

A Study of Classification of Quizzes on Intellectual-Property Education

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Abstract— In this paper, we propose an e-learning system with classification of quizzes to estimate learners' understanding on intellectual-property education. First, we start with an acquirement of knowledge such as the definition of terms or the purpose of the law and legal system in the general introductory education of intellectual property, because the terms are defined by law. Next, we instruct how to apply the acquired knowledge to solving case problems. We set four educational aims and the question in the introductory phase of the intellectual-property education. In addition, we develop a quiz application to learn legal terms and apply the quiz to the intellectual-property education.

Keywords— e-learning, law education, quiz application, learning-support system

I. INTRODUCTION

In this paper, we propose an e-learning system with classification of quizzes to estimate learners' understanding on intellectual-property education.

First, learners start with an acquirement of knowledge such as the definition of legal terms or the purpose of the law and legal system in the general introductory education of intellectual property. To prevent that a term has meanings, the terms are defined by law. In legal documents such as precedent, lawyers generally use expressions including phrases and keywords that describe the aims of provisions where the phrases and keywords are carefully selected by legal experts. The learners are trained to use the phrases and keywords. Next, teachers instruct how to apply the acquired knowledge to solving case problems.

We set four education aims in the introductory phase of the intellectual-property education to each learning step and make it the type of the problem suitable for each step. In addition, we develop quiz application for learning the legal term and apply the system on the intellectual-property education.

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II. CLASSIFICATION OF QUIZ

A. Classification of Quizzes

We developed a learning-support system with a classification function that can classify learners' understanding-degree into six types using results of quiz [1]. According to their type, it can generate the teaching plan suitable to the learner automatically [1]. In addition, we inspected the usefulness of the proposed system in the lecture of the real network technology [1]. We also showed the system could be applicable on the law education [2].

B. Quiz Application

We developed a quiz application for learning legal terms [3]. The quiz uses questions with blanks to fill in. When a learner makes w, we can know the learner's weak point from the question.

Table I shows four categories of the classification of quiz corresponding to the learning steps on the introductory law-education.

TABLE I: THE CLASSIFICATION OF QUIZ

Learning Steps	Names of Questions Category
Understanding of Definition of Terms	Questions of Terms
Understanding of Purpose of Law System	Questions of Purposes
Application	Questions of Applications
Justification	Questions of Justifications

Table II shows sample questions that important keywords are bound in " " in their answers. The learning method that consists of a question-and-answer section is applicable to knowledge acquisition on law education.

TABLE II: THE SAMPLE QUESTIONS

Category Names	Question	Answer
Questions on Terms	What is an inventor?	Person who let invention make "completion". "Personally or in-home", in the case of a purpose, a copyright holder can reprint the use in a limited range following these other "without permission".
Questions on Purposes	Explain a reproduction in the private use.	

III. CONCLUSION

In this paper, we developed game type application for the

intellectual-property education and implemented the learning-support system using the quiz to estimate an understanding degree of the learner. The application is under development and, after the trial in the real educational front, is going to plan improvement.

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