

Analysis of competency requirements to introduce qualification system for developing e-learning contents

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Abstract: In this study, I analyzed the practical requirements for the development of the qualification framework for developing e-learning contents. Needs analysis used qualitative analysis to categorize subjects after conducting focus group interviews with corporate representatives. The results of needs analysis to introduce the qualification system for developing e-learning contents were categorized into 5 pieces.

Keywords: Qualification framework, Needs analysis, Qualitative analysis, Competency requirement

INTRODUCTION

The field of e-learning content development in Korea has been steadily growing since the late 1990s. However, there has not yet been developed a qualification system that can train related personnel and verify job performance (Han, 2015, 2013). Due to the lack of a qualification system for developing e-learning contents, systematic management of professional manpower is lacking, and it is obstructing the entry of new manpower and hindering industrial development. To solve this problem, it is required to introduce a professional qualification system in the field of e-learning content development. In the e-Learning industry survey, there was a need for e-learning qualification and job training (NIPA, 2017; Im, Park, Kang, & Lee, 2012). In this study, I analyzed the practical requirements for the development of the qualification framework for e-learning content development.

RESEARCH METHOD

This study analyzed the data by using the analysis method of Colaizzi (1978) of the phenomenological study. The phenomenological study is a method of analyzing the contents of the subject and revealing the meaning of the phenomenon experienced. The phenomenological method is to identify the meaning of the phenomenon experienced by analyzing the description of the subject and focuses on organizing the analyzed contents into themes and categories by deriving the common attributes of the research participants. In this study, a focus group interview was conducted for company representatives, and the collected data were transcribed, coded and

categorized according to the theme. In order to obtain the internal validity in this study, some of the participants who participated in the study were selected and reevaluated the content and results of the data analysis.

ANALYSIS RESULT

The requirements analysis results for the introduction of e-learning contents development qualification system are as follows.

1) Problems of e-Learning contents development project

The e-learning companies are experiencing problems of project management, communication, content porting, and developers' self-esteem violation in the course of content development work. In terms of project implementation, systematic and clear work instructions, role assignments, schedule management, responsibility transfer, and other issues need to be improved and a solution for content porting is needed. In addition, there is a problem in the communication of team members during development, so it is necessary to have an understanding of related work and communication skill education, and to have a positive mind formation and education so as not to infringe on the self-esteem of development personnel.

2) Development Trend of e-Learning Contents

Recently, demand for new development direction of e-learning contents is increasing, and talk type lectures are considered, but actual investment is insufficient. Especially, it shows that they are

interested in development method and problem using html5, and it is necessary to consider the development method using html5 when establishing the qualification system.

3) Characteristics of e-Learning contents development field

Companies are concerned about the lack of e-learning expertise, unreasonable contract practices, structural problems of the industry, and outsourcing of personnel, which are unique characteristic of e-learning content development field. E-Learning companies have to play a role of providing the latest trends and education for the customers with lack of expertise, and have difficulty in adjusting the quality in the development process due to the contract method which is determined by price rather than quality (Nor & Han, 2015), low cost competitiveness, frequent turnover of development manpower, excessive labor cost and lack of responsibility of outsourcing personnel.

4) E-Learning Content Developer Capabilities and Role

There have been many discussions about the competence of e-learning developers. For PM competency, planning and design, multimedia development, schedule management, customer demand response, development manpower reading, collaboration, performance management, and communication capabilities. It is suggested that the planning and designing ability is important for the planning designer and the content developer should develop the html5 so that the programming and design roles should be separated and the server programming ability should be provided.

5) E-Learning contents development qualification system

The qualifications framework for the development of e-learning content was discussed in terms of the need and composition of the qualifications framework and the role of the association in qualification management. Qualification frameworks are needed to assess developers' competencies and certify qualifications to manage their careers, the structure of the qualification system is composed of professionals such as PM, planning and design, media development, filming and editing reflecting the contents development characteristics, and it was discussed that the qualification system is given the first and second qualifications respectively. It has been argued that qualifications management should be responsible for the training, certification, registration and management of qualifications in the association and for managing the project history of qualified developers. In particular, it was suggested that qualifications need to reflect the NCS competence by

placing importance on practical competence. In the future, we decided to derive detailed competencies for the working developers and to decide on the name of the qualification system in consideration of versatility, scalability, inclusiveness and clarity.

Table1. Topics, topic bundles, categories for needs analysis

Category	Topic Bundle	Topics
Project execution	Communication difficulties	Recognizing the difficulty of communication Lack of understanding about related work Difficulty in communicating between internal teams The existence of barriers by sector Lack of communication skills
	Self-esteem management	Need positive mindset on job Decrease in self-esteem due to external factors Worry about loss of self-esteem Need self-improvement education
	Project management issues	Reasonable, process-oriented work order and performance need Systematic and clear schedule management required Problem of proper workload management Needs to fulfill the task that is appropriate for the role of development manpower Responsibility for developer Complaints of difficulty for customers Need to communicate smoothly with customers
	Content Porting Issues	Severity of the porting problem Lack of standardization of porting method Absence of porting manual Empathy for the need to improve porting Identifying the cause of the porting error Porting problem caused by LMS renewal Recognize the necessity of porting personnel of the operation team
Development trend	New content requirement	The need for a new direction of content Talk type lecture requirement Lack of investment for change
	Html5 development advantage	Html5 utilization development requirement Sharing difficulties in using Html5 Html5 development method (hard coding, use of authoring tool, platform utilization, mp4 utilization, etc.) analysis How to develop video-based content How to develop VR content How to develop mobile contents using Mp4 Need to enhance planning and design function of video-based content
E-Learning field characteristics	Customer's lack of expertise	Lack of e-learning professionals Professional enterprise dependency recognition Providing developer's e-learning trend Planners, designers of role sharing requirements Training for new e-learning trends
	Contract practice	Write an inaccurate contract Price-oriented contract practices Price determines content quality Expect the association's role in fair trade and contract approach Recognizing the need for e-learning development unit price
	Structural problems in the industry	Positive expectation for introduction of qualification system Negative recognition of e-learning occupation Low price competitiveness Frequent turnover of development personnel Low development labor cost Difficulty to reflect developer's career when calculating development cost
Developer Competencies and roles	Manpower outsourcing	Frequent outsourcing of personnel and utilization of freelancers Overlap of freelance labor costs Lack of freelance job responsibilities Poor output quality of freelance
	Project Manager Competency	Comprehensive capability Planning and design competence Ability to understand multimedia development methods such as Html5 Ability to respond to customer needs Ability to lead each development part Project management capability Content Planning Capability Staff and communication capabilities Project scheduling capability Individual personality and style understanding ability Differentiated training needs based on unique expertise Biased recognition conversion to PM capabilities Smooth collaboration with team members Project performance management capability
	Planning and Design Capability	The proliferation of presentation oriented content Decrease content focused on learning activities Time required for manuscript writing Planning and design workforce still important Story configuration competence required
	Content	Separation of programming and design roles Strengthen the need for server programming

	Developer Capability	Requirement for Html5 development capability
Qualifications Framework	The need for a qualifications framework	Recognizing the necessity of e-learning contents developer certification Developers competency assessment requirements Require professionalism verification Treatment of Qualified Owners Based on unit cost of development manpower cost NCS competency reflected National Qualification Requirement Management of proven workforce
	Structure of Qualifications framework	Qualification framework structure considering content development characteristics 1st and 2nd grade eligibility criteria Association role for training, certification, qualification, and career management Media development qualifications that separate programming and design
	Qualifications Management	Qualification registration and management function Career management function Project history management function E-learning certification NCS ability unit reflected Practical Competency-Based Qualification Management Certification jointly managed by the Association and the Society Verifying e-learning workforce capacity Fair personnel management agreement between companies
	Future progress	Develop detailed competencies for PM, planning and design, media development, photography and editing Review of qualification term name (versatility, scalability, inclusiveness, clarity)

CONCLUSION

According to the results of needs analysis for company representatives to introduce the qualification system for developing e-learning contents, it was categorized into 5 pieces, such as e-learning content development project issues, e-learning content development trends, characteristics of e-learning content development field, e-learning content developer's competencies and roles, e-learning content development qualifications framework.

These factors should be reflected in strengthening the basic competencies and skills of developers when introducing the qualification system for developing e-learning contents. Self-esteem management, communication difficulties and customary contracts should be considered as educational programs that can improve the characteristics and perception of the e-learning industry.

In this analysis, the requirements for the qualification structure and the management elements to introduce the qualification system for developing e-learning contents were presented. However, detailed information on the authentication procedure and method were not mentioned. Therefore, it is necessary to review the requirements analysis process that will be conducted for each development specialist in the near future.

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