

Development of a competency based e-learning system: case analysis of Korean IT business

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ABSTRACT

This paper presents how IT (Information & Technology) companies in South Korea can develop competency based e-Learning system to improve employees' career development and their performance skills. From the analyses of job descriptions, survey, and interview, this study concluded that system can monitor and improve not only individual worker's competency, but also organizational competency as well.

1. Introduction

The research of job competencies in terms of performance improvement has been ongoing interest both in academic areas and business workplaces [1][2][3][4]. Researchers usually define competency as personal capabilities containing fundamental knowledge, ability, and expertise in a specific subject area or skill set [5][6][7]. Competency is sometimes used as an interchangeable term as capabilities, however at the particular setting such as in business and industry, core competencies are more likely to use in producing technologies and/or improving performance skills [4][8]. Most of business environments emphasize on employees' core competencies in their jobs, and are willing to provide training opportunities to improve their work performances because workforce environment always demands more changes toward efficiency, productivity, profitability, and competitiveness [8][9].

In south Korea, most of big corporations have their own customized competency development system which individual employee can easily monitor and manage their past, current, and future competency and training action plans [10]. However, small scale companies cannot afford the system because of limitations of needed time and budget to develop their own system. Especially IT companies in Korea are relatively small scale having total 30-80 workers. These companies are having difficulties in training employees and directing career plans because of high turnover rate and rapidly changing business environment. The purpose of this study was first to analyze what were the major job categories and competencies in small scale IT business, and next to design and develop the competency based e-learning system to guide employees optimum career path to go through to get promotion.

2. Competency Analyses

To examine job competency level and desirable career path for IT workers, the survey was conducted from 55 subjects out of total 70 employees in two IT companies in 2008. The subjects were asked what positions to go through to be executives in three major job categories such as administration, technology, and marketing. The subjects were also asked about their present job competency level, the required time to get promotion, important competencies to improve, and desirable career development paths.

Subjects answered that the time needed to be executive officers in IT companies. 52.7% of employees answered 5 to 10 years and 34.5% responded that it would take more. Table 1 shows important job duties and positions to go through to be an executive officer in each job category. The duties in administration department are finance, accounting, and personnel affairs. Job duties in marketing department are more oriented in marketing and sales of their technologies and products.

Table 1. Important job duties and positions

Department	Duties and positions
Administration	<ul style="list-style-type: none"> duties: finance, accounting, personnel positions: chief, assistant manager, manager, assistant director, director, executive
Technology	<ul style="list-style-type: none"> duties: technology planning, R&D, technology management, positions: team member, team leader, assistant director, director, executive
Marketing	<ul style="list-style-type: none"> duties: business planning, marketing & Sales, business administration Positions: assistant manager, manager, assistant director, director, executive, CEO
others	<ul style="list-style-type: none"> Need to rotate in each job department before being an executive

From the analysis of self-assessed job competency level, only 9.1% of employees show high confident level on their job competency, and 20% of employees in low level. 67.3% of workers thought their competencies were in intermediate level. Table 2 shows that 30.9% suggests training is the most effective solution to improve job competency, and next job positioning and incentives and promotions consecutively. Subjects marked on multiple items in rank order.

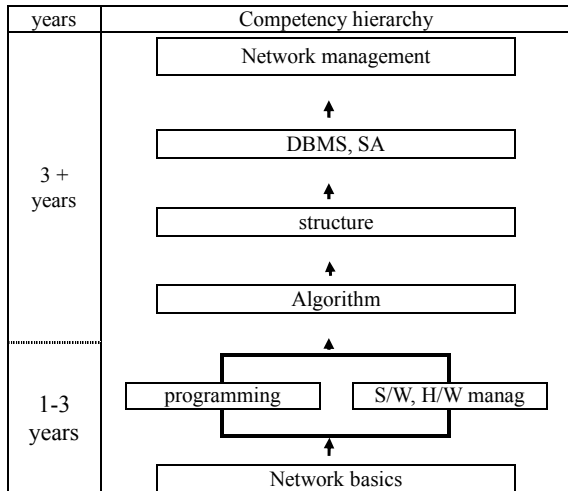
Table2. Effective solution to improve competency (in rank order with multiple responses)

solution	Rank 1	%	Rank 2	%	Rank3	%
T&D	23	30.9	13	23.6	6	12.7
Job positioning	17	18.2	13	23.6	9	16.4
Incentive/promotion	10	41.8	9	16.4	6	10.9
other	3	5.5%	0	0.0	0	0.0
n/a	2	3.6	20	36.4	33	60.0
total	55	100	55	100	55	100

3. Job Analysis

To design desirable career development paths including e-learning system based on job competencies, this study examined job descriptions in each job categories. Subject matter experts (SME) in each department were also interviewed to see competency hierarchy. Picture 1 showed that competencies in technology department in sequential order and employees should experience for certain years to

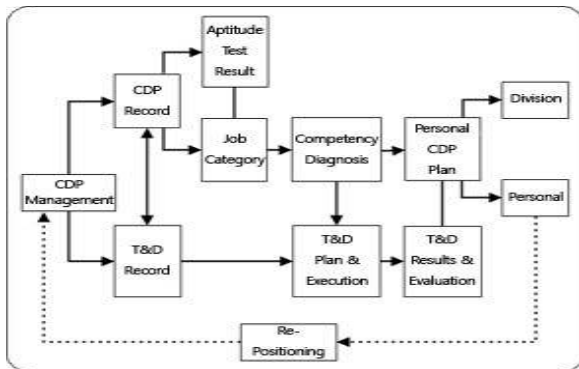
be an expert. The other departments showed about same hierarchy in job competencies.



Picture 1 Competency hierarchy in technology

4. System Development

From the results of the analyses, competency development system was designed and developed. Picture 2 shows the framework of the system. The system allows employee can diagnose current job competencies and set up action plans to improve performance skills. Personal career development plan includes departmental and individual goals to achieve.



Picture 2 Framework of the system

Picture 3 shows the main screen of the system developed in this study. Picture 4 indicates the comprehensive individual career development management functions including work experiences, competencies, current duties, and training plans. Both personnel office and individual employee can be access to this screen, and monitor training and work experiences. These information will be crucial key indicators for promotion.



Picture 3 Main screen of the system



Picture 4 Comprehensive individual career records and plans screen

5. Conclusion

The results showed that most of employees were not confident on their current job competencies, and providing training programs was the first solution to improve their competency level. Job positioning was also important factor to level up their competencies. The career development system developed in this study can be able to monitor and plan one's career and training history and set up each worker's future plan. This study concludes the system can monitor and improve not only individual worker's competency, but also organizational competency as well, so IT companies are able to cultivate highly competitive employees to increase high IT technologies and marketing power in global market. Finally this study suggests that the modification is needed to fit the system in individual company's unique organizational culture and competency when adopting the system.

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