

Learning by Doing: An Enhancing Designs User Interfaces for Web Applications: A Case Study in Human-Computer Interaction Course

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Overview

How to improve the efficiency of students to develop web application in an attractive way and easy to use. It is the challenge task to teach because the previous classes are lecture-based.

In spite of the Human-Computer Interaction course being offered for students to understand the theories in UI&UX, most of the students can implement web applications but they have problems with attractiveness and usability of applications.

Aims and Objectives

- Be able to create useful, usable and visually compelling UI design for web applications.
- Understand and apply the principle of balance and rhythm to create visual order, establish and reinforce comprehension.
- Understand and know how to choose the right colors for any UI design.
- Encourage the students to implement powerful web applications.

Activities

In each chapter, students have '**Learning by doing**' after completing a lecture. First, each group think of their interest web application project. After that, they **practice** and **apply** what they have learned to develop the project step by step. On the progress tracking, each group reports on their work, including explains the theories applied to their project.

On the last day of the course, each group will present their **final web application project**, explaining what they did and what knowledge has been applied.

References

- Reese, H. W. (2011). The learning-by-doing principle. *Behavioral Development Bulletin*, 17(1), 1-19. <http://dx.doi.org/10.1037/h0100597>
- Hackathorn, J., Solomon, E., Blankmeyer, K.L., Tennial, R. & Garczynski, A.M.. (2010). Learning by doing: an empirical study of active teaching techniques. *J. Eff.Teach.*, 11(2). 40-54.

Outcomes

This method is used to motivate students to develop their powerful web application projects. Allowing to know the UI&UX design process from the beginning to the end of the process as show in Fig1 and 2. From Fig 2, students can apply the principle of balance, rhythm and golden rules to create forms. In addition, students are more confident in the design and development of web applications and can learn how to work as a team.



Fig1: User Flow Diagram

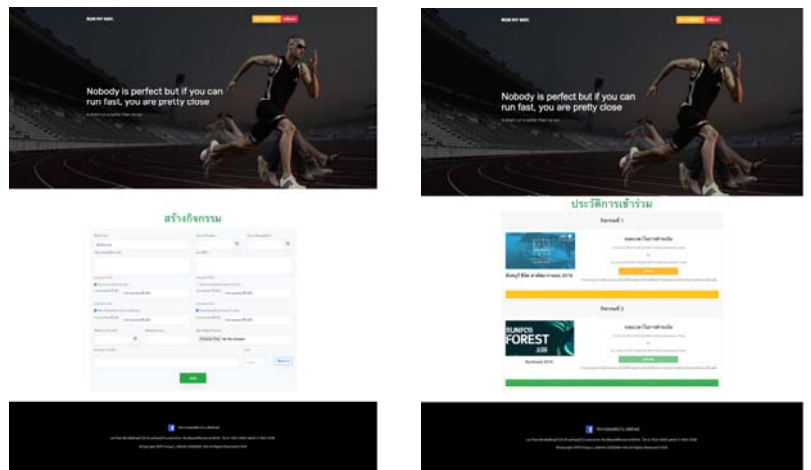


Fig 2: Screen capture of web application project

Impacts

Students can apply the knowledge of UI&UX design to the **senior project**, which requires students to design and develop practical applications. Moreover, to make students confident that they can use their knowledge about UI&UX design in **cooperative education**.

Future development of projects

To encourage students have been inspired to develop web application. On the last day of the course, to provide a showcase for the other group and allow to vote on which group developed the most powerful web application.