

**CONFERENCE PROCEEDING****Trend on Gamification Approach in Learning and Teaching**

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**ABSTRACT**

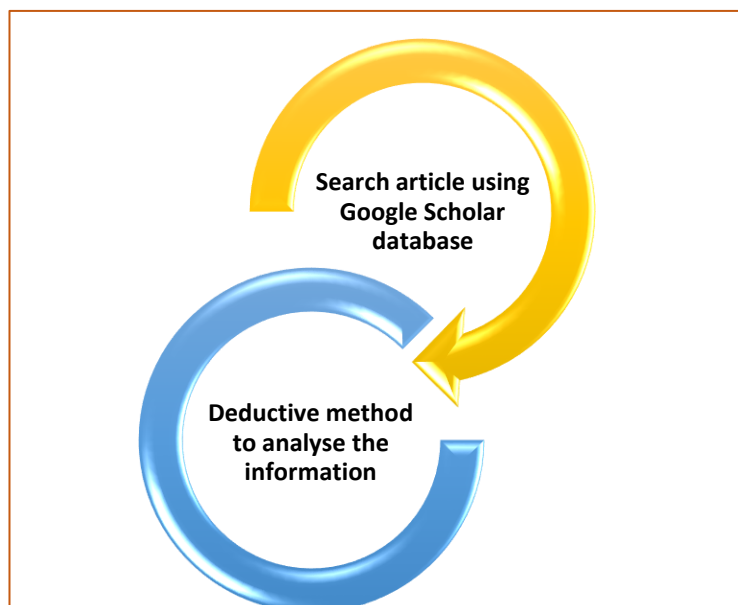
Gamification approaches to education have already been studied extensively for their effectiveness in teaching and learning. As a result, Gamification has been replaced the conventional way to deliver the content of the subject. Therefore, this study aims to identify the growing trend of the gamification approach used as an aid tool in teaching and learning sessions. The deductive method in studying the literature review was used to determine the information and justify the trend from the literature review. According to current trends, gamification is often employed in classes to improve students' grasp of the subject. Also, various uses of digital or physical games can be found today.

**Keywords:** *Gamification, board game, education 4.0*

**INTRODUCTION**

Gamification is a terminology that allows interactively demonstrating critical stuff by cumulating non-gaming factors with a game predicated environment. Gamification offers tremendous opportunities comparing to the traditional scholastic system (Oyshi *et al.*, 2018). It was done by using gamification with the user-centred design approach. The data collection used questionnaires and a literature review. Moreover, the researchers identified the resources by applying the gamification element, developing the game based on user requirements, and evaluating the usability testing (Arifin *et al.*, 2018). Gamification nowadays is one of the techniques that can increase motivation and encourage users' involvement, particularly in the education domain that requires teaching and learning activities to be more fun and interesting (Kusuma *et al.*, 2018). Teaching students pleasantly and successfully more and more requires the inclusion of interactive elements in the mix of didactic elements. As guessing games and quizzes always enjoy great popularity in class, we dreamt of developing a board game based on typical gamification mechanics (Taspinar *et al.*, 2016). Hence, this study has been done to view trends in the gamification approach for teaching and learning purposes.

## MATERIALS AND METHODS/ METHODOLOGY



**Figure 1.** Flow Chart of Methodology

Figure 1 shows the flow chart of the methodology used in this study that includes two stages. Stage 1 is searching articles in the Google Scholar database using keywords “*gamification*”, “*education for secondary school*”, “*board game*”, and “*education 4.0*” from the year 2011 until 2021. Then the title of the article was selected manually based on the domain required. The second stage involves reading each article in depth and developing a synthesis table that categorizes the (i) title of the research, (ii) year, and (iii) type of gamification being used as a teaching and learning aid.

## RESULTS AND DISCUSSION

The synthesis table for the 16 articles chosen for this study can be found in Table 1. According to the findings, the results of previous studies used a board game approach in the teaching and learning activities. Aside from that, digital games are not extensively used.

**Table 1.** Synthesis Table

No.	Name Of Paper	Year	Type Of Gamification
1.	Using A Digital Game As An Advance Organizer	2017	Digital Game
2.	The Pedagogical Application Of Alternate	2015	Alternate Reality Games, Args And Serious Args
3.	The Effects Of Mansa Historical Board Game Toward The Students' Creativity And Learning Outcomes On Historical Subjects	2020	Board Game
4.	Playing A Board Game To Learn Bioenergy And Biofuels Topics In An Interactive, Engaging Context	2020	Board Game
5.	Learning History Through Computer Game Authoring	2013	Computer Games
6.	Utilizing History Information In Acquiring Strategies For Board Game Geister By Deep Counterfactual Regret Minimization	2019	Board Game
7.	Homo Ludens Moralis: Designing And Developing A Board Game To Teach Ethics For ICT Education	2020	Card Games/Board Games
8.	The Development Of History Educational Game As A Revision Tool For Malaysia School Education	2011	Digital Game/Visual Informatics
9.	Gamifying The Flipped Classroom Using Game-Based Learning Materials	2018	Board Game
10.	"Sejaraone" Board Game Design As Educational Media For Hindu And Budhha Empire Classical Time In Indonesia	2020	Board Game
11.	Designing And Evaluating A Card Game To Support High School Students In Applying Their Knowledge Of World History To Solve Modern Political Issues	2012	Card Game
12.	Board Game Prototyping To Co-Design A Better Location-Base Digital Game	2017	Digital Game
13.	A Qualitative Study On The Effect Of Game Board Strategy On The Student's Motivation Of Learning Statistics Course	2019	Board Game
14.	Indonesian History Educational Card Game, Indonesian History Educational Card Game	2018	Card Game
15.	Student Engagement, Collaboration And Critical Thinking Through A Board Game Module In An Architecture History Class	2018	Board Game
16.	Gamification In Education: A Board Game Approach To Knowledge Acquisition	2016	Board Game

## CONCLUSION

As a result, the utilization of conventional board games is the current gamification trend. However, as time passes and technology improves, many individuals are now creating digital games. In general, students' understanding of the material has improved, and their creativity has increased. Students' brains develop methods while playing and learning. The colours and forms entice them to play. It evolved into an idea of having fun while studying.

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