

Study on the Effects of the Korean IT Consultants Training on the Job Satisfaction and the Employee Turnover

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Abstract

Objectives: This study examines the effect of the education and training performed by the IT consulting firms in Korea on the job satisfaction, the organizational commitment, the turnover intention and the management performance of the consultants engaging in IT consulting firms. **Methods/Statistical Analysis:** In this study, the reliabilities of the exploratory factor analysis and research tool were analyzed using SPSS Windows 12.0 and Cronbach's Alpha ($\alpha \geq 0.7$) were used to evaluate the reliabilities and the validity of the measuring tools was verified by conducting Confirmatory Factor analysis using AMOS 18.0 for the factors extracted from Exploratory Factor Analysis. The causal relationship is often used to clarify correlation between cause and effect. In this study, the causal relationship among education and training, job satisfaction, turnover intention, job commitment and management performance were analyzed using covariance structure model. **Findings:** The results indicate that education and training influence on job satisfaction, turnover intention, and management performance. As the characteristics of consulting which is the representative occupation in the knowledge-based industries, it requires more specific knowledge, and the job is performed based on such knowledge, and thus has an effect on the performance of the corporations. **Improvements/Applications:** This study may further improved by considering other efficiency factors related with training and job satisfaction.

Keywords: IT Consulting, Job Satisfaction, Organizational Commitment, Training, Turnover

1. Introduction

As today's industries are progressing more advanced and intelligent every moment, as of reflecting this characteristic, the industries are implementing diverse management techniques such as the knowledge-base management, others based on the knowledge. Particularly, in the IT field, the corporation is recognized as fundamental element to perform knowledge-based management and performs utilization of the knowledge through the cre-

ation of knowledge, the sharing knowledge, and operation and management of knowledge using diverse knowledge within corporation^{1,2}.

In other words, IT (Information Technology) not only has the function of Back office in the past but also has effect on all areas of the corporation activities such as the present and future strategies, the objectives of the corporation, the customer service, the marketing for publicity, etc, and its importance is increasing everyday³.

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As such, it can be considered that IT consulting was born by the need of age according to the development of IT industries and the increase of IT utilization in the corporation. The main task of IT consulting includes ISP (Internet Service Provider) for corporation strategy establishment, BPM (Business Process Management), ERO (Enterprise Resource Optimization), etc for job process innovation, EA (Enterprise Architecture), ITA (Information Technology Architecture), others for information infrastructure and design, BSC (Balanced Score Card), ITSM (Information Technology Service Management), TCO (Total Cost of Ownership), SLA (Service Level Agreement), etc., for information organization and efficient man-power allocation, and information service orientation, Network, DB (Database), DW (Data Warehouse), and others for professional technology consulting and is applied by diverse types such as IT healthcare, IT ROI, 6 sigma, and others for information level diagnosis and evaluation, and can be considered as important business area to lead the future knowledge industries. And as the area related to initial IT consulting is now expanding to diverse areas such as schools, hospitals, local governments, public agencies, and the application fields are also expanding.

As the bubbles in IT industries were removed at the end of 1990s, IT consulting business fell down together but recently the world's leading IT consulting firms such as McKinsey and Co, Boston Consulting Group, and others are growing rapidly and the total revenue of the companies operating in Korea such as IBM, BCS Korea, Bearing Point Inc, Andrew Consulting Partners and others. Area rapidly growing⁴.

And also, in IT consulting area, except the companies initially related to IT industries, the scope of area are expanded to diverse areas such as the schools, hospitals, local governments, public agencies, and others, recognized its great contribution to the development of service industries, particularly IT consulting industry, the government are making multilateral efforts to foment the knowledge service industry.

Upon reviewing world's consulting market, it started by Booz and Hamilton, McKinsey and Co, and others of United States in 1930s, in 1970s, its perception and direction were changed greatly by the advent of the computer⁵, in 1990s, rapid growth of 20% to 30% was achieved due

to increase of business restructuring to cope with the economic environment, the Merger and Acquisition (M&A), the diverse method and application using information and communication technologies, and others⁶, and out of them, the IT-related consulting occupied 60% to 70% of the growth and as of 2003, the amount reached to about 115 billion dollar⁷. In Korea, although the demand for IT consulting is increasing every year, due to deterioration of quality of IT consulting caused by lack of capable IT consultant, frequent conflict with customer, low satisfaction of consulting have been occurring relentlessly⁸. In other words, to perform IT consulting, it is important to secure good man-power and many studies suggested that to secure good man-power, the corporation should invest lots of time, efforts and expenditure in the employee education and training⁹, which would have positive effect on the performance of corporation^{10,11}.

However, when comparing the competence of IT-related firms of Korea with the overseas leading IT consulting firms, they are far behind in all areas such as revenue, education and training, employee welfare, job satisfaction, and by moving good man-powers to foreign companies, lots of adverse effects such as information transfer to foreign companies are occurring¹². As such, to achieve constant development and success, IT consulting-related firms should be able to deliver the trust and satisfaction to customers, which will expand the knowledge through constant consulting training, and allow obtaining competitive advantage in the market by influencing on the job satisfaction and job commitment^{13,14}.

Therefore, in this study, what effect have the education and training performed by the IT consulting firms in Korea on the job satisfaction, the organizational commitment, the turnover intention and the management performance was examined from the consultants engaging in IT consulting firms. And secondly, what effects have these job satisfaction and job commitment on the consultant turnover and the management performance.

2. Research Background

The corporations are striving to find the solutions for the diverse problems in the job not the present time but in the future, and the consulting can be defined as service activities to help the corporations to perform proper

measurement by analyzing and suggesting diverse outstanding problems for those corporations.

In defined the consulting industry as “the activities which the certain qualified personnel through specific training help and recommend to review and analyze the problems of management in the customer’s organization with independent and objective attitude according to the contact with the customer, and the advice service to provide help when customers request help to perform those solutions”, emphasizing professional service aspect.

International Council of Management Consulting Institute (ICMCI) defined as “is to provide independent advice and assistance for the customer who are responsible for management, and such advice represents in various forms since the consultant can be outsider or insider pertaining outsourcing function for customer, and can play one or many series of roles”. As such, today’s consulting is used in many fields, and particularly the interest in IT is constantly growing. In^{15,16} proposed in their study the important 22 attributes which IT consultant should acquire and suggested that IT consultant should have comprehensive skill, knowledge, traits, behavior, characters, and others.

The competence mentioned here is to approach the overall perspectives including knowledge, ability, and skills required to perform IT consulting¹⁷ and the basic matters, when performing IT consulting, are the acquisition of knowledge and skills required to perform IT consulting. Like this, the existing researches indicated that it is important to acquire the competence required for job through the education and training rather than the competence reserved by individual at the essential stage of IT consultant.

These learning activities lead to the growth of the individual and the corporation together with the employee’s attitude and job improvement¹⁸. In the perspective based on the resource-based theory, the resources which cannot be mimicked and hardly obtained by the competitors, that is, human resources, is the important factor to secure the competitive advantage today.

In case of Korea, in early 2000, it was classified as three categories such as the strategy Consulting, Operation Consulting for problem diagnosis in the productivity and management, and increase of productivity through pro-

cess innovation, and IT consulting to provide IT service and consulting to fit customer’s circumstance by identifying customer’s needs.

In Korea, the role of IT industry is recognized as essential part of knowledge-based industries and many researches were conducted^{19,20}. In case of the country where the IT industry occupies higher position than other industries, it is considered that it has at least one leading growth area to lead other industries and that IT industry helps national economic growth by influencing positively on the other industries has been proven through various data²¹.

On closer examination of this, while the size of IT consulting service market in Korea reaches up to 400 billion won, in the aspect of consumer’s satisfaction and quality and capability of IT consultant, there are lots of problems.

While the human resources, the core component of consulting, is the most important. In Korea, due to small size of the consulting firms, it is hard to invest in re-education and since it is impossible to foster professional man-power due to lack of the professional training institute, it is hard to cope with demand for the professional man-power of the corporation. This situation is far behind to reach to the level of the interest and investment in the consulting man-power shown by the United States, where implementing active education for the consulting man-power such as professional education like OJT (On-the-Job training), and the operation of professional consultant in the training institutions.

When reviewing competitiveness of man-power in the domestic IT consulting area, while in the domestic consulting revenue status by area, the number of firms, annual revenue of the firms and the gross revenue are included in top rankers in the domestic market, when reviewing revenue per capita, as they are included in the lower rankers, the education and training for domestic IT consultants is needed immediately.

Today, in the fierce competitive environment, the corporations are expanding investment in many areas such as employment, and training to secure good human resources and the investment of corporations in training of human resources actually occupies as core factor for the competitiveness of corporation²¹. Thus, in corporations,

reducing employee turnover also arises as important issue together with attracting good human resources.

For the corporations, increase of employee turnover directly connects to increase of cost and collapse of the organizational collaboration and even affects the satisfaction of other employees, and leads to loss of customer information, the increase of employee training cost and employment cost.

In IT consulting-related firms, it can be considered as the representative knowledge service industry, which the capability of the individuals influences greatly on the firm or the performance of the organization and, by the characteristics of the job, the reliability on the human resources is particularly higher than in other industries.

Therefore, in this study, it is intended to review what effect has the good training performed by domestic IT consulting firms on the job satisfaction, organizational commitment, turnover, and management performance from the domestic consultants.

3. Research Model and Hypothesis

In this study, based on the previously reviewed theoretical backgrounds, the empirical analysis on the effects of the training performed by corporation on the job satisfaction, organizational commitment, turnover propensity, and the management performance and on the effects of the job satisfaction and organizational commitment on

the consultant's turnover propensity and the management performance through the relationship among elements from the domestic IT consultants, The research model of this study is as shown in Figure 1.

In the education and training, to achieve good IT consulting, it is important to secure good IT consultants and the education and for securing competent man-power, the education and training are more important than competence of individual²². Therefore, the corporation should invest lot of time, efforts and expenses in employees' education and training. Many researchers suggested that this would have positive effects on the performance of the corporation. Therefore in this study, it is assumed that the education and training have effects on the job satisfaction, the organizational commitment, the management performance and the turnover intention.

Hypothesis 1: Education and training would have an effect on job satisfaction.

Hypothesis 2: Education and training would have an effect on organizational commitment.

Hypothesis 3: Education and training would have an effect on turnover intention.

Hypothesis 4: Education and training would have an effect on management performance.

In relation to service business, job satisfaction considers all employees working in the corporation as internal customer and the satisfaction of internal customers can create the profitability of the corporation by leading to the satisfaction of external customers. And also the

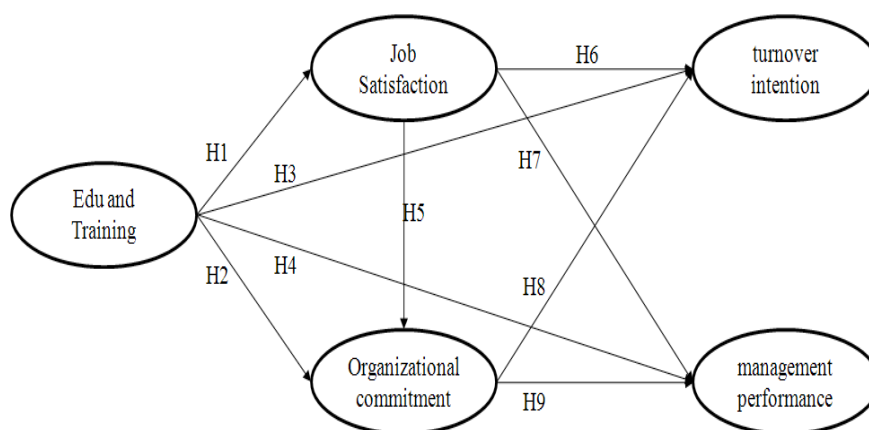


Figure 1. Research model.

organizational commitment results from the job satisfaction. Accordingly, in this study, it is assumed that the job satisfaction would have effects on the organizational commitment, the management performance, and the turnover intention.

Hypotheses 5: The job satisfaction would have an effect on the organizational commitment.

Hypotheses 6: The job satisfaction would have an effect on the turnover intention.

Hypotheses 5: The job satisfaction would have an effect on the management performance.

The organizational commitment refers to that the employee contributes and sacrifices for the organization or corporation doing his/her best²³ and appears due to their own needs. And since the organizational commitment contains the future-oriented concept, which the current dissatisfied circumstance would be improved constantly than now²⁴, when occurring the organizational commitment, it will be satisfied not only by the external compensation but also the psychological satisfaction increases together. This may be interpreted that the organizational commitment would have negative effects on the turnover propensity and have positive effects on the management performance. Thus, in this study, following hypotheses were established.

Hypothesis 8: The organizational commitment would have an effect on the turnover intention.

Hypothesis 9: The organizational commitment would have an effect on the management performance.

4. Research Methods

4.1 Sampling and Characteristic

The data collection in this study was conducted from Oct 01, 2012 to Nov 15, 2012, from the employees engaging in eight IT consulting companies located in Seoul through self-administered questionnaire method. Survey was conducted that the researcher distributed 400 survey questionnaires by direct visit or by mailing and collected total 256 questionnaires, out of which excluded

7 questionnaires without answering questions or with incorrect answers and total 249 questionnaire were used.

In the examination by gender, as the male represented 178 (71.5%) and the female was 71 (28.5%), the male was about 2 times more than female and in the ages, as represented the age 20s are 70 (28.1%), the age 30s are 125 (50.2%), the age 40s are 47 (18.9%) and above than age of 50 are 7 (2.8%), the age of 30s appeared the most. Monthly income ranged from 3 million to 3.99 million represented 95 (38.3%), 4million to 4.99 million are 48 (19.4%) and 5 million to 5.99 million are 37 (14.9%) in order.

4.2 Exploratory Factor Analysis Results

In this study, the reliabilities of the exploratory factor analysis and research tool were analyzed using SPSS Windows 12.0 and Cronbach's Alpha ($\alpha \geq 0.7$) were used to evaluate the reliabilities. Analysis was conducted using Principle Component Analysis for factor extraction method and the varimax rotation for factor rotation method, and the questions were made in consistent with the purpose of this study. Also, single dimension factor analysis was conducted using Factor Loading ($FL \geq 0.6$), which represents correlation between evaluation factors.

First, as a result of the Exploratory Factor analysis for the questions of survey questionnaire using SPSS 12.0, 9 factors were deduced and while Factor Loading represented more than 0.6 for all education and training, job commitment, turnover intention, management performance, and job satisfaction, one measuring tool was deleted due to representing less than 0.6 but since there was no question found showing less than 0.4 for two factors at the same time, convergent validity and discriminant validity appeared to be adequate.

4.3 Confirmatory Factor Analysis Results

Since in this study, to be recognized the internal validity, the measuring questions suggested by previous researches were modified to fit the purpose of this study and verified by relevant experts, the internal validity was considered to be recognized. First, the validity of the measuring tools was verified by conducting confirmatory factor analysis using AMOS 18.0 for the factors extracted from Exploratory Factor Analysis. The consis-

tency among research concepts and measuring variables was identified using maximum likelihood method and to verify validity, Standardized Factor Loadings ($FL \geq 0.6$), Squared Multiple Correlations ($SMC \geq 0.5$), Standardized Residual Covariance ($-2.58 \leq SRC \leq +2.58$), and Construct Reliability ($CR \geq 0.7$) and Average Variance Extracted ($AVE \geq 0.5$) were used²⁵. In addition, in the Confirmatory Factor Analysis, the significance of the research model was reviewed using GFI, AGFI, RMR, NFI, CFI, TLI, and RESEA, which are the overall fit evaluation indices.

And finally, to verify the hypothesis suggested in this study, the path coefficients among theoretical variables were verified using Structure Equation Model. In the Confirmatory Factor Analysis results, while the Standardized Factor Loadings, the Squared Multiple Correlations, the Standardized Residual Covariance, these were satisfied the standard, the overall fit evaluation indices like GFI, AGFI, RMR, NFI, CFI did not satisfied the standard.

In case of Confirmatory Factor Analysis, although the analysis data did not fit adequately, under the assumption which different aspects would work among the measuring variables, the model was modified using modification index and modified model was analyzed against the Confirmatory Factor model²⁶. The measuring questions satisfied the standard.

In this study, the adequate fit index appeared as result of deleting measuring variables based on the modified index. This is because in case of empirical study, it is possible to add or delete the path unless it causes problem in the theoretical background. As a result, 11 measuring items were selected by deleting 5 out of total 16 measuring items in the education and training.

4.4 Structural Model Analysis

The causal relationship is often used to clarify correlation between cause and effect. In this study, the causal relationship among education and training, job satisfaction, turnover intention, job commitment and management performance were analyzed using covariance structure model. In the fit evaluation of the model to extract the optimal condition of the structure of the every item, GFI (Goodness-of-fit Index; ≥ 0.9), AGFI (Adjusted Goodness-of-fit Index; ≥ 0.8), RMRS (Root Mean Square Residual; ≤ 0.08), CFI (Comparative Fit

Index; as close as to 1), RMSEA (Root Mean Square error of Approximation; ≤ 1), NFI (Normed Fit Index; ≥ 0.8), TLI (Tucker-Lewis Index = 1), (the smallest), value of the P against (≥ 0.05) were used.

In the verification results of the structural model to examine causal relationship among the all factors using AMOS 18.0, while the values represented as = 111.007 (df = 28), $p = 0.000$, /df = 3.965, GFI = 0.988, RMR = 0.047, NFI = 0.925, AGFI = 0.837, and CFI = 0.942 satisfying all the general fit indices, RMSFA represented a little higher as 0.109 but it is considered that there is no significant impact to interpret the model of this study.

Results are showing every standardized path coefficient and the significant level. Upon reviewing the result of this study, the education and training have an effect on the job satisfaction (H1), the turnover intention (H3), and the management performance (H7) but no effect on the organizational commitment, and particularly, has great effect on job satisfaction (0.660).

In case of job satisfaction, it appeared that while it has an effect only on the organizational commitment (H5), has no effect on the turnover intention (H6), and management performance (H7). And it was found that the organizational commitment does not have an effect on management performance (H9) while having effect on the turnover intention (H8).

5. Results

In this study, as empirical study to identify what causal relationship has the education and training performed in the corporation with the job satisfaction, organizational commitment, turnover intention and management performance, the hypothesis of this study were verified.

First, the hypotheses verification results on the effects of the education and training on the job satisfaction, the organizational commitment, the turnover intentions and the management performance represented that in case of IT consultants, it has an effect on the job satisfaction, the turnover intention and the management performance except on the organizational commitment. Those results are consistent with the contents of the existing researches, which suggest that the good consultant trained through education and training has an effect on the job satisfaction and management performance.

This means that it is important individual basic competence in consultant's satisfaction on the job but the cultivation of the competence through the education and training is more important, which means that the more the competence on the job is cultivated the more job satisfaction is raised as the motivation on the self-confidence, enthusiasm on the job is increased.

On the other hand, it showed that the good education and training provided by the corporation also have a positive effect on the consultant's turnover propensity. The consulting business is representative business of high knowledge service and due to its characteristics, particularly more dependent on the human resources than other occupations. Accordingly, the interest of the corporation is growing higher due to higher turnover than other occupations^{27,28}. To settle this problem, the drain of good man-power must be prevented through the adjustment of salary, welfare, working hours, working conditions, and others.

In addition, it appeared that the job satisfaction does not have an effect on the management performance and turnover intention. The job satisfaction generally includes opportunity, responsibility, recognition, accomplishment, etc, and the improvement of competence increases the relevant job satisfaction through granting self-confidence, and as the increased individual competence naturally leads to promotion and compensation, it does not have effect.

In many existing researches, it suggested that the job satisfaction is essential element which has positive effects not only on the individual performance but also performance of the corporation²⁹, and has positive effect on the return on the assets and return per share³⁰. However, in this study, job satisfaction did not have an effect on the performance of the corporation. This means that in case of IT consultant in Korea, the job satisfaction has a tendency to incline mainly to individual performance, and to make them interested in management performance, domestic consultant companies should make efforts to improve performance of the corporation through reinforcement of compensation on the performance.

The organizational commitment refers that the employee contributes and sacrifices for the organization or corporation doing his best and this appears due to for his/her own needs. In addition, since the organizational commitment includes future-oriented concepts, which the circumstance would be constantly improved rather than current dissatisfactory circumstances, when occurring the organizational commitment, not only they would be satisfied with external compensation but also psychological satisfaction would be increased together. This study also obtained the same result as existing researches which when the organizational commitment occurs, it would not have effects on the turnover intention Figure 2.

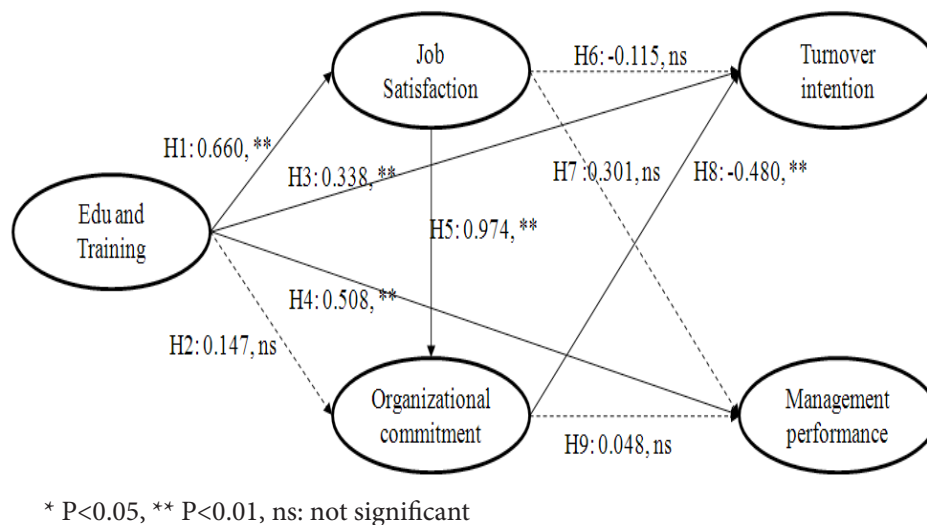


Figure 2. Results of hypothesis.

6. Conclusions and Limitations

This study is the empirical study to review what relations have the education and training with the job satisfaction, the organizational commitment, the turnover intention and the management performance, to examine what effects has the job satisfaction on the organizational commitment, the turnover intention, and the management performance, and what effects has the organizational commitment on the turnover intention and the management performance from the consultants engaging in the domestic IT consulting business.

The meaning of this study is that first, it identified the education and training have an effect on the job satisfaction of the IT consultant. As the characteristics of consulting which is the representative occupation in the knowledge-based industries, it requires more specific knowledge, and the job is performed based on such knowledge, and thus has an effect on the performance of the corporations. Particularly in the IT consulting, to establish trust with the customers, to adapt flexibly in the environment, and to perform thoroughly works, constant education and training are required. Second, it identified that since the constant education and training make them faithfully perform their current works and can settle the potential problems caused by turnover, the domestic IT companies should support the self-development of the consultant.

However, the limit of this study is that the data were collected from the large companies located in the Seoul region out of the domestic IT consulting companies. Since in the characteristics of IT consulting in Korea, the number of small IT consulting firm are far more greater than large company, In the future study, the more specific study has to be conducted by comparing consultants engaging in the small and medium IT consulting companies.

The reason is that as mentioned previously, it is proved through various data that our IT industry has leading growth sector to lead other industries, and helps greatly national economic growth. However, since in the aspect of consumers' satisfaction on the small size and IT consulting, and in the aspect of the competence or the capability of the IT consultant, there are lots of problems comparing foreign IT consulting companies, the further

research from the consultant engaging in the small and medium IT consulting companies should be conducted.

Secondly, since the participants for this study were limited to domestic consulting companies, it require to compare with the consultants engaging on the overseas consulting companies operating domestically or overseas multi-national IT consulting companies. Since many domestic researches suggested that through diverse and constant education and training for overseas IT consultants, it has positive effect on the performance of the corporation together with the customer's satisfaction, the research on what differences exist between domestic and overseas IT consultants and how those differences can be overcome should be conducted.

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