at **current reality**, it was found that the highest mean was **executive practices** ($\overline{X}$ = 3.37) . And of the total mean of the 12 sub-systems of the private sector in Thai enterprises, the highest one is the mean of **executive practices** ($\overline{X}$ = 3.60) This showed that the total mean of the 12 sub-systems of the private sector is higher than that of the public sector in Thai enterprises at current reality. From analyzing the total mean of the 12 sub-systems of the public sector in Thai enterprises for **future possibility**, the highest one is the mean of **vision and strategy and executive practices** ($\overline{X}$ = 3.93) and the total mean of the 12 sub-systems of the private sector in Thai enterprises, the highest one is the mean of **executive practices** ($\overline{X}$ = 4.15). This shows that the total mean of the 12 sub-systems of the private sector is higher than that of the public sector in Thai enterprises for future possibility. And Table 5 indicates that total mean of the opinion on the 12 sub-systems in Thai enterprises between private public sectors for future possibility is higher than those at current reality.

Table 6 Comparison of Survey Opinions of the 12 Sub-systems Among the Three Levels at Managerial Staff for   Current Reality and Future Possibility

Sub-system	Sub-data	Current Reality							Future Possibility						
		Top Manager		Middle Manager		First-Line Manager		F	Top Manager		Middle Manager		First-Line Manager		F
		$\bar{X}$	S.D	$\bar{X}$	S.D	$\bar{X}$	S.D		$\bar{X}$	S.D	$\bar{X}$	S.D	$\bar{X}$	S.D	
A. Vision and Strategy	1. The vision and strategy are continually updated, based on changes in the business environment and customer's needs.	3.70	0.85	3.72	0.76	3.62	0.70	0.42	4.26	0.74	4.31	0.61	4.37	0.57	0.50
	2. People take into account the organization's long-term goals and strategies as they plan and execute their work.	3.22	0.78	3.37	0.75	3.21	0.81	1.47	3.96	0.67	4.05	0.60	3.91	0.79	1.18
	3. We discuss trends and forces that drive current and future changes in our marketplace and industry as a normal part of our work.	3.57	0.81	3.50	0.94	3.65	0.81	0.70	4.20	0.69	4.14	0.75	4.17	0.72	0.20
	4. We have a vision of ourselves as an organization in which learning and purposeful change are expected.	3.54	0.94	3.56	0.90	3.58	0.86	0.03	4.09	0.80	4.10	0.72	4.11	0.73	0.01
	5. People have a broad understanding of our organization's structure, processes, and systems and how they are related.	3.34	0.68	3.33	0.74	3.35	0.79	0.02	4.03	0.69	3.96	0.66	3.94	0.61	0.50
	Total	3.48	0.64	3.49	0.64	3.48	0.60	0.02	4.11	0.59	4.12	0.50	4.10	0.52	0.03
B. Executive Practices	6. We are inspired to follow our executives toward our organizational vision.	3.55	0.77	3.43	0.85	3.35	0.94	1.21	4.12	0.65	4.03	0.71	3.85	0.83	2.77
	7. Executives visibly lead and facilitate problem-solving efforts or special projects.	3.74	0.83	3.61	0.91	3.62	0.94	0.68	4.26	0.70	4.11	0.74	4.06	0.84	1.73
	8. Executives speak about the connections between continuous learning, continuous improvement, quality, and business results.	3.63	0.92	3.64	0.85	3.74	0.88	0.39	4.16	0.78	4.13	0.71	4.15	0.81	0.04
	9. We believe that our executives are proud of us.	3.56	0.74	3.49	0.82	3.45	0.83	0.46	4.09	0.76	3.97	0.75	3.81	0.81	2.42
	10. Executives hold managers accountable for supporting the development of their employees.	3.80	0.76	3.88	0.74	3.92	0.77	0.61	4.27	0.73	4.20	0.69	4.20	0.73	0.26
	Total	3.66	0.67	3.60	0.66	3.60	0.73	0.20	4.17	0.63	4.08	0.58	4.00	0.67	1.40

Table 6 (Continued)

Sub-system	Sub-data	Current Reality						F	Future Possibility						F
		Top Manager		Middle Manager		First-Line Manager			Top Manager		Middle Manager		First-Line Manager		
		$\bar{X}$	S.D	$\bar{X}$	S.D	$\bar{X}$	S.D		$\bar{X}$	S.D	$\bar{X}$	S.D	$\bar{X}$	S.D	
C. Managerial Practices	11.Managers encourage us to pursue personal development as part of our jobs and to learn by doing.	3.39	0.85	3.52	0.71	3.52	0.86	0.79	4.01	0.77	4.02	0.67	3.95	0.87	0.19
	12.Managers help their people integrate what they have learned in development or training programs by discussing business applications.	3.05	0.72	3.07	0.79	3.06	0.89	0.01	3.79	0.77	3.75	0.69	3.65	0.83	0.69
	13.Managers communicate effectively with their employees about the employees' developmental needs and progress.	3.13	0.78	3.23	0.81	3.21	1.00	0.43	3.92	0.78	3.93	0.75	3.89	0.86	0.05
	14.Managers encourage people to contribute ideas for improvements through individual conversations and/or group meetings.	3.30	0.91	3.45	0.85	3.29	1.00	1.19	4.01	0.81	4.00	0.80	3.89	0.97	0.45
	15.Managers admit their own mistakes.	3.10	0.92	3.01	0.91	3.08	0.86	0.26	3.80	0.87	3.56	0.92	3.41	0.86	3.84*
	Total	**3.20**	**0.70**	**3.26**	**0.63**	**3.23**	**0.77**	**0.23**	**3.90**	**0.69**	**3.85**	**0.63**	**3.75**	**0.74**	**0.91**
D. Climate	16.We are not afraid to share our opinions and speak our minds.	3.32	0.81	3.24	0.79	3.20	0.87	0.42	4.03	0.71	3.93	0.73	3.80	0.85	1.81
	17.We have a healthy sense of "play" about our work; it's O.K. to enjoy our jobs.	3.33	0.66	3.22	0.73	3.38	0.65	1.45	3.87	0.77	3.68	0.83	3.71	0.76	1.60
	18. We work hard to eliminate "we/they" mindsets; we cooperate and collaborate whenever possible.	3.41	0.85	3.22	0.90	3.54	0.92	3.18*	4.11	0.80	3.87	0.94	3.91	0.91	2.09
	19. We treat one another as adults-as people who can think for themselves and be responsible.	3.40	0.73	3.38	0.78	3.52	0.71	0.90	4.02	0.77	3.94	0.70	3.86	0.79	0.89
	20. People are interested in and care about one another.	3.41	0.74	3.29	0.76	3.52	0.66	2.36	3.97	0.76	3.80	0.80	3.74	0.83	1.83
	Total	**3.37**	**0.60**	**3.27**	**0.59**	**3.43**	**0.58**	**1.92**	**3.99**	**0.65**	**3.84**	**0.63**	**3.80**	**0.65**	**2.14**

Table 6 (Continued)

Sub-system	Description	Current Reality							Future Possibility						
		Top Manager		Middle Manager		First-Line Manager		F	Top Manager		Middle Manager		First-Line Manager		F
		$\bar{X}$	S.D	$\bar{X}$	S.D	$\bar{X}$	S.D		$\bar{X}$	S.D	$\bar{X}$	S.D	$\bar{X}$	S.D	
E. Organizational and Job Structure	21.Job rotation, ad hoc assignments, and/or cross-training (for other jobs) are used to build work-force flexibility.	3.02	0.86	3.05	0.83	3.33	0.94	3.03*	3.75	0.82	3.82	0.90	3.78	0.84	0.19
	22.We utilize self-directed work teams that have responsibility for work processes from start to finish.	3.33	0.88	3.34	0.92	3.47	0.73	0.61	3.97	0.75	3.87	0.80	3.83	0.76	0.65
	23.Our work spaces are designed to allow for easy and frequent communication among those who work together most often.	3.42	0.84	3.54	0.94	3.58	0.79	0.80	3.97	0.79	3.98	0.85	4.05	0.72	0.21
	24.We routinely modify work processes in response to changing circumstances or priorities or to improve efficiency.	3.44	0.81	3.50	0.88	3.45	0.84	0.16	4.11	0.79	4.03	0.89	3.97	0.82	0.57
	25.We are reducing the number of rules, policies, forms, and procedures, allowing more individual judgement.	3.23	0.98	3.03	0.86	3.14	0.80	1.48	4.00	0.84	3.76	0.90	3.79	0.87	2.23
	Total	**3.29**	**0.68**	**3.29**	**0.66**	**3.39**	**0.58**	**0.65**	**3.95**	**0.66**	**3.89**	**0.68**	**3.89**	**0.60**	**0.27**
F. Information Flow	26.We utilize advanced technology to improve the flow of information and to enhance our communication with one another (for example, satellite TV, computer networks, electronic mail, cellular phones, or pagers).	3.69	0.88	3.73	0.95	3.83	0.89	0.51	4.44	0.67	4.42	0.69	4.44	0.79	0.05
	27.We communicate key business information to all employees through channels such as organizational newsletters, department meetings, and/or all-personnel meetings.	3.70	0.76	3.74	0.82	3.86	0.74	0.87	4.29	0.67	4.27	0.73	4.29	0.72	0.02
	28.Those of us for whom it is appropriate have learned to use our computer system effectively.	3.57	0.83	3.48	0.88	3.68	0.84	1.30	4.27	0.68	4.17	0.79	4.24	0.72	0.57
	29.All of our employees receive quality, productivity, cost, or sales data relevant to their jobs on a daily or weekly basis.	2.70	0.98	2.69	0.99	2.85	1.11	0.59	3.66	0.93	3.58	0.98	3.55	1.17	0.26
	30.As our work groups or project teams solve business problems or create new approaches, we communicate our learnings and results throughout the organization (through things such as memos, presentations, E-mail, etc.).	3.01	0.93	2.88	0.99	3.14	1.04	1.62	3.85	0.96	3.76	0.83	3.80	1.01	0.28
	Total	**3.33**	**0.71**	**3.30**	**0.73**	**3.47**	**0.70**	**1.30**	**4.10**	**0.66**	**4.04**	**0.65**	**4.06**	**0.68**	**0.24**

Table 6 (Continued)

Sub-system	Sub-data	Current Reality							F	Future Possibility							F
		Top Manager		Middle Manager		First-Line Manager				Top Manager		Middle Manager		First-Line Manager			
		X̄	S.D	X̄	S.D	X̄	S.D			X̄	S.D	X̄	S.D	X̄	S.D		
G. Individual and Team Practices	31.Individuals and teams are encouraged to identify and solve problems in their work areas.	3.26	0.66	3.21	0.78	3.30	0.76	0.41		3.94	0.61	3.91	0.64	3.92	0.79	0.09	
	32.In conflict situations, blaming is minimized so that people can openly and honestly discuss the issues and work toward solutions.	3.30	0.69	3.03	0.79	3.12	0.79	3.41*		3.95	0.64	3.74	0.73	3.61	0.97	4.16*	
	33.People and groups are encouraged to analyze mistakes in order to learn how to do it better the next time.	3.11	0.80	3.02	0.89	3.22	0.86	1.18		3.92	0.66	3.79	0.81	3.78	0.96	0.84	
	34.We routinely ask one another for feedback on our performance so that we can continually improve our work.	3.33	0.83	3.26	0.87	3.30	0.84	0.17		4.05	0.66	3.92	0.78	3.86	0.85	1.24	
	35.We share our expertise and learn from one another through informal conversations and "storytelling."	3.07	0.92	3.13	0.86	3.24	0.77	0.82		3.83	0.78	3.78	0.84	3.86	0.86	0.24	
	Total	**3.21**	**0.66**	**3.12**	**0.68**	**3.24**	**0.64**	**0.85**		**3.94**	**0.57**	**3.82**	**0.65**	**3.81**	**0.76**	**1.01**	
H. Work Processes	36.We routinely and purposefully use systematic problem-solving techniques for solving difficult problems.	3.36	0.79	3.19	0.80	3.25	0.81	1.31		4.02	0.79	3.87	0.75	3.88	0.78	1.19	
	37.We routinely experiment with new approaches to our work; we try out new ideas.	3.19	0.91	3.04	0.89	3.03	0.83	1.04		3.88	0.88	3.76	0.79	3.63	0.83	1.80	
	38.When a group learns or discovers new information that would be helpful to others, that information is quickly disseminated throughout the organization (for example, through presentations, memos, computer networks, etc.).	3.06	0.88	2.86	0.88	3.11	0.90	2.42		3.85	0.80	3.70	0.82	3.72	0.94	0.89	
	39.When we engage in problem solving, we consider the "ripple" effects that various solutions or actions may have throughout the organization.	3.17	0.83	3.11	0.90	3.32	0.85	1.31		3.94	0.78	3.75	0.84	3.86	0.88	1.56	
	40.We learn from marketplace through studies of competitors and/or other industry leaders.	3.29	0.85	3.43	0.93	3.51	0.79	1.24		4.06	0.85	4.15	0.79	4.05	0.76	0.57	
	Total	**3.22**	**0.68**	**3.13**	**0.68**	**3.24**	**0.64**	**0.95**		**3.95**	**0.70**	**3.84**	**0.64**	**3.83**	**0.66**	**0.83**	

Table 6 (Continued)

Sub-system	Sub-data	Current Reality						F	Future Possibility						F
		Top Manager		Middle Manager		First-Line Manager			Top Manager		Middle Manager		First-Line Manager		
		$\bar{X}$	S.D	$\bar{X}$	S.D	$\bar{X}$	S.D		$\bar{X}$	S.D	$\bar{X}$	S.D	$\bar{X}$	S.D	
I. Performance Goals and Feedback	41.The satisfaction of our internal and external customers is considered in our performance reviews.	3.58	1.00	3.65	0.91	3.58	0.97	0.22	4.28	0.75	4.23	0.79	4.06	0.97	1.41
	42.As appropriate, people periodically renegotiate their goals with their key customers, suppliers, and/or managers.	3.18	0.90	3.25	0.92	3.25	0.85	0.22	3.89	0.76	3.84	0.87	3.61	0.93	2.16
	43.We routinely give our suppliers (internal and external) feedback on the quality of the products and services they deliver to us.	3.47	0.82	3.56	0.91	3.52	0.79	0.29	4.11	0.70	4.10	0.78	3.92	0.87	1.36
	44.We set our individual-development goals during an annual goal-setting process, rather than during our performance appraisals.	3.48	0.93	3.49	0.82	3.62	0.86	0.58	4.09	0.82	4.09	0.73	3.98	0.98	0.41
	45.Individuals' performance goals are clearly aligned with the organization's strategic goals.	3.17	0.90	3.29	0.91	3.31	0.88	0.63	3.94	0.83	4.00	0.82	3.86	0.96	0.60
	Total	3.38	0.78	3.44	0.73	3.46	0.66	0.27	4.06	0.65	4.04	0.64	3.88	0.77	1.56
J. Training and Education	46.Educational programs include skill training on "learning how to learn" from one's own experience and from others.	3.18	0.90	3.15	0.89	3.23	0.99	0.16	3.96	0.76	3.83	0.78	3.74	0.88	1.41
	47.Educational programs include skill training on becoming more creative problem solvers.	3.23	0.84	3.21	0.88	3.29	0.95	0.21	3.97	0.74	3.94	0.78	3.78	0.93	1.11
	48.We have diagnostic tools for individual development and/or developmental-planning processes available for everyone.	2.74	0.94	2.77	0.94	2.85	0.95	0.26	3.77	0.81	3.64	0.90	3.50	0.99	1.70
	49.We assign special work projects in which people are given the time and support to learn new skills and knowledge, as well as do the work.	2.98	0.92	2.86	0.92	2.92	0.98	0.42	3.83	0.85	3.66	0.89	3.49	1.01	2.86
	50.Formal training programs provide us with tools, job aids, or processes that enhance on-the-job performance.	3.30	0.86	3.22	0.98	3.15	1.06	0.48	3.99	0.80	3.88	0.79	3.69	1.04	2.21
	Total	3.09	0.74	3.04	0.77	3.07	0.83	0.09	3.90	0.69	3.79	0.70	3.63	0.84	2.63

Table 6 (Continued)

Sub-system	Sub-data	Current Reality						F	Future Possibility						F
		Top Manager		Middle Manager		First-Line Manager			Top Manager		Middle Manager		First-Line Manager		
		X̄	S.D	X̄	S.D	X̄	S.D		X̄	S.D	X̄	S.D	X̄	S.D	
K. Rewards and Recognition	51.People are recognized for being courageous, that is, for experimenting and taking appropriate chances.	3.28	0.78	3.19	0.92	3.15	0.83	0.52	3.97	0.75	3.79	0.76	3.66	0.86	3.09*
	52.Managers are rewarded for supporting the development of their employees.	3.48	0.79	3.31	0.92	3.32	0.77	1.25	4.06	0.66	3.83	0.83	3.77	0.82	3.15*
	53.We share directly in the profits of the business through a profit-based reward system.	2.71	1.16	2.95	1.07	2.69	1.06	1.91	3.33	1.21	3.54	1.06	3.14	1.13	2.95
	54.We are not punished for making honest mistakes, for having tried something worthwhile and failed.	3.26	0.84	3.18	0.86	3.12	0.84	0.55	3.69	0.84	3.47	0.78	3.38	0.93	2.96
	55.We are recognized for solving business problems or successfully meeting challenges.	3.42	0.83	3.33	0.91	3.23	0.79	0.93	4.03	0.79	3.80	0.83	3.64	0.88	4.39*
	Total	**3.23**	**0.61**	**3.18**	**0.68**	**3.11**	**0.60**	**0.69**	**3.79**	**0.62**	**3.68**	**0.65**	**3.49**	**0.69**	**3.90***
L. Individual and Team Development	56.Much of our ongoing learning comes directly out of our work experiences rather than through formal training programs.	3.68	0.68	3.78	0.71	3.80	0.71	0.77	3.92	0.75	3.91	0.78	3.82	0.68	0.47
	57.Teams are given appropriate assistance with their development (e.g., process facilitation, team-building support).	3.40	0.72	3.29	0.77	3.40	0.82	0.76	4.07	0.65	3.86	0.73	3.83	0.82	2.86
	58.People have individual-development plans that impact their performance in a positive way.	3.04	0.88	3.01	0.86	3.08	0.78	0.13	3.89	0.73	3.71	0.79	3.70	0.87	1.60
	59.Work teams and long-term project teams have specific learning agendas.	2.88	0.87	2.79	0.82	2.92	0.98	0.56	3.62	0.89	3.57	0.80	3.47	0.94	0.60
	60. Taking responsibility for our own learning and development is considered part of our jobs.	3.29	0.85	3.27	0.91	3.49	0.92	1.53	4.03	0.77	3.92	0.83	4.00	0.88	0.55
	Total	**3.26**	**0.60**	**3.23**	**0.61**	**3.32**	**0.60**	**0.54**	**3.91**	**0.56**	**3.79**	**0.57**	**3.76**	**0.64**	**1.63**

** $p < 0.01$ * $p < 0.05$

In Table 6, the mean difference in **vision and strategy at current reality** between the three levels of managerial staff shows no significant difference (F = 0.02) at the confidence level of 99%. When the sub-data was analyzed, all the means were statistically insignificant. **For future possibility**, the mean difference in **vision and strategy** between the three levels of managerial staff shows no significant difference (F = 0.03) at the confidence level of 99%. When the sub-data was analyzed, all the means were statistically insignificant.

In Table 6, the mean difference in **executive practices at current reality** between the three levels of managerial staff shows no significant difference (F = 0.20) at the confidence level of 99%. When the sub-data was analyzed, all the means were statistically insignificant. **For future possibility**, the mean difference in **executive practices** between the three levels of managerial staff shows no significant difference (F = 1.40) at the confidence level of 99%. When the sub-data was analyzed, all the means were statistically insignificant.

In Table 6, the mean difference in **managerial practices at current reality** between the three levels of managerial staff shows no significant difference (F = 0.23) at the confidence level of 99%. When the sub-data was analyzed, all the means were statistically insignificant. **For future possibility**, the mean difference in **managerial practices** between the three levels of managerial staff shows no significant difference (F = 0.91) at the confidence level of 99%. When the sub-data was analyzed, only sub-data 15 showed a significant difference at the confidence level of 95%.

In Table 6, the mean difference in **climate at current reality** between the three levels of managerial staff shows no significant difference (F = 1.92) at the confidence level of 99%. When the sub-data was analyzed, only sub-data 18 showed a significant difference at the confidence level of 95%. **For future possibility**, the mean difference in **climate** between the three levels of managerial staff shows no significant difference (F = 2.14) at the confidence level of 99%. When the sub-data was analyzed, all the means were statistically insignificant.

And Table 6 indicates that Middle Manager is significantly different from First-Line Manager at **current reality** by LSD test. (Least Significant Difference) Wattanathayakul (1984).

In Table 6, the mean difference in **organizational and job structure at current reality** between the three levels of managerial staff shows no significant difference   (F = 0.65) at the confidence level of 99%. When the sub-data was analyzed, only sub-data 21 showed a significant difference at the confidence level of 95%. **For future possibility**, the mean difference in **organizational and job structure** between the three levels of managerial staff shows no significant difference (F = 0.27) at the confidence level of 99%. When the sub-data was analyzed, all the means were statistically insignificant.

And Table 6 indicates that Top Manager is different from First-Line Manager and Middle Manager is different from First-Line Manager at current reality by LSD test.

In Table 6, the mean difference in **information flow at current reality** between the three levels of managerial staff shows no significant difference (F = 1.30) at the confidence level of 99%. When the sub-data was analyzed, all the means were statistically insignificant. **For future possibility**, the mean difference in **information flow** between the three levels of managerial staff shows no significant difference   (F = 0.24) at the confidence level of 99%. When the sub-data was analyzed, all the means were statistically insignificant.

In Table 6, the mean difference in **individual and team practices at current reality** between the three levels of managerial staff shows no significant difference   (F = 0.85) at the confidence level of 99%. When the sub-data was analyzed, only sub-data 32 showed a significant difference at the confidence level of 95%. **For future possibility**, the mean difference in **individual and team practices** between the three levels of managerial staff shows no significant difference (F = 1.01) at the confidence level of 99%. When the sub-data was analyzed, only sub-data 32 showed a significant difference at the confidence level of 95%.

In Table 6, the mean difference in **work processes at current reality** between the three levels of managerial staff shows no significant difference (F = 0.95) at the confidence level of 99%. When the sub-data was analyzed, all the means were statistically insignificant. **For future possibility**, the mean difference in **work processes** between the three levels of managerial staff shows no significant difference (F = 0.83) at the confidence level of 99%. When the sub-data was analyzed, all the means were statistically insignificant.

In Table 6, the mean difference in **performance goals and feedback at current reality** between the three levels of managerial staff shows no significant difference (F = 0.27) at the confidence level of 99%. When the sub-data was analyzed, all the means were statistically insignificant. **For future possibility,** the mean difference in **performance goals and feedback** between the three levels of managerial staff shows no significant difference (F = 1.56) at the confidence level of 99%. When the sub-data was analyzed, all the means were statistically insignificant.

In Table 6, the mean difference in **training and education at current reality** between the three levels of managerial staff shows no significant difference (F = 0.09) at the confidence level of 99%. When the sub-data was analyzed, all the means were statistically insignificant. **For future possibility,** the mean difference in **training and education** between the three levels of managerial staff shows no significant difference (F = 2.63) at the confidence level of 99%. When the sub-data was analyzed, all the means were statistically insignificant.

In Table 6, the mean difference in **rewards and recognition at current reality** between the three levels of managerial staff shows no significant difference (F = 0.69) at the confidence level of 99%. When the sub-data was analyzed, all the means were statistically in significant. **For future possibility,** the mean difference in **rewards and recognition** between the three levels of managerial staff shows a significant difference (F = 3.90) at the confidence level of 95%. When the sub-data was analyzed, most show a significant difference at the confidence level of 95% except for sub-data 53 and sub-data 54 are statistically insignificant.

was analyzed, most show a significant difference at the confidence level of 95% except for sub-data 53 and sub-data 54 are statistically insignificant.

And Table 6 indicates that Top Manager is different from First-Line Managers, Top Managers are different from Middle Managers at future possibility by LSD test.

In Table 6, the mean difference in **individual and team development at current reality** between the three levels of managerial staff shows no significant difference (F = 0.54) at the confidence level of 99%. When the sub-data was analyzed, all the means were statistically insignificant. **For future possibility**, the mean difference on **individual and team development** between the three levels of managerial staff shows no significant difference (F = 1.63) at the confidence level of 99%. When the sub-data was analyzed, all the means were statistically insignificant.

From analyzing the total mean of the 12 sub-systems of top manager level of the organization for current reality, the highest one was **executive practices** ($\bar{X}$ = 3.66). The highest of middle manager level and first-line level of the organization for current reality was **executive practices** ($\bar{X}$ = 3.60) .This showed that the highest of the total mean of the opinion on the 12 sub-systems between the three levels of managerial staff of the organization for current reality was top managers .For future possibility, the highest of top manager level of the organization was **executive practices** ($\bar{X}$ = 4.17) . And the highest of middle manager level of the organization for future possibility was **vision and strategy** ($\bar{X}$ = 4.12). The highest mean for first-line managerial level of current reality, was **vision and strategy** ($\bar{X}$ = 4.10). This showed that the highest of the total mean of the opinion on the 12 sub-systems between the three levels of managerial staff of the organization for future possibility was top managers. Table 5 indicates that the total mean of the 12 sub-systems between the three levels of managerial staff of the organization for future possibility was higher than that of those for current reality.

Tables 3, 4, 5, 6 are total means and standard deviation comparison between current reality and future possibility regarding the 12 sub-systems in all enterprises and institutions. The following is a summary of the main findings:

Table 3 indicates that the highest total mean for current reality is **executive practices** and for **future possibility** is **vision and strategy**. The total mean of **future possibility** is higher than **current reality**.

Table 4 indicates that executive practices is the highest total mean of Thai and multinational enterprises at current reality. **For future possibility**, executive practices is the highest total mean in the Thai enterprises and information flow is the highest total mean in the multinational enterprises. The total mean of Thai and multinational enterprises for future possibility is higher than current reality.

Table 5 reveals that the highest total mean of the 12 sub-systems of the public and private sectors in Thai enterprises regarding **current reality** is **executive practices**. **For future possibility**, vision and strategy and executive practices are the highest total mean in the public sector of Thai enterprises. **Executive practices** is the highest total mean in the private sector of Thai enterprises. The total mean of the opinion for both public and private sectors of Thai enterprises, **the future possibility** is highest than **current reality**.

Table 6 reveals that executive practices are the highest total mean for top, middle, first-line managers regarding current reality. **Vision and strategy** is the highest total mean for middle and first-line managers and **executive practices** is the highest total mean for top managers regarding future possibility. The total mean of managerial staff for **future possibility** is higher than **current reality**.

Tables 3, 4, 5 and 6 indicate that **executive practices** enhanced learning organization the most at the current reality in all enterprises and institutions. However, **training and education** must be developed in order to support learning organization.

For the future, **vision and strategy** and **executive practices** already supported learning organization and still continue to support practice of learning organization in all enterprises and institutions. **Reward and recognition** is the least supportive for future possibility. All enterprises and institution need to focus on this area for development in order to enhance learning organization.

2.2 Conceptualization of Model Development

2.2.1 Integration of Survey Results

The results from the sub-data of the 12 subsystems are used as a mean comparison from the overall Thai and multinational enterprises and higher education institution the strengths and weaknesses as show in Table 7. Another aspect for conceptualizing the model is the analysis for potential development as first, second and third priority from the low means of Thai enterprises in current reality, which explained in Table 9.

Another aspect that included in the model is the Thai and Western supportive and non-supportive characteristics. Data from Tables 12-20 illustrate both Thai and Western Characteristics that are supportive and non-supportive for learning organization from the overall enterprises, Thai and multinational enterprises.

Means from the overall enterprises serve as the basis for comparison. Mean category derived from the highest mean subtracted the lowest mean can be divided into 3 categories, high, medium and low. Thai and multinational enterprises and higher education institutions used the same process as the overall enterprises in subtracting the lowest mean (2.71) from the highest mean (3.86) and divided by 3 with equal number for each range. To identify which level of the sub-data means will be either high, medium, or low for Thai and multinational enterprises and higher education institutions, the high and low means from the overall enterprises are used as a base or criterion for comparison. Table 7 demonstrates means comparison between the overall, multinational, Thai enterprises and higher education institutions in current reality based on high, medium, and low means from the overall enterprises which are 3.49 and above for high level, 3.48-3.10 for medium level, and 3.09 and below for low level.

Table 7 Means Comparison Among the Overall, Multinational ,Thai Enterprises, and Higher Education Institutions at Current Reality

Dimen-sions	Sub-systems	Sub-data	Overall Enterprises		Multinational Enterprises		Thai Enterprises		Higher Education	
			Mean	Range	Mean	Range	Mean	Range	Mean	Range
Leadership	A. Vision and Strategy	1. The vision and strategy are continually updated, based on changes in the business environment and customer's needs.	3.68	H	3.95	H	3.56	H	3.78	H
		2. People take into account the organization's long-term goals and strategies as they plan and execute their work.	3.26	M	3.46	M	3.20	M	3.22	M
		3. We discuss trends and forces that drive current and future changes in our marketplace and industry as a normal part of our work.	3.54	H	3.92	H	3.36	M	3.42	M
		4. We have a vision of ourselves as an organization in which learning and purposeful change are expected.	3.54	H	3.94	H	3.36	M	3.56	H
		5. People have a broad understanding of our organization's structure, processes, and systems and how they are related.	3.23	M	3.41	M	3.29	M	3.39	M
	B. Executive Practices	6. We are inspired to follow our executives toward our organizational vision.	3.44	M	3.63	H	3.36	M	3.37	M
		7. Executives visibly lead and facilitate problem-solving efforts or special projects.	3.65	H	3.82	H	3.57	H	3.52	H
		8. Executives speak about the connections between continuous learning, continuous improvement, quality, and business results.	3.64	H	3.88	H	3.55	H	3.73	H
		9. We believe that our executives are proud of us.	3.50	H	3.67	H	3.42	M	3.61	H
		10. Executives hold managers accountable for supporting the development of their employees.	3.86	H	4.04	H	3.77	H	3.60	H

Table 7 (Continued)

Dimensions	Sub-systems	Sub-data	Overall Enterprises		Multinational Enterprises		Thai Enterprises		Higher Education	
			Mean	Range	Mean	Range	Mean	Range	Mean	Range
Leadership	C. Managerial Practices	11. Managers encourage us to pursue personal development as part of our jobs and to learn by doing.	3.46	M	3.66	H	3.38	M	3.40	M
		12. Managers help their people integrate what they have learned in development or training programs by discussing business applications.	3.05	L	3.24	M	2.97	L	3.04	L
		13. Managers communicate effectively with their employees about the employees' developmental needs and progress.	3.20	M	3.34	M	3.12	M	3.09	L
		14. Managers encourage people to contribute ideas for improvements through individual conversations and/or group meetings.	3.37	M	3.57	H	3.27	M	3.13	M
		15. Managers admit their own mistakes.	3.06	L	3.28	M	2.93	L	2.91	L
	D. Climate	16. We are not afraid to share our opinions and speak our minds.	3.25	M	3.43	M	3.17	M	3.02	L
		17. We have a healthy sense of "play" about our work; it's O.K. to enjoy our jobs.	3.29	M	3.36	M	3.35	M	3.39	M
		18. We work hard to eliminate "we/they" mindsets; we cooperate and collaborate whenever possible.	3.34	M	3.57	H	3.23	M	3.22	M
		19. We treat one another as adults-as people who can think for themselves and be responsible.	3.41	M	3.58	H	3.30	M	3.41	M
		20. People are interested in and care about one another.	3.38	M	3.43	M	3.36	M	3.29	M

Table 7 (Continued)

Dimensions	Sub-systems	Sub-data	Overall Enterprises		Multinational Enterprises		Thai Enterprises		Higher Education	
			Mean	Range	Mean	Range	Mean	Range	Mean	Range
Job Structure and Systems	E. Organizational and Job Structure	21. Job rotation, ad hoc assignments, and/or cross-training (for other jobs) are used to build work-force flexibility.	3.10	M	3.15	M	3.08	L	3.00	L
		22. We utilize self-directed work teams that have responsibility for work processes from start to finish.	3.35	M	3.65	H	3.22	M	3.07	L
		23. Our work spaces are designed to allow for easy and frequent communication among those who work together most often.	3.50	H	3.74	H	3.39	M	3.13	M
		24. We routinely modify work processes in response to changing circumstances or priorities or to improve efficiency.	3.46	M	3.75	H	3.32	M	3.17	M
		25. We are reducing the number of rules, policies, forms, and procedures, allowing more individual judgement.	3.12	M	3.34	M	2.99	L	2.83	L
	F. Information Flow	26. We utilize advanced technology to improve the flow of information and to enhance our communication with one another (for example, satellite TV, computer networks, electronic mail, cellular phones, or pagers).	3.73	H	4.17	H	3.51	H	3.74	H
		27. We communicate key business information to all employees through channels such as organizational newsletters, department meetings, and/or all-personnel meetings.	3.76	H	4.09	H	3.59	H	3.67	H
		28. Those of us for whom it is appropriate have learned to use our computer system effectively.	3.54	H	3.81	H	3.42	M	3.59	H
		29. All of our employees receive quality, productivity, cost, or sales data relevant to their jobs on a daily or weekly basis.	2.71	L	3.14	M	2.52	L	2.35	L
		30. As our work groups or project teams solve business problems or create new approaches, we communicate our learnings and results throughout the organization (through things such as memos, presentations, E-mail, etc.).	2.97	L	3.37	M	2.77	L	2.89	L

Table 7 (Continued)

Dimensions	Subsystems	Sub-data	Overall Enterprises		Multinational Enterprises		Thai Enterprises		Higher Education	
			Mean	Range	Mean	Range	Mean	Range	Mean	Range
Job Structure and Systems	G. Individual and Team Practices	31. Individuals and teams are encouraged to identify and solve problems in their work arcas.	3.23	M	3.45	M	3.32	M	3.04	L
		32. In conflict situations, blaming is minimized so that people can openly and honestly discuss the issues and work toward solutions.	3.12	M	3.23	M	3.08	L	3.11	M
		33. People and groups are encouraged to analyze mistakes in order to learn how to do it better the next time.	3.09	L	3.42	M	2.92	L	2.83	L
		34. We routinely ask one another for feedback on our performance so that we can continually improve our work.	3.29	M	3.48	M	3.19	M	3.13	M
		35. We share our expertise and learn from one another through informal conversations and "storytelling."	3.13	M	3.25	M	3.08	L	3.17	M
	H. Work Processes	36. We routinely and purposefully use systematic problem-solving techniques for solving difficult problems.	3.25	M	3.47	M	3.14	M	3.36	M
		37. We routinely experiment with new approaches to our work; we try out new ideas.	3.07	L	3.32	M	2.96	L	3.16	M
		38. When a group learns or discovers new information that would be helpful to others, that information is quickly disseminated throughout the organization (for example, through presentations, memos, computer networks, etc.).	2.97	L	3.35	M	2.78	L	2.82	L
		39. When we engage in problem solving, we consider the "ripple" effects that various solutions or actions may have throughout the organization.	3.17	M	3.41	M	3.05	L	3.18	M
		40. We learn from marketplace through studies of competitors and/or other industry leaders.	3.40	M	3.72	H	3.24	M	3.23	M

Table 7 (Continued)

Dimensions	Sub-systems	Sub-data	Overall Enterprises		Multinational Enterprises		Thai Enterprises		Higher Education	
			Mean	Range	Mean	Range	Mean	Range	Mean	Range
Performance and Development	L. Performance Goals and Feedback	41. The satisfaction of our internal and external customers is considered in our performance reviews.	3.61	H	3.94	H	3.45	M	3.20	M
		42. As appropriate, people periodically renegotiate their goals with their key customers, suppliers, and/or managers.	3.22	M	3.53	H	3.07	L	2.74	L
		43. We routinely give our suppliers (internal and external) feedback on the quality of the products and services they deliver to us.	3.52	H	3.87	H	3.35	M	3.07	L
		44. We set our individual-development goals during an annual goal-setting process, rather than during our performance appraisals.	3.50	H	3.83	H	3.35	M	3.45	M
		45. Individuals' performance goals are clearly aligned with the organization's strategic goals.	3.24	M	3.58	H	3.09	L	3.22	M
	J. Training and Education	46. Educational programs include skill training on "learning how to learn" from one's own experience and from others.	3.16	M	3.35	M	3.09	L	3.15	M
		47. Educational programs include skill training on becoming more creative problem solvers.	3.22	M	3.34	M	3.18	M	3.35	M
		48. We have diagnostic tools for individual development and/or developmental-planning processes available for everyone.	2.76	L	3.09	L	2.61	L	2.67	L
		49. We assign special work projects in which people are given the time and support to learn new skills and knowledge, as well as do the work.	2.90	L	3.07	L	2.83	L	3.24	M
		50. Formal training programs provide us with tools, job aids, or processes that enhance on-the-job performance.	3.23	M	3.43	M	3.13	M	3.30	M

Table 7 (Continued)

Dimensions	Sub-systems	Sub-data	Overall Enterprises		Multinational Enterprises		Thai Enterprises		Higher Education	
			Mean	Range	Mean	Range	Mean	Range	Mean	Range
Performance and Development	K. Rewards and Recognition	51. People are recognized for being courageous, that is, for experimenting and taking appropriate chances.	3.20	M	3.52	H	3.05	L	3.09	L
		52. Managers are rewarded for supporting the development of their employees.	3.36	M	3.60	H	3.24	M	3.46	M
		53. We share directly in the profits of the business through a profit-based reward system.	2.83	L	3.08	L	2.68	L	2.05	L
		54. We are not punished for making honest mistakes, for having tried something worthwhile and failed.	3.21	M	3.42	M	3.08	L	3.38	M
		55. We are recognized for solving business problems or successfully meeting challenges.	3.34	M	3.57	H	3.22	M	3.40	M
	L. Individual and Team Development	56. Much of our ongoing learning comes directly out of our work experiences rather than through formal training programs.	3.76	H	3.88	H	3.69	H	3.71	H
		57. Teams are given appropriate assistance with their development (e.g., process facilitation, team-building support).	3.35	M	3.58	H	3.23	M	3.31	M
		58. People have individual-development plans that impact their performance in a positive way.	3.03	L	3.19	M	2.96	L	3.20	M
		59. Work teams and long-term project teams have specific learning agendas.	2.84	L	3.05	L	2.74	L	3.00	L
		60. Taking responsibility for our own learning and development is considered part of our jobs.	3.32	M	3.53	H	3.21	M	3.49	H

Note :   **Ranges of Means based on Overall Enterprises**
   Maximum of overall enterprises mean is 3.86.
   Minimum of overall enterprises mean is 2.71.

H	indicates	High	range	3.49 and above
M	indicates	Medium	range	3.48 – 3.10
L	indicates	Low	range	3.09 and below

Some significant points as strengths and weaknesses of the overall, Thai, multinational enterprises, and higher education institutions at the **Current reality** are differentiated and presented in Table 7. The finding dimensions are **leadership, job structure and system, and performance and development.**

Leadership

A. Vision and Strategy

More managers in multinational enterprises than in Thai enterprises and higher education institutions pointed pout that they routinely discuss trends and forces that drive changes in the market place (Table 7, sub-data 3). This is due to the fact that it is more crucial for multinational enterprises to keep market changes in order to survive.

B. Executive Practices

Executive practices are assessed as being important for all enterprises including higher education institutions. However, respondents from multinational enterprises rated their executive practices more highly than other respondents.

C. Managerial Practices

Respondents in all categories of enterprises and institutions except multinational enterprises identified common weaknesses under **managerial practices**. The weakest aspect are managers, unable to admit their own mistakes and unable to help their staff to translate theoretical lessons into business practices. The overall and Thai enterprise and educational institution respondents rated these aspects "low" while multinational enterprise respondents indicated "medium" rating. Thai managers' inability to admit mistake stemmed from their fear of "losing face", as described by Komin (1990).

D. Climate

multinational enterprises, cooperation and empowerment are more emphasized as shown in sub-data 18 and 19.

Job Structure and Systems

E. Organizational and Job Structure

Multinational enterprise respondents rated the job structure and organization within their companies higher than those of Thai enterprise and educational institution respondents. In particular, Thai enterprise and institution respondents gave low rating to the statement: "we utilize self-directed work teams that have responsibility for work processes from start to finish". This is due to the feeling that Thai companies are still relatively inflexible and bureaucratic. Educational institutions may also find this statement irrelevant to their operational objectives. Also the significant point is how multinational enterprise respondents rated their work spaces as highly conducive to easy and frequent communication between staff members, while Thai enterprise and institutional respondents gave their work spaces as "medium" rating.

F. Information Flow

In the Information flow, the overall and Thai enterprises, and higher education institutions share the same weaknesses both on employees receiving quality, productivity, cost, or sales data relevant to their jobs on a daily or weekly basis and also on the communication's problem of the work groups or project teams to solve business problems or create new approaches by their learning and results throughout the organization.

G. Individual and Team Practices

The most significant difference between Thai and Multinational respondents is in the rating of the statement "people and groups are encouraged to analyze mistakes in order to learn how to improve it next time". While multinational enterprises' respondents gave this statement a medium rating, respondents from both Thai enterprises and institutions rated it low. This is resulted, again, from the fear of

"losing face" among Thais, which makes them reluctant to admit mistakes, let alone analyze them.

H. Work Processes

Multinational enterprise respondents generally rated their companies' work processes higher than those of their counterparts from Thai companies and institutions. In particular, multinational companies are able to "learn from the marketplace through studies of competitors and/or other industry leaders". Systemic problem-solving techniques and trying out new ideas are more often practised in multinational companies, making them better learning organizations.

Performance Goals and Feedback

I. Performance Goals and Feedback

Again, all the statements related to this category were rated higher by multinational enterprises respondents than those of Thai enterprise and institution counterparts. In fact, multinational enterprise respondents gave all five statements in the category "high" ratings while Thai enterprise and institution respondents gave them "medium" ratings. The only "low" rating was given by Thai educational institution respondents to the statement: "as appropriate, people periodically renegotiate their goals with their key customers, suppliers and/or managers".

J. Training and Education

The survey shows that multinational enterprises are more equipped overall to implement effective training and education. They have better "diagnostic tools for individual development and development processes". Thai enterprise respondents rated "diagnostic tools" as well as "special work projectd" as "low", while rating the three other statements in the category as "medium". Interestingly, Thai educational institution respondents gave "special projects" a "medium" rating, showing that these institutions were better prepared than Thai enterprises in this respect.

K. Reward and Recognition

Multinational enterprises rated four of the five statements under this category higher than those of their Thai enterprise counterparts. They gave the same rating "medium" as Thai enterprise and educational institution respondents to the statement: "we are not punished for making honest mistakes, for having tried something worthwhile and failed".

L. Individual and Team Development

Not surprisingly, higher education institution respondents gave a "medium" rating to the statement "work teams and long-term project teams have specific learning agendas". By contrast, Thai enterprise respondents gave this statement a low rating, thus causing the overall rating to be "low".

In conclusion, **leadership** in the higher education institutions is as important as in all the overall enterprises. **Vision and strategy, executive practices, managerial practices and climate** are supportive to learning organization. For **job structure and system, organizational and job structure** aspect needed to be developed more in the higher education institution in order to support learning organization. **Information flow** aspect also needed to improve to the same level as multinational enterprises. **In performance and development dimension,** diagnostic tools for individual development and developmental planning need to be utilized and encouraged.

It can be concluded that higher education institutions are not significantly different from Thai enterprises in both their strengths and weaknesses in order to transform into a learning organization.

Figure 33 illustrates the low means of the overall, Thai and multinational enterprises and higher education institutions. This comparison depicts how the overall, Thai and multinational enterprises and higher education institutions differed in their development. As show in **Figure 33**, higher education institution is not significantly different from Thai enterprises; therefore, development programs for Thai enterprises are applicable for higher education institution as well.
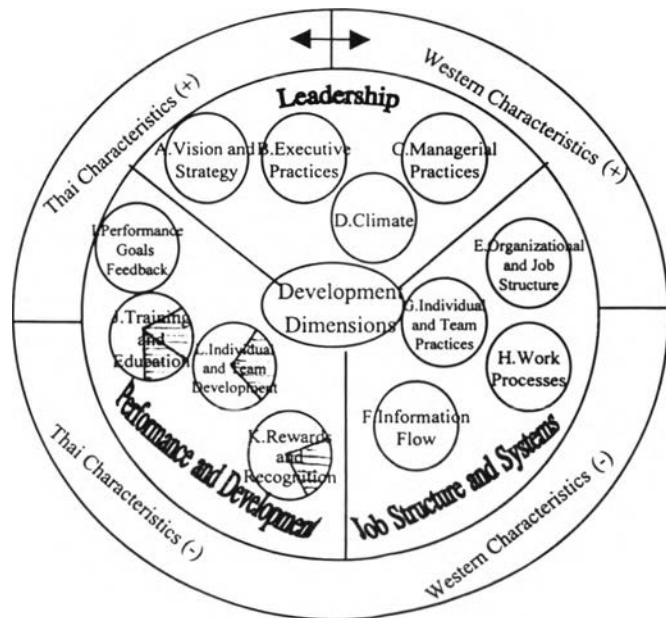
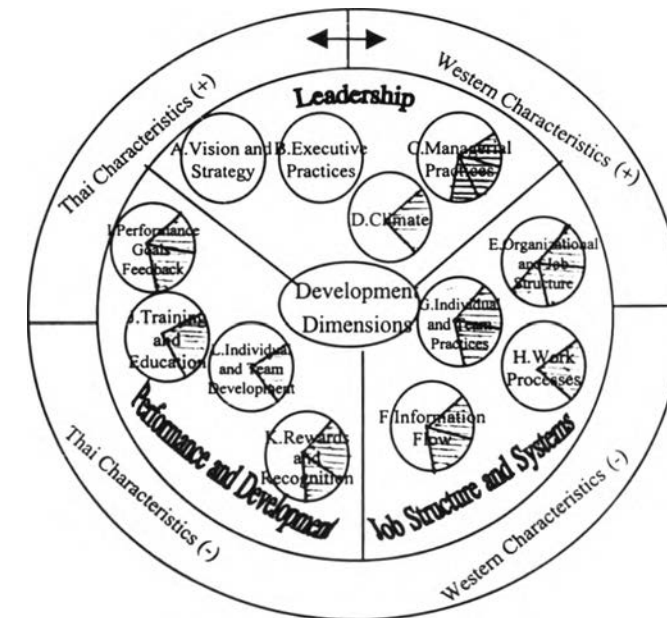# Thai Enterprises and Higher Education Institution Needed for Development
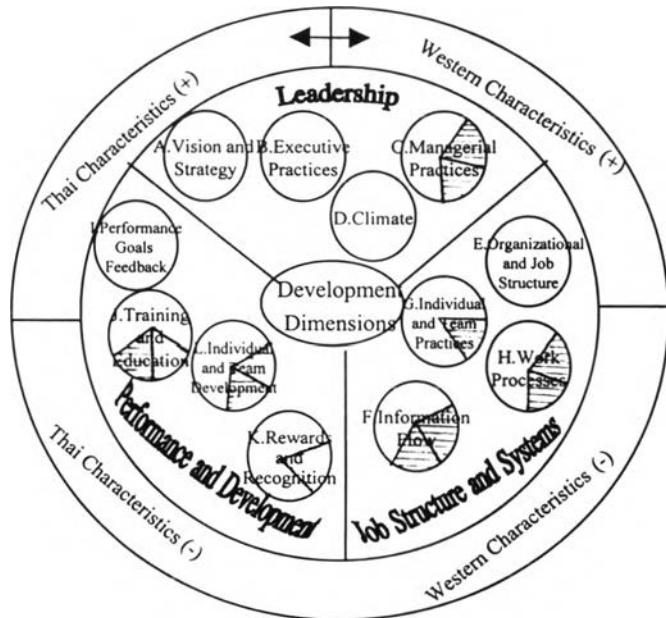
Overall
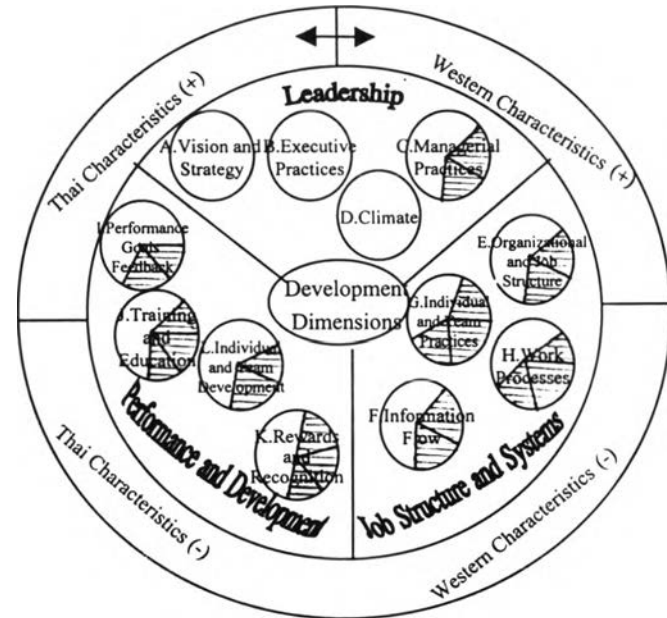
Thai Enterprises

Multinational Enterprises

Higher Education Institutions

In Figure 33, low means are concentrated on the **job structures and systems and performance and development** dimensions especially for Thai enterprises and higher education institutions. It is clearly that multinational enterprises have only four low means in the performance and development dimensions while Thai and higher educational institutions need much development in this dimension.

From the **leadership** dimension, low means for development are commonly shared by all enterprises and high education institutions except multinational enterprises in managers helping employees integrated what they have learned in discussing business applications and admit then own mistakes.

In the **job structure** and **system dimension,** Thai enterprises and higher education institutions, job rotation, assignment or cross-training building workforce flexibility are needed. The number of rules, polices, forms and procedures also need to be reduced in order to encourage empowerment in order to facilitate a learning organization.

For all Thai enterprises and higher education institutions, relevant data needed to be shared daily or weekly as well as communicate learning results when group or project teams solve business problems or create new approaches. Sharing of experiences and information are highly needed for these organizations.

To increase individual and team practices, all enterprises and institution are encouraged to analyze mistakes in order to learn how to improve in the next time. Information needed to be disseminated throughout the organization when the group learn or discourse new information.

In the performance and development dimension, diagnostic tools for individual development and developmental planning processes needed to be evaluated and needed to be given for learning new skills and knowledge.

In can be seen clearly that sharing directly in the profits of business through a profit-based reward system is not widely practical even in the multinational enterprises. All enterprises including higher education institutions must have specific learning agenda for work teams of long-term project teams.

Overall, The development that needs to facilitate a learning process for learning organizations in Thai enterprises and higher education institutions is possible. Through HRD unit, courses which is one of methods can be designed to help support changes necessary in order to transform an organization.

2.2.1.1 Prioritization of the 12 Sub-systems for Learning Organization Development

Prioritization of the 12 sub-systems for learning organization is needed in order to identify which sub-data of the 12 sub-systems in current reality must be developed as first, second, and third priorities. The researcher chose the low means of the sub-data as first priority for development, medium means as second priority and high means as third priority for development. Sub-data means of future possibility were categorized as high, medium, and low for confidence rating. This rating explained how possible these elements of the sub-data can support a learning organization in Thai enterprises and institutions.

To explain what elements are needed for the development in facilitating a learning organization for Thai enterprises and institutions, the low means identified as first priority for development as presented in Table 9, are being used as part of the design of the model. From the **Leadership** dimension, 2 sub-data from managerial practices are identified as low means. For **the Job Structure and Systems** dimension, 10 sub-data needed development. For the **Performance and Development** dimension, 10 sub-data identified as low means also needed development. The low means are 3.09 and below. Low means for Thai were chosen for designing and testing the model because the overall enterprises included data from multinational enterprises as well.

In Table 4 data revealed that there were significant difference between Thai and multinational enterprises both in currently reality and future possibility. Table 7 and Figure 33 demonstrate that low means for Thai enterprises are lower than multinational enterprises. According to the definition of Fleet and Peterson, multinational enterprise is a corporation that is primarily based in a single country, but acquires some meaningful share of it resources or revenue which leadership style, job structure and system as well as performance and development dimensions are greatly influenced by western concept.

Table 8 is mean ranking of sub-data in Thai enterprises for future possibility. The means ranking are used as a confidence rating for analyzing Table 9, 10, and 11. Confidence rating in this context indicates how respondents view the future for further developed. If identified as high, it is likely that Thai enterprises will be transformed to a learning organization. Mean identified as high, medium and low based on the means of the overall enterprises which range from 4.09 and above for high, 3.73-4.08 for medium and 3.72 and below for now.

Table 8 Mean Ranking of Sub-data in Thai Enterprises at Future Possibility

Sub-data	Future Possibility		Dimension
	X	Range	
26. We utilize advanced technology to improve the flow of information and to enhance our communication with one another (for example, satellite TV, computer networks, electronic mail, cellular phones, or pagers).	4.34	High	J
27. We communicate key business information to all employees through channels such as organizational newsletters, department meetings, and/or all-personnel meetings.	4.21	High	J
1. The vision and strategy are continually updated, based on changes in the business environment and customer's needs.	4.20	High	L
10. Executives hold managers accountable for supporting the development of their employees.	4.19	High	L
28. Those of us for whom it is appropriate have learned to use our computer system effectively.	4.19	High	J
7. Executives visibly lead and facilitate problem-solving efforts or special projects.	4.14	High	L
41. The satisfaction of our internal and external customers is considered in our performance reviews.	4.14	High	P
8. Executives speak about the connections between continuous learning, continuous improvement, quality, and business results.	4.13	High	L
3. We discuss trends and forces that drive current and future changes in our marketplace and industry as a normal part of our work.	4.11	High	L
4. We have a vision of ourselves as an organization in which learning and purposeful change are expected.	4.02	Medium	L
6. We are inspired to follow our executives toward our organizational vision.	4.02	Medium	L
40. We learn from marketplace through studies of competitors and/or other industry leaders.	4.02	Medium	J
43. We routinely give our suppliers (internal and external) feedback on the quality of the products and services they deliver to us.	4.02	Medium	P
5. People have a broad understanding of our organization's structure, processes, and systems and how they are related	4.01	Medium	P
44. We set our individual-development goals during an annual goal-setting process, rather than during our performance appraisals.	4.01	Medium	P
2. People take into account the organization's long-term goals and strategies as they plan and execute their work.	3.98	Medium	L
9. We believe that our executives are proud of us.	3.97	Medium	L

Table 8 (Continued)

Sub-data	Future Possibility		Dimension
	X	Range	
11. Managers encourage us to pursue personal development as part of our jobs and to learn by doing.	3.96	Medium	L
24. We routinely modify work processes in response to changing circumstances or priorities or to improve efficiency.	3.96	Medium	J
60. Taking responsibility for our own learning and development is considered part of our jobs.	3.96	Medium	P
19. We treat one another as adults-as people who can think for themselves and be responsible.	3.95	Medium	L
14. Managers encourage people to contribute ideas for improvements through individual conversations and/or group meetings.	3.94	Medium	L
34. We routinely ask one another for feedback on our performance so that we can continually improve our work.	3.94	Medium	J
16. We are not afraid to share our opinions and speak our minds.	3.93	Medium	L
23. Our work spaces are designed to allow for easy and frequent communication among those who work together most often.	3.93	Medium	J
47. Educational programs include skill training on becoming more creative problem solvers.	3.93	Medium	P
13. Managers communicate effectively with their employees about the employees' developmental needs and progress.	3.92	Medium	L
18. We work hard to eliminate "we/they" mindsets; we cooperate and collaborate whenever possible.	3.92	Medium	L
31. Individuals and teams are encouraged to identify and solve problems in their work areas.	3.91	Medium	J
57. Teams are given appropriate assistance with their development (e.g., process facilitation, team-building support).	3.91	Medium	P
45. Individuals' performance goals are clearly aligned with the organization's strategic goals.	3.90	Medium	P
36. We routinely and purposefully use systematic problem-solving techniques for solving difficult problems.	3.89	Medium	J
20. People are interested in and care about one another.	3.87	Medium	L
56. Much of our ongoing learning comes directly out of our work experiences rather than through formal training programs.	3.87	Medium	P
46. Educational programs include skill training on "learning how to learn" from one's own experience and from others.	3.86	Medium	P
52. Managers are rewarded for supporting the development of their employees.	3.86	Medium	P
22. We utilize self-directed work teams that have responsibility for work processes from start to finish.	3.84	Medium	J

Table 8 (Continued)

Sub-data	Future Possibility		Dimension
	X	Range	
35. We share our expertise and learn from one another through informal conversations and "storytelling."	3.84	Medium	J
39. When we engage in problem solving, we consider the "ripple" effects that various solutions or actions may have throughout the organization.	3.84	Medium	J
50. Formal training programs provide us with tools, job aids, or processes that enhance on-the-job performance.	3.84	Medium	P
55. We are recognized for solving business problems or successfully meeting challenges.	3.83	Medium	P
21. Job rotation, ad hoc assignments, and/or cross-training (for other jobs) are used to build work-force flexibility.	3.80	Medium	J
58. People have individual-development plans that impact their performance in a positive way.	3.78	Medium	P
17. We have a healthy sense of "play" about our work; it's O.K. to enjoy our jobs.	3.77	Medium	L
25. We are reducing the number of rules, policies, forms, and procedures, allowing more individual judgement.	3.77	Medium	J
32. In conflict situations, blaming is minimized so that people can openly and honestly discuss the issues and work toward solutions.	3.77	Medium	J
42. As appropriate, people periodically renegotiate their goals with their key customers, suppliers, and/or managers.	3.77	Medium	P
33. People and groups are encouraged to analyze mistakes in order to learn how to do it better the next time.	3.76	Medium	J
30. As our work groups or project teams solve business problems or create new approaches, we communicate our learnings and results throughout the organization (through things such as memos, presentations, E-mail, etc.).	3.75	Medium	J
37. We routinely experiment with new approaches to our work; we try out new ideas.	3.74	Medium	J
51. People are recognized for being courageous, that is, for experimenting and taking appropriate chances.	3.74	Medium	P
12. Managers help their people integrate what they have learned in development or training programs by discussing business applications.	3.72	Low	L
38. When a group learns or discovers new information that would be helpful to others, that information is quickly disseminated throughout the organization (for example, through presentations, memos, computer networks, etc.).	3.72	Low	J
49. We assign special work projects in which people are given the time and support to learn new skills and knowledge, as well as do the work.	3.68	Low	P

Table 8 (Continued)

Sub-data	Future Possibility		Dimension
	X	Range	
48. We have diagnostic tools for individual development and/or developmental-planning processes available for everyone.	3.62	Low	P
15. Managers admit their own mistakes.	3.58	Low	L
59. Work teams and long-term project teams have specific learning agendas.	3.57	Low	P
29. All of our employees receive quality, productivity, cost, or sales data relevant to their jobs on a daily or weekly basis.	3.49	Low	J
54. We are not punished for making honest mistakes, for having tried something worthwhile and failed.	3.47	Low	P
53. We share directly in the profits of the business through a profit-based reward system.	3.29	Low	P

Note :

- **Dimensions of Sub-systems**
  L indicates Leadership
  J indicates Job Structure and Systems
  P indicates Performance and Development

- **Range of means are**
  High indicates 4.09 and above
  Medium indicates 4.08 - 3.73
  Low indicates 3.72 and below

- **Range of means are based on overall enterprises.**
  Maximum is 4.43.

  Minimum is 3.38.

For potential development, means of sub-data were categorized into 3 priorities. The first priority for potential development consists of mean from sub-data identified as low range. The second priority for potential development consists of means from sub-data identified as medium range. And the third priority for potential development consists of means from sub-data identified as high range. The data presented in Table 9, 10 and 11 indicate the different priorities for development. Each sub-data of Table 9, 10 and 11 were analyzed by Senge's five disciplines and leadership competencies and what interventions are needed, as described by Chawla. The confidence level derived from the data viewed by the respondents as how enterprises or

institutions support the learning process that can strengthen their organizations in the future.

The data presented in Table 9 illustrates the analysis factors that affected the learning process, which needs to be strengthened in Thai enterprises. The means of the sub-data in Table 9 were identified as low means in current reality ranging from 3.09 and below.

Table 10 illustrates second priority for development, the means range from 3.10-3.48 for medium. Mean for third priority for development is 3.49 and above which identified as high means, presented in Table 11.

Table 9   Analysis for Potential Development as First Priority in Thai Enterprises at Current Reality

Dimensions	Sub-systems	Sub-data	The Five Disciplines	Leadership Competencies	Intervention		Confidence Rating
					HRD	Non-HRD	
Leadership	C. Managerial Practices	12. Managers help their people integrate what they have learned in development or training programs by discussing business applications.	• Team Learning • System Thinking	• Dialogue • Integration	Thinking Skills Workshop		L
		15. Managers admit their own mistakes.	• Mental Models • Personal Mastery	• Self and other acceptance • Nurturance of spirit	Transformational Leadership Workshop		L
Job Structure and Systems	E. Organizational and Job Structure	21. Job rotation, ad hoc assignments, and/or cross-training (for other jobs) are used to build work-force flexibility.	• Mental Models • Personal Mastery	• Challenge assumptions • Growth oriented		Company Policy OJT Training	M
		25. We are reducing the number of rules, policies, forms, and procedures, allowing more individual judgement.	• Personal Mastery	• Shared power	Empowering Employees for Center of Excellence	Company Policy	M
	F. Information Flow	29. All of our employees receive quality, productivity, cost, or sales data relevant to their jobs on a daily or weekly basis.	• Shared Vision	• Vision		Information Systems	L
		30. As our work groups or project teams solve business problems or create new approaches, we communicate our learnings and results throughout the organization (through things such as memos, presentations, E-mail, etc.).	• Shared Vision • Team Learning	• Mobilize commitment • Creativity	Team Development Workshop	Information Systems	M

Table 9 (Continued)

Dimen-sions	Sub-systems	Sub-data	The Five Disciplines	Leadership Competencies	Intervention		Confi-dence Rating
					HRD	**Non-HRD**	
Job Structure and Systems	G. Individual and Team Practices	32. In conflict situations, blaming is minimized so that people can openly and honestly discuss the issues and work toward solutions.	• Team Learning • Personal Mastery	• Encourage relationship • Self and other acceptance	Team Development Workshop		M
		33. People and groups are encouraged to analyze mistakes in order to learn how to do it better the next time.	• Personal Mastery	• Learning commitment	Thinking Skills Workshop		M
		35. We share our expertise and learn from one another through informal conversations and "storytelling."	• Team Learning	• Dialogue	Transformational Leadership Workshop		M
	H. Work Processes	37. We routinely experiment with new approaches to our work; we try out new ideas.	• Term Learning • Mental Models	• Creativity • Challenge assumptions	Creative Thinking & Problem Solving		L
		38. When a group learns or discovers new information that would be helpful to others, that information is quickly disseminated throughout the organization (for example, through presentations, memos, computer networks, etc.).	• Team Learning • Shared Vision	• Listening • Personal/co. values alignment	Interpersonal Communication Skills	• Knowledge Creation and Transfer • Information Systems	L
		39. When we engage in problem solving, we consider the "ripple" effects that various solutions or actions may have throughout the organization.	• System Thinking	• Expansionist thinking	Creative Thinking and Problem Solving		M

Table 9 (Continued)

Dimen-sions	Sub-systems	Sub-data	The Five Disciplines	Leadership Competencies	Intervention		Confi-dence Rating
					HRD	**Non-HRD**	
Performance and Development	I. Performance Goals and Feedback	42. As appropriate, people periodically renegotiate their goals with their key customers, suppliers, and/or managers.	• Shared Vision • Mental Models	• Goals • Introspection	Interpersonal Communication Skills	Interpersonal Communication	M
		45. Individuals' performance goals are clearly aligned with the organization's strategic goals.	• Shared Vision	• Personal/co. values alignment	Transformational Leadership Workshop		M
	J. Training and Education	46. Educational programs include skill training on "learning how to learn" from one's own experience and from others.	• Personal Mastery • Mental Models	• Learning commitment • Insight	Transformational Leadership Workshop		M
		48. We have diagnostic tools for individual development and/or developmental-planning processes available for everyone.	• Personal Mastery	• Growth oriented	Transformational Leadership Workshop	Company Policy	L
		49. We assign special work projects in which people are given the time and support to learn new skills and knowledge, as well as do the work.	• Mental Models • Team Learning	• Challenge assumptions • Creativity	Team Development Workshop		L
	K. Rewards and Recognition	51. People are recognized for being courageous, that is, for experimenting and taking appropriate chances.	• Personal Mastery	• Risk taking	Transformational Leadership Workshop		M
		53. We share directly in the profits of the business through a profit-based reward system.	• Shared Vision	• Personal/co. values alignment		Company Reward System	L
		54. We are not punished for making honest mistakes, for having tried something worthwhile and failed.	• Mental Models	• Challenge assumptions • Innovation	Transformational Leadership Workshop		L

Table 9 (Continued)

Dimensions	Sub-systems	Sub-data	The Five Disciplines	Leadership Competencies	Intervention		Confidence Rating
					HRD	Non-HRD	
Performance and Development	L. Individual and Team Development	58. People have individual-development plans that impact their performance in a positive way.	• Personal Mastery	• Growth oriented	Thinking Skills Workshop		M
		59. Work teams and long-term project teams have specific learning agendas.	• Shared Vision	• Mobilize commitment	Team Development Workshop		L

Note : Confidence Rating is the rating from the future possibility.

Table 10 Analysis for Potential Development as Second Priority in Thai Enterprises at Current Reality

Dimensions	Sub-systems	Sub-data	The Five Disciplines	Leadership Competencies	Intervention		Confidence Rating
					HRD	**Non-HRD**	
Leadership	A. Vision and Strategy	2. People take into account the organization's long-term goals and strategies as they plan and execute their work.	• System Thinking	• Expansionist thinking	Transformational Leadership Workshop		M
		3. We discuss trends and forces that drive current and future changes in our marketplace and industry as a normal part of our work.	• Team Learning	• Dialogue	Transformational Leadership Workshop		H
		4. We have a vision of ourselves as an organization in which learning and purposeful change are expected.	• Personal Mastery • Mental Models	• Mastery • Introspection	Transformational Leadership Workshop		M
		5. People have a broad understanding of our organization's structure, processes, and systems and how they are related.	• System Thinking	• Understanding of connectivity	Transformational Leadership Workshop	Appropriate Structure	M
	B. Executive Practices	6. We are inspired to follow our executives toward our organizational vision.	• Shared Vision	• Principles	Transformational Leadership Workshop		M
		9. We believe that our executives are proud of us.	• Mental Model	• Introspection	Transformational Leadership Workshop		M
	C. Managerial Practices	11. Managers encourage us to pursue personal development as part of our jobs and to learn by doing.	• Personal Mastery	• Growth oriented	Transformational Leadership Workshop		M
		13. Managers communicate effectively with their employees about the employees' developmental needs and progress.	• Personal Mastery	• Mastery	Interpersonal Communication Skills Workshop		M
		14. Managers encourage people to contribute ideas for improvements through individual conversations and/or group meetings.	• Team Learning	• Dialogue	Team Development Workshop		M

Table 10 (Continued)

Dimensions	Sub-systems	Sub-data	The Five Disciplines	Leadership Competencies	Intervention		Confidence Rating
					HRD	**Non-HRD**	
Leadership	D. Climate	16. We are not afraid to share our opinions and speak our minds.	• Personal Mastery	• Risk-taking	Empowering Employees for Center of Excellence		M
		17. We have a healthy sense of "play" about our work; it's O.K. to enjoy our jobs.	• Mental Models	• Introspection	Transformational Leadership Workshop		M
		18. We work hard to eliminate "we/they" mindsets; we cooperate and collaborate whenever possible.	• Mental Models	• Introspection	Team development Workshop		M
		19. We treat one another as adults-as people who can think for themselves and be responsible.	• Personal Mastery	• Self and other acceptance	Transformational Leadership Workshop		M
		20. People are interested in and care about one another.	• Personal Mastery	• Spirituality	Transformational Leadership Workshop		M
Job Structure and Systems	E. Organization And Job Structure	22. We utilize self-directed work teams that have responsibility for work processes from start to finish.	• System Thinking	• Integration	Team Development Workshop		M
		23. Our work spaces are designed to allow for easy and frequent communication among those who work together most often.	• Team Learning	• Cooperation	Team Development Workshop	Appropriate Structure	H
		24. We routinely modify work processes in response to changing circumstances or priorities or to improve efficiency.	• System Thinking	• Expansionist thinking	Thinking Skills Workshop	Appropriate Structure	M
	F. Information Flow	28. Those of us for whom it is appropriate have learned to use our computer system effectively.	• Personal Mastery	• Self directed		Appropriate Structure	H
	G. Individual and Team Practices	31. Individuals and teams are encouraged to identify and solve problems in their work areas.	• System Thinking	• Intuition	Creative Thinking and Problem Solving		M
		34. We routinely ask one another for feedback on our performance so that we can continually improve our work.	• Personal Mastery	• Mastery • Self and other acceptance	Interpersonal Communication Skills Workshop		M

Table 10 (Continued)

Dimensions	Sub-systems	Sub-data	The Five Disciplines	Leadership Competencies	Intervention HRD	Intervention Non-HRD	Confidence Rating
Job Structure and Systems	H. Work Processes	36. We routinely and purposefully use systematic problem-solving techniques for solving difficult problems.	• System Thinking	• Expansionist Thinking • Intuition	Creative Thinking and Problem Solving		M
		40. We learn from marketplace through studies of competitors and/or other industry leaders.	• Mental Models	• Insight		IT Network	M
Performance and Development	I. Performance Goals and Feedback	41. The satisfaction of our internal and external customers is considered in our performance reviews.	• Personal Mastery	• Ego subordination	Transformational Leadership Workshop		H
		43. We routinely give our suppliers (internal and external) feedback on the quality of the products and services they deliver to us.	• Personal Mastery	• Growth oriented	Interpersonal Communication Skills Workshop		M
		44. We set our individual-development goals during an annual goal-setting process, rather than during our performance appraisals.	• Personal Mastery	• Growth oriented	Transformational Leadership Workshop	Company Policy	M
	J. Training and Education	47. Educational programs include skill training on becoming more creative problem solvers.	• Personal Mastery • System Thinking	• Mastery • Perspective	Creative Thinking and Problem Solving		M
		50. Formal training programs provide us with tools, job aids, or processes that enhance on-the-job performance.	• Shared Vision • System Thinking	• Goals • Understanding of connectivity		Company Policy Appropriate Structure	M
	K. Rewards and Recognition	52. Managers are rewarded for supporting the development of their employees.	• Personal Mastery • System Thinking	• Nurturance of spirit • Understand of connectivity	Transformational Leadership Workshop		M
		55. We are recognized for solving business problems or successfully meeting challenges.	• Mental Models	• Challenge assumptions	Transformational Leadership Workshop		M

Table 10 (Continued)

Dimen-sions	Sub-systems	Sub-data	The Five Disciplines	Leadership Competencies	Intervention		Confi-dence Rating
					HRD	**Non-HRD**	
Performance and Development	L. Individual and Team Development	57. Teams are given appropriate assistance with their development (e.g., process facilitation, team-building support).	• Team Learning • Shared Vision	• Cooperation • Mobilize commitment	Team Development Workshop		M
		60. Taking responsibility for our own learning and development is considered part of our jobs.	• Personal Mastery	• Compassion	Empowering Employees for Center of Excellence		M

Note : Confidence Rating is the rating from the future possibility.

Table 11 Analysis for Potential Development as Third Priority in Thai Enterprises at Current Reality

Dimensions	Sub-systems	Sub-data	The Five Disciplines	Leadership Competencies	Intervention		Confidence Rating
					HRD	**Non-HRD**	
Leadership	A. Vision and Strategy	1. The vision and strategy are continually updated, based on changes in the business environment and customer's needs.	• Shared Vision	• Mobilize commitment	Transformational Leadership Workshop	Company Policy	H
	B. Executive Practices	7. Executives visibly lead and facilitate problem-solving efforts or special projects.	• System Thinking • Team Learning	• Integration • Cooperation	Creative Thinking and Problem Solving		H
		8. Executives speak about the connections between continuous learning, continuous improvement, quality, and business results.	• System Thinking	• Expansionist thinking	Thinking Skills Workshop		H
		10. Executives hold managers accountable for supporting the development of their employees.	• Personal Mastery	• Growth oriented	Transformational Leadership Workshop		H
Job Structure and Systems	F. Information Flow	26. We utilize advanced technology to improve the flow of information and to enhance our communication with one another (for example, satellite TV, computer networks, electronic mail, cellular phones, or pagers).	• System Thinking	• Understanding of connectivity		• Appropriate Structure • Learning Technology	H
		27. We communicate key business information to all employees through channels such as organizational newsletters, department meetings, and/or all-personnel meetings.	• Shared Vision	• Personal/co. value alignment		• Appropriate Structure • Learning Technology	H

Table 11 (Continued)

Dimen-sions	Sub-systems	Sub-data	The Five Disciplines	Leadership Competencies	Intervention		Confi-dence Rating
					HRD	**Non-HRD**	
Performance and Development	L. Individual and Team Development	56. Much of our ongoing learning comes directly out of our work experiences rather than through formal training programs.	• Personal Mastery	• Nurturance of spirit		• Coaching • Mentoring	M

Note : Confidence Rating is the range from the future possibility which were categorized into 3 levels; high, medium and low.
The ranges are: High = 3.49 and above,   Medium = 3.48-3.10   Low = 3.09 and below

The data presented in Table 9 illustrates the analysis factors affecting learning process that need to be strengthened in Thai enterprises. The means of the sub-data in Table 8 were identified as low means in current reality ranging from 3.94 and below.

1) The low means of sub-data showed that managerial practices in the leadership dimension for Thai enterprises still need to focus on managers or leaders to change their mental model in admitting their own mistakes and integrating what people have learned in order to promote team learning and system thinking. The respondents viewed these practices as being low in the future because changing a person's paradigm maintain some difficulties

2) Organizations need to integrate the technological networks and information tools that allow access to and exchange of information and learning. Respondents saw this as difficult to achieve because information systems require money to initiate and maintain.

3) Individual and team practices need to be encouraged greatly especially in minimizing blame and fear in conflict situation and analyzing mistakes in order to know how to do it better in the next time. Thai respondents viewed these practices as being difficult due to Thai values on face saving.

4) Problem solving process that involves creative idea generation, content questioning, and disciplined thinking are needed for development in the Thai enterprises.

5) Training and education are still inadequate for development. Employees need to have a development plan. They also need to learn new skills and knowledges through special work projects. These policies must be initiated by leaders or executives of the organizations to enhance the developmental growth for employees.

6) Rewards and recognition are another aspect which Thai enterprises need to emphasize. Employees should not be punished for making honest mistakes. This requires a new mental model of the leaders to change their ways of thinking.

7) Sharing directly the profits of the business through a profit-based reward system is viewed by the respondents as hard to achieve especially with Thai government enterprises.

8) There is little emphasis on work team and long-term project teams that have specific learning agendas.

The data presented in Table 10 were categorized as second priority for learning processes that need to be strengthened in the Thai enterprises. The means for this category range from 3.10-3.48 based on the overall enterprises are identified as medium for the current reality. It means that the sub-data, which affect the learning processes for Thai enterprises, need to be strengthened but mainly to continually updating the leaders' skills and practices. The data in Table 9 shows that in the **Leadership** dimension, respondents from the Thai enterprises expect leaders to discuss more trends and forces that drive current changes in the market as a normal part of their work. Leaders need to continually update the external forces that affect their organizations.

From the **job structure and system** dimension the use of computer system effectively is expected as part of the learning processes. The data presented in Table 10. The **performance and development** perspective indicates how respondents from Thai enterprises have placed great emphasis on performance services for employees in order to satisfy both internal and external customers.

The sub-data presented in Table 11 were means that ranged from 3.49 and above. These means were categorized as high level, which indicated that Thai enterprises have already supported the learning processes in these areas. Development may not needed, but to continually support elements and enhance a learning organization.

In Table 11, ongoing Thai respondents viewed that learning should come directly from their experiences more than through training programs but rated as medium, which is quite currently support by the organizations. However, for the future, it may not require much once the practices are part of the system.

For each sub-data in Table 9, 10 and 11, the researcher analyzed the data according to the concept of Seng's five disciplines for leadership competencies. The five disciplines composed of system thinking, personal leadership competencies and

fellowship expectation. On page 34 Figure 5, illustrates a model of leadership competencies and fellowship expectations. To explain what developments are needed for each sub-data, the researcher used a model of leadership competencies and fellowship expectation as a reference. HRD or non-HRD initiatives can be seen as interventions for development. For the purpose of this research, HRD unit is a change agent to facilitate change and also an agent to facilitate change for a person's paradigms. Courses can be implemented for the development such as 1) Interpersonal Communication, 2) Thinking Skills Workshop, 3) Team Development Workshop, 4) Transformational Leadership Workshop, 5) Empowering Employees for Center of Excellence and 6) Creative Thinking and Problem Solving. Details of courses are in Appendix C.

2.2.1.2 Ranking of Thai and Western Supportive and Non-Supportive Characteristics

Another components which have impact in the development of learning organization are Thai and Western characteristics, Tables 12-13, 15-16, and 18-19 show the ranking of Thai and Western most supportive characteristic in column 1. Column 2 shows characteristics identified by the respondents as being Thai characteristics ranking from most to least. The means for grouping high, medium and low derived from the scale of 5.1, which are used as criteria for interpreting the means. The scale for means ranges are:

5.00 - 4.51	indicates	Very Much
4.50 - 3.51	indicates	Much
3.50 - 2.51	indicates	Moderate
2.50 - 1.51	indicates	Little
1.50 - 1.00	indicates	Least

In the questionnaire, Part 3, respondents assessed the 30 characteristic described as the most Thai characteristics with the scale of 5.00-1.00. Table 12 illustrates the ranking of Thai supportive characteristics, which coded for Thai supportive characteristics. Table 13 describes as Thai characteristics, which coded for Western characteristics. Table 14 presents the overall picture showing both Thai and Western characteristics that support learning organization from the respondents.

For Tables 15-20, the same process was used to present the data as for Tables 15-17 data came from multinational enterprises respondents and Tables 18-20 data came from Thai enterprises respondents.

From the scale of 5-1, the researcher reduced the scale to 3 levels, high, medium and low. For high level, the mean range is 5.00-3.51, for medium level, the mean range is 3.50-2.51 and for low level, the mean range is 2.50-1.00. High, medium and low levels are also interpreted as most, moderate and least supportive characteristics for learning organization as well as how much these characteristics are Thai characteristics.

Table 12 Ranking of Thai Supportive Characteristics Coded for Thai Characteristics
Identified by All the Respondents

Ranking	Individual Characteristics	Supportive Characteristics		Thai Characteristics	
		Mean	Level	Mean	Level
1	Responsive to situation-opportunities.	3.72	H	3.53	H
2	Purpose of education is learning how to do.	3.56	H	3.35	M
3	Sensitivity is valued.	3.53	H	3.64	H
4	Supervisors must look for problems, subordinates wouldn't initiate a discussion.	3.46	M	3.19	M
5	Reward behavioral traits.	3.05	M	3.33	M
6	Short-term oriented, focus on past and present.	3.03	M	3.52	H
7	Attribute failure to outside forces.	2.84	M	3.61	H
8	Contented.	2.84	M	3.31	M
9	Avoid conflict to keep harmony.	2.82	M	3.57	H
10	Rarely plan ahead, especially in long range, play it by ear.	2.73	M	3.87	H
11	Low tolerance for deviant behavior and ideas.	2.61	M	3.36	M
12	Centralization is popular.	2.44	L	3.81	H
13	Dislike initiatives, failure is stigma.	2.42	L	3.60	H
14	Instructions are sought and responsibility is avoided.	2.37	L	3.83	H
15	Indirect or circuitous.	2.34	L	3.81	H

Note : H indicates means 5.00 – 3.51.

M indicates means 3.50 – 2.51.

L indicates means 2.50 – 1.00.

Table 13 Ranking of Thai Supportive Characteristics Coded for Western

Characteristics, Identified by All the Respondents

Ranking	Item No.	Individual Characteristics	Supportive Characteristics		Thai Characteristics	
			Mean	Level	Mean	Level
1	5	Ambitious.	3.95	H	3.23	M
2	30	Reward performance.	3.84	H	2.98	M
3	28	Always plan ahead.	3.76	H	2.49	L
4	10	Creative, take risk if appropriate.	3.72	H	2.61	M
5	25	Purpose of education is learning how to learn.	3.72	H	2.90	M
6	13	Disagreement is common.	3.72	H	2.74	M
7	3	Long-term oriented, focus on present and future.	3.70	H	2.63	M
8	24	Direct and be efficient.	3.66	H	2.42	L
9	7	Decentralization is popular.	3.65	H	2.56	M
10	21	Empowerment is accepted and initiative is shown.	3.60	H	2.77	M
11	19	Tolerance is shown toward those with differing opinions and standards of behavior.	3.50	M	2.73	M
12	1	Assertiveness is valued.	3.39	M	3.18	M
13	18	Speaking one's mind is a characteristics of an honest person.	3.38	M	2.62	M
14	11	Attribute failure to individuals.	3.37	M	2.59	M
15	15	Subordinates always seek help when encounter problems.	2.57	M	3.51	H

Note : H indicates means 5.00 – 3.51.

M indicates means 3.50 – 2.51.

L indicates means 2.50 – 1.00.

Table 14 Results of Supportive and Non-Supportive Characteristics for Learning

Organization, Identified as Thai or Western Characteristics by All

Respondents

Thai Characteristics (+)	Western Characteristics (+)
Most	**Most**
• Responsive to situation-opportunities.	• Ambitious.
• Purpose of education is learning how to do.	• Reward performance.
• Sensitivity is valued.	• Always plan ahead.
Moderate	• Creative, take risk if appropriate.
• Supervisors must look for problems, subordinates wouldn't initiate a discussion.	• Purpose of education is learning how to learn.
• Reward behavioral traits.	• Disagreement is common.
• Short-term oriented, focus on past and present.	• Long-term oriented, focus on present and future.
• Attribute failure to outside forces.	• Get to the point and be efficient.
• Contented.	• Decentralization is popular.
• Do not disagree to keep harmony.	• Empowerment is accepted and initiative is shown.
• Rarely plan ahead, especially in long range, play it by ear.	**Moderate**
• Low tolerance for deviant behavior and ideas.	• Tolerance is shown toward those with differing opinions and standards of behaviors.
	• Assertiveness is valued.
	• Speaking one's mind is a characteristics of an honest person.
	• Attribute failure to individuals.
	• Subordinates always seek help when encounter problems.
Thai Characteristics (-)	**Western Characteristics (-)**
Least	**Least**
• Centralization is popular.	
• Dislike initiatives, failure is stigma.	
• Instructions are sought and responsibility is avoided.	
• Indirect or circuitous.	

Table 15 Ranking of Thai Supportive Characteristics Coded for Thai

Characteristics, Identified by Respondents from Multinational Enterprises.

Ranking	Item No.	Individual Characteristics	Supportive Characteristics		Thai Characteristics	
			Mean	Level	Mean	Level
1	17	Responsive to situation-opportunities.	3.76	H	3.53	H
2	2	Sensitivity is valued.	3.66	H	3.72	H
3	26	Purpose of education is learning how to do.	3.57	H	3.39	M
4	16	Supervisors must look for problems, subordinates wouldn't initiate a discussion.	3.37	M	3.28	M
5	4	Short-term oriented, focus on past and present.	3.13	M	3.57	H
6	29	Reward behavioral traits.	3.08	M	3.48	M
7	6	Contented.	2.81	M	3.44	M
8	27	Rarely plan ahead, especially in long range, play it by ear.	2.78	M	3.90	H
9	12	Attribute failure to outside forces.	2.77	M	3.54	H
10	14	Avoid conflict to keep harmony.	2.75	M	3.63	H
11	20	Low tolerance for deviant behavior and ideas.	2.57	M	3.32	M
12	8	Centralization is popular.	2.48	L	3.68	H
13	22	Instructions are sought and responsibility is avoided.	2.46	L	3.85	H
14	9	Dislike initiatives, failure is stigma.	2.43	L	3.56	H
15	23	Indirect or circuitous.	2.40	L	3.84	H

Note : H indicates means 5.00 – 3.51.

M indicates means 3.50 – 2.51.

L indicates means 2.50 – 1.00

Table 16 Ranking of Thai Supportive Characteristics Coded for Western

Characteristics, Identified by Respondents from Multinational Enterprises

Ranking	Item No.	Individual Characteristics	Supportive Characteristics		Thai Characteristics	
			Mean	Level	Mean	Level
1	5	Ambitious.	3.94	H	3.21	M
2	30	Reward performance.	3.90	H	3.07	M
3	3	Long-term oriented, focus on present and future.	3.79	H	2.63	M
4	28	Always plan ahead.	3.75	H	2.49	L
5	10	Creative, take risk if appropriate.	3.75	H	2.71	M
6	13	Disagreement is common.	3.73	H	2.76	M
7	7	Decentralization is popular.	3.69	H	2.66	M
8	24	Direct and be efficient.	3.69	H	2.44	L
9	25	Purpose of education is learning how to learn.	3.64	H	2.90	M
10	21	Empowerment is accepted and initiative is shown.	3.63	H	2.79	M
11	19	Tolerance is shown toward those with differing opinions and standards of behavior.	3.61	H	2.77	M
12	1	Assertiveness is valued.	3.54	H	2.95	M
13	18	Speaking one's mind is a characteristics of an honest person.	3.40	M	2.58	M
14	11	Attribute failure to individuals.	3.39	M	2.61	M
15	15	Subordinates always seek help when encounter problems.	2.61	M	3.62	H

Note : H indicates means 5.00 – 3.51.

M indicates means 3.50 – 2.51.

L indicates means 2.50 – 1.00

Table 17 Results of Supportive and Non-Supportive Characteristics for Learning
Organization, Identified as Thai or Western Characteristics by
Multinational Enterprise Respondents

Thai Characteristics (+)	Western Characteristics (+)
Most	**Most**
• Responsive to situation-opportunities.	• Ambitious.
• Sensitivity is valued.	• Reward performance.
• Purpose of education is learning how to do.	• Long-term oriented, focus on present and future.
Moderate	• Always plan ahead.
• Supervisors must look for problems, subordinates wouldn't initiate a Discussion	• Creative, take risk if appropriate.
	• Disagreement is common.
	• Decentralization is popular.
• Short-term oriented, focus on past and present.	• Get to the point and be efficient.
• Reward behavioral traits.	• Purpose of education is learning how to learn
• Contented.	• Empowerment is accepted and initiative is shown.
• Rarely plan ahead, especially in long range, play it by ear.	• Tolerance is shown toward those with differing opinions and standards of behaviors.
• Attribute failure to outside forces.	
• Do not disagree to keep harmony.	• Assertiveness is valued.
• Low tolerance for deviant behavior and ideas.	**Moderate**
	• Speaking one's mind is a characteristics of an honest person.
	• Attribute failure to individuals.
	• Subordinates always seek help when encounter problems.
Thai Characteristics (-)	**Western Characteristics (-)**
Least	**Least**
• Centralization is popular.	
• Instructions are sought and responsibility is avoided.	
• Dislike initiatives, failure is stigma.	
• Indirect or circuitous.	

Table 18 Ranking of Thai Supportive Characteristics Coded for Thai Characteristics Identified by Respondents from Thai Enterprises

Ranking	Item No.	Individual Characteristics	Supportive Characteristics		Thai Characteristics	
			Mean	Level	Mean	Level
1	17	Responsive to situation-opportunities.	3.69	H	3.52	H
2	26	Purpose of education is learning how to do.	3.55	H	3.32	M
3	16	Supervisors must look for problems, Subordinates wouldn't initiate a discussion.	3.51	H	3.15	M
4	2	Sensitivity is valued.	3.46	M	3.60	H
5	29	Reward behavioral traits.	3.03	M	3.24	M
6	4	Short-term oriented, focus on past and present.	2.98	M	3.50	H
7	12	Attribute failure to outside forces.	2.88	M	3.65	H
8	6	Contented.	2.85	M	3.24	M
9	27	Rarely plan ahead, especially in long range, play it by ear.	2.71	M	3.86	H
10	14	Avoid conflict to keep harmony.	2.66	M	3.54	H
11	20	Low tolerance for deviant behavior and ideas.	2.63	M	3.38	M
12	9	Dislike initiatives, failure is stigma.	2.42	L	3.63	H
13	8	Centralization is popular.	2.41	L	3.89	H
14	22	Instructions are sought and responsibility is avoided.	2.32	L	3.81	H
15	23	Indirect or circuitous.	2.31	L	3.80	H

Note : H indicates means 5.00 – 3.51.

M indicates means 3.50 – 2.51.

L indicates means 2.50 – 1.00.

Table 19 Ranking of Supportive Characteristics Coded for Western Characteristics
Identified by Respondents from Thai Enterprises

Ranking	Item No.	Individual Characteristics	Supportive Characteristics		Thai Characteristics	
			Mean	Level	Mean	Level
1	5	Ambitious.	3.96	H	3.24	M
2	30	Reward performance.	3.82	H	2.94	M
3	28	Always plan ahead.	3.77	H	2.49	L
4	25	Purpose of education is learning how to learn.	3.76	H	2.90	M
5	13	Disagreement is common.	3.72	H	2.73	M
6	10	Creative, take risk if appropriate.	3.71	H	2.55	M
7	3	Long-term oriented, focus on present and future.	3.66	H	2.62	M
8	24	Direct and be efficient.	3.65	H	2.41	L
9	7	Decentralization is popular.	3.63	H	2.52	M
10	21	Empowerment is accepted and initiative is shown.	3.58	H	2.77	M
11	19	Tolerance is shown toward those with differing opinions and standards of behavior.	3.44	M	2.71	M
12	18	Speaking one's mind is a characteristics of an honest person.	3.37	M	2.64	M
13	11	Attribute failure to individuals.	3.36	M	2.58	M
14	1	Assertiveness is valued.	3.32	M	3.29	M
15	15	Subordinates always seek help when encounter problems.	2.56	M	3.45	M

Note : H indicates means 5.00 – 3.51.

M indicates means 3.50 – 2.51.

L indicates means 2.50 – 1.00

Table 20   Results of Supportive and Non-Supportive Characteristics for Learning
Organization, Identified as Thai or Western Characteristics by
Thai Enterprise Respondents

Thai Characteristics (+)	Western Characteristics (+)
Most	**Most**
• Responsive to situation-opportunities.	• Ambitious.
• Purpose of education is learning how to do.	• Reward performance.
	• Always plan ahead.
• Supervisors must look for problems, subordinates wouldn't initiate a discussion.	• Purpose of education is learning how to learn
	• Disagreement is common.
Moderate	• Creative, take risk if appropriate.
• Sensitivity is valued.	• Long-term oriented, focus on present and future.
• Reward behavioral traits.	
• Short-term oriented, focus on past and present.	• Get to the point and be efficient.
	• Decentralization is popular.
• Attribute failure to outside forces.	• Empowerment is accepted and initiative is shown.
• Contented.	**Moderate**
• Rarely plan ahead, especially in Long range, play it by ear.	• Tolerance is shown toward those with differing opinions and standards of behaviors.
• Do not disagree to keep harmony.	
• Low tolerance for deviant behavior and ideas.	• Speaking one's mind is a characteristics of an honest person.
	• Attribute failure to individuals.
	• Assertiveness is valued.
	• Subordinates always seek help when encounter problems.
Thai Characteristics (-)	**Western Characteristics (-)**
Least	**Least**
• Dislike initiatives, failure is stigma.	
• Centralization is popular.	
• Instructions are sought and responsibility is avoided.	
• Indirect or circuitous.	

Tables 14, 17 and 20 show summary of the results of Thai Characteristics from the overall, Thai and multinational enterprises. Some significance Pontes can be included as follows:

The three most supportive Thai characteristics identified by the overall respondents are:

1. Responsive to situation and opportunities.
2. Purpose of education is learning how to do.
3. Sensitivity is value.

When a comparison is made among the overall, Thai and multinational enterprises, Thai enterprises ranked **supervisors must look for problems, subordinates wouldn't initiate a discussion** as third most supportive characteristic instead "**sensitivity is value**" which ranked fourth as being most supportive characteristics. Multinational enterprises ranked **sensitivity is value** as second most supportive characteristics..

The four least supportive Thai characteristics identified by the overall respondents and respondents from Thai and multinational enterprises are :

1. Centralization is popular.
2. Dislike initiatives, failure is stigma.
3. Instructions are sought and responsibility is avoided.
4. Indirect or circuitous.

In designing a Thai learning organization model, the researcher selected the low means of the sub-data from the 12 sub-systems which categorized as first priority for development. Another component which also integrated as part of the model is the Thai and Western supportive and non-supportive characteristics.

When designing courses for leadership development program, the Thai least supportive or non-supportive characteristics must be considered as part of the program development in order to enhance a Thai learning organization. Interestingly, there are four Thai characteristics, which are supportive to the development of a

learning organization these must be integrated into the leadership development program as well as order to further support the concept of learning organization.

There are many interventions that enhance the development for a learning organization. HRD as a change agent in designing courses that support the learning organization's concepts is one of the approaches that can be used for developing leaders in the leadership development program. The followings described how important of HRD and its role as a change agent.

The Role of HRD as a Change Agent

Anyone who intervenes in the problem-solving efforts of a social group or organization can be described as a "change agent". However, there are numbers of different ways in which intervention can take place. The change agent can and should specialize in helping with part of the process where he/she has the best chance to make a difference. As Havelock and Zlotolow (1995) pointed out, there are at least four primary ways in which people can act as change agents. These are:

(1) The Change Agent as Catalyst

Change agents are needed to pressure the system in order to be less complacent and to start working on its serious problems. They energize the problem-solving process and get started. They are the catalysts of change as well as the relationship builder.

(2) The Change Agent as Solution giver

Being an effective solution giver involves more than simply having a solution. One has to know how it relates to people's needs and concerns and be prepared to adapt oneself and one's innovation to satisfy those concerns.

(3) The Change Agent as Process Helper

The process helper is someone who assists the system in all aspects of the change process from awareness of need through relationship building and defining the problem to search for and apply solutions. Because most people who want to

bring about change are not experts on the "How-To" of change, they can be helped greatly by skill people in the various stages of problem solving.

(4) The Change Agent as Resource Linker

Effective problem-solving requires the bringing together of needs and resources. A very special and underrated change role is that of the "linker". It is the person who brings people together, helps clients find and make the best use of resources inside and outside their own system.

There are numbers of different ways to tackle the process of change. One of the methods is to create an awareness of the need for changing and selecting an appropriate initiative person or group to create the right culture. Burnes (1992) suggested that change that is inconsistent with the culture of the organization is doomed to fail, but changing culture is even more problematic. Desirably, the culture of the organization should foster flexibility and encourage reflection. Senge (1992) also suggested that the gap between espoused theory and theory - in–use can present a challenged shared vision. The role of HRD as a change agent can embrace the process of change as well as associate task.

The model, which the researcher proposed, is to create an awareness of the need for change and select an appropriate initiative person or group as a change agent. Learning via HRD is one of the methods, which can be used as a tool for creating awareness for change. According to Senge, leaders are responsible for building and maintaining cultural relations within the organization. Leaders enable individuals to master the five disciplines which converge to create the learning organization Senge, (1990).

Figure 34 demonstrates how HRD as a change agent relates the activities to leaders adaptation process. As proposed by Havelock and Zlotolow, (1973) the diffusion and adoption of innovations, are as follows: "awareness", "interest", "evaluation", "trial", "adoption" and "integration". The HRD unit, as a change agent, needs to stimulate awareness and interest. The primary objective should be simple explosive, exposure to the concern, to the need for change, and the availability of one or more change alternatives. During the interest stage, the HRD

unit must encourage individual to become actively involved in the search for information. As potential leaders begin to make them "mental trial", they will continue to seek information, which will enable them to envision the innovation applied to their own situation. During the trial stage, leaders need training in order to fulfill their roles or to carry out these new activities. After the trial, the leader is in a position to decide whether to adopt or reject the innovation. If ideas are adopted at this stage, the HRD unit must be prepared to provide further training and encouragement.

After adoption, there are numbers of changing things that can nurture the integration of new skills or material into the day-to-day behavior of the leaders. Practices sessions, reminders in newsletters, and brief follow-up questionnaires on frequency of use and usefulness will all serve the purpose.

To illustrate the effectiveness of these courses, a Transformational Leaderships Workshop was conducted by an expert as part of the case study to validate the model.

Leadership of any kind has critical strategic importance to change program, whether that leadership is formal, informal, administrative, or elective. These leaders, together with the HRD unit will help to stimulate, inform, demonstrate, train, help and nurture employees to adopt the concept of learning organization. However, leaders must transform themselves first before they could transform others. The five disciplines, mental model, system thinking, shared vision, personal mastery and team learning are part of the development for the leaders including the leaderships competencies.

Corporations greatly need leaders who have been through their own transformation to facilitate the transformations of others. They need leaders who value people, growth and learning, and who can help employees tap into inner reserves, re-invent themselves, to become more attuned to interrelationship, to connect and to value their own wisdom and to work with colleagues in co-creation. Without these leaders, it will be difficult to build high performance for a learning organization.

Figure 34 Matching Change Agent Actions to the Leaders' Adoption Process

CHANGE AGENT ACTIVITIES
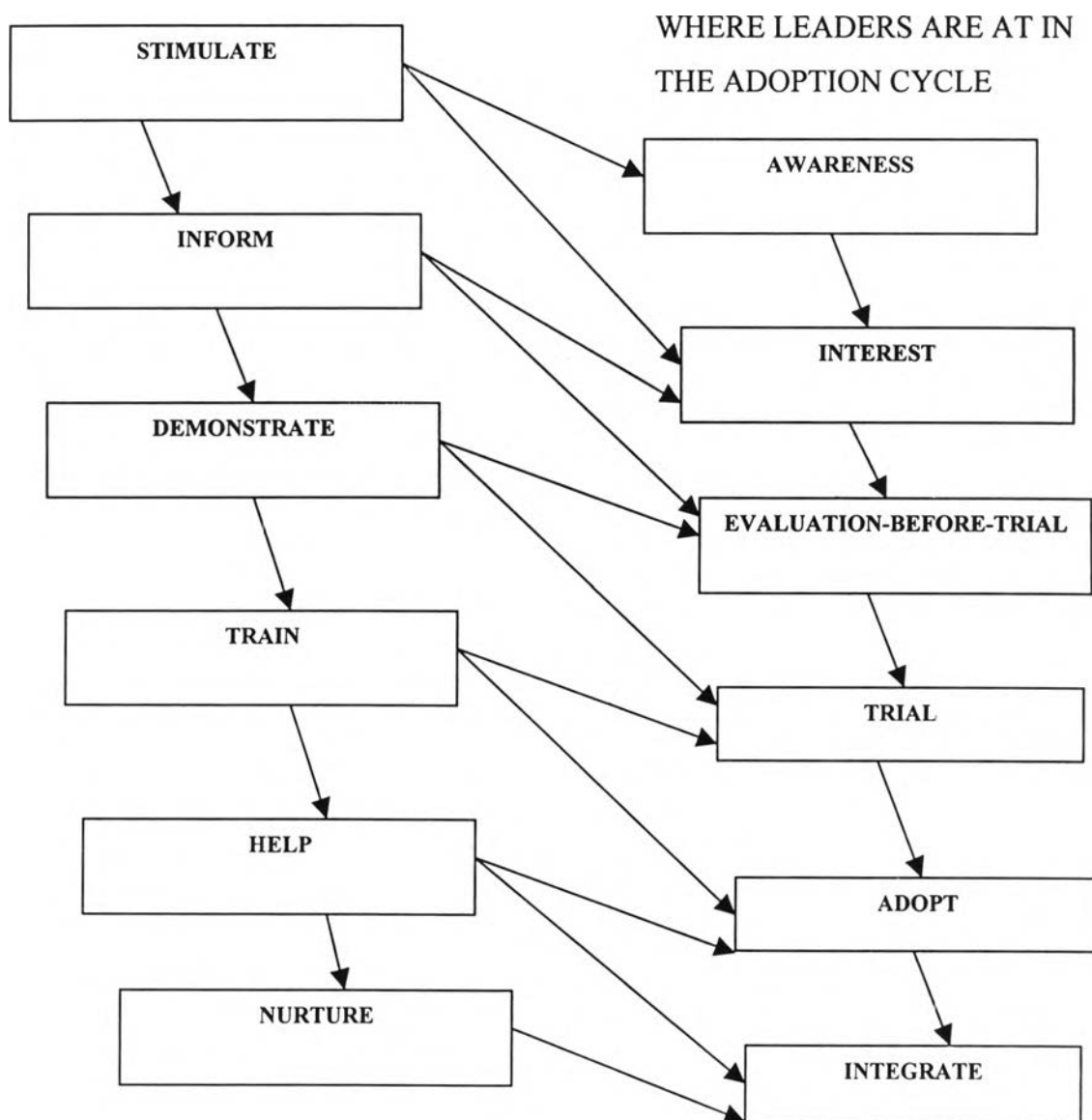
Havelock and Zlotolow (1995)

Figure 35 illustrates the components focusing the Thai learning organization model. One of the courses, Transformational Leadership Workshop was validated via HRD of Thai Airways International Public Company Limited for 24 managerial staff as participants..
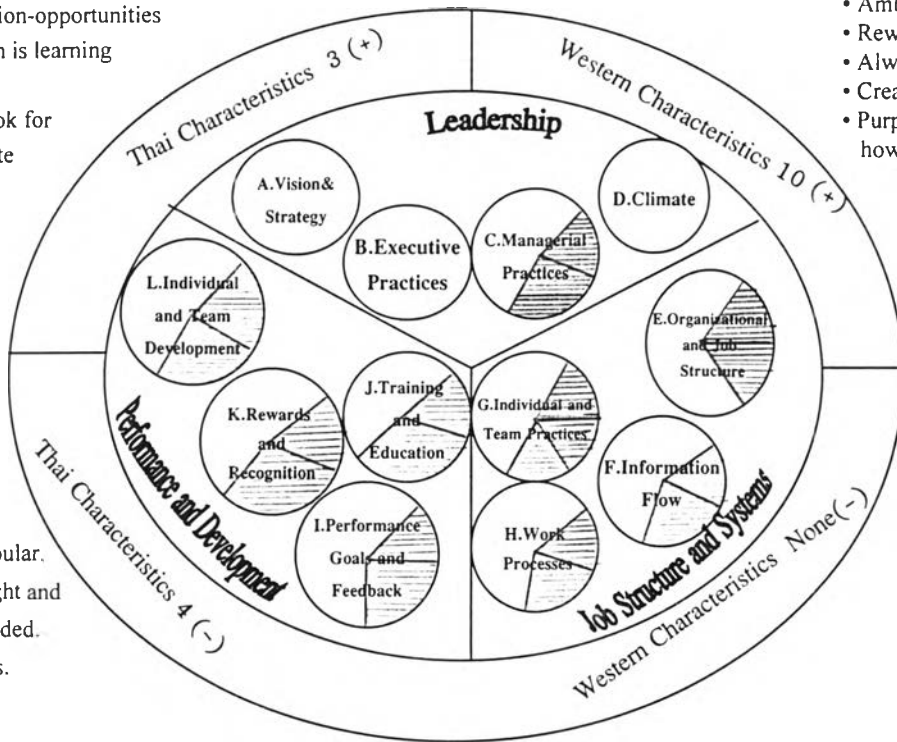
Thai Characteristics
- Responsive to situation-opportunities
- Purpose of education is learning how to do
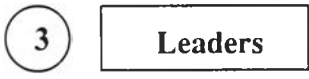- Supervisors must look for problems, subordinate wouldn't initiate a discussion.

Western Characteristics
- Ambitious.
- Reward performance.
- Always plan ahead.
- Creative, take risk if appropriate.
- Purpose of education is learning how to learn.
- Disagreement is common.
- Long-term oriented, focus on present and future.
- Get to the point and be efficient.
- Decentralization is popular.
- Empowerment is accepted and initiative is shown.

Thai Characteristics
- Dislike initiatives, failure is stigma.
- Centralization is popular.
- Instructions are sought and responsibility is avoided.
- Indirect or circuitous.

Thai Characteristics 3 (+)
Western Characteristics 10 (+)
Leadership

A. Vision & Strategy
B. Executive Practices
C. Managerial Practices
D. Climate
L. Individual and Team Development
E. Organizational and Job Structure
K. Rewards and Recognition
J. Training and Education
G. Individual and Team Practices
F. Information Flow
I. Performance Goals and Feedback
H. Work Processes

Performance and Development
Thai Characteristics 4 (–)
Job Structure and Systems
Western Characteristics None (–)

Profile of 12 Sub-systems, Supportive, Non-Supportive Characteristics (1)

1. Stimulate
2. Inform
3. Demonstrate
4. Train
5. Help
6. Nurture
Leadership

Team Learning
Mental Model
System Thinking
Shared Vision
Personal Mastery
Leadership

Help others develop and grow
Facilitates management functions
Fosters common vision
Encourages collaboration
Advocates change
Creates atmosphere for excellence
Influences others
Deals with adversity
Demonstrates Flexibility
Practices effective listening
Develops relationships
Encourages open communication

Interpersonal Communication Skills Workshop
Thinking Skills Workshop
Team Development Workshop
Transformational Leadership Workshop
Empowering Employees for Center of Excellence
Creative Thinking & Problem Solving
C I

(3) **Leaders**

(2) **HRD Unit**

The following elements describe the three components of the model in Figure 35.

The Three components are as follows:

1. Profile of the 12 Sub-systems, Supportive and Non-supportive Characteristics.

The 12 sub-systems that facilitate learning process which need to be strengthened for learning organization in Thai enterprises are

A. Vision and Strategy

B. Executive Practices

C. Managerial Practices

D. Climate

E. Organizational and Job Structure

F. Information Flow

G. Individual and Team Practices

H. Work Processes

I. Performance Goals Feedback

J. Training and Education

K. Rewards and Recognition

L. Individual and Team Development

Thai and Western Cultures by Thai Enterprises

Thai Culture

Most

- Responsive to situation-opportunities.
- Purpose of education is learning how to do.
- Supervisors must look for problems, subordinate wouldn't initiate a discussion.
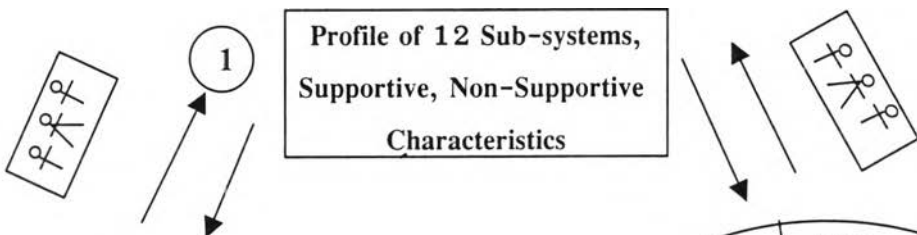
Moderate

- Sensitivity is valued.
- Reward behavioral traits.
- Short-term oriented, focus on past and present.

- Attribute failure to outside forces.
- Contented.
- Rarely plan ahead, especially in long range, play it by ear.
- Do not agree to keep harmony.
- Low tolerance for deviant behavior and ideas.

Least

- Dislike initiatives, failure is stigma.
- Centralization is popular.
- Instructions are sought and responsibility is avoided.
- Indirect or circuitous.

Western Culture

Most

- Ambitious.
- Reward performance.
- Always plan ahead.
- Creative, take risk if appropriate.
- Purpose of education is learning how to learn.
- Disagreement is common.
- Long-term oriented, focus on present and future
- Get to the point and be efficient.
- Decentralization is popular.
- Empowerment is accepted and initiative is shown.

Moderate

- Tolerance is shown toward those with differing opinions and standards of behaviors.
- Assertiveness is valued.
- Speaking one's mind is a characteristic of an honest person.
- Attribute failure to individuals.
- Subordinates always seek help when encounter problems.

2. HRD Unit as a Change Agent

Courses for leadership development program to strengthen the learning process provided by HRD unit. Details of courses are in Appendix C.

1. Interpersonal Communication Skills

2. Thinking Skills Workshop

3. Team Development Workshop

4. Transformational Leadership Workshop

5. Empowering Employees for Center of Excellence

6. Creative Thinking and Problem Solving

3. Leader as a Role Model

Leaders can act as change agent and can become the role model in facilitating learning, process for employees for a changing paradigm in order to become a learning organization. Leaders need to do the following processes:

1. Stimulate awareness and interest

2. Inform interest and evaluation before trial

3. Demonstrate evaluation before trial and during the trial

4. Train for people to adopt the ideas

5. Help to adapt and integrate

6. Nurture the integration

Part 3 Result of Model Validation Testing Through a Case Study

3.1 Summary of Pre-test and Post-test

Tables 21 presents the raw data of the acquired knowledge in the five disciplines of Senge and leadership competencies and Table 22 and 24 are the percentage increased of the pre-test and post-test of Thai characteristics that are conducive to the Thai learning organization. The content of the first two questions was analyzed in reference to The Five Disciplines of Senge (1990).

Table 21 Results of Pre-test and Post-test of the Case Study

Subject	SV		MM		TL		Per M		ST		LS	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
1	-	3	2	2	-	2	4	6	2	-	-	2
2	4	5	2	2	2	2	2	5	4	3	2	3
3	-	-	-	-	-	-	3	3	-	2	8	16
4	-	-	-	-	9	-	-	5	-	-	-	5
5	2	4	2	4	7	7	4	10	-	7	-	3
6	-	5	-	2	9	10	2	5	-	5	3	5
7	-	6	-	2	9	5	6	15	-	-	-	12
8	-	4	-	2	9	6	3	11	2	6	-	7
9	3	6	-	3	4	5	-	6	2	6	3	-
10	2	2	2	-	3	2	5	5	2	9	-	4
11	-	2	-	2	-	4	-	7	-	2	-	-
12	-	3	3	2	5	-	6	8	-	3	-	-
13	-	4	3	4	-	5	4	4	2	3	-	4
14	-	3	2	5	3	4	3	8	3	6	3	5
15	3	3	-	-	11	5	-	7	3	7	-	8
16	3	6	-	5	-	3	3	2	-	2	2	3
17	-	5	-	2	4	5	3	4	-	5-	-	5
18	-	2	-	4	-	7	7	4	-	6	6	8
19	5	5	3	-	5	9	-	3	-	9	-	-
20	2	2	-	4	-	3	3	4	2	2	5	4
21	-	-	-	2	3	2	2	3	-	5	3	5
22	2	4	-	3	-	3	2	3	2	3	3	2
23	-	2	-	2	-	3	2	7	-	4	3	3
24	-	7	4	4	-	5	6	6	-	6	4	12
Total	26	83	23	56	83	97	67	141	24	101	45	116

Remark: SV = Share Vision   TL = Team Learning   ST = System Thinking

MM = Mental Model Per M = Personal Mastery LS = Leadership

Table 22 Means Comparison between the Pre-test and Post-test of Perceptions of Skills

Skills	N	Pre-test		Post-test		t	Sig (2 tailed)
		$\bar{X}$	S.D.	$\bar{X}$	S.D.		
Shared Vision	24	1.08	1.56	3.46	1.98	5.65	0.000**
Mental Model	24	0.96	1.33	2.33	1.58	3.49	0.002**
Team Learning	24	3.46	3.73	4.04	2.61	0.75	0.462
Personal Mastery	24	2.79	2.17	5.88	2.98	4.95	0.000**
System Thinking	24	1.00	1.29	4.21	2.62	5.62	0.000**
Leadership	24	1.88	2.27	4.83	4.05	4.02	0.001**

N = 24   ** $p \leq 0.01$

Table 23 Results of Pre-test for Thai Supportive Characteristics

Thai Characteristics	Percent	Score
1. Respect seniority	17.65	9
2. Supporting others	9.80	5
3. Family Oriented	9.80	5
4. Taking Care of Other	9.80	5
5. Caring	7.84	4
6. Helping Other	5.88	3
7. Education Support	5.88	3
8. Kindness	5.88	3
9. Easy to Accept New Things	5.88	3
10. Respect Management	5.88	3
11. Continuous Learning	3.92	2
12. Generosity to Other	3.92	2
13. Having Difference Style/Having Working Difference Frame	1.96	1
14. Respect Expert	1.96	1
15. Loyalty to Organization	1.96	1
16. Details	1.96	1
Total	**100.00**	**54**

Table 24 Results of Post-test for Thai Supportive Characteristics

Thai Characteristics	Percent	Score
1. Respect Seniority	11.30	13
2. Support Others	9.56	11
3. Humble	7.83	9
4. Trust	6.96	8
5. Unity	6.96	8
6. Supportive	6.96	8
7. Change Agent	5.22	6
8. Family Life Oriented	5.22	6
9. Closely	4.35	5
10. Different Visions a not Encouraged	4.35	5
11. Knowledgeable	4.35	5
12 Share Vision	4.35	5
13 System Thinking	348	4
14 Team Learning	3.48	4
15 Team Work	3.48	4
16 Have Principles	2.61	3
17. Continuous Development	2.61	3
18. Continuous Learning	1.74	2
19. Fairness	1.74	2
20. Give People a Channel	1.74	2
21. Learn from Others	0.87	1
22 Content	0.87	1
Total	**100.00**	**115**

In the pre-test, team learning has the highest score (83) followed by personal mastery (67) leadership (45), shared vision (26), system thinking (24), and mental model (23). From the content analysis, it was clear that participants could perceive more on team learning, personal mastery and leadership skills due to their

work experience. However, shared vision, system thinking and mental model were not emphasized as much in the post-test.

Appendix B shows the content analysis of each participant's knowledge and understanding from the questions asked in the pre-test and post-test.

The t score from Table 22 shows that shared vision was the highest and system thinking (t = 5.65) was the second highest (t = 5.62). There are significant differences in most of the skills except team learning,

The Results from the post-test regarding Thai characteristics which participants viewed as supportive to learning organization show an increase of 125% according to the improvement ratio method. Participants could understand more clearly what is meant by Thai characteristics that could support learning organizations show in Table 23 and 24.

The process of model development included sub-data from the 12 sub-systems. The sub-data were categorized into three dimensions, leadership. Job structure and systems, and performance and development. The low means were elements that composed the model which included most and least supportive Thai and Western characteristics. Courses were designed and presented in the model for leadership competencies.

To test the validity of the model, case study was conducted for Thai Airways International Public Company Limited. A Transformational Leadership which is one of the courses designed for leadership program was selected to train the managerial staff. The results from the pre-test and post-test show a significance difference in the five disciplines except team learning. Leadership competencies are also measured. The resulted are significantly different. It can be concluded that leaders can be transformed through training via HRD unit. Leaders together with HRD unit as a change agent can

create an awareness and interests on the concept of a learning organization and help an organization to transform into a learning organization.

In sum, the results of the study confirm the viability of a learning organization as inherent within the Thai culture. Both supportive and non-supportive characteristics in the Thai culture were identified and subsequently used in the HRD model for the development at macro and micro levels.