The Development Of Teaching Model "Arlo Framework Gamification" In Basic Teaching Skill

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Abstract.
This study aims to develop a gamification learning model as an effective learning model to use during a pandemic which is 100% held in online learning. This development is carried out by considering the needs of students in economic education in pursuing the Basic Teaching Ability course which is a prerequisite course for participating in the field practice program which is mandatory for all education faculty students. This research adopts Marczewski's Gamification Framework which consists of 8 questions, namely 1) what is being gamified; 2) why is it being gamified; 3) who are the users; 4) how is it being gamified; 5) analytics are set up; 6) tested with users; 7) acted on feedback; and 8) released the solution. There are 25 students in this study. Furthermore, the result of this study finds 8 types of mechanics, 8 badges, and 4 trophies. There are 7 students who get platinum level, 10 students get gold level, 5 students get silver level, and the remaining 4 students get bronze level. In addition, there is an increase in the students' pretest and posttest from 66.28 to 82.20.

Keywords: *Developmet, Gamification, Teaching Model. ARLo framework Model.*

I. INTRODUCTION

As a lecturer at an educational institution, it is a must to understand that teaching and learning activities will be more meaningful if the process is in accordance with the conditions and situations around the students being taught. Based on the observations of researchers during the covid-19 pandemic, where students and lecturers have started to experience boredom studying in front of a computer or gadget, therefore lecturers are challenged to be extra creative and innovative, especially in online learning. One trick that can be done by a lecturer in the online learning process is not only limited to hearing and seeing but also battling games between students as known as gamification.Gamification is the process of using game design techniques and game mechanisms in non-game contexts to engage users in achieving learning goals. Gamification is intended to motivate students in the learning process and maximize feelings of enjoyment and engagement with the learning process they are participating in. [6] [7] [12] [9], Based on the description above, it can be concluded that gamification is not a learning approach in which the whole class plays games together but simply adapts the rules and concepts of games in online learning so that the learning process runs comfortably and meaningfully.

The development of a learning model for students of Economics education is very necessary because 1) there is a policy issued by the Rector of Pamulang University regarding the transition of teaching implementation from a blended learning system to a full online system, this of course provides its own challenges in the learning process, for that 2) it is important to create ang appplying learning models that are in accordance with the needs of students in this case in the Basic Teaching Ability course, 3) activities that have been applied to the Basic Teaching Ability course are considered monotonous and boring because they only focus on theory and general knowledge about abilities that must be mastered by a teacher. It affects 4) the low level of student participation in online learning which results in the inequality of the portion of knowledge received by students, further students are also not interested in joining the class.To answer this problem, the researcher chose a gamification learning model which is assumed to be able to solve the problems faced above. Gamification is a learning model that emphasizes classroom activities given the context of the game. [3] [11] [12] The games are developed and arranged in order of the basic teaching skills that must be mastered by the teacher.

These abilities include 1) skills to open learning, 2) skills to explain learning materials, 3) skills to provide reinforcement, 4) skills in questioning, 5) skills to provide variations in learning, 6) skills in class management, 7) skills to guide small groups and individuals, and 8) skills to close learning. This research and development refers to [1] [8] which consists of (1) analyzing the needs of Economic Education students in learning the basic teaching skills, (2) developing a gamification learning model, (3) validating experts, consisting of content, linguists and gamification and revision model experts, (4) testing in online learning. and (5) final revision and application. This study is a refinement of previous research conducted by [2] with a composition of 60% offline and 40% online. In 2021, the study was continued by [5] with a composition of 40% offline and 60% online. Both studies found that there was an increase in social skills, communication skills, and critical thinking. In this study, the researchers focused on social skills which included eight basic teaching skills, especially the ability to make questions, give reasons, agree- disagree, and expressing honestly. This study was conducted on program fasilitasi rekognisi pembelajaran lampau (RPL) for students and institutional capacity building in disadvantaged areas between universities in the main disadvantaged areas, namely IKIP Gunung Sitoli and partner universities, namely Pamulang University, organized by the Ministry of Education and Culture of the Directorate General of Higher Education. The Directorate of Learning and Student Affairs which is conducted 100% online using a Moodle-based LMS. The concept of gamification that is applied is made simpler to adapt to the characteristics of students and learning objectives that require students to express creative and innovative ideas as prospective professional teachers.
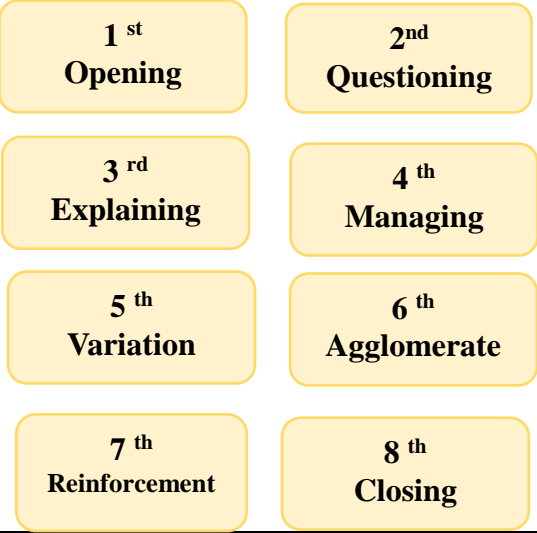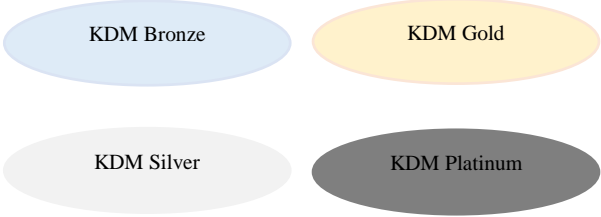
II.   METHODS

This study was conducted on students of the Online RPL program. Students of Pamulang University and IKIP Gunung Sitoli Economic Education. In accordance with the problems studied, this study was conducted using the Research and Development (R & D) research method. The research procedure carried out by researchers in this development was adapted from the development steps developed by [1] which stated that it was possible to limit research to a small scale, including limiting the steps of research. The application of development steps is tailored to the needs of the researcher. Given the limited time the researcher has, these steps are simplified into three development steps. The development steps taken by researchers are: limited trials, extensive trials and field trials. This study modifies the concept of gamification by [4] called Marczewski's Gamification Framework which consists of 8 questions: 1) What is being gamified; 2) Why is it being gamified; 3) Who are the users; 4) How is it being gamified; 5) Analytics are set up; 6) tested with users; 7) acted on feedback; and 8) released the solution

III.   RESULT AND DISCUSSION

Initial observations of students who take part in the RPL program have a tendency to have good digital literacy. However, the researchers carried out the concept of gamification by modifying it according to the characteristics of the class which were students from two different campuses, namely Pamulang University and IKIP Gunung Sitoli.

The gamification design in this study is called the ARLo Framework Gamification which consists of 8 levels according to the number of basic teaching skills. ARLo Framework gamification in the Basic Teaching Ability course is summarized in the table below:

No	Step	Sinopsis
1	**Planning**	
	What is being gamified	Researchers describe gamification in the online learning system using the Unpam LMS system which includes pretest, reading war instructions (modules), looking for weapons (viewing learning videos), fighting matches (discussion forums), assessments, assignments, posttests and student satisfaction questionnaires to determine abilities lecturers in providing academic services.
	Why is being gamified	KDM subjects often seem complicated and tedious for most students because they are required to be painstaking and focused on mastering every basic teaching skill. With this gamification concept it is hoped that learning will be more fun and simpler.

	Who is the user	Users in this gamification concept consist of 2 elements, namely students and lecturers. Students have the responsibility to participate in the gamification process. Lecturers have the responsibility to make game rules, add and subtract questions as well as enforce the rules during the gamification concept.
2	**Perancangan**	
	Game mechanics	This concept uses 8 game mechanics, namely 1) opening skills, 2) skills to explain learning material, 3) skills to provide reinforcement, 4) skills in questioning, 5) skills to provide variations in learning, 6) classroom management skills, 7) skills guiding small groups and individuals, and 8) closing skills.
	Level/ Progression	Determination of the level of gamification based on the level of complexity of Basic Teaching Skills
	Question/ Challenges	After students play at level 1 then it continues at level 2, and so on until level 8
	Achievement/ reward	Points, badges and trophies are rewards in the concept of gamification
	Points	Students who successfully work on the pretest and postest in one game mechanics and all correct answers will get 3 stars per session. Furthermore, students who are able to find problems and describe and solve them on a discussion topic will get 4 stars. Students who successfully complete all challenges perfectly will get 112 points or the equivalent grade A.
	Badges	There are 8 badges for students, badges will be obtained if students get points that meet the requirements for the badges scores. Badges for students: 1st Opening 2nd Questioning 3rd Explaining 4th Managing 5th Variation 6th Agglomerate 7th Reinforcement 8th Closing
	Tropies	There are 4 trophies for students, students will get it if they meet the criteria for the value of the trophies. Trophies for students: 1. KDM Bronze 2. KDM Silver 3. KDM Gold 4. KDM Platinum KDM Bronze KDM Gold KDM Silver KDM Platinum

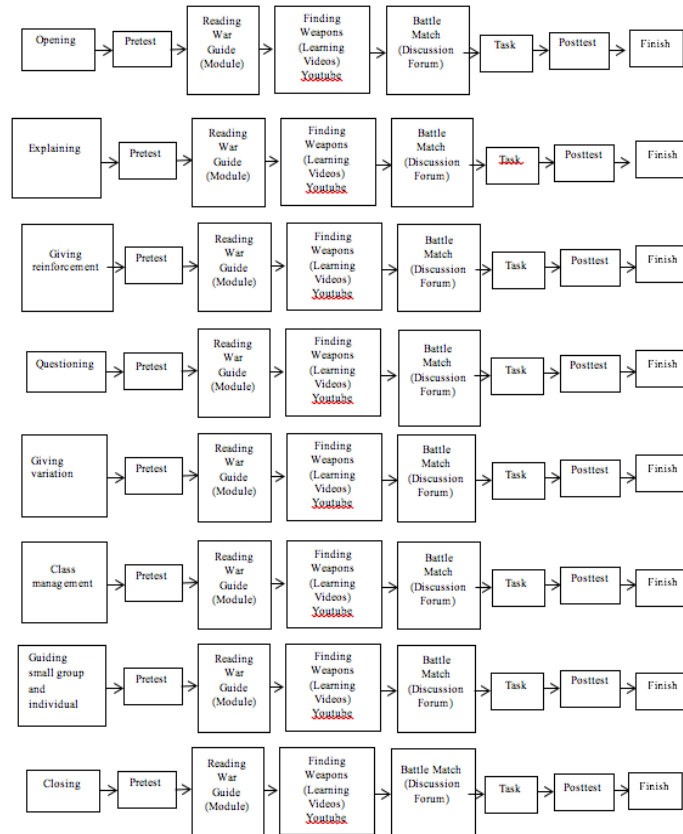Game rules and game play are described in the image below

Fig 1. Games Rules and Game Play

At the level of games rules are applied in stages, so students must complete level 1 before completing levels above, they must complete one game mechanic completely first, they cannot continue to the next level if not finished. In simple terms, the game flow is summarized in the form of a flowchart in Figure 2.
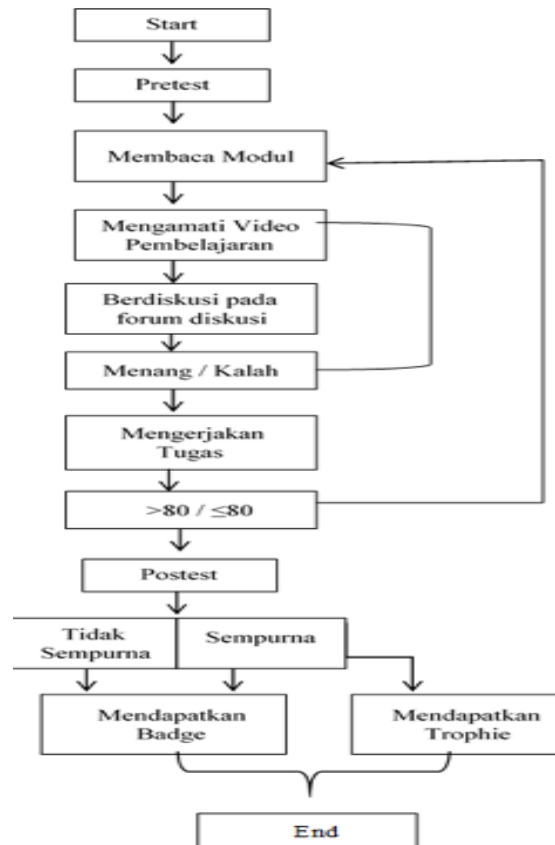

Fig 2. Game Flow

In general, student activities in online learning are active, although not all students get maximum marks. During the gamification process, students' interests and curiosity are increasing and honing, social skills and community skills are getting honed, as analytical skills, it can be seen how students are able to start criticizing ideas and expressing them well. [10].However, there are still some obstacles in the implementation of this gamification, especially the cellular signal that is not supported, so that sometimes some students seem to be left behind in responding. In addition, in tests that were carried out synchronously, some students experienced problems not being able to practice perfectly due to strict rules during the COVID-19 pandemic.The gamification results showed 7 students got the platinum level, 10 students got the gold level, 5 students got the silver level, and the rest 3 got the bronze level. Usually those who get silver and bronze levels are students who are not careful in seeing the problems that exist in the learning video so that when giving comments on the discussion topic they do not focus on solving the problem, there are even students who wrongly see the video that is discussed because every lesson video meeting is used case studies vary.

IV.   CONCLUSION

Based on the results of the students' pretest and posttest, there was an increase of 15, 82 where the pretest results were found to be 66, 28 while the posttest was 82, 20. The increase from that number was in a sufficient position to be a good position but that position had to be improved again. Apart from the two things mentioned above, there are side effects in learning with the gamification model. Researchers concentrated on the four social skills observed, namely: 1) Skills to express opinions, 2) Skills to clarify ideas, 3) to criticize non-individual ideas (Crictizing an idea, not a Person) and 4) to express reasons.

V.   ACKNOWLEDGMENTS

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