

Pilot Practice of Co-generative Dialogue in Lectures of Mobile Application Design – To Both, Design-majored Undergraduate and Education-majored Graduate Students

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1. Introduction

The object of research is analysis of class education of mobile application design through comparison between design-majored undergraduate class and education-majored graduate class at the same semester. With the intent of transforming classroom practice, analysis with dialogue is one of effective tools for enhancing lecture ability. (Siry & Martin, 2014) In order to improve instructional practice and to evaluate program effectiveness in a professional development program for instructors, co-generative dialogue was an evaluative tool for general assessment of various program-related issues was effective to extract research findings. (Martin & Scantlebury, 2009)

Fundamentally for DOE (design of experiment, design experiment, or experimental design) in science and field, Roth & Tobin (2004) presented research has shown co-generative dialogue as a curriculum evaluation and improvement tool is that the responsibility for improving a curriculum and enacting it successfully is more collectively assumed and when the curriculum is enacted the student feedback from the lecturer in higher education.

But only few models were installed and settled co-generative dialogue for design education including design thinking. Recent design thinking approaches on education meet communication with co-generative dialogue to share feedback and discussions interactively¹.

2. Mobile Application Design (App Design)






2-1. Application design/development process

According to the mobile application designers and mobile app developers, recently most people can connect to the web services through mobile devices frequently. A number of devices expands tremendously worldwide and people are strategically being accustomed to having both web and network connection through handheld mobile

phones, devices which are providing the similar performances with personal computers. For example, user can find weather information in the news widget as well as browsed website.

While mobile usability is quietly as simple as when users tried computers, demand for mobile app designers and developers are increasing by industrial ecosystem. Through the academic system from design major in the university, designers and developers are growing and graduating every semester. This research deals with lectures on mobile application creation. As mobile platform get evolved by itself, development process today is being simple and simpler like five steps as shown on [Table 1].

[Table 1] Mobile Application Development Process (X-Tech, 2019)

Analyze	Design	Develop	Certify	Deploy
				
Use Cases Technology Strategy	UI/Wireframe Prototyping	Performance Usability Response Platforms	App Distributor Certification	Device Lifecycle Management

But only few models were installed and settled co-generative dialogue for design education including design thinking. Recent design thinking approaches on education meet communication with co-generative dialogue to share feedback and discussions interactively.

2-2. Class for application design and development

In accordance with the intent of transforming classroom practice, analysis from dialogue is one of the most effective tools for enhancing instructor's lecture ability. (Siry & Martin, 2014) In order to improve instructional practice and to evaluate program effectiveness in a professional development program for instructors, co-generative dialogue was an evaluative tool for general assessment of various program-related issues was effective to extract research findings. (Martin & Scantlebury, 2009)

¹ Chemi, T., & Krogh, L. Setting the stage for co-creation in higher education. Co-creation in higher education. Students and educators preparing creatively and collaboratively to the challenge of the future. Rotterdam: Sense Publishers, 2017)

3. Research Objective, Problem and Method

3-1. Research objective

With the increasing importance of venture startups in the global economy, the trend shows that not only the business environment for venture startups is strengthened, but also entrepreneurial enthusiasm is increasing. In order for this trend to continue as an ongoing and not a temporary phenomenon, venture startups should continue to grow with survival competitiveness. Further, the growth of online and mobile businesses and the development of not only the cultural and creative but also the contents and knowledge industries has expanded and diversified the existing business models and created new ones, triggering new business model interpretations and discussions².

[Table 2] Class profile: comparison of two classes

Contents	Class I	Class II
Course Title	Media Interaction Design	Convergence Education in Science-Mathematics and Computer Technology
College and Dept.	College of Fine Arts Dept. of Crafts and Design (Design Major)	College of Education Dept. of Science Education (Science Education Major)
Degree Program	Bachelor	Combined Masters/Doctorate
Teaching Language	Korean / English ³	Korean Only
No. of regist. students	12+3(audits)	14+3(audits)
No. of attend. students ⁴	12	16
Project groups	4	5
Avg. students per group	3.0	3.2
Stdev. students per group	0.8	1.1

3-2. Research problem

With the emphasizing significance of mobile application with high fidelity both in the design education and education practice, the technical barriers to programming mainly cause worries on the project. Especially small groups which is made up with two students meet increasing psychological pressure on software code. Unlike entrepreneurial players facing challengeable environment with mission as job, students have shown hesitation for fear of programming by themselves. According to the problem-solving situation, we found a couple of research questions below:

Which structure makes teaching and learning in (mobile application design & development) education to face

² Myers, P. The unfortunate requisites and consequences for partitioning your mind, p.3, 2017. ([Times New Roman 7.5pt, horizontal scale 100](#))

³ Additional Lecture is provided with English for exchange student from Europe.

⁴ Remained students in the class after drop season passed.

challenges?

Observing instructor-students interaction plays when facing technical-sociocultural environment has its challenges.

3-3. Research method

Qualitative research on student feedback was main supplement data for the research. With the approach of co-generative dialogue after the class, researchers naturally gathered by teaching assistant with coherent experience.

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