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LITERATURE REVIEW ON THE ANALYSIS OF MOTIVATIONAL ELEMENTS AND GAMIFICATION CONTENT IN CREATING SEMANTIC BARRIERS

Carlos Rugu[1], Anida Sarudin[2]*, Zulkifli Osman[3], Husna Faredza Mohamed Redzwan[4], Wan Mazlini Othman[5], Marlini Idris[6]

[1]Universiti Pendidikan Sultan Idris, Malaysia

[2,3,4]Department of Malay Language and Literature,
Faculty of Languages and Communication, Sultan Idris Education University

[5]Faculty of Languages and Communication, Universiti Pendidikan Sultan Idris

[6]Universiti Pendidikan Sultan Idris, Malaysia

[1]carlosrugu95@gmail.com, [2]anida@fbk.upsi.edu.my, [3]zulkifli@fbk.upsi.edu.my,
[4]Husna.faredza@fbk.upsi.edu.my, [5]wan.mazlini@fbk.upsi.edu.my,
[6]lini.idris@pbmpu@fbk.upsi.edu.my

Carlos Rugu, Anida Sarudin*, Zulkifli Osman, Husna Faredza Mohamed Redzwan, Wan Mazlini Othman, Marlini Idris: Literature Review On The Analysis Of Motivational Elements And Gamification Content In Creating Semantic Barriers-- Palarch's Journal Of Archaeology Of Egypt/Egyptology 17(6). ISSN 1567-214x

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ABSTRACT

The study aims to examine the development of literature highlights related to motivational elements and gamification content in the implementation of gamification which indirectly creates semantic barriers. A total of 11 local and international literature were examined based on Literature Review Inventory (IVS), which was built on ARCS Model founded by John Keller (2010), consisting of 4 important elements: attention, relevant, confidence and satisfaction as well as referring to Content Gamification Model by Karl M. Kapp et Al (2014) which consist of 7 elements: story, challenge, curiosity, character, interactive, feedback and freedom to fail. Both models focused on four (4) teaching and learning motivational factors in gamification as well as

in the aspects of gamification content which are the basic backup in fulfilling the teaching and learning based on gamification. The findings discovered that the main relationship between semantic barrier and gamification process was through meanings with an attempt to deliver the design and implementation of gamification. Barriers of meaning which occur could be the result of some semantic aspect: the barrier of an understanding of motivational concept in gamification based on ARCS Model, gamification elements such as point, badges, levels, leader boards, challenges, reward, on boarding and engagement loops as well as the concept of the fun and implementation of gamification design. This study is important in the effort to expose various constraints and obstacles in the gamification process which needs to be given the attention though the method is interactive and entertaining in nature.

INTRODUCTION

Gamification is a method of teaching and learning that has been widely adapted to meet the game-based features, which has thus brought positive changes in the world of Education (Gartner, 2011, McGonigal, 2011, Zichermann & Cunningham, 2011). In this context, gamification can exist as a picture of culture and identity. As such, the gamification aspects are often seen from several perspectives, the gamification has a relationship implications in motivation from the player's point and participation as well as learning outcomes received from the game (Domínguez et al., 2013; Lee & Hammer, 2011). This is supported in several other studies such as the study by Filomena Faiella and Maria Ricciardi (2015) titled "Gamification and Learning: A Review of Issues and Research". He notes that Gamifikasi can be shared in three aspects, namely participation, motivation and learning outcomes.

Gamification does not only influence the external motivation of a student, but also the internal motivation of a student in a classroom that determines the student's progress in the classroom. Gamification is not only an important aspect in promoting motivation, but gamification can also be modified at students' the level of achievement so that it can be utilized both inclusively and exclusively. This means that gamification approach is not just material but involves various factors such as rewards and competition factors (Dominguez et. al., 2013). The use of remunerations will increase students' motivation because there are gifts after completing something in the gamification process.

In addition, engagement or participation can happen because of the implication of gamification elements. It is undeniable that the use of gamification can increase students' participation in classrooms because the mechanism in gamification learning activities do not involve specific gaming tools. However, there are some factors that can cause a reduce student's involvement in activities. For example, traditional gamification learning (Mollick & Rothbard, 2014; Filomena Faiella & Maria Ricciardi, 2015).

From the point of view and philosophy, gamification is seen as a critical narrative. This is deemed through a relationship between life which is full of narration that takes into account the aspect of dialogues in a story, as well as

oral narrations in certain societies from teachers, pupils, students, plural society and others because narration can be referred to thoughts, philosophies, materials and so on (Ivor Goodson & Schert Gill (2014). Gamification is regarded as a critical narrative as it is an art and learning practice supported by theory and philosophy. This means that gamification has a theory as a learning process which is a guide to students in learning something.

TECHNOLOGY AND EDUCATION

Students are now in an entertainment-based learning era or "Edutainment Era" (Khairuddin Nisa et. AL, 2017) with the emergence of a variety of games that are shaped and based on games such as SimCityEDU, Misson Us, Oregon Trail, Math Blaster and Minecraft (Farber, 2014). Games or gamification does not only focus on entertainment, but also exist indirectly in education with gamification elements through the process of teaching and facilitation.

Gamification is a game or device produced to facilitate the learning and facilitation process in the classroom. According to Arif Prambayun, M. Suyanti and Andi Sunyoto (2016), they stated that gamification has a complete model game that uses a method of storytelling, completing quest, levelling up, achievement (badge, status, final point), collecting reward, earn & curn, competition (leaderboard & duel quiz), poking & reminders and forum activities.These methods are planned, in particular, to influence students' behaviour so that at the early stages of learning they are in orderly manners and will eventually affect students' interests in learning. This is because through good and structured planning, gamification conducted will be more attractive and have aesthetic values. Heni Jusuf (2016) stated that gamification is a learning approach using elements of multimedia such as video games and games applications. This is to motivate students in the learning process by maximizing the feeling of enjoyment and creating engagement in the learning process implemented in the classroom. For example, some very famous game applications such as Simcity and Pokemon Go that represent the gamification system is combined the geo-location system, which is the place indicator in the game application has made players more interested because it displays the reality of places which that has reward systems, onboarding, levels, leaderboard and challenges.

The technology-based pedagogy is a new learning nowadays, however, technology has become an important element which supports certain pedagogies. From the context of definition, technology is a practical systematic science application (Ishak Abdulhak & Dani Parmawan, 2015, Salisbury, 1996). Technology is an intelligent application that helps people in any fields. In the field of education, the application of technology in education, particularly in matters related to "technological pedagogy". Technology is a process, and education can also be regarded as one of the technologies because education is the process of making human-educated or process to acquire added

values or in other words is referred to as *education as technology*.

The combination of technology and education has been seen as a significant progress in the presence of a combination of several knowledge disciplines inter-dependence in the world of education. Today, the use of e-book on Google website helps with virtual learning, which proves to create a combination of technological knowledge in education. According to Kamal B. Madarsha (2016), he stated that the virtual reading nowadays has created technological applications in education, which is read-aloud tool, recording function, automatic page-turning, slide bar for navigation, different font sizes and format, electronic dictionaries, pronunciation guides, online games and quizzes and digital media such as video, pictures and music.

These facilities have made online or virtual reading more interesting and help to provide useful functions especially in English and Malay language pronunciations. Positively, the development of education through technology does not only help people, but also enhance skills such as featured reading skills or created functions. Technological innovations embedded in e-book has converted reading as fun practices. A deeper study is more robust through the field of gamification incorporating pedagogical technology. This development has sparked an exciting and enjoyable education development scenario (Salen & Zimmerman, 2004). However, according to Landers, R (2014) and Amon Rapp et. Al. (2019), gamification is also an art-based because there are confusing game elements. It is influenced by challenges in gamification elements such as competition that will affect players. He discovered that the performance of a player increased when the player is only supplied with information that "they will play as well as compete with other players" and this principle causes their motivation to grow in line with the performance of the player even if the game produced does not have functions or stipulations in "competing with other players". The content of gamification and gamification elements can influence motivation as well as improve the performance of a player with a phrase or verse while playing certain games in particular which involve biological elements. Motivation in games is regarded as a psychologist's effort produced by designers or to insert emotions in the game.

Therefore, the gamification approach in learning has developed and is named as the Game-Based Learning (GBL) because it involves fun elements and can attract students in teaching. The continuity between GBL and language areas especially the understanding of language in the perspective of semantics has identified several problems, namely, the use, understanding, and the term of meaning in gamification accepted by students while playing. Elements in GBL can affect learning, for example, rules affect the learning process because rule determines the success of a player in games. According to Tan (2018), GBL has several elements affecting the learning process, namely regulations, challenges, goals, narrative, feedback and interactions. However, these elements is divided into two, which is the main elements that refer to the rules, goals and feedback while the choice elements refer to challenges, narrative and interactions. Therefore, it is important to investigate

in detailed how far gamification elements and features of gamification have implications communication spoken throughout gamification games.

The main problem to be examined is semantic barriers occurred during gamification. This is because, the meaning acquired or received by students and teachers will experience confusion caused by several factors that occurred during communication. The elements of gamification such as rules will involve teachers giving directions to students in which semantic barriers will occur, resulting from the use of the language itself or different cultures between teachers and students. According to Agnes B. Hatfield (2014), it is stated that the cause of the semantic barriers are based on language of control in his study entitled 'Semantic Barrier to a Family and Professional Collaboration' in 2014. Language of control can control situations in various aspects among those mentioned in this study are control in establishing cooperation in communication.

The main relationship between semantic barriers and gamification is through meanings delivered. The semantic barriers occurred might be the result of several semantic aspects, which are barriers of denotative, connotative, Homophone, Homonym, homographs, different cultures and different words used (Shraddha Bajracharya, 2018).In addition, semantic barriers can also occur due to other factors such as faulty translation, unclear assumptions, bad impressions and the use of meanings at different levels as well as lexical meaning, grammatical meaning, contextual meaning, referential meaning, conceptual meaning, associative meaning, word meaning, meaning of idioms and proverbs which are considered as a medium to identify certain words or meaning delivered by a sender to a listener. Sareen Kaur Bhar et. Al. (2012) in a study has stated that barriers that occurred in communication were based on certain factors.

Among these are communication skills which are influenced by their own cultural background. In this study, it is stated that a total of 77.7% agreed that social culture influenced the skills of communication directly. This has proven that culture is one of the causes because culture sets a ruling to the mind that certain words are given certain 'meanings' though formally they give different meanings in the process of communication.

Starting from issues of gamification in education and the relationship in language issues, this article will examine the extent of the past studies in the perspectives of semantic barrier and 'gamification pedagogical' discussed in previous studies. The details conducted is based on the Literature Review Inventory of ARCS Model by John Keller (2010) and the Gamification Content Model (Kapp et. al. (2014). The literature review is detailed from the aspect of semantic barriers and Gamification Content Theory that are structured through the use of gamification in classrooms. The following shows the Inventory Framework Checklist (IVS) based on ARCS Model (John Keller, 2010) and the Gamification Content Model by Karl M. Kapp ET. AL (2014).

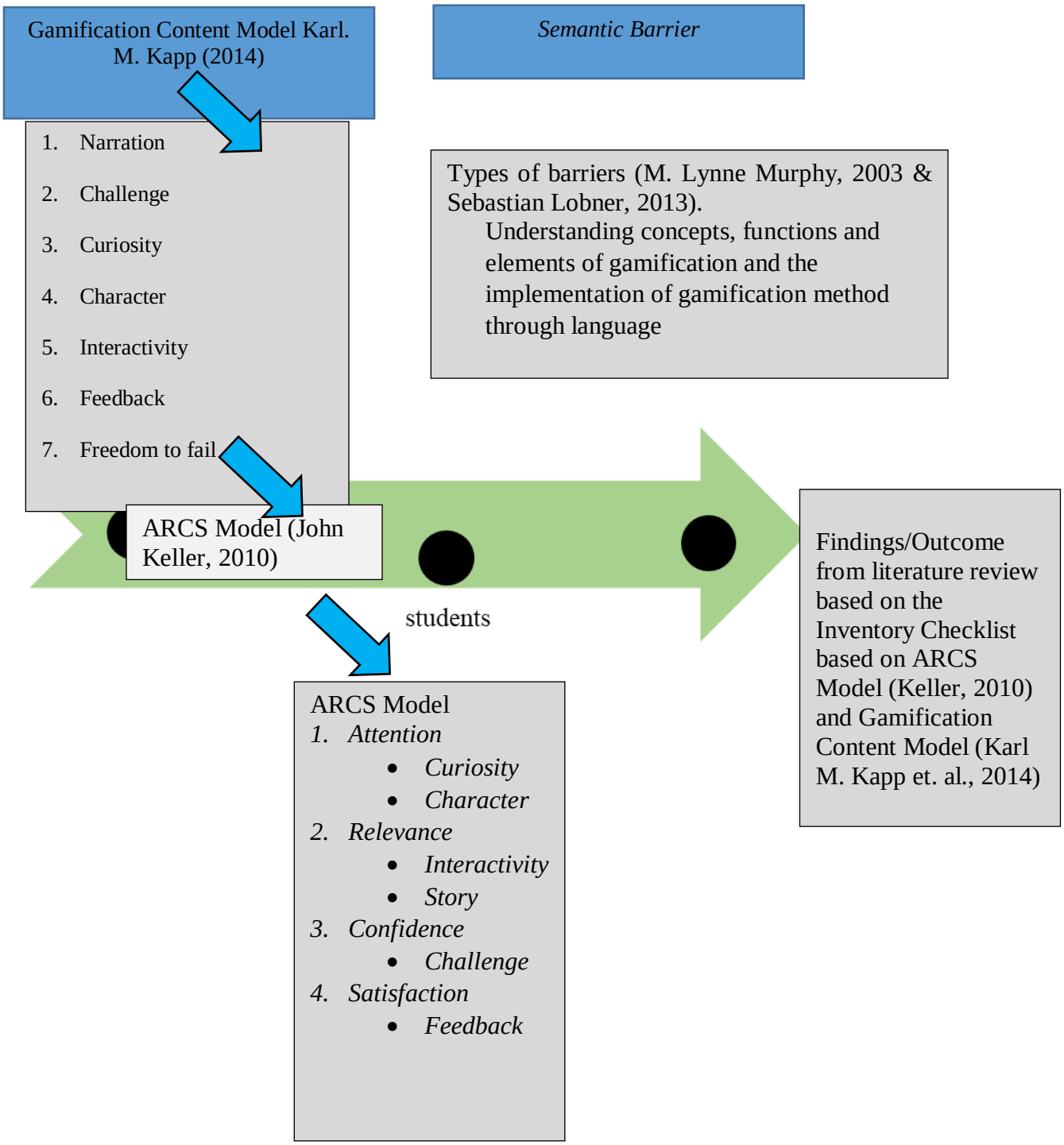

Figure 1 Inventory Framework Checklist (IVS) based on the idea of ARCS Model (John Keller (2010) and Gamification Content Model (Karl M. Kapp et al., 2014).

This study uses the ARCS Model (Keller, 2010) Model and takes the idea from the Gamification Content Model by Karl M. Kapp et al. (2014), aims

to look at 4 gamification learning motivation such as attention, relevance, confidence and satisfaction as well as 7 elements of gamification content such as story, challenge, curiosity, character, interactive, feedback and freedom to fail. These two models influenced each other in examining semantic barriers (M. Lynne Murphy, 2003; Sebastian Lobner, 2013).

SEMANTIC BARRIER

Generally, barriers are ambiguity of meanings received by listeners and readers. Semantic barriers refer to misunderstandings between senders and receivers occur from differences of meaning and symbols in communication.

According to Shraddha Bajracharya (2018), it is stated that communication semantics barriers are symbolic barriers that interfere with messages sent in other ways from the intention to create message which are difficult to understand. He also noted that these semantic barriers could occur because of different situations which form semantic (related to or arising from different meanings of words or other symbols) from senders and receivers, which are also known as semantics. In addition, he also expressed that semantic barriers are due to the emergence of languages, education, culture and place of original related to dialects and through experience that resembles language barriers in communication.

Ashley Friedman (2018) declared that language barriers, in the use of the most basic and concise terms, is a lack of common language that deprive two or more people from speaking or understanding each other through oral communication. In addition, he also stated that language barriers were caused by dialects and slang as well as what happened in language barriers were a lack of common vocabulary that discussed specific topics.

Next, according to Massa Ernest Mass and Lukong Kenneth Mengjo (2016), they stated that semantics barriers occur caused by meanings of a word used, the same word may mean different things to different people. For example, words and phrases like efficiency, increased productivity, prerogative management, can only be understood as one thing for certain people especially in the field of education. Apart from that, they also stated that technology also played a role in semantics barriers to communication because today's complex school systems are high-tech that only involve skilful technical staff in developing and utilizing the terms of technology use that are only understood by technical staff.

Semantic barriers do not only focus on meanings, but also the use of terms that have different meanings to different individuals. This is due to technological development in the world of education which further expands the levels of language such as pedagogical technology that is only used in today's learning. In addition, semantic barriers also occur from the use of different dialects and environmental experience. This will cause different meanings from the aspect of denotative barriers and connotative barriers in understanding the meaning of certain sentences.

OBJECTIVE

Identify the factors of semantic barrier in literature review based on gamification content.

Discuss the gamification content in GBL using the ARCS Model in literature review.

Analyse the discussions on semantic barriers in literature review based on ARCS Model (John Keller, 2010) and Gamification Content Model, Karl M. Kapp et.al (2014).

RESEARCH THEORY

Figure 1 Gamification Content Model by Karl M. Kapp *et. al* (2014)

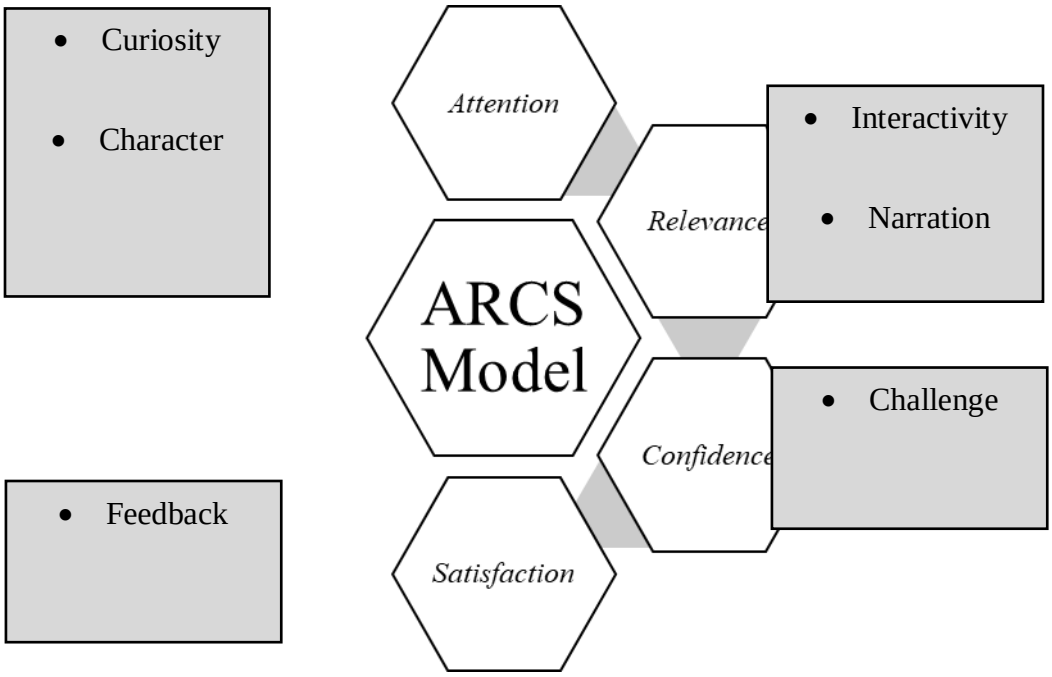

Figure 2 A combination of ARCS Model Karl M. Kapp et. Al (2014) in Gamification

Model ARCS (John Kelle, 2010) is a model developed in the context of motivation, looking at students' motivation either they are motivated or not through attention, relevance, confidence and satisfaction. This model focuses on instruction design, but many elements have applications to model learning and teaching, and easy to see how the elements can be applied to various learning aspects based on games.

Attention is the first element in this model to get the attention of learning so that they are keen to understand certain content. Attention can be achieved in several ways, i.e. through analogy, conflict, specific meanings and elements of suspense. Subsequently, the relevant aspects have four sub-aspects: meaningful goal-orientation on how certain goals have become the guides to succeed for learners. The second sub-aspect is matching meanings of motif, which refers to a learner's motive aligned with the desire of a student or a learner and the third sub-aspect is normal habits. Habits here refer to showing certain new knowledge inter-related to the existing knowledge of students and final sub-aspect is modelling or innovation on the new learning knowledge outcomes. The third element, which is belief, refers to students who have the expectation that they will be able to achieve something. If students can learn and believe in certain learnings, then his/her level of motivation will increase to a higher level. The final element is satisfaction, students have to feel that learning has value and worthwhile in the pursuit of certain efforts. This is because, through positive support, help and encouragement towards new knowledge, it is a strategy to enhance their motivation for learning.

LITERATURE REVIEW BASED ON THE INVENTORY CHECKLIST (IVS) TAKEN THE IDEA BASED ON THE ARCS MODEL BY JOHN KELLER (2010) AND THE GAMIFIKASI CONTENT MODEL BY KAPP ET. AL (2014)

The study by Rohaila Mohamed Rosly and Fariza Khalid (2017) showed the concept and implications of gamification happening in education field. In this study, the concept of gamification is discussed in the implementation and challenges faced in education field. The methodology used to conduct the study is documents analysis on past studies and making comparisons to identify the development of gamification in the education system.

Through the sample of the document, the analysis is focused on three key factors in gamification: motivation, involvement and achievement as well as knowledge and experience. According to the research findings, most of the past studies discussed gamification into three, among them is gamification concepts. There are several views of scholars stated in the past studies including stating the concept of gamification is an approach that uses methods of games in the process of teaching and learning and making the learning process more attractive and interactive, apart from making activities that are originally not games as a formal and serious playing activities (Cugelman, 2013; Rohaila Mohamed Rosly and Fariza Khalid, 2017).

In addition, the main objective of gamification is to create attractive experiences to students and to stimulate interests (Kiili, 2014; Rohaila Mohamed Rosly and Fariza Khalid, 2017). The discussion of past studies has included gamification concepts by Hsin-Yuan Huang and Soman (2013) as shown follows:

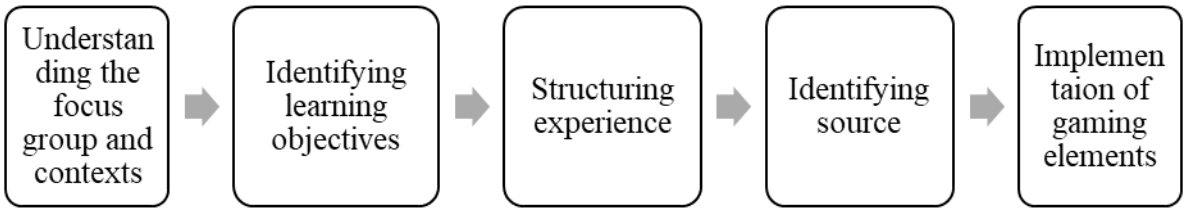

Figure 3 Process of gamification implementation in education

Each process of implementing gamification in education has specific criteria to achieve the specified level or process. Further, the study also discussed on the implications of gamification in education that would highlighted benefits of gamification to improve students' learning process. There are several challenges that have been identified throughout the implementation of gamification in classrooms: poor quality of gamification product, the objective of gamification is not achieved because most gamification is built by inexperienced designers in the field of education and constraints in providing input in specific gamification skills has also become a

challenge to the implementation of gamification. Through this study, it can be seen that gamification is a motivation indicator and this motivation is increased through the process of gamification element and content such as point system and development of levels.

The next study is 'Gamification Approach in the implementation of Learning the Arabic Language' written by Siti Rohani Binti Jasni, Suhaila Binti Zailani and Hakim Bin Zainal (2018). The purpose of this study is to investigate how gamification approach can be implemented in learning the Arabic language and what are the implications in its implementation among students using literature research methodology or content analysis. The research findings indicated a number of issues discovered such as the roles of gamification in learning other languages or second language generally, however, this study focused more on gamification in learning the Arabic language. The study has found out that gamification approach in learning is seen to focus on constructivism theory, in which the theory supports student-centred learning practices and gamification approach has emphasized on the development of students motivation because students' motivation is found to be a challenge. Generally, this study has shown the existence of student-centred theory which involves students' motivation in learning the Arabic language. Therefore, ARCS Model is used to increase students' motivation in the classroom with the combination of gamification content. Different scopes in terms of the use of a language are the main problems in the study conducted because the focus is only on meaning and gamification terms approach on the Arabic language.

A study by Meghan C. Lister and Holland Collage (2015) has shown the effects towards motivation and students' performance at post-secondary level. The study used document analysis methodology of 19 journals and conferences proceedings selected in achieving the research objectives which focused on elements of gamification which influence students' motivation such as point, learder boards and badge which detected similarities, differences and patterns of 19 selected documents. The research findings revealed 10 elements of gamification for each 19 selected documents: badge and achievements, point, levels, leader boards, challenge, progress bars, peers, collaboration and interactions, coins and storyline. Thus, only four elements will be selected and detailed in this study: point, level, and badge and achievement as well as leader boards. The discussion in the study indicated that the elements of gamification can influence and increase students' involvement and motivation, however, these elements cannot stand on their own, they need to be supported with interesting game designs and relevant gamification content and story line which give freedom to students to fail certain games and try again. The implications of the study are the elements can influence students' motivation while conducting certain gamification and only simple elements, such as points, are enough to change secondary level students to be excited to participate in certain teaching and facilitation process involving gamification.

A study conducted by Nurhuda Ahmad and Fariza Khalid (2017) has

shown that the effects of gamification in education influenced students' motivation level and engagement. The objective of this study is to investigate the effects of gamification on students which involved three aspects: students' development of cognitive, emotion and social. This study has used document analysis methodology from previous studies to achieve one decision, which is the effects of motivation and students' engagement. Through detail review of previous studies, there are positive supports that gamification helps in education, digital games in education have increased students' performance and encouraged competitive activities and challenges to achieve certain goals. This study is an encouragement to fill the gap of the current study, implementation of gamification content to motivate students in the gamification approach.

Next, 'Gamification in Education' is a study conducted by Brian J, Arnold in 2014. The objective of the study is identified through writing which is to study gamification in the market and the impact of gamification in education. This study has also used document analysis methodology to obtain data and produce discussion for the research findings. Gamification needs to be included in education because games create the participation atmosphere or exciting students' engagement. This is because gamification is a learning process which needs to be conducted for any experience-based learning. Gamification is a process of experience adaptation involving various situations such as buying, mastering skills and learning mathematics through element of playing. Digital games nowadays go for popularity and pursuing the foundation of modernity through the majority in the first phase of world population. This study also stated that only the concept such as *Explorers* which focuses on the world adventure but in the context of gamification, the words are not only in the form of geography but more to the detailed information for certain mechanical games. In addition, *Achievers* is a competition and fun in defeating players in games. This study has revealed that in education, games can result in experience-based learning which can develop various aspects such as activities conducted in daily life. From a different perspective, this study has also shown that simple words can influence the process of thinking and perceptions through words mentioned, this shows the strength of the study that games have certain concepts to be understood.

The following study is investigating motivation in the learning process which was conducted by Michael Sailer et al. (2017) entitled *How Gamification Motivates: An Experimental Study of the Effects of Specific Game Design Elements on Psychological Need Satifaction*. This study was conducted with the aim to discuss the implementation of games designed in the real world for non-gaming to instil motivation and human performance through certain activities. Quantitative design was used as the methodology in which respondents are gathered online in conducting certain predefined games; after they finished the games, respondents were required to complete a questionnaire. This study does not only show the rationale why gamification needs to be implemented in educational context, but also the elements of games which influenced one's motivation. Just guided by games designs such as

points, badges, leaderboards, avatars, meaningful stories and teammates, they indicated strong influence in the aspect of motivation. Psychological aspect also plays an important role in supporting the stated design to show that the design can give positive effects to humans. This study has also stated that gamification elements in the aspect of motivation in the obvious example of *points* can influence the results of the games because players who hold the highest points have the highest motivation to continue the games.

Apart from this, there are studies on the changes of attitude through gamification engine conducted by Eirini Lithoxoidou et al. (2018) entitled '*A Gamification Engine Architecture for Enhancing Behavioural Change Support Systems'*. This study is a study on the gamification building to change a person's attitude. Researchers assume that gamification engine supports games activities in which these activities are aimed to develop positive skills for connections. This study used research and development methodology because it has the detailed concept ideas in gamification building. There are a number of purpose in gamification concepts: socialization, education/trainings, treatment compliance and observation. What is being focused in the study is in the aspects of education/training such as solving puzzles, knowledge tests, achieving good test results, using suggested interventions, assist other players/students, develop education content encouraged by users and maximize the total of time used on education or training activities. This system is applicable and is the building or engine of gamification and has certain purposes by online users. These buildings directly help in gamification mechanism because it is wide depending on certain discipline areas. This study has the advantages in term of engines which refer to mechanical gamification itself in the game process.

In addition, another study by Heni Jusuf (2016) entitled 'The Use of Gamification in the Learning Process'. The use of ICT has created gamification because the creativity used by the development of application or software specializing in education. Gamification leads to big influence in motivation to develop feelings that stimulate players to keep playing. In educational context, motivation is one of the basis to the success of gamification which has the continuation of gamification elements such as the functions of point, badges, levels, leaderboards, challenges, reward, on boarding and engagement loops. From the detailed research results, the study has discovered the existence of interactive element to produce motivation among students in the learning process. In addition, the use of multimedia such as texts, pictures, animations, videos and audio resulted in the increased of motivation among students and teachers.

Apart from motivation, gamification is also used in problem solving context and this can be seen in a study by Nurfazliah Muhamad et al. (2018) entitled 'The Use of Digital Games in Classroom Learning to Develop Creativity in Problem-Solving of Mathematics.' This study is based on ARCS Model by Keller and is based on 4 factors: observation, relevance, confidence and satisfaction. The findings indicated that positive feedback in the

implementation of digital games in classrooms. Overall, students stated that they can learn through the games given, they realized that problem-solving strategies help them to overcome problems and learning with peers can also make it easy for them to solve problems given.

In the Industrial Revolution 4.0, the gaming approach has been used widely for example, *Kahoot*. Nowadays *Kahoot* is widely used and has been acknowledged as GBL. Aprilia Riyana Putri and Muhammad Alie Muzakki (2019) have discussed on the use of *Kahoot* in a study entitled 'Implementation of *Kahoot* as Learning Materials of Game-Based Digital Learning in Facing the Industrial Revolution Era 4.0'. The study stated that the use of *Kahoot* in GBL increased 'motivation' and 'freedom' among players and students in learning and learning evaluation process. The content of *Kahoot* can encourage players to delve into each of the materials presented easier and leveraged through virtual learning without being in the class but more to assignments or training and quizzes. Based on the content of gamification, the statement of *Kahoot* content involves a number of gamification content: the sense of curiosity, freedom to fail, feedback and others to create 'motivation' and 'freedom' to players. This is because motivation involves *attention, relevence, confidence* and *satisfaction* based on ARCS Model used by the researcher. As a conclusion, *Kahoot* is a gamification medium in education which is widely used because of its compact and easy function used by all educators.

A study on 'Game-Based Learning in STEM Education and the Mastery of 21st Century Skills' has also looked at the development of GBL in classrooms. This article is discussed by Weng Siong, W and Osman, K (2018) and stated that the 21st Century skills can be mastered through game-based learning reported by some researchers like Zimmerman, Gill and Romig in 2013. Aspects such as collaboration skills in problem-solving can be increased through activities based on mobile phones. This happens because in games which apply the station approach, it requires each player or group members to cooperate in solving problems in games. Therefore, each member will discuss to plan on how to overcome issues presented in certain games. Other than this, GBL also focuses on the element of *fun*. The element of *fun* will attract players' attention to continue with the games because of the high level of curiosity. Thus, gamification does not only focus on the available skills, but also provides fun to increase students' motivation to continue studying in educational context without concerning about various subjects.

As a conclusion of all the studies, this study has concluded the connection of previous studies based on the element of motivation and gamification content, thus, indicating indirect semantic barrier.

Research Bibliography	**Analysis of ARCS Motivation Element (Keller, 2010) and Gamification Content (Karl, M. Kapp et al (2014).**	**Semantic Barrier**
Rosly, R & Khalid, F. (2017). Gamifikasi: Konsep dan Implikasi dalam Pendidikan. Dalam Rohaila Mohamed Rosly, Nabila Atika Razali & Nur Atikah Jamailluddin. (Editor), *Pembelajaran Abad ke-21: Trend Integrasi Teknologi* (pp 144-154). Bangi: Fakulti Pendidikan UKM.	There are a number of challenges in *point* system and the development level.	Understanding related to the meaning of point and level
Siti Rohani binti Jasnii, Suhaila binti Zailan & Hakim bin Zainal. (2018). Pendekatan Gamifikasi Dalam Pembelajaran Bahasa Arab. *Journal of Fstwa Management and Research SeFPIA. Special Edition*, 358-367.	This study discovered that gamification approach focused on instilling motivation among students because students' motivation is a challenge.	Understanding of challenge concept in games.
Lister, M & College H. (2015). Gamification: The Effect On Student Motivation and Performance At The Post-Secondary Level. Issues and Trends in Education Technology. 3(2), 1-22.	Elements of *point, level, badge & achievement as well as leaderboards* are able to influence and increase participation and students' motivation, however, the elements of gamification need to be supported by interesting games design and relevant story line.	Understanding story line which is in line with the game.
Nurhuda Ahmad dan**,** Khalid. (2017). Kesan Gamifikasi dalam Pendidikan Mempengaruhi Tahap Motivasi dan Penglibatan Pelajar. Dalam Rohaila Mohamed Rosly, Nabila Atika Razali & Nur Atikah Jamilluddin. (Editor),	Positive support that gamification helps in education in which digital games in education has increased learning performance and encourage competition activities	Understanding related to competition and challenges in digital games design.

Pembelajaran Abad ke-21: Trend Integrasi Teknologi (pp 157-163). Bangi: Fakulti Pendidikan UKM.	and challenges to achieve certain goals.	
Arnold, B. (2014). Gamification in Education. *Conference Paper of the Annual American Society of Business and Behavioural Sciences (ASBBS).* Conference, At Las Vegas, NV.	This study also stated that the concept of *Explorers* not only in a form of geography but more to detailed information for certain mechanical games. In addition, *Achievers* is a completion and fun in defeating the different levels of challenge fixed by games or players themselves. The concept of gamification needs to be understood clearly.	Understanding of the term *Explorers* and *Achievers* in gamification design.
Sailer, M, Hense, J, U, Mayr, S & Mandi, H. (2017). How Gamification Motivates: An Experimental Study of the Effects of Spesific Game Design Elements On Psychological Need Satisfaction. *Computers in Human Behavior*. 69 (1), 371-380.	This study also stated that elements of gamification as an aspect of motivation, like *points*, can influence the games decision because players who hold the highest *point* have the highest motivation to continue playing.	Understanding the term of *point* which represent motivation.
E. Lithoxoidou, I. Paliokas, I. Gotsos, S. Krinidis, A. Tsakiris, K. Votis, and D. Tzovaras. (2018). In *Proceedings of ACM 11th PErvasive Technologies Related to Assistive Environments, Corfu, Greece*, June 2018 (PETRA'2018), 8 pages.	Gamification buildings directly help in the gamification mechanism because gamification designs are wide depending on certain discipline areas. This study has its strengths in terms of its engine referring to gamification mechanism itself in the process of games.	Gamification buildings involving clear mechanism of games.
Heni Jusuf. (2016). Penggunaan Gamifikasi dalam Proses Pembelajaran. *Jurnal TICOM*,	In the context of education, motivation is one of the basis to	Understanding related to *point, badges, levels, leaderboards, challenges,*

Vol. 5 No.1 September, 1-6.	gamification success which has the continuity of gamification elements such as the functions of *point, badges, levels, leaderboards, challenges, reward, onboarding* and *engagement loops.*	*reward, onboarding* and *engagement loops.*
Nurfazliah Muhamad*, Megat Aman Zahiri Megat Zakaria, Shaharudin Md. Salleh, Jamalludin Harun. (2018). Penggunaan Game-Based Learning Bagi Meningkatkan Kemahiran Penyelesaian Masalah Kreatif Dalam Matematik. *Jurnal Sains Humanika*, 10: 3-2 39–45.	Teachers need to make a choice for suitable digital games for classrooms so that the use of digital games in learning can be achieved.	Understanding related to digital games with the learning objectives.
Aprilia Riyana Putri, Muhammad Alie Muzakki. (2019). Implemetasi Kahoot Sebagai Media Pembelajaran Berbasis Digital Game Based Learning Dalam Mengahadapi Era Revolusi Industri 4.0. *Prosiding Seminar Nasional "Penguatan Muatan Lokal Bahasa Daerah sebagai Pondasi Pendidikan Karakter Generasi Milenia*l, Program Studi Pendidikan Guru Sekolah Dasar Universitas Muria Kudus, Indonesia, ms 219-223.	Based on the gamification content, the *Kahoot* content is related to a number of gamification content based on studies conducted which are curiosity, freedom to fail, feedback and others to create 'motivation' and 'freedom' to players. This is because motivation involves *attention, relevance, confidence* and *satisfaction* which are based on ARCS Model used by researchers.	Understanding related to curiosity, freedom to fail, feedback and others which create 'motivation' and 'freedom' to players.
Weng Siong, W & Osman, K. (2019). Pembelajaran Berasaskan Permainan dalam Pendidikan STEM dan Penguasaan Kemahiran Abad ke-21. *Journal of Science and Humanities*. 1(3). 121-135.	Other than this, GBL also focuses on element of fun. The element of fun will attract players' attention to continue the games because of the high level of curiosity. Therefore, gamification does not only focuses on	Understanding of features or elements of fun really provide the learning input.

	skills but also on providing fun to increase students' motivation to continue learning in educational context without considering various subjects.	

DISCUSSION

The question on how gamification makes a difference or provides fun to students is answered by looking at the elements of gamification itself. According to Matthew Farber (2014) in his book entitled '*Gamify Your Classroom'*, elements of gamification involve mechanical design features which are point system, badge, level, challenges, leaderboard and quest. According to Darrell M. West (2012), he stated that students can learn something through playing, performance, simulation, appropriation, multitasking, judgement and also networking.

All these skills can also be learned by a teacher in guiding the teaching and facilitation process in the classrooms such as multitasking which makes teachers or students versatile in various situations. Although there are various concepts, the term gamification is established. However, the term gamification is always misinterpreted by readers, listeners, educators, games designers, teachers and students in institutions especially schools. The term gamification is always referred to games with the purpose of only for fun and not for the classroom learning process. Therefore, studies are conducted to provide evidence that the term gamification has a great impact in the teaching and facilitation process nowadays on students' motivation and performances in classrooms. In addition, the term gamification is also one language adjustment mixed with other languages which are of different areas such as technology, pedagogy, multimedia, games and education.

Therefore, the ambiguity of meaning happens because the use of languages has different meanings which can lead to different feedback on a number of certain factors in semantic barriers such as different culture, different dialects and others. In addition, language has specific terms referring to each word used Mohamed Redzwan et al. (2020); Sarudin et al.(2019a, 2019b); Jalaluddin et al. (2012); Osman et al. (2016, 2019); Idris et al. (2013). In the process of GBL, there must be words which can influence semantic barriers. For example, 'play' which can be influenced by experiences can be referred to the meaning of the word itself being misinterpreted as 'get down to play' in terms of conversation referring to someone who is going for sports at certain time and 'hide and seek' which brings the meaning of a game of searching for someone hiding (Tan, 2018). Therefore, proper vocabulary improvement needs to be developed. In this study, the collection of various

words which have semantic barriers are given the glossary to determine accurate meanings for students to analyse meanings and develop their vocabulary as well as promoting the use of language which is fading among public.

CONCLUSION

This article has focused on two disciplines: gamification which refers to technology and language which refers to semantic. Gamification is a new approach in the teaching and facilitation which is used frequently and improved not only in Malaysia but also in other western countries as well as neighbouring countries. Therefore, gamification supports the interactive and informative of education policy. To ensure the achievement of this desire, the elements of language which are always forgotten need to be considered to explain the ambiguity of gamification applied or developed.

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