# A Case Study of the Educational Contents Development in the Fisheries and Marine High School for Smart Education: Focus on the content of 'Understanding of the Ocean.'

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**Abstract: To achieve the learning goals of 'Understanding of the Ocean,' which is an essential subject for fisheries and marine high schools, we have developed educational content using Storyline, authoring tools to learn in smart device environments.**

**Keywords: Smart education, Contents development, Fisheries and marine high school, Storyline**

## INTRODUCTION

Smart education is an effort of the government in order to establish a smart learning environment in public education. The Ministry of Education, Science and Technology use ICT in public education to help learners take the lead in learning that is appropriate for themselves.

We intend to develop educational contents of the fisheries and marine high school curriculum, 'Understanding of the Ocean,' for Chapter 5 and 6 using the authoring tool, Storyline.

## BACKGROUND

Not many cases have been used to develop training contents and apply it to training sites using the Storyline. Verification of differences in academic achievements of preceding studies shows conflicting results. This could be a result of focusing on new functional areas. However, it appears consistently to have played a positive role in the understanding, attitude and interest of the experimental group. This means that educational contents using smart devices can have a positive effect on stimulating, focusing interest and self-driven learning.

## RESEARCH PROCEDURE & METHOD

The procedure for this study was the analysis of the needs and the content of the texts starting from the study of the literature data. Based on this, we set the learning goals and entered the contents production through the design based on the web-based information, interaction, motivation and evaluation. Contents production was done with PowerPoint and completed the contents with Storyline. It received feedback from experts during the contents production process to supplement corrections.

## CONTENTS DEVELOPMENT

### Analysis

The ' Understanding of the Ocean ' course is not only the basic knowledge and information that will be used in the field of employment but the subject of the College Scholastic Ability Test. We are going to apply the self-driven learning strategy for this contents development. Because the result of the conflicting preceding study on learning achievement is judged to be a lack of learning strategy.

### Design

It is systematically linked to the functions of the authoring tool Storyline so that the conceptual mission can achieve the behavioral goals in the contents. Regarding content design, the basic unit of content was divided by EBS unit. Not only basic learning, but also vocabulary description, repeated learning, and advanced learning were separated so that learners can take the self-directed in selecting opportunities for learning. In the introductory section, various examples of practical images were shown to enhance learning motivation. It is designed to enable learners to set and achieve their own learning goals through pre-study quizzes. The assessment design is closely related to other areas. It is inserted into the contents using the various functions of Storyline.

### Development

In the introduction, they presented motivation, pre-diagnostic quiz, and learning objectives. Questions for content comprehension and repeat learning were

placed in each concept unit and were finalized with a summary and introduction to the next content.

We used legible fonts and many images and take advantage of image graphics. To make it more practical, we also inserted video files from the related site information search process to enhance the reality, adaptability, and durability of learning.

## DISCUSSION

The significance of this study is that by providing smart educational content to students in fisheries and marine high schools, they can help learners perform more effectively in the field of smart education.

In subsequent studies, it is stated that the educational content developed should be implemented, evaluated, and revised at the school education site and that further studies such as verification of the results are necessary.

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