Promoting Student Engagement with Activity Templates: A Case study

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Abstract: The purpose of this research is to provide a guideline for teachers to design classes that can continuously promote student engagement by designing and operating a class for teachers who are aware of problems of low student engagement in teaching profession courses at college using activity templates and verifying the effects. For this, the class context of <Instructional Methods and Technology> in the 2nd semester of 2017 at College A was analyzed, and a class was designed and run using activity templates to promote student engagement. Furthermore, a class satisfaction survey was carried out to investigate its effects. As a result, it was revealed that students were generally satisfied with the class, and teachers needed to include the class strategy of encouraging student interactions in the overall process of teaching design rather than using it superficially to promote student engagement in class.

Keywords: Student engagement, Activity templates

INTRODUCTION

With the emergence of knowledge in the information society of the 21st century, OECD has emphasized key capabilities of Use Tools Interactively, Interact in Heterogeneous Groups, and Act Autonomously with the project of DeSeCo (Definition and Selection of Competencies). In other words, as the key capacity in the future society, it is required to develop the ability to utilize one's own knowledge and information according to the context of certain circumstances. To help develop the ability to successfully respond to the rapidly changing future society, the education paradigm has been changed from a passive paradigm where students accept knowledge delivered from teachers to an active paradigm where students actively lead learning through interaction. The 2015 revised curriculum organizes the contents of each subject focusing on key concepts or principles and emphasizes student class participation and process-type assessment through classes involving active interactions including project-based learning (PBL), problem-based learning (PBL), and collaborative learning according to the characteristics of the subjects (Ministry of Education, 2015). For teachers to conduct a students-oriented class through various activities, student engagement is essential.

Pre-service teachers who are on the front line dealing with such changing educational policy and curriculum need to develop class professionalism and teaching capacity related to class design, operations, and assessment to promote student engagement and interactions among students. For this, they need to naturally learn from teaching profession courses through direct experience of interactive classes. A lack of experience in interactive classes may make it hard for pre-service teachers to practice interactions in their own classes; thus, it is necessary to provide the opportunity of training during the class procedure. Most teaching profession courses, however, have been taught in a lecture-style due to the characteristics limitations including number of class hours, required subjects, absolute assessment, and mid and large-sized classes.

In this regard, this research aimed to provide a guideline for teachers to design classes that can continuously promote student engagement by designing and operating a class for teachers who are aware of problems of low student engagement in teaching profession courses at colleges using activity templates and verifying the effects.

RESEARCH METHODS

Research subjects

The profile of the research subjects of this research, students taking <Instructional Methods and Technology > in the 2nd semester of 2017 showed that they had different backgrounds such as grade and major (<Table 1>).

Table 1. Profile of student (n=26)

sex	Male	12	46.2
	Female	14	53.8
Grade	Freshman	8	32.8
	Sophomore	10	38.5
	Junior	6	23.0
	Senior	2	7.7
Major	Korean Education	9	34.6
	English Education	4	15.4
	Physical Education	2	7.7
	Math Education	3	11.6
	Social Education	2	7.7
	Education	6	23.0

Table 2. Composition of the survey questions

Areas		Number of questions	Cronbach's α
General backgrounds (Sex/ grade/major)		3	-
Multiple-choice type	Class method and organization	9	.805
	Learning tasks	9	.897
	Activities during class	18	.879
	Assessment	6	.644
	Satisfaction	1	-
Short answer type		1	-
Total		47	

Research tools amd analysis

To verify the effects of the class designed to promote student engagement in this research, <Instructional Methods and Technology> in the 2nd semester of 2017, preceding research on perception of and satisfaction with the interactive class including flipped learning and team-based learning (Kang & Kim, 2018; Lee & Lee, 2017) was consulted to develop 47 survey questions including general background, class method and composition, learning materials and learning tasks, activities during class, homework and assessment, satisfaction, and others (<Table 2>). Each question was made to be answered using the Likert 5-point scale (1: Strongly disagree, 2: Disagree, 3: Neither, 4: Agree, 5: Strongly agree). To verify the developed survey tools, the questions were assessed by revising terms and expressions with 3 educational technology experts. After studying the composition of the survey, examples, and category credibility of the questions, it was revealed that Cronbach's α by area was high at over 0.8. The data collected through the survey was analyzed using SPSS 18.0 program, and frequency analysis and descriptive statistics analysis was conducted to explore class satisfaction.

A CASE STUDY

Class contexy

<Instructional Methods and Technology>, the teaching profession course for all pre-service teachers, has a wide range of curriculum including the theoretical base of educational engineering, class design, teaching methods, and various teaching media. Moreover, as practicing acquired knowledge in real classes is important in < Instructional Methods and Technology >, active engagement is required from the students. Nonetheless, teachers get pressure in the progress since the class time is limited to 2 credits (100 min), and students' differences in prerequisite learning and learning motive are relatively significant as the class is open to students regardless of their major or grade. Although students need to participate in developing class guidelines using various teaching methods or teaching media in < Instructional Methods and Technology>, most teachers are giving lecture-style classes due to the practical limitations of the class.

Instructional design and operations

Considering the class context of <Instructional Methods and Technology> in the 2nd semester of 2017, this research designed a class by dividing categories into 1) Organizing instruction modules; 2) Designing the learning topic; 3) Preparing learning materials; 4) Engaging students in group work; 5) Expanding student knowledge by sharing group work; 6) Providing feedback; 7) Sequencing learning activities; and 8) Assessing student learning for student engagement .

Class effects and sttisfaction

To improve student engagement, this research organized the class with 2-week unit modules by class topic and investigated class satisfaction of the students using <Instructional Methods and Technology > that group activities were conducted using activity templates. As a result, 72% of the students were generally satisfied with the class as shown in <Table 3>.

Table 3. Overall satisfaction with the class (n=25)

	Strongly disagree	Disagree	Neither	Agree	Strongly agree
I am generally satisfied with this class.	0 (0.0%)	0 (0.0%)	7 (28.0%)	15 (60.0%)	3 (12.0%)

DISCUSSION AND CONCLUSION

In this research, a class using activity templates was designed and operated to promote student engagement in classes taught by teachers who are aware of problems with low student engagement in teaching profession courses at colleges, and the effects of the class were verified. As a result, it was revealed that students were generally satisfied with the class, and teachers needed to include the class strategy to encourage student interactions in the overall process of teaching design rather than using it superficially to promote student engagement in class. To encourage students to participate in class, teachers should utilize technology-based learning tools to arouse their interest and various class strategies by reorganizing their classes with activities emphasizing cooperation among students. Although technology-based learning tools in class can induce fun and the students' interest, it can be just a one-time effect and hard to continue educationally meaningful learning. Moreover, if teachers operate activities emphasizing only cooperation without close correlation with students' circumstances and experience, there may be free riding students or increasing negative awareness of team activities. Therefore, teachers need to develop a systematic teaching design such as an analysis of learning process and context, reorganization of class and learning tasks, and assessment to promote student engagement, instead of using class strategy that superficially encourages students' interactions.

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