

## The Impact of Competence Development in Organizations: A Case Study of Electronics Field in Bangkok Metropolitan and Suburban Areas

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**Abstract:** Purpose of this research was to study the impact of competence development in organizations: A case study of electronics field in Bangkok Metropolitan and suburban areas. Sampling group chosen for this study were 45 electronics industrial companies. Instrument used for data collection was a questionnaire. Data were analyzed by using percentage, mean ( $\bar{X}$ ), and standard deviation (S.D.). Results of this study were as follows: (1) The impact of operation by using instruments for competence management towards organizations was at rather high as in: improvement of quality management, raising the level of customer satisfaction, improvement of efficiency, improvement of corporate governance, improvement of customer orientation, and as well as improvement of communication, performance improvement of the organization was at a considerable extent, (2) The impact of operation by using instruments for competence management towards human resource management was at rather high as in: improving performance of employees, improving assessment structure, increasing employee satisfaction, and as well as alignment of personnel instruments, and (3) The impact of operation by using instruments for competence management towards human resource training and development was at rather high as in: improvement of the added value of training and development, improving employees' willingness to learn, defining assessment criteria for results of measurements, improving advice on participation in training, better alignment of training and development with organization strategy, optimizing the learning potential of the work place, stimulating learning and development of employees, improving basis for training and learning programs, and as well as learning culture in the organization.

**Keywords:** competence development, impact, electronics field, Bangkok, suburban areas

### Introduction

Factors affecting organization are both internal factors like existing competencies, skills, and resources and external factors like economy, society, and technology changes (Ojanen et al., 2002). Robert White and David McClelland (Janwongpaisan, 2006) were the first to propose the idea of competence in journals related to human resource development, explaining the relationship of excellent performer and the level of knowledge, skills, and abilities to the world. Moreover, there were many people defined "competence" like Lloyd & Cook (1993) who defined it as "The ability to perform activities to the level expected within employment", Janwongpaisan (2006) also defined it as "Skills, Knowledge and Attribute of a person essential to their work and to their work achievement" along with ISO 9001:2000 defined it as "Demonstrated ability to apply knowledge and skills" (International Organization for Standardization, 2006).

After all, electronics field in Thailand is important for economic growth and Thai society because they yields the highest GDP and the highest expandable export figure in 2005. GDP

raised to 18.2 % and export values were at 1,413,557 million baht. Thai government had a clear policy to make Thailand the electronics field center of Asia by improving policies and rights to promote investment from abroad (Foreign Development Investment) and tried hard to make value creation so that Thailand could compete with other countries (The Office of Industrial Economics, 2006). Since knowledge and technology in sciences have changed dramatically, personnel in the electronics field must improve their competence and organization. In fact, Board of Investment (BOI) realized this importance and enacted a policy to promote competence development entitled “Skills, Technology & Innovation (STI) incentive package” whose objectives were to let electronics industry companies do research and plan or improve their human resources by remitting import tax. This project covered 3 topics: a) Research and Development (R&D) or Planning, b) Training in Applied Technology, and (3) Research or Educational Institution Support (The Board of Investment of Thailand, 2005).

From the definitions and the above-mentioned significance of competence development as said by Linton and Walsh (2000) that “At the present the effective management, acquisition and development of technological competence is a subject of widespread concern”, the researchers decided to conduct this study entitled “The Impact of Competence Development in Organizations: A Case Study of Electronics Field in Bangkok Metropolitan and Suburban Areas” whose results yield the relationship between human resource development and organization management in electronics field in Bangkok Metropolitan so that the management becomes effective and efficient as well as able to follow the globalization and/or to compete with other countries.

### **Objective**

The objective of this research was to study the impact of competence development in organizations: A case study of electronics field in Bangkok Metropolitan and suburban areas.

### **Outcomes of the Study**

1) Trainers can apply the results of this study to the development of learning innovation appropriate for organizations with competence development; for example, system for competence development and promotion. The data in the system would provide trainers with information to give a suitable training to fill staff’s competence gap which is an obstacle in their career path.

2) Organizations and/or relevant institutes can apply the results of this study to the policy establishment to develop, train, and/or evaluate staff’s competence. This will increase staff’s attitude towards career and collaboration in organizations.

### **Research Methodology**

#### **a. Sample**

Sampling group chosen for this study consisted of executives, managers, technicians, working staff or supporting staff of 45 electronics industrial organizations in Bangkok Metropolitan and suburban areas.

#### **b. Procedure**

This research procedure consisted of four steps as follows: (1) constructing a questionnaire, (2) validating a questionnaire, (3) collecting the data from the target group, and (4) analyzing the data.

### c. Instrument for Data Collection

The instrument for data collection was a questionnaire adapted from a free online survey of “EN-competence development in organizations” (The European Centre for the Development of Vocational Training, 2006) which includes three main items as follows: (1) The impact extent of working with competence instruments on the organizational factors, (2) The impact extent of working with competence instruments on the human resource management factors, and (3) The impact extent of working with competence instruments on the training and development factors. The questionnaire had been approved by three groups of experts as follows: (1) 1 language expert, (2) 1 content expert, and (3) 6 content and research experts.

### d. Analysis of Data

The data were put into a package program for analysis and were statistically analyzed by using frequency, percentage, mean, standard deviation, and content analysis.

### Results of the Study

#### Phase 1: General Data of Respondents and Respondent’s Organizations

Out of 88 questionnaires from 88 electronics field companies, 45 of them or 51.14% had utilized the competence development, 14 of them or 15.91% had not implemented this approach, 29 of them or 32.95% was obscure in their responses. Out of 45, 37.78% were in Bangkok, 64.44% were large enterprises (with over 200 employees), and 31.11% made electricity and general electronics products. The respondents were executives at the middle level (48.89%), had less than 5 years of experiences (37.78%), were males (80.00%), aged under 30 years (35.56%), holding BA as their highest degree (64.44%), and graduated in engineering (60.00%).

#### Phase 2: The Impact Extent of Working with Competence Instruments on the Organizational Factors

The impact extent of working with competence instruments on the organizational factors in 45 organizations was shown in Table 1.

Table 1: *The Impact Extent of Working with Competence Instruments on the Organizational Factors*

Items	$\bar{X}$ (N=45)	S.D.	Level
1. Performance improvement of the organization	3.49	1.254	Moderate
2. Improvement of communication	3.51	1.180	Considerable
3. Improvement of corporate governance	3.60	1.156	Considerable
4. Improvement of efficiency	3.66	1.098	Considerable
5. Improvement of customer orientation	3.59	1.207	Considerable
6. Raising the level of customer satisfaction	3.68	1.157	Considerable
7. Improvement of quality management	3.80	1.212	Considerable
8. Increasing flexibility	3.19	1.277	Moderate
9. Integrating cultural differences	2.81	1.484	Moderate
10. Decrease in the number of customer complaints	3.32	1.360	Moderate
11. Decrease in the number of disturbances and malfunctioning	3.39	1.280	Moderate
Total	3.46	1.242	Moderate

From Table 1, it was found that the impact extent of working with competence instruments on organizational factors for all items was at moderate level ( $\bar{X} = 3.46$ ) and when the mean score for each item was arranged, it was found that:

1) Factors which yielded considerable impact were improvement of quality management ( $\bar{X} = 3.80$ ), raising the level of customer satisfaction ( $\bar{X} = 3.68$ ), improvement of efficiency ( $\bar{X} = 3.66$ ), improvement of corporate governance ( $\bar{X} = 3.60$ ), improvement of customer orientation ( $\bar{X} = 3.59$ ), and improvement of communication ( $\bar{X} = 3.51$ ).

2) Factors which yielded moderate impact were performance improvement of the organization ( $\bar{X} = 3.49$ ), decrease in the number of disturbances and malfunctioning ( $\bar{X} = 3.39$ ), decrease in the number of customer complaints ( $\bar{X} = 3.32$ ), increasing flexibility ( $\bar{X} = 3.19$ , and integrating cultural differences ( $\bar{X} = 2.81$ ).

### Phase 3: The Impact Extent of Working with Competence Instruments on the Human Resource Management Factors

The impact extent of working with competence instruments on the human resource management factors in 45 electronics field companies which had utilized this approach was shown in Table 2.

Table 2: *The Impact Extent of Working with Competence Instruments on the Human Resource Management Factors*

Items	$\bar{X}$ (N=45)	S.D.	Level
1. Improving recruitment practices	3.27	1.020	Moderate
2. Improving selection practices	3.45	1.088	Moderate
3. Increasing motivation of employees	3.23	1.031	Moderate
4. Improving performance of employees	3.61	0.970	Considerable
5. Increasing employee satisfaction	3.55	0.975	Considerable
6. Improving assessment structure	3.59	0.996	Considerable
7. Improvements in the structure of salaries and remuneration	3.20	0.978	Moderate
8. Reduction of absenteeism due to illness	2.98	1.336	Moderate
9. Making expectations regarding employees more clear	3.48	1.067	Moderate
10. Offering better development opportunities	3.39	0.993	Moderate
11. Improving career management	3.48	1.131	Moderate
12. Increasing employability of employees	3.23	1.151	Moderate
13. Improving the integration of organization and personnel policy	3.41	1.106	Moderate
14. Alignment of personnel instruments	3.50	1.026	Considerable
Total	3.38	1.062	Moderate

From Table 2, it was found that factors for all items were at moderate level ( $\bar{X} = 3.38$ ) and when all mean scores were arranged, it was found that:

1) Factors which yielded considerable impacts were improving performance of employees ( $\bar{X} = 3.61$ ), improving assessment structure ( $\bar{X} = 3.59$ ), increasing employee satisfaction ( $\bar{X} = 3.55$ ), and alignment of personnel instruments ( $\bar{X} = 3.50$ ).

2) Factors which yielded moderate impacts were making expectations regarding employees more clear ( $\bar{X} = 3.48$ ), improving career management ( $\bar{X} = 3.48$ ), improving selection practices ( $\bar{X} = 3.45$ ), improving the integration of organization and personnel policy ( $\bar{X} = 3.41$ ), offering better development opportunities ( $\bar{X} = 3.39$ ), improving recruitment practices ( $\bar{X} = 3.27$ ), increasing motivation of employees ( $\bar{X} = 3.23$ ), increasing employability of employees ( $\bar{X} = 3.23$ ), improvements in the structure of salaries and remuneration ( $\bar{X} = 3.20$ ), and reduction of absenteeism due to illness ( $\bar{X} = 2.98$ ).

#### Phase IV: The Impact Extent of Working with Competence Instruments on the Training and Development Factors

The impact extent of working with competence instruments on the training and development factors in 45 electronics field organizations which had run competence management was shown in Table 3.

Table 3: *The Impact Extent of Working with Competence Instruments on the Training and Development Factors*

Items	$\bar{X}$ (N=45)	S.D.	Level
1. Better alignment of training and development with personnel management	3.51	1.058	Considerable
2. Better alignment of training and development with organization strategy	3.60	1.136	Considerable
3. Improvement of the added value of training and development	3.78	1.064	Considerable
4. Improving advice on participation in training	3.64	0.908	Considerable
5. Improved basis for training and learning Programs	3.53	0.869	Considerable
6. Optimising the learning potential of the workplace	3.60	0.889	Considerable
7. Defining assessment criteria for result measurements	3.69	0.996	Considerable
8. Improving employees' willingness to learn	3.78	0.876	Considerable
9. Better basis for the selection of training activities	3.47	1.140	Moderate
10. Improving the learning culture in the organization	3.51	1.079	Considerable
11. Stimulating the learning and development of employees	3.56	1.078	Considerable
12. Making better use of informal learning	3.09	1.221	Moderate
Total	3.56	1.026	Considerable

From Table 3, it was found that factors for all items were at considerable level ( $\bar{X} = 3.56$ ) and when the mean scores were arranged, it was found that:

1) Factors which yielded considerable impacts were improvement of the added value of training and development ( $\bar{X} = 3.78$ ), improving employees' willingness to learn ( $\bar{X} = 3.78$ ), defining assessment criteria for result measurements ( $\bar{X} = 3.69$ ), improving advice on participation in training ( $\bar{X} = 3.64$ ), better alignment of training and development with organization strategy ( $\bar{X} = 3.60$ ), optimising the learning potential of the work place ( $\bar{X} = 3.60$ ), stimulating the learning and development of employees ( $\bar{X} = 3.56$ ), improved basis for training and learning programs ( $\bar{X} = 3.53$ ), better alignment of training and development with personnel management ( $\bar{X} = 3.51$ ), and improving the learning culture in the organization ( $\bar{X} = 3.51$ ).

2) Factors which yielded moderate impacts were better basis for the selection of training activities ( $\bar{X} = 3.47$ ) and making better use of informal learning ( $\bar{X} = 3.09$ ).

### Discussion

From the results of this research, it was found that the impact extent of working with competence instruments on the organizational factors in electronics field companies which had utilized competence management in general was at moderate level and when each item was considered in details, factors which yielded considerable factors were improvement of quality management, raising the level of customer satisfaction, improvement of efficiency, improvement of corporate governance, improvement of customer orientation, and communication. These comply with Giardino & Pearce (1993) in that "The core competence is the acquired skills and knowledge of an organization. It can be used to achieve the following goals: (1) couple short-term and long-term results, (2) connect business performance – market standing, innovation, productivity, people, and their development – with financial needs and results, and (3) satisfy the objectives and expectations of owners, customers, and employees" and "A core competence is a special combination of skills as well as abilities that has been learned and coordinated and which can be used to meet identified and evolving customers' needs. The core competence of an organization is more important to its continued success than any of its products."

Besides, it was found that the impact extent of working with competence instruments on the human resource management factors for electronics field companies in general was at moderate level and when each item was considered in details, factors which yielded considerable impacts were improving performance of employees, improving assessment structure, increasing employee satisfaction, and alignment of personnel instruments. These comply with Kajko-Mattsson et al. (2003) in that "Staffs should continuously develop, maintain and improve their professional competence" and Curtis et al. (1997) in that "Differences between high-low performing teams had the largest effect on productivity among all the factors he measured."

As for the impact extent of working with competence instruments on the training and development factors for electronics field companies, the total mean score for all items was at considerable level and when each item was considered in details, factors which yielded considerable impacts were improvement of the added value of training and development, improving employees' willingness to learn, defining assessment criteria for result measurements, improving advice on participation in training, better alignment of training and development with organization strategy, optimising the learning potential of the work place, stimulating the learning and development of employees, improved basis for training and

learning programs, and improving the learning culture in the organization. These comply with Giardino & Pearce (1993) in that “The core competence is what gives focus and direction to the professional disciplines within the organization” and “A core competence is sometimes described in terms of evolving professional disciplines. As a vast range of new technologies are applied to industry, a great number of specializations have become incorporated into development teams.” It also complies with Nadaillac (2004) in that “Competence system in an organization could be used in terms of policy by defining core or general competencies and functional or specific competencies which are important for each position in an organization or by analyzing the present status and the expected outcomes with the heads or the ones responsible for the tasks and summarizing the expected competence after planning and holding trainings to run the project.”

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