Design Gamification Model in Local History Learning

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Abstract. The background of this writing is that lecturers are still not maximal in developing teaching materials or local history learning models in the classroom. This can be seen by the fact that there are still many lecturers who use power points, modules, and lecture methods that are not updated according to the times. This paper aims to describe the design of gamification models in local history learning activities in the classroom. The method used in this study is the literature review method. That study critically examines knowledge, ideas, or findings in the theoretical and methodological literature on a particular topic. The design of the gamification model that can be done in learning activities is to prepare the gamification teaching materials in advance and determine the elements that will be used in learning activities. In this design, the components used are user, task, level, point, badge, and leader boards. The learning steps, namely, the lecturer provides an explanation of the application that will be used, divides the class into several groups consisting of 3–4 people, conducts class discussions with fellow groups in doing the tasks in the application, interacts with students related to the experiences they have had. Already felt related to the use of applications and materials obtained, reflecting on the learning activities that have been carried out.

Keywords: Gamification · Local History · Game-Based Learning

1   Introduction

Efforts to improve the quality of students must be continuously carried out, including in learning activities or lectures, one of which is in the Local History course. This course is one of the core courses in the History Education study program curriculum that students must follow. This course has great potential in introducing events close to the student environment. According to Hasan [1], local history will hold the central position because it relates to students' immediate environment and culture. In this position, local history material becomes the basis for developing students' personal, cultural, and social identities. Mulyana and Gunawan [2] add that an introduction to events in the area where students live is critical because it can introduce the processes and changes that occur in their area.

Teaching local history is essential to present historical events that are close to students. The resilience of local history can explain various phenomena, including family

history, social history on a local scale, the role of local heroes in local and national struggles, local culture, the origin of the nation, and past events. Teaching local history to students means realizing that they have a past. They are proud that long before birth, some figures or events played a role in shaping the environment that is relevant to the present. This awareness of continuity and place can prepare students to demonstrate their historical, social and cultural identity.

Learning local history in universities is one of the efforts made by LPTKs to equip students to explore and review historical documents in the student learning environment. This course is essential because there are written sources, and it is easier to conduct historical research in a documentary manner. The power of history makes students' thinking more focused and even able to create arguments from the analysis they know [3]. Local history is considered educational because students can place past values in the form of creative ideas and concepts as resources for solving current problems [4]. History learning will be easy to understand if students can see real life directly, not lecture material that is far from reality; even good education can be sourced from the life experiences of these students in everyday life and must provide meaning [5]. Based on the above opinion that local history has the potential to create creative concepts in learning that can encourage students' analytical power in solving problems.

In the history curriculum, its implementation can be developed by using the students' immediate environment as a source of historical material, both in the form of physical relics and local events that occurred in the area where students live [2]. When students reproduce local historical stories near their territory, most of which are under their observation, then history becomes something alive and has an important influence on current life. In higher education, local history is not only the starting point for courses; each part of the course must also find its foundation in today's industrial, social, and political conditions. The relationship between the past and the present must always be considered in teaching so that students can feel the importance of the lesson. The study of history fails to achieve its ultimate goal when it is taught as a thing of the past, not as a force in the present [6]. Based on the above opinion, implementing local history learning can use the physical relics in the surrounding environment as a source of knowledge. In addition, the material presented is not only focused on past conditions but is associated with current conditions so that learning can be more meaningful.

Teaching history carries the mission of gluing together the nation's unity so that the development of materials based on local history must be seen as an effort to raise students' awareness so that they can live side by side peacefully and are willing to accept differences and not the goal of breaking the unity of the nation. Clarke & Lee [7] explain that local history learning provides a space to enhance students' ability to contextualize their historical thinking and, in turn, engage in self-reflection. Through local history learning, students realize that the past consists of stories and memories based on limited historical records. Students in local history classes see the past as narratives constructed with interpretation and conjecture rooted in local communities and actions. It can be said that learning local history has great potential in developing students' thinking skills.

The expectations regarding local history learning are part that does not maximize the potential that exists in it. For example, local history learning activities still do not optimize variety and innovation in teaching materials, learning resources, and learning

models. This makes local history learning activities less than optimal or enjoyable. Thus, lecturers should be able to provide solutions to these problems. One thing that can be done is to apply a learning model combined with gamification teaching materials.

Meer [8] argues that using in-game components (application of gamification) in e-learning is enough to affect users in learning the material. This depends on the users and game components used in the e-learning. This follows what was done by Wijaya et al. [9], Karner and Hartel [10], and Stocks et al. [11] in their research which states that gamification influences the understanding of learning material.

Caponetto et al. [12] in Dichev and Dicheva [13] explain that gamification in education refers to the introduction of game design elements and the experience of playing them into the design of the learning process. It has been used to support learning in various settings and fields of study, address attitudes and behaviours, and strengthen creativity with implementation combining participatory, collaborative, independent learning and task completion approaches. Another thing explained by Kapp [14] is that gamification uses game-based mechanics, aesthetics, and game thinking to engage users, motivate action, facilitate learning, and solve problems. Based on this opinion, gamification in education uses games and their elements in learning activities to increase motivation to learn, solve problems, and carry out collaboratively. This can be proven based on the results of research by Arifin et al. [15], Dimova et al. [16], and Chowanda and Chowanda [17], which state that gamification affects students' motivation and interest in learning. Furthermore, the results of Rasini's research [18] state that gamification involves students' motivation and problem-solving.

Gamification involves lecturers and students in implementing learning and can also be done using blended learning. This strategy can train students in using information technology and the internet, so they don't only get historical material. This is a response to the emergence of the Industrial Revolution 4.0, which makes history lecturers have to get out of their comfort zone in exploring using learning methods and media to create an impression and a pleasant learning atmosphere. This breakthrough is expected to answer problems in local history learning activities in the Industrial Revolution 4.0.

2   Research Method

The research method used in this paper is a literature review, a study that critically examines knowledge, ideas, or findings in the theoretical and methodological literature on a particular topic. The focus of library research is to find various theories, laws, or pictures used to analyze and answer the research questions formulated. Snyder [19] explains that a literature review is the best way to synthesize research results in determining evidence at the meta-level and shed light on areas that require more research. This is essential to creating a theoretical framework and building a conceptual model. A literature review can also be described as a more or less systematic way of collecting and synthesizing previous research; as suggested by Baumeister & Leary [20]; Tranfield, Denyer, & Smart [21], that literature review can broadly be described as a more or less systematic way of collecting and synthesizing previous research.

A review carried out optimally and implemented as a research method will create a solid basis for increasing knowledge and theory. By integrating empirical findings and

perspectives, the literature review can answer research questions with strengths that no single study has. Conducting a literature review can take time, which is essential because it can determine the quality of research and writing that will be compiled. One of the benefits that can be felt by using this method is to find out relevant previous research. So that they can know whether the research topic or the topic of the written work taken has been previously researched. If so, then there will be more literature to read.

3   Result and Discussion

In the early stages, the lecturer determines the elements that the gamification application will use. Game elements included in Gamification include:

1) The user that appears as the user here is the student himself. Games played by students are a form of teacher-designed form that comes from an app or a learning management system (LMS).
2) Assignments are instructions that students must perform. For example, one form of assignment is a question that students must answer.
3) A grade is a value a student gives for completing an assigned task or correctly answering a question asked. As noted by Schwartz [22], this is a form of appreciation for students, and points can be awarded for completing assignments or levels. It can be used as in-game currency to exchange for unlocked content.
4) Levels are the level of each completed challenge/task. The higher the level/stage, the more complex the task becomes. For better classification, the levels/stages are divided into easy, medium, and challenging levels/stages.
5) Badges are rewards for achievement in a learning activity, such as getting the highest score at each level or the highest score in a learning activity. With this badge hopefully, it will trigger student achievement in learning activities. The more medals you get, the more you can be said to be a scholar and get the recognition of your friends.
6) A leader board is a ranked list of students with the highest scores. This ranked list motivates students to do their assignments better.
7) The progress bar is a graph of the progress of all students based on the results of their completed tasks. The chart shows students who can consistently complete and vice versa. Through this progress bar, instructors can see the progress of students' abilities.

After that, lecturers can use existing applications, such as Kahoot!, socrative, class dojo, class badges, class craft, ribbon hero, play brighter, goose chase, Minecraft: education edition, and others [23]. You can also develop your application. Furthermore, students register in the application that will be used, and learning activities can be carried out. In its implementation, the learning steps are divided into preliminary, core, and closing activities.

Preliminary activities begin with the lecturer greeting students, asking how they are, and checking student attendance in learning activities. Before entering the core activity, the lecturer provides learning motivation regarding the importance of Information and Communication Technology (ICT) in learning activities and asks questions about the
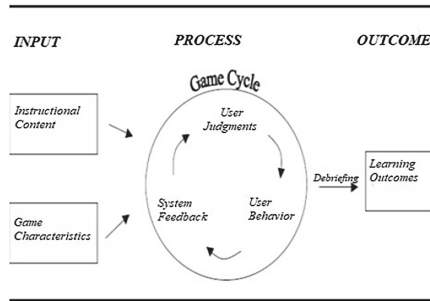
Fig. 1. Model Input Process Output.

Sukapura/Galuh regent figures by the Subject Learning Outcomes (CPMK) sub. Next, the lecturer conveys the sub-CPMK; the learning model to be used is the Game-Based Learning (GBL) model, according to (Garris et al.) [24], which consists of three stages, namely input, process, and output (Fig. 1).

Based on the picture above, the input in the model is to design an instructional program that combines the characteristics of the game. Instructional content here means the material prepared by the teacher in the game. In this study, the instructional content is local history material. Game characteristics include fantasy, rules/goals, sensory stimuli, challenge, mystery, and control [24].

Then at the process stage, the game cycle works in three parts, namely 1) User assessment; when users start the game, they make subjective judgments about whether the game is fun, engaging, and involves students in its use. This assessment is usually represented by self-reports of interest, involvement, and mastery in using it, 2) User behaviour, formed from an initial and ongoing play that determines the direction, intensity, and quality of subsequent behaviour. Motivated learners will more easily choose to engage in target activities, they pursue these activities more vigorously, and they stay longer in these activities than less motivated learners, 3) System feedback provides an assessment of progress towards the desired goal. Encourage students to be motivated to focus on the given task.

The next stage of debriefing is a review and analysis of events that occur in the game itself. Debriefing can include descriptions of events that occurred in the game, analysis of why they happened, and discussion of experiences that have occurred. This is the fundamental relationship between the game experience and learning. For learning outcomes, it consists of three, namely psychomotor, affective, cognitive,

The core activity is to apply the game cycle to the core learning activities, meaning that here students are ready to play the game. On this occasion, the lecturer divided the class into ten groups, each consisting of 4 people. Next, each group member joins their respective group. If it is done online, then each group creates a Whats App (WA) group so that they can have discussions when determining the answers to each question in the gamification application. This is done without leaving the synchronous application. After students create a WA group, the lecturer joins the group to see the interactions and discussion activities that take place in the group. However, if it is done face-to-face, the lecturer can monitor it by going around each group. After the discussion, activities,

and work on the task take place. The lecturer provides feedback regarding the learning activities that have been carried out in terms of material and technical processing. At this stage, the lecturer also explains to students the discussion of level features that students have done. This section also provides opportunities for students to interact with lecturers or other students.

Closing activity, namely learning outcomes. On this occasion, lecturers and students reflect by providing opportunities for students to express their opinions regarding the material that has been received in the learning activities. At this stage, the lecturer also includes information related to the results of the gamification features carried out by students, such as the badge, grade, and leader board features. Lecturers give appreciation to students who get maximum results and encourage students who have not been maximized in the results obtained. Another thing is that the lecturer evaluates skills, attitudes, and knowledge based on the learning activities that have been carried out.

This learning design is one form of innovation in local history learning activities. Several characteristics must be possessed in activities based on local history education, such as being interesting [25]; students must learn by doing or learning by doing, develop curiosity, and provide skills [26]. Based on this opinion, it is appropriate that the design of the gamification model above is very relevant to be implemented in local history learning activities.

Ideally, learning local history is presented with strategies that challenge students. History learning should emphasize constructivist learning activities that are open to student differences. This is very important to help students understand themselves and their past as part of the local, national, and global. Group and individual tasks to studying the past of each community group are practical examples of developing local history learning strategies [27]. Based on this, local history learning should be presented excitingly, build curiosity, and there are challenging strategies for students, and there is group cooperation. These components can also be seen in the design of the gamification model.

4   Conclusion

Local history learning should be done excitingly; students must learn by doing or learning by doing, develop students' curiosity, provide collaborative skills, and contribute to developing various skills. One such packaging is combining gamification and appropriate learning models in learning activities, such as Game-Based Learning.

The implementation stage is divided into several stages, namely preliminary activities, core activities, and closing. Primary activities consist of several steps, first starting with a greeting, greeting students, asking how they are, and checking students in learning activities. Second, the lecturer connects the material taught with the previous material and real life. Third, convey messages to students to participate in learning activities from beginning to end, and fourth, get the Sub Course Learning Outcomes (CPMK), broad material coverage, and learning models that will be used using the Game-Based Learning (GBL) learning model.

The core learning activities consist of several steps, firstly inputting, namely the lecturer explaining the instructional content to students regarding the gamification elements in the application, such as user, badge, leader board, task, point, and level. Furthermore,

the lecturer also explains the rules, introductory material, and functions that must be done in the game that will be played later. The second step is to apply a game cycle, meaning that here students are ready to play the game on the application that has been shared. On this occasion, the class was divided into eight groups, each consisting of 4–5 people. Next, each group member joins their respective group. After the discussion and work took place, the lecturer allowed each group to discuss everything they had done by dividing 1–2 questions each.

In conclusion, the lecturer and students conclude the learning materials that have been carried out and reflect on the learning experiences that have been carried out. In addition, the lecturer also appreciated the group that got the highest score in working on the task in their gamification application.

References

1. S. H. Hasan, Pendidikan Sejarah Indonesia: Isu dalam Ide dan Pembelajaran, Rizqi Press, 2012.
2. A. Mulyana, R. Gunawan, Sejarah Lokal Penulisan dan Pembelajaran di sekolah, Salamina Press, 2007.
3. Y. Kusnoto, F. Minandar, Pembelajaran Sejarah Lokal: Pemahaman Kontens Bagi Mahasiswa, Sosial Horizon: Jurnal Pendidikan Sosial 4(1) (2017) 125–137.
4. U. A. Sari, Rusli, Integrasi Ilmu Sejarah Dan Ilmu Geografi Dalam Meningkatkan Kemampuan Literasi Sejarah Mahasiswa Pendidikan Ips Melalui Eksplorasi Sejarah Lokal Candi Badut, Jurnal Teori dan Praksis Pembelajaran IPS 1(2) (2016) 130–135.
5. N. A. Kubangun, Pengaruh Metode Pembelajaran dan Pemahaman Konsep Terhadap Hasil Belajar Sejarah Lokal Pada Mahasiswa Program Studi Pendidikan Sejarah FKIP Universitas Pattimura Ambon, Socia 11(1) (2012) 59–77.
6. E. J. Rice, Local History, The Course of Study 1(8) (1901), 689–693.
7. W. G. Clarke, J. K. Lee, The Promise of Digital History in the Teaching of Local History, The Clearing House: A Journal of Educational Strategies, Issues and Ideas 78(2) (2004), 84–87.
8. R. Meer, User Experience of Gamification in E-Learning, Maastricht University, 2013.
9. A. B. Wijaya, Suyanto, Sukoco, Gamification Pelajaran Sejarah Perjuangan Kemerdekaan Menggunakan Metode Scot, Jurnal Telematika, 10(1) (2017) 23–35.
10. F. W. Karner, G. Härtel, Theory and Taxonomies of Serious Games, ENTRExplorer, 2010.
11. C. Stocks, B. Birley, R. Collins, Stories from the Frontier: Linking Past and Present at Vindolanda through Digital Gameplay, Thersites 8 (2018), 97–109.
12. I. Caponetto, J. Earp, M. Ott, Gamification and education: a literature review, 8th European Conference on Games Based Learning, ECGBL 1 (2014), 50–57.
13. C. Dichev, D. Dicheva, Gamifying education: what is known, what is believed and what remains uncertain: a critical review, International Journal of Educational Technology in Higher Education XIV(9) (2017) 1–36.
14. K. M. Kapp, The Gamification of Learning and Instruction: Case-Based Methods and Strategies for Training and Education, Pfieffer: An Imprint of John Wiley & Sons, 2012.
15. Y. Arifin, R. Martin, R. Dratama, Gamification for the Ancient Kingdom of Nusantara with User-Centered Design Approach, ComTech: Computer, Mathematics and Engineering Applications 9(1) (2018) 9–14.
16. M. Dimova, D. Paneva-Marinova, L. Pavlova, Towards Better Understanding of Ancient Civilizations by Storytelling and Gaming, TEM Journal 7(3) (2018), 658–661.
17. A. Chowanda, A.D Chowanda, Gamification Of Learning: Can Games Motivate Me To Learn History?, ComTech 7(3) (2013) 225–232.

18. N. Rasini, Desafío Entre Reporteros Del Pasado: Esperienza Di Gamificazione E Apprendimento Cooperativo Con Il Digitale Riguardo La "Edad De La Restauración" E Guerra Civile Spagnola, Didattica Della Storia: Journal of Research and Didacrics of History 2(1) (2020) 668–683.
19. H. Snyder, Literature Review As a Research Methodology: An Overview and Guidelines, Journal of Business Research 104 (2019) 333–339.
20. R. F. Baumeister, M. R. Leary, Writing narrative literature reviews, Review of General Psychology 1(3) (1997) 311–320.
21. D. Tranfield, D. Denyer, P. Smart, Towards a Methodology for Developing Evidence-Informed Management Knowledge by Means of Systematic Review, British Journal of Management 14(3) (2003) 207–222.
22. M. Schwartz, *Teaching with Gamification*, 2016, (http://www.ryerson.ca/content/dam/lt/resources/handouts/gamification.pdf, accessed from 20 October 2020)
23. O. A. K. Shavab, Gamification In History Learning As An Effort To Answer The Challenges In Facing Industrial Revolution 4.0, Proceeding of The 3rd International Seminar on Social Studies and History Education (ISSSHE), 2018, pp. 371–376.
24. R. Garris, R. Ahlers, J. E. Driskell, Games, Motivation, and Learning: A Research and Practice Model, Simulation & Gaming. 33 (2002) 441–467.
25. A. A. Akcali, E. Aslan, Effect Of Using Local History In History Teaching On Academic Success And Historical Thinking Skills, GEFAD/GUJGEF 36(2) (2016) 375–397.
26. İ. H. Demircioglu, M. A. Tokdemir, History Teaching While Creating Values: Purpose, Function And Content, Journal of Value Education 6(15) (2018), 69–88.
27. Supardi, Pendidikan Multikultural Dalam Pembelajaran Sejarah Lokal, Jurnal Pembangunan Pendidikan: Fondasi dan Aplikasi 2(1) (2014), 91–99.