OCTALYSIS GAMIFICATION FRAMEWORK
FOR ENHANCING STUDENTS' ENGAGEMENT
IN LANGUAGE LEARNING

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Abstract

Gamification is one of the learning innovations which implement the element of games within the learning process to attract students' attention. This paper discusses the octalysis gamification framework applied in language learning and the effect of it towards students' engagement. The subject of this study was 25 primary students who considered have low English ability known by teacher's handed down in the beginning of the semester and classroom observation in one of private schools in Jakarta. The data used was from lesson plans, teaching reflections, and students' self-reflection were collected at the seventh

meeting and were analysed using thematic analysis, means that this paper use mix-method data analysis.The result of this study showed that the applied octalysis gamification frameworks can improve students' engagement proved from students' self-reflection using Likert scale which was analysed using explanatory sequential design method. Even though it gives positive effects, there are still many things that need to be concerned by the teacher, such as classroom management. This study suggested the teacher to have clear rules and procedures of playing game, so that students are behaving a good attitude towards classroom activity even though they engaged actively and motivated during the learning process.

Keywords: Gamification, Octalysis Framework, Students' Engagement

A. Introduction

Good quality of teaching and learning processes involve the role of the teachers and students where they are required to give their best potentials within themselves to support each other (Brummelen, 2009). Pooja (2017) stated that the teachers' teaching method and classroom instruction may affect students' achievement. Teachers are supposed to maintain students' interest in learning by bringing up innovations as one of the strategies. Innovation is about delivering materials to students in different and interesting ways. For example, short lecture, role-playing, and problem-based learning (Subramani & Iyappan, 2018). Thus, means that the teachers try to apply teaching method which is appropriate with the classroom conditions and the students' abilities.

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On the other side, students as the Image Bearers who have the characteristics which possessed by human and of God, such as goodness, love, and knowledge, can use their internal thinking and external verbalization optimally in their learning process by being active, having a good collaboration skill, and having the responsibility to achieve the learning goal (Knight, 2009; Watkins, Carnell, & Lodge, 2007). It means that students are supposed to be engaged in every aspect during the learning process in order to fulfill their responsibility in reaching the learning goal. It is also supported by Abubakar, Abubakar, & Itse (2017) that students' engagement is important because it can help the students to be focus in academic. It is true that the students who can be engaged in the learning process might pay more attention to the teachers' instructions in terms of listening to the material explanation and doing assignments individually either in group.

The learning process might be more effective because the teachers can deliver the material in various ways which suits with the students' learning style and make them engage towards the learning activities. Thus, the teachers who teach monotonously caused the students to become less interested and not exert their maximum abilities to learn and the students who are not being engaged during the learning process. Thus, it can be concluded that the students who are passive in giving responses or questions are considered not being engaged during the learning process.

This also happened to the grade V students in one of private schools in Jakarta during the language learning. Language learning requires more intensive communication practices than other lessons. Unfortunately, it was not happened in this class, the students were not engaged in learning language which can be seen since the first week of the school. They were passive and not able to answer a simple question from the teachers and kept quiet until the lesson was end. They would not give any answer nor question unless the teacher mentioned their name to speak up.

By looking up this condition, the researcher tried to apply gamification which use the game concept to help students to be engaged during the learning process (Pratomo, 2018). The main core of gamification is not about making mobile game or web game, but implementing the elements of game, such as challenges and feedbacks into learning process (Kim, 2015). It means that the teacher will try to deliver the lesson in different ways, it can be by giving a challenging activity. Thus, by implementing the game concept into the learning process, it is expected that the students can be engaged towards learning. Some researchers tried to integrate the elements of game into educational field to improve students' learning effectiveness. Such as Papp (2017) who found that gamification is able to improve motivation and engagement, Rahman, Panessai, Noor, & Salleh (2018) found it could increase students' engagement and achievement. Thus, in scan, gamification has a positive impact such as improving students' motivation, engagement, and achievement

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towards learning. By this integration, teachers and students are expected to be able to improve the quality of teaching and learning process.

Since everyone has a great mind and ability to think given by God (Phillips, 2010), it is expected that teachers can explore their best potential in themselves to always find innovation in their teaching to help their students. On the other hand, considering humans as social beings who need relationships with others (Pazmino, 2006), gamification in education are expected to help students in increasing their sensitivity as humans. The purposes of this study are to explain the octalysis gamification framework implemented in the teaching and to identify the effect of gamification towards students' engagement in the language learning.

B. Literature Review

As mentioned before, a good quality of teaching and learning process needs both teacher and students' roles. It can be occurred when students are actively involved to construct their own knowledge by connecting the previous knowledge and experience (Watkins et al., 2007). To be actively engaged in the classroom, students should have a good motivation towards learning, and it requires a good attitude also. Students' engagement is talking about students' active involvement in the realm of behavior, cognitive, and emotional aspects towards classroom activities to build their connection within classroom community in order to help them in improving their learning outcomes (Abubakar et al., 2017; Ashwin & McVitty,

2015; Axelson & Flick, 2011; Bouvier, Lavoue, & Sehaba, 2014).

Students are considered having a good behavioral engagement when they are able to participate in class by being the initiative students in doing a good thing, taking roles in classroom management, and having a good attendance record (Abubakar et al., 2017; Muniroh, 2015). The examples are giving attention, questioning, discussing within group, obeying the rules, respecting other students, prohibiting bad behavior in class, and having the capability to focus.

Cognitive engagement is related to the student's internal factors, such as his views on the value of education, how he reaches his educational objective, and the skills he has. It becomes a learning factor that influences the way of thinking, effort and strategies used in problem solving, desires to achieve something more (Abubakar et al., 2017; Muniroh, 2015). For example, the ability in solving problems, willing to work hard, investment in learning more than just behavior, and desire to finish tasks.

Emotional engagement must be based on a sense of belonging to the school, its activities, and to the people in it - such as classmates and teachers, which then influences students' interest and behavior in the classroom (Muniroh, 2015; Wara, Aloka, & Odongo, 2018). Students who engage emotionally will show curiosity positively by paying attention to the teacher's explanation. In conclusion, students who are engaged behaviorally, cognitively, and emotionally towards learning will give eye contact during the

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learning, care about what they are learning by knowing their orientation, listen carefully, obey the school rules and procedures, and participate actively in school's activity (Barkley, 2009; Exeter et al., 2010; Muniroh, 2015).

In order to enhance students' engagement, gamification can be considered as one of the ways to improve it. Gamification term was first introduced by Nick Pelling, a game designer, in 2002 (Christians, 2018). It is about the use of game elements in non-game activities (Deterding, Nacke, Sicart, O'Hara, & Dixon, 2011). This kind of implementation was not a new thing. Since it has been applied more than 30 year. This means that the elements of game have the positive impacts towards life activities in some aspects (Y. Chou, 2014). In this recent decade, gamification become the buzzword found in research.

Gamification used by the teacher either in delivering the materials or giving assignments. It uses game mechanics to motivate learners by using fun and interesting way in order to reach specific aim (Garland, 2015; Marczewski, 2013). Thing that need to be considered that gamification does not always related with the making of game applications or the using digital tools to play games, but it can use the simple tools to facilitate the delivering of learning materials (Jusuf, 2016). Thus, the teacher might apply gamification in the form of explaining the materials orally, giving paper worksheet, showing educational website, or playing simple games in the classroom or using computers.

Back to 2003, Yu-kai Chou, one of the pioneers of actionable gamification, tried to find out how gamification implementation could improve life in many aspects. He found that most of successful games embodied the Core Drives within human which triggered them in making decisions and doing activities (Y. Chou, 2014). That Core Drives called octalysis framework. Octalysis comes from the octagon shape of the framework made by Yu-kai Chou and had written in his book of "Actionable Gamification". It represents eight main Core Drives within human which drives their motivation to act desired behavior (Y. Chou, 2014; Cruz & Oliveira, 2018). Those eight Core Drives are:

Octalysis Gamification Framework
Souce: (Y. Chou, 2014, p.24)

1. Epic Meaning & Calling

This Core Drive talks about selfless acts which drive people to do something bigger than themselves because they fell they are chosen, even though there is no reward guarantee (Y. Chou, 2014; Salonen & Mohammad, 2017). In addition, people who want to contribute into something are concerned with others' needs

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(Amstrong, 2018). It means that people can voluntary doing something for the group's benefits to glorify God through their kindness (Phillips, 2010).

2. Development & Accomplishment

Points, Badges, and Leaderboards (PBLs) activities mostly use this Core Drive. It triggers internal drive of people to always make development which lead to a commitment to gain more skills in order to accomplish goals (Cruz & Oliveira, 2018). Challenge is the main point here. Without challenge, any reward got by someone will be meaningless (Y. Chou, 2014).

3. Empowerment of Creativity & Feedback

Y. Chou (2013) believed that every person is creative and eager to learn, imagine, and participate in the creative process. It is because humans are created as creative individuals (Pazmino, 2006). This Core Drive focuses on creative activity which repeatedly done by someone to find out other form or combination in something followed by feedback given from others to improve his result Chou (2014).

4. Ownership & Possession

Human has feeling, will, and ability to make decisions given by God (Pazmino, 2006). It means that they might have the sense of belonging into something, the willingness to do something, and the responsibility to take decision. This Core Drive comes up when people feel that they own something to control and triggered the eagerness to improve it (Y. Chou, 2014).

5. Social Influence & Relatedness

It is clearly stated that human is a social being and cannot live alone. This is one of the Core Drive of human driven into octalysis

gamification framework. In this term, human is driven by what their social environments say, think, and do and helped by mentorship, companionship, and even triggered by competition (Cruz & Oliveira, 2018; Salonen & Mohammad, 2017). This is the strongest motivation for students to become engaged into learning and connected with others (Cruz & Oliveira, 2018).

6. Scarcity & Impatience

"As a person, the student is to convey the full range of human needs and skills relevant to" (Pazmino, 2006, p. 110). It means that human has the nature of curiosity and explorer. This Core Drive is related with human's curiosity to own something rare and exclusive, and it has value (Y. Chou, 2014). When they cannot get what they want, they will return in every chance and use their resources wisely until they get it (Y. Chou, 2014; Salonen & Mohammad, 2017).

7. Unpredictability & Curiosity

Many people want to read novel or watch movie because they are curious with what will happen next. This is the example of Unpredictability & Curiosity Core Drive within human. People are being triggered to do something if they feel curious to something. In addition, it can start with a simple way like giving a simple task in the beginning, then in the next session it becomes more difficult (Knudson, 2017). It shows that people can be triggered because they feel challenged and curious about further activities.

8. Lost & Avoidance

This Core Drive represents it, which is motivate someone to avoid the negative thing and

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this is commonly used in classroom rules and procedures (Cruz & Oliveira, 2018). Another example is a worker trainee who will do his best during the trainee time to show that he is capable for the work and avoid him from being rejected from the company. This Core Drive is related to Ownership & Possession Core Drive which motivate someone to protect or even improve their belongings.

C. Method of Investigation

This study was held for a month during the school new academic year in one of private schools in Jakarta. The researcher tried to implement the gamification octalysis framework for the grade V students who considered have low English ability known by teacher's handed down in the beginning of the semester and classroom observation during the English lesson. The Core Drives that have been implemented were only four from eight Core Drives which suitable with the classroom condition, material delivered, and the teaching tools used during the learning process.

After implementing the gamification framework towards the students, the researcher collect the data from students' self-reflection (see Appendix A), lesson plans (see Appendix B), and teaching reflections (see Appendix C),to know the effect of gamification framework (the four Core Drives) applied towards students The students' self-reflection were using Likert scale which analyzed using explanatory sequential design method. It were collected at the seventh meeting and the result were

analyzed using thematic analysis, which is "combine and catalogue related patterns" and relate it with the suitable theory (Aronson, 1995). Means that this paper use mix-method data analysis.

D. Findings and Discussion

As mentioned in the introduction part, this study discuss about the octalysis gamification framework implemented in the teaching and the effect of gamification towards students' engagement in the language learning. The first part of discussion will be discussed about the octalysis gamification framework applied in language teaching. The researcher tried to apply some Core Drives in grade 5 language teaching during August 2nd -13th, 2019 for six meetings. It was expected to support the language learning to be more engaging and help the students to understand every topic delivered well. During those teaching, there are four Core Drives were used, those are social influence & relatedness; epic meaning & calling; unpredictability & curiosity; and development & accomplishment.

The first one is Social Influence & Relatedness. It was applied in the first meeting through the "Match Words" game to check students understanding, and in the fourth meeting through Jumbled Sentence to give prior knowledge to students about the topic delivered. These activities were played in group and asked the students to finish the game as fast as possible. This is because they were triggered by other groups who did well than theirs. From this activity, it showed that some students within group

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were trying to match the words and some were trying to stick the matched words on the board, so they worked collaboratively to finish it fast and correctly. It is coherent with the nature of human, which is as social being and to help each other (Pazmino, 2006). It showed that as a social being, human can be influenced by social environment which include mentorship and competition factors (Cruz & Oliveira, 2018; Salonen & Mohammad, 2017). Thus, it can be concluded that the students were naturally being triggered to compete with others group because the Social Influence and Relatedness Core Drives within them.

The next Core Drive is Epic Meaning & Calling, which affected human to do something without any reward guarantee because they feel responsible to others' need (Amstrong, 2018). This Core Drive was applied in the third meeting through vocabulary worksheet in the form of matching the words and on the fifth meeting through "Guessing the Gesture" game within group. The things that made this vocabulary worksheet different with the usual matching word game was because the instruction written in the vocabulary worksheet. The instruction was, *"Axel wants to save Grits, his dog, which get trapped on the mountain. **Please help Alex to reach the top of the mountain** by providing 10 vocabularies with its meaning below."*

The bolded sentence might trigger the students to feel that they were chosen to help in saving the dog. This is as the same as the "Guessing the Gesture" game, where the representative students of the group

would feel that they had the responsibility to give the clear clue, so their group can answer it and continue to the next question. It is affected by human Core Drive of Epic Meaning & Calling. In conclusion, those motivations can be appeared because human has given the ability by God to help others in order to glorify Him (Phillips, 2010).

The third Core Drive is Unpredictability & Curiosity which related with human sense of curiosity and drive them to explore more on something (Salonen & Mohammad, 2017). The using of interactive PowerPoint in the fourth meeting could trigger students' curiosity, because the background or the theme of the Power Point was used cartoon which attract students' attention. In addition, it also provided "Menu" by using some characters of the cartoon and students could choose any characters that they want. After clicking the menu, there will be appeared the character chosen explaining the material in an interactive form to students, for example by saying,

"Hello, I'm Flame Princess (depends on the character chosen). Welcome to my kingdom. In my kingdom, you will know about FRAGMENT (depends on the material delivered). I will explain it to you."

Furthermore, on the quiz session, the "Unpredictability" Core Drive within students was triggered. They would guess what was the next question or picture that might be appeared on the screen. They would not go to the next question, unless they could answer the presented question correctly. At the end, this activity might encourage the students to

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think maximally to solve the problem in order to raise up their level (Pazmino, 2006).

The last Core Drive is Development & Accomplishment. The key of this Core Drive is "challenge". It was delivered by Offline Kahoot! activity in the sixth meeting. Just like what have been explained before, this activity asked the students to give the correct answers as fast as possible (Sabandar et al., 2018). The more they developed themselves and their group performance, the higher accomplishment that they could get. This activity drives the students to change positively and become a positive impact to others (Wolterstorff, 2014).

To be considered that various teaching tools can hinder the students from being bored and to keep staying into the learning process (Ellis, 2015). Considering students' ability is also important as the guiding for teacher in their way of delivering the materials. It can be fast either slow, depends on the students' ability and teacher's way of teaching. At the end, all these activities showed that game can make a fun atmosphere of learning, but the one that help students the most in being engaged to the learning is the Core Drives within themselves which get triggered through each activity.

The second part of discussion will be discussed about the effect of octalysis gamification framework applied during six meetings of language teaching and the data analyzed, which is 25 students' reflection papers, were taken on the seventh meeting, which is the last meeting of the researcher's teaching sessions. The quantitative data were analyzed using

thematic analysis, which is "combine and catalogue related patterns" and relate it with the suitable theory (Aronson, 1995). In addition, the teaching reflections also used to show the students condition, which were very passive. The researcher's teaching reflection stated that,

"They [the students] *would not answer my* [the researcher] *questions unless I called their name one by one, and they were not able to answer the questions very well. In addition, the students could not easily to understand the material delivered orally; it needed more time in discussing a story and sometimes did some repetitions to make them understand."*

This becoming a big task for the researcher to apply another octalysis gamification framework during the next five meetings in order to help these students to be more engaged with the learning.

Students' Self-Reflection

The students' self-reflection range above was modified into 4 range which is adapted from four-points Likert scale, which is one point (if the student did not colour any star) means strongly disagree, two points (1 star) means disagree, three points (2 stars) means agree, four points (three stars) means strongly agree (Pornel & Saldana, 2013). Every statement

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above will be classified and discussed into behavioural engagement, cognitive engagement, and emotional engagement.

Table 1. Behavioural Engagement Statements

Statement	0 Star	1 Star	2 Stars	3 Stars
I disturb my friend when she/he is answering/doing the teacher' s instruction	6 24%	12 48%	6 24%	1 4%

The table above shows that 72% of the students are disagree with the statement above and followed by these reasons,

*"Because I respect others; **it is not polite to the person; I do not want miss to be angry; Because I don't like disturbing**; If I disturb my friends they'll be upset and **if that happen to me I'll be upset; I will be a bad student if I do that**."*

Those reasons show that the students take part in classroom management by avoiding the negative behaviour (Abubakar et al., 2017). Thus, the students were engaged behaviourally by trying to respect others and prohibit bad behaviour in the class.

Table 2. Cognitive Engagement Statement

Statement	0 Star	1 Star	2 Stars	3 Stars
I listen to the teacher's instruction very well	-	2 8%	16 64%	7 28%
I can understand the lesson well	-	6 24%	15 60%	4 16%

The table above shows that there are 92% of the students agree with the first statement and 76% of the students agree with the second statement. Furthermore, students' reasons behind that are,

"Because I wan't to be smart; So, we can get good score; I want to know the materials; I understand because I always want to answer the question."

It is coherent with students' cognitive engagement which is related with students' effort and desire to learn (Abubakar et al., 2017). Therefore, the students showed that they were engaged cognitively by showing effort in learning and desire to finish the task given. Started from answering the question given in order to reach the educational objective, such as to be smart, get good score, and understand the material.

Table 3. Emotional Engagement Statements

Statement	0 Star	1 Star	2 Stars	3 Stars
I feel excited when the teacher started the lesson using game	-	-	4 16%	21 84%
I pay attention during the lesson	-	5 20%	13 52%	7 28%

From the table above, it shows that 100% of the students agree with the first statement and 80% students agree with the second statement. Those statements are in accordance with emotional engagement which related with students' positive feeling and respond in the classroom, such as paying attention to the teacher (Wara et al., 2018). The students also gave the related reasons with that,

"Because I like playing; Because it's fun and we can learn; Because *I want to be smart; I just **pay attention to teacher** so when they talk it's not useless.*"

From those reasons, it reflected that the students wanted to reach the best thing that they could

reach and it was in accordance with Christian values (Sproul, 2005). Thus, it proves that students were engaged emotionally and affected them to show their curiosity positively by giving attention towards the learning.

After analyzing five statements in students' self-reflection papers, it showed that the students were able to be engaged behaviorally, cognitively, and emotionally towards the learning which delivered by the implementation of octalysis gamification framework. This achievement was not obtained instantly by the students and teacher. It takes effort, patience, and perseverance in undergoing every process that exists by the help of the Holy Spirit. In the end, all the good achievements achieved by humans derived them to become more Christ-like (Pratt, 2002).

E. Conclusion

Bringing up innovations into the way of teaching is important. It might help the teacher to deliver the material better and help the students to be engaged in the learning process. For this study, the implementation of gamification octalysis framework towards English learning was one of the solutions. The applied octalysis gamification framework during this study were Social Influence & Relatedness, Epic Meaning & Calling, Unpredictability & Curiosity, and Development & Accomplishment. Those four Core Drives can help the students to be more engaged behaviorally, cognitively, and emotionally. To be noticed that this cannot be happened instantly, but it

needs the implementation in several times of teaching which need effort, patience, and perseverance in obtaining the good result. Furthermore, before applying this method, teachers are required to know their students' ability. Therefore, the applied activity might help both the teachers and also the students.

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Bibliography

Abubakar, A. M., Abubakar, Y., & Itse, J. D. (2017). Students' Engagement in Relationship to Academic Performance. *Journal of Education and Social Sciences*, *8*(1), 5–9. https://doi.org/2289-1552

Amstrong, S. (2018). Gamification - Exploring the Octalysis Framework. Retrieved September 15, 2019, from Medium website: https://medium.com/namaste-tech-blog/gamification-exploring-the-octalysis-framework-e03c524aa500

Aronson, J. (1995). A Pragmatic View of Thematic Analysis. *The Qualitative Report*, *2*(1), 1–3. Retrieved from https://nsuworks.nova.edu/cgi/viewcontent.cgi?referer=https://scholar.google.co.id/&httpsredir=1&article=2069&context=tqr/

Ashwin, P., & McVitty, D. (2015). The Meaning of Student Engagement: Implications for Policies and Practices. In A. Curaj, L. Matei, R. Pricopie, J. Salmi, & P. Scott (Eds.), *The European Higher Education Area* (pp. 343–359). https://doi.org/10.1007/978-3-319-20877-0_23

Axelson, R. D., & Flick, A. (2011). Defining Student Engagement. *Change: The Magazine of Higher Learning*, *43*(1), 38–43. https://doi.org/10.1080/00091383.2011.533096

Barkley, E. F. (2009). *Student Engagement Techniques: A Handbook for College Faculty*. Retrieved from https://books.google.co.id/books?hl=en&lr=&id=NK

OdDwAAQBAJ&oi=fnd&pg=PR12&dq=Barkley,+E
.F.+2010.+Student+Engagement+Techniques.+San+
Francisco:+Jossey-Bass.&ots=hVsHFg9och&sig=-
_58nbd69nB6tUxby1OIXKjeXpg&redir_esc=y#v=o
nepage&q&f=false

Bouvier, P., Lavoue, E., & Sehaba, K. (2014). Defining
Engagement and Characterizing Engaged-Behaviors
in Digital Gaming. *SAGE*, *45*(4–5), 491–507.
https://doi.org/10.1177/1046878114553571

Brummelen, H. Van. (2009). *Walking with God in the
Classroom: Christian Approaches to Teaching and
Learning* (third). Colorado: Purposeful Design
Publications.

Chou, Y.-K. (2013). The 8 Core Drives of Gamification
(3): Empowerment of Creativity & Feedback.
Retrieved September 6, 2019, from Wordpress
website: https://yukaichou.com/gamification-study/8-
core-drives-gamification-3-empowerment-creativity-
feedback/

Chou, Y. (2014). *Actionable Gamification: Beyond Points,
Badges, and Leaderboards*.

Christians, G. (2018). *The Origins and Future of
Gamification* (University of South Carolina).
Retrieved from
https://scholarcommons.sc.edu/senior_theses/254

Cruz, M., & Oliveira, S. (2018). The Gamification
Octalysis Framework within the Primary English
Teaching Process: the Quest for a Transformative
Classroom. *Revista Lusófona de Educação*, *41*(41),
63–82. https://doi.org/10.24140/issn.1645-

7250.rle41.04

Deterding, S., Nacke, L., Sicart, M., O'Hara, K., & Dixon, D. (2011). Gamification: Using Game Design Elements in Non-Gaming Contexts. *International Conference on HUman Factors in Computing Systems*. https://doi.org/10.1145/1979742.1979575 · Source: DBLP

Ellis, D. (2015). Using Padlet to Increase Student Engagement in Lectures. ECEL2015-14th European Conference on e-Learning (pp. 195 - 198). New York: Academic Conferences and Publishing INternational Limited.

Exeter, D. J., Ameratunga, S., Ratima, M., Morton, S., Dickson, M., Hsu, D., & Jackson, R. (2010). Student Engagement in Very Large Classes: The Teachers' Perspective. *Studies in Higher Education*, *35*(7), 761–775. https://doi.org/10.1080/03075070903545058

Frierson, P. R. (2013). What is the Human Being? New York: Routledge.

Garland, C. M. (2015). *Gamification and Implications for Second Language Education: A Meta Analysis* (No. 40). St. Cloud.

Jusuf, H. (2016). Penggunaan Gamifikasi dalam Proses Pembelajaran. *Journal TICOM*, *5*(1).

Kim, B. (2015). *Understanding Gamification* (P. Hogan, Ed.). Chicago: American Library Association.

Knight, G. R. (2009). *Filsafat & Pendidikan: Sebuah*

Pendahuluan dari Perspektif Kristen (4th ed.). Jakarta: Universitas Pelita Harapan.

Knudson, P. (2017). Gamification in 2017: Top 5 Key Principles. Retrieved September 15, 2019, from UX Planet website: https://uxplanet.org/gamification-in-2017-top-5-key-principles-cef948254dad

Kolb, D. A. (2015). *Experential Learning: Experience as the Source of Learning and Development* (2nd ed.; J. G. Levine, Ed.). Retrieved from https://books.google.co.id/books?id=jpbeBQAAQBAJ&pg=PA49&dq=definition+of+learning&hl=en&sa=X&ved=0ahUKEwjb2aPTob_kAhVo6XMBHXxGDhA4ChDoAQhYMAc#v=onepage&q=definition of learning&f=false

Marczewski, A. (2013). *Gamification: A Simple Introduction*. Retrieved from https://books.google.co.id/books?id=IOu9kPjlndYC&printsec=frontcover#v=onepage&q&f=false

Muniroh, A. (2015). *Academic Engagement: Penerapan Model Problem-Based Learning di Madrasah* (A. Arifin, Ed.). Retrieved from https://books.google.co.id/books?id=_D5aDwAAQBAJ&pg=PA191&lpg=PA191&dq=Bruce,+M.,+Omne-Ponten,+M.+%26+Gustavsson,+P.J.+2010.+Active+and+Emotional+Student+Engagement:+A+Nationwide,+Prospective,+Longitudinal+Study+of+Swedish+Nursing+Students.+International+

Papp, T. A. (2017). Gamification Effects on Motivation and Learning: Application to Primary and College Students. *International Journal for Cross-*

Trihartita Sulispera, Michael Recard

Disciplinary Subjects in Education, *8*(3), 3193–3201.

Pazmino, R. W. (2006). *Foundational Issues in Christian Education: An Introduction in Evangelical Perspective* (2nd ed.). Grand Rapids: Baker Books.

Phillips, R. D. (2010). *The Masculine Mandate: God's Calling to Men* (1st ed.). Sanford: Reformation Trust Publishing.

Pooja, G. (2017). Study The Effect of Teaching Method on The Academic Achievement of School Going Children of Semiurban Area, S Schools of Lucknow City. *International Journal of Home Science*, *3*(2), 447–453.

Pratomo, A. (2018). Pengaruh Konsep Gamifikasi Terhadap Tingkat Engagement. *Tourism and Hospitality Essentials Journal*, *8*(2), 63–74. https://doi.org/http://dx.doi.org/10.17509/thej.v8i2.13 740.g7977

Pratt, R. L. (2002). *Dirancang bagi Kemuliaan* (H. Ongkowidjojo, Ed.). Surabaya: Momentum.

Rahman, M. H. A. R., Panessai, I. Y., Noor, N. A. Z. M., & Salleh, N. S. M. (2018). Gamification Elements and Their Impacts on Teaching - A Review. *The International Journal of Multimedia & Its Applicants (IJMA)*, *10*(6). https://doi.org/10.5121/ijma.2018.10604

Sabandar, G. N. C., Supit, N. R., & Suryana, H. T. E. (2018). Kahoot!: Bring the Fun Into the Classroom! *Indonesian Journal of Informatics Education*, *2*(2), 127–134. https://doi.org/10.20961/ijie.v2i2.26244

Salonen, A., & Mohammad, A. (2017). *Practicing Octalysis* (Uppsala Universetet). Retrieved from http://www.diva-portal.org/smash/get/diva2:1108441/FULLTEXT01.pdf

Sproul, R. C. (2005). *Mendambakan Makna Diri* (I. Tjulianto, Ed.). Surabaya: Momentum.

Subramani, P. C. N., & Iyappan, V. (2018). Innovative Methods of Teaching and Learning. *Journal of Applied and Advanced Research*, *3*(1), 20–22. https://doi.org/https://dx.doi.org/10.21839/jaar.2018.v3S1.161

Wara, E., Aloka, D. P. J. O., & Odongo, D. B. C. (2018). Relationship between Emotional Engagement and Academic Achievement among Kenyan Secondary School Students. *Academic Journal of Interdisciplinary Studies*, *7*(1), 107–118. https://doi.org/10.2478/ajis-2018-0011

Watkins, C., Carnell, E., & Lodge, C. (2007). *Effective Learning in Classrooms*. https://doi.org/10.4135/9781446211472

Wolterstorff, N. P. (2014). *Mendidik untuk Kehidupan* (G. G. Stronks & C. W. Joldersma, Eds.). Surabaya: Momentum.