TESL-EJ Teaching English as a Second or Foreign Language
The Electronic Journal for English as a Second Language

Technology in Action: Developing Gamification Handbook in English Teaching and Learning for the 21st Century Learners

May 2022 – Volume 26, Number 1
https://doi.org/10.55593/ej.26101a2

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Abstract

Diffusion of digital literacy and technological practices in 21st-century learning has become a constructive force in EFL classrooms in North Bali, Indonesia. To align this, the study aimed at developing a gamification handbook in English teaching and learning. The study was carried out with 15 secondary students and 10 English teachers in North Bali, Indonesia through the design and development design research (DDR). The obtained data were collected through observation, interviews, and document analysis and analyzed qualitatively through Interactive Model Analysis. The quality of the developed product was obtained through Interrater Agreement Model. The result of the study shows there is an urgent need to develop a gamification handbook aimed at effectively integrating 21st-century skills, digital literacy, and technological practices in English teaching and learning context. Based on the quality check on the product, the gamification handbook was classified as an excellent media, and therefore ready to be used. Further study needs to be conducted to explore the specific impact of the gamification handbook on students' performance in learning.

Keywords: DDR, gamification, handbook, 21st-century learning

The new learning paradigm in English teaching and learning has been set as the desirable goal in the 21st-century learning. The standards and initiatives are notably introduced globally by the Common Core State Standards and Partnership for 21st-Century Skills (P21). These standards represent the adaptability through the advancement of technology in the global era to promote a framework incorporating with 4Cs (critical thinking, communication, collaboration, and creativity) and digital literacy skills (National Governors Association Centers for Best Practices & Council of Chief State School Officers, 2010; Partnership for 21st-Century Skills, 2012). As a result, both teachers and students urge to be able to face new different learning paces, styles and needs to accomplish the 21st-century learning.

To confront this, Indonesia has made enormous strides to forge out into this new learning paradigm. The initial idea has been stated in the Indonesian Regulation from the Ministry of Education and Culture Number 20, 21, 22, and 24 in the Year 2016 which covers the competency standards of graduates (attitudes, knowledge, and skills), content standards, process standards, and core and basic competencies. These are the basic principles of 21st-century education standards. In the sense of achieving educational quality and better learning outcomes, Indonesia also has undergone several changes along with the changing of the 21st-century education paradigm (Afandi et al., 2019; Rosser, 2018; Susilo, 2015). According to the Law Number 36 the Year 2018, the Ministry of Education and Culture of Indonesia has envisaged preparing the students for success on their career and life skills domain of the new learning paradigm by implementing and intensifying the use of technology in the process of learning. It embodies the Indonesian Partnership 21st-Century Skills Standards or IP-21CSS framework that covers 4Cs skills (critical thinking, creative thinking, collaboration, and communication), information communication technology (ICT; technology, media, and information literacy), spiritual values (religious beliefs and spiritual awareness), and character-building (Afandi et al., 2019; Amendments to the Regulation of the Minister of Education and Culture, 2018; Kivunja, 2014).

However, embedding 21st-century learning has become a challenging task for both educators and students. The national standards and international standards fail to be effective in its implementation in the Indonesian EFL Context. Some studies reveal that teachers' readiness to implement the new learning paradigm has a low correlation to their competence (Retnawati & Nugraha, 2016; Rosser, 2018; Sukasni & Efendy, 2017; Sundayana, 2015). National Teachers' Competency Test Result in 2015 shows that teachers need to develop greater professional capacity and be held more accountable for the result of the test they achieved (Hendarman, 2016). Rumahlatu et al. (2016) also state that teachers in the Indonesian context are not optimally prepared and lack the appropriate textbook to use as guidance to the new learning paradigm.

Six out of ten teachers from four schools in North Bali, Indonesia admitted that applying 21st-century skills, digital literacy, and technological practices were challenging tasks. Eighty percent of teachers revealed that they rarely used or enhanced the utilization of technological practices although Wi-Fi, projector, and other ICT tools are already provided in every classroom. Sixty percent of teachers revealed that they attended and participated in seminars related to 21st-century learning. However, there were only 20% of teachers who integrate technological practices into their learning. Based on the class observation and interview, students experienced a lack of autonomous learning. Around 87% of students stated that they were not prepared to learn independently. They preferred to learn and listen to their teachers and work with the help of teachers or their peers. Besides, the existing English textbook used in EFL classrooms focused on teacher-centered learning, isolated skills (listening, speaking, reading, and writing), and also emphasized on the grammar and text structure activities. The learning activities provided in the textbook were monotonous and lack of the integration of

digital literacy and technological practices. It showed that the implementation of new learning paradigm in North Bali, Indonesia was not in line with the advancement of 21st-century learning and innovation skills (4Cs).

A requested interactive development of new learning material is now forced onto teachers since the textbook provided by the government do not integrate some aspects needed for 21st-century learning. The frontier of new approaches, gamification, has been developed over the past years and has shown success in the current realm of education. Kim (2015) investigated the impact of gamification in learning. The study conducted by implementing gamification activities in a Charter school in New York. The implementation of gamification through *Quest2Learn* revealed positive impacts on the students like making choices, solving complex problems, searching content knowledge, getting constant feedback, and consideringperspectives from other learners. The implementation of gamification fosters 21st-century learning.

Kingsley and Grabner-Hagen (2015) also created a unique way to teach science and literacy skills through gamification by utilizing various apps and available online tools to promote 21st-century students. *3D Lab Game* was chosen as a Gamification platform and the use of various apps like *Notability, Padlet, Moodle, BrainPOP, YouTube,* etc. The study revealed that gamification in the process of learning became a powerful way in education to supportthe new literacies and technological practices along with 4Cs Skills.

Funa and Ricafort (2019) developed gamified instructional materials in genetics for grade 12 STEM. This study developed gamified materials, which were comprised of two parts such as students' portfolios and gamified lesson plans. The development of gamified instructional materials was recommended to be used by the teachers in the process of learning. This study revealed that gamified instructional materials helped students evaluate the materials critically and enhance the acquisition of 21st-century skills needed for their future.

Kaplan University also infused gamification through a gamified platform to run a pilotproject for their courses. Through its implementation, gamification gained success in which the result showed that students' grade improvement was about 9% and their involvement in completing the tasks also increased by 16%. This study also revealed that gamification has adjusted rapidly to the profile of the 21st-century learner. It changed the learning experience where the 21st-century learner became more engaged and motivated in their learning (New Media Consortium, 2014).

The aforementioned studies show the successful implementation of gamification to foster students' critical thinking, problem-solving, and the acquisition of 21st-centurylearning, digital literacy, and technological practices. Those studies also utilized various gamified platforms like *Quest2Learn, 3D Game Lab,* and several apps along with the integration of gamified learning. Another study developed an instructional gamified material to equip the acquisition of 21st-century skills needed for learners. Therefore, the concept of gamification can be used as the bridge to venture into 21st-century learning.

In the Indonesian EFL context, especially in North Bali, Indonesia, the development of gamified-based learning materials has not been widely exposed and investigated. Considering the demands that need to be fulfilled in 21st-century learning along with the problems found in the real situation, the present study aimed at developing gamification handbook in English teaching and learning that works in tandem with the demand of 21st-century learning.

Literature Review

Digital Literacy and 21st-Century Learning

The incorporation of digital literacy and technological practices in the 21st-century were introduced globally by the Common Core State Standards and Partnership for 21st-Century Skills (P21) (National Governors Association Centers for Best Practices & Council of Chief State School Officers, 2010; Partnership for 21st-Century Skills, 2012). First, the new learning paradigm urges to promote digital literacy in the process of learning. The Common Core State Standards emphasize on the capabilities to use digital literacy which involves the knowledge and skills to use digital tools and devices for certain purposes on technology-enhanced language learning (TELL) environments to prepare learners in the complex and competitive 21st Digital age (Kivunja, 2014; National Governors Association Centers for Best Practices & Council of Chief State School Officers, 2010). Second, Partnership for 21st-Century Skills (P21) has established a framework incorporating 21st-century learning. P21 refers to 4Cs, namely critical thinking, communication, collaboration, and creativity. These standards represent the advancement and the promotion of the new learning paradigm that prepares the students for 21st-century learning.

Gamification

The term gamification was first coined in 2002 by Nick Pelling. However, it was not a common term at first. Starting 2010, gamification gained widespread attention with the public. Several companies began gamifying their business to drive users' behavior and engage them through rewards (Goethe, 2019). Gamification is defined as the use of non-gamemechanics in non-game situations (Marczewski, 2013). Zichermann and Cunningham (2011) define the term gamification based on its purposes. It focuses on the process of game-thinking and game mechanics in non-gaming contexts to engage users and solve problems. Gamification in the context of learning and instruction is the use of game-based mechanics, aesthetics, and game thinking to engage, motivate, and promote learning to solve problems. It integrates the use of parts, elements, and techniques from games. However, it should be in meaningful consequences by driving the users intrinsically. The elements of the game are not only points, badges, and level, but also deep elements of games like the challenge, mystery, storytelling, socialization, and other elements that can move them in an emotional and deeper meaning level (Kapp et al., 2014).

Gamification allows information and technological practices that can help the learners to socialize, interact independently, and become the producer of the information (Simoes et al., 2013). Gamification offers opportunities for teachers to gamify the learning activities by synchronizing the subject knowledge and game elements or mechanics.

In the quadrant figure, gamification is placed in the top right quadrant between gaming and other parts. This distinction can be used to clarify the ambiguity of gamification. The use of gamification is to solve real-world problems and situations that are not fictional as it is in a game. Gamification possesses game elements while the playful design does not. It is unlike a serious game in which it uses the whole games, but it has a learning background, for instance, a game that teaches project management for the learners. In teaching and learning, gamification can be classified into six categories such as gamified courses without online support, massive open online courses, blended/flipped learning courses, e-learning sites, gamified platform/system, and mobile learning (Dicheva et al., 2015).

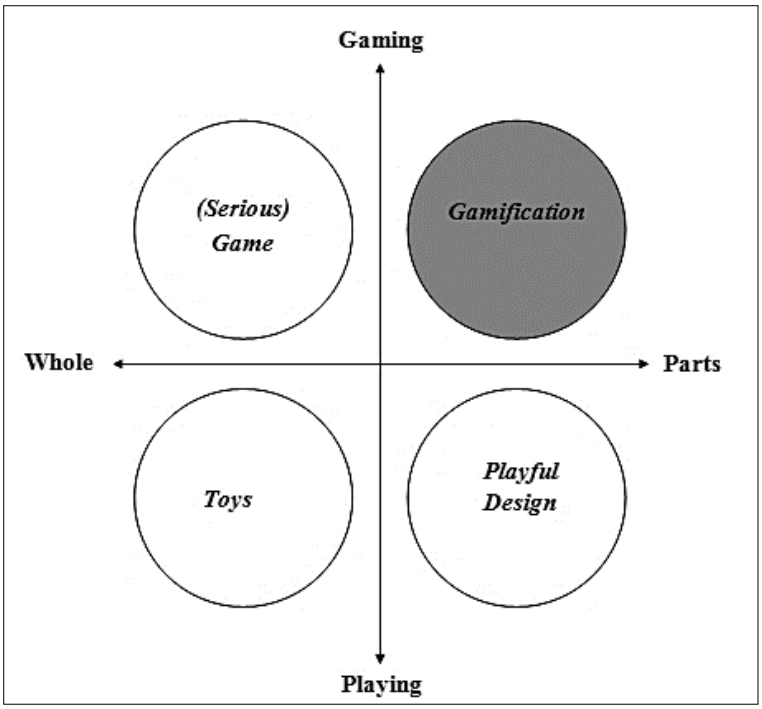

Figure 1. Gamification and related concepts (Deterding et al., 2011)

Theories for Gamification in Learning and Education

Gamification has associated with four major theories in learning, namely Self-Determination Theory (Deci & Ryan, 2015), Achievement Goal Theory (Hamstra et al., 2014), Social Learning Theory (Bandura, 1977), Situated Learning Theory (Lave, 1991), and Feedback (Brookhart, 2017).

Self-Determination Theory. Gamification is closely linked to the theory of self-determination proposed by Deci and Ryan (2015). Self-determination theory is defined as the theory of human motivation (Kim et al., 2018). According to self-determination theory, people tend to grow by their innate psychological needs: autonomy, competence, and relatedness. Kim et al. (2018) explain how gamification associated with the aspects of self-determination theory. Autonomy can be achieved through gamification by providing the students choices in their learning. Besides, providing students with some useful resources is also a better strategy to facilitate autonomy. Mastering in certain subjects or having competence is also another contributing aspect of motivation. Providing challenging tasks canmotivate students to do something well. Relatedness is a significant psychological condition when the tasks are linked to personal goals or interest and connect to the shared goals. The tasks are meaningful for the students. Healey (2019) highlights self-determination theory as the psychology of gamification. The rationale derives from the integration of those three fundamental psychological aspects in the gamified activities in learning.

Achievement Goal Theory. Achievement Goal Theory is related to students' beliefs to reach their specific goals. According to Hamstra et al. (2014), Achievement Goal Theory can be divided into two such as mastery goals and performance goals. Mastery goal is defined as the ability to fulfill the required tasks or understand a concept. It emphasizes autonomous learning, competence development, and self-improvement. Meanwhile, performance goals focus on the desire to show higher achievement to other people. People with performance goals tend to compare the results of their own with other people. Mastery goals show high self-esteem and academic achievement. However, performance goal can negatively impact student self-esteem and their motivation in learning (Seifert, 2004). Thus, in selecting the achievement goal, the

present study considered several aspects like learning situations, possible effects towards the students, and students' characteristics.

Social Learning Theory and Situated Learning Theory. Social Learning Theory and Situated Learning Theory rely heavily on the assumption that learning can be achieved through social interaction (Bandura, 1977; Lave, 1991). The first theory for gamification is Social Learning Theory. Bandura (1977) explains that social learning theory is the core of learning. It can be done by observing others, their behavior, and also the results of the observed behavior. To achieve effective social learning, Bandura (1977) posits four principles of social learning such as attention, retention, reproduction, and motivation.

In line with Social Learning Theory, Lave (1991) agrees that social interaction is needed to make the process of learning meaningful. Besides, he asserts that learning is situated in which the process of learning cannot be separated from the learning activities, culture, and context. In other words, knowledge is constructed through social interaction and it is linked to the culture and associated with contexts of situation.

In developing gamification handbook, it is essential to create social learning for the students in the engaging environment. It can provide learners opportunities to observe their models like their peers, parents, teachers, or some actors or characters in their learning materials. Students can learn through modeling behaviors either in the classroom, outside the classroom,or in their learning materials. On the other side, learning should be situated in which authentic context makes the application to the real-world easier for the learners.

Feedback. Another important theory underlying gamification is feedback. Feedback is portrayed as a verbal or nonverbal response that shows an evaluation of the results of learning or the performance of learning (Brookhart, 2017). Some studies reveal that feedback can be classified based on its mood of the feedback content, who evaluates the performance, and timing (Burgers et al., 2015; Ryan et al., 2002; Zhu et al., 2012). In gamified-based learning activities, positive and negative feedback, external or internal feedback, or immediate feedback can be well supported.

Gamification Framework

There are some basic principles used as a framework to best apply gamification in the classroom. Carvalho et al. (2014) outline a framework for gamified activities which is applicable to be designed and developed in gamified learning activities in the class. It is illustrated in Figure 2.

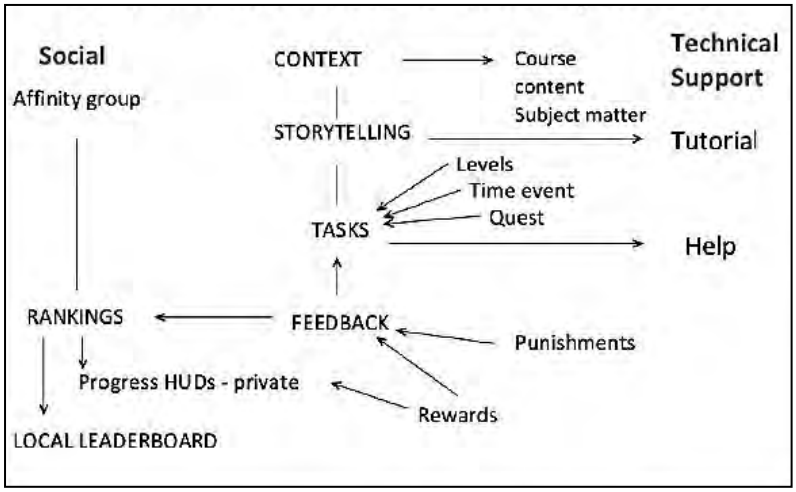

Figure 2. Gamification Framework (Carvalho et al., 2014)

According to Carvalho et al. (2014), gamified learning activities must relate to the context of the course content and the subject matter being learned by the students, in Figure 2, context can be done through storytelling. Based on the framework above, it can be seen that the students have to solve several tasks or missions. There will be a different level of difficultyon every task. Each task has a deadline for submission or accomplishment, some may have time events to challenge the students, and some can be on a quest. In this case, the degree of difficulty should be moderate but challenging to make students engaged and keep their interest and involvement.

Handbook

In developing an interactive learning handbook, the development of the gamification handbook was based on the criteria of a good learning material proposed by Tomlinson (2011). Those are: 1) it should achieve impact, 2) it should help learners to feel at ease, 3) it helps the learners to develop confidence, 4) it should require and facilitate learner self-investment, 5) learners must be ready to acquire the points being taught, 6) it should expose learners to language in authentic use, 7) it should be perceived as relevant and useful for learners, and 8) it should be drawn to linguistic features of the input.

Method

The present study followed Design and Development Research from Richey and Klein (2007). The research design consists of four major phases: 1) Analysis, 2) Design, 3) Development, and 4) Evaluation. The first phase conducted a gap analysis. Three key elements was considered in a gap analysis in this study such as 1) the ideal situation of 21st century learning based on the national and international standards, 2) the current situation of learning (teachers' performance, students' performance, and materials used in learning), 3) bridging the gap from the ideal standards to the current implementation of 21st-century learning in EFL classrooms in North Bali, Indonesia. To achieve this, the gap analysis was done through 1) document analysis by analyzing the national, global standards, curriculum, syllabus and the current learning materials used, 2) observation by investigating teachers' and students' performance in the current EFL classrooms, and 3) interview by analyzing the shortcomings and expectations in the process of learning and the materials used inlearning. The results from gap analysis were used as a basis to bridge the gap of the ideal standards and the real implementation of 21st-century learning in North Bali, Indonesia. The second phase designed the prototype of the gamification handbook. The third phase was developed or modified the prototype of the gamification handbook. The last phase is to evaluate the product by expert judges to measure the quality of the gamification handbook.

Participants

The participants of this study were 10 English teachers and 15 students from four senior high schools in North Bali, Indonesia. The four schools were selected based on their facilities to support the gamification environment. To complete the data for need analysis, those English teachers were observed to investigate the implementation of 21st-century learning. Besides, they were also being interviewed to analyze the needs of the developed product and to check the appropriateness of the developed products. These participants were selected through purposive sampling technique.

Data Collection and Analysis

The data were collected through observation, interviews, and document study. A non-participant observation was conducted to investigate the teachers' instructional practices and evaluate the learning activities. The observation checklist can be examined in Appendix A. A

structured interview was also used to collect the data by interviewing the same predetermined questions to teachers and students in four selected schools in North Bali, Indonesia. The interview guide was used to elicit specific answers from the participants. The interview guidelines can be examined in Appendix B. The interview aimed at finding the information about the available textbook being used and the instructional and learning experience for both teachers and students. Document study was also conducted to collect the data about the appropriateness of the available textbook with the curriculum, syllabus, 21st-century learning, and the needs of the students. Public documents, the English textbook for the tenth grade of senior high school published by The Ministry of Education and Culture Republic of Indonesia in 2016, the curriculum and syllabus used by the teachers were analyzed.

The obtained data were analyzed qualitatively through interactive model analysis proposed by Miles and Huberman (1994). Those are data reduction, data display, and conclusion drawing and verification. Data reduction was conducted after obtaining the data from observation, interview and document analysis. The obtained data were reduced and organizedto outline the gap between the current learning practices and learning materials with the 21st century learning standards. After reducing and organizing the data, the researchers displayed the data. In this phase, the researchers analyzed and determined the solutions to bridge the gap of the current study. On conclusion drawing and verification, the researcher drew a temporary conclusion and re-checked the conclusion and related it to the real situation. This activity was continuously conducted until the conclusion could answer the research questions.After analyzing through interactive model analysis, the developed product was examined through the interrater agreement model by Gregory (2007). This method involved two expertjudges to evaluate the product to find the content validity of the gamification handbook. The result of the interrater agreement model then calculated based on the criteria for the validityof the product.

Results and Discussion

Analysis

The result of classroom observations revealed that the observed teachers in North Bali, Indonesia were not able to provide opportunities for autonomous learning and enhancing students' engagement in learning. The learning activities were also lack of personalized-learning tasks for the students. The teacher integrated ICT tools like LCD projector, slide presentations in the learning process and provided the students' opportunities to use their mobile phones to gather evidence from other sources. However, the teacher did not integrate or use an interactive platform or other interesting media to increase students' involvement in learning. The use of the mobile phones in the classroom was only on surface learning like finding the meaning or translating.

Based on the result of the interviews, there were some problems found in the process of learning and the learning material. In the process of learning, there were problems in students' involvement and the lack of differentiated tasks for the students. Students' involvement was one of the problems in the process of learning. It was conveyed by the teachers that students had low involvement in their learning. It was illustrated in the following transcription.

> *"Some students are hard to be motivated in learning. Their involvement is quite low. Only few students actively engaged in the classroom"* (Teacher 2; Female).
>
> *"Not all students are engaged. I need to provide stimuli or sometimes provide assignments or tasksthat require students' involvement"* (Teacher 3; Female).

Besides, all teachers admitted that they do not provide differentiated tasks for the students. It is still hard for them to prepare differentiated tasks because of the limitation of the time

allotment and the large classrooms. It is illustrated in the following transcription.

> *"Not yet. It takes a great amount of time and preparation to create differentiated tasks for the students. Because of those limitations, it is hard for me to prepare it in a large numberof students in one classroom"* (Teacher 1; Female).

In the context of learning materials, there were some drawbacks. Based on the results of the teachers' interview, it was found out that learning material was in line with the curriculum 2013 but still lack the demands of 21st-century learning. It was illustrated by the following transcription.

> *"It needs to be re-developed on its context so that it can be in line with the development of the 21st- century learning paradigm. The relevance to the new learning paradigm cannot be found in the textbook, although the learning material is already in line with the curriculum"* (Teacher 4; Male).
>
> *"Actually, learning material is already in line with the curriculum being used. However, it is also important to improve the quality of it by inserting the technological practices in the textbook"* (Teacher 1; Female).
>
> *"It needs improvement in the learning activities of the textbook. It can be added several innovative games that can be accessed through the Internet so that students do not rely heavily on the textbook only"* (Teacher 3; Female).

Considering these drawbacks, there were some expectations for further development of the learning material. It is illustrated in the following transcription.

> "*The appropriateness of the students' level and learning material needs to be considered. It is also important to implement the innovative learning activities and technological practices that can be accessible for the learners"* (Teacher 1; Female).
>
> *"It is a need to provide additional learning activities with the insertion of technology in the textbook. So, it can help the learners to explore and learn the book as well. Besides, it does not create monotonous activities and can cover HOTS and not LOTS only"* (Teacher 4; Male).

Findings from the results of students' interviews revealed that 60% of students had low involvement during the learning process. Meanwhile, it was only 40% of students admitted that they were engaged in the process of learning. On the other hand, students' autonomous learning was also low. From the interview, it was found that 87% of students stated that they did not like learning independently. They preferred to learn and listen to their teachers and work with the help of teachers or their peers. All students stated that there were no differentiated tasks given by the teachers. Besides, 40 % of students admitted that they did not know the criteria of learning and its assessment.

Moreover, based on the interview, students also expected that the learning materials could be developed. It can be shown in the following transcription.

> *"The learning material is easy to understand, but it lacks of interactive and innovative media.So, sometimes I feel bored"* (Student 2; Male).
>
> *"Sometimes the material makes me a little bit confused and hard to understand"* (Student 7; Female).

Findings from the result of document analysis from the textbook used, "*Bahasa Inggris*" published by The Ministry of Education and Culture Republic of Indonesia in 2016 for the tenth grade of senior high school students showed some drawbacks. The textbook has 15 chapters that cover the whole semester. This English textbook was used as the main textbook by all teachers who teach English in the tenth grade of senior high school in North Bali, Indonesia.

Based on the analysis of the English textbook, the results showed that each chapter was not explicitly integrated the advancement of 21st-century learning and technological practicesinto learning activities. Most of the activities focused more on grammar review and sentence structure. Some activities were still on Lower Order Thinking Skills and the learning activities were monotonous. Most of the activities provide less opportunity for students to explore the activities autonomously. Each chapter also still focuses on isolated skills (listening, speaking, reading, and writing) like the yesteryear of teaching, not oninterpersonal, interpretive, and presentational skills needed in 21st-century learning. Therefore, the gap analysis showed that the implementation of the process of learning and thetextbook used in EFL Classrooms in North Bali, Indonesia did not represent the advancementof 21st-century learning.

Design and development

After conducting the gap analysis through class observation, interview, and document analysis, there were several characteristics of the product needed that can be used as the basis for the product development. It was aligned with the English syllabus of the curriculum 2013 and the criteria of good learning material from Tomlinson (2011). The aspects of developed product needed should: 1) contain clear information about 21st-century learning and the concept of gamification in education2) focus on interpersonal, interpretive, and presentationalnot on isolated skills (listening, speaking, reading, and writing), 3) provide students with tasks to participate in the learning process, 4) allow students to complete the task using various sources, for example, QR codes to access pictures, link, video, and audio, 5) let the students have personalized learning by providing them different choices in completing tasks, 6) offer various of interactive activities that can be chosen based on the class situation and condition, 7)provides the acquisition of 21st-century learning, digital literacy, and technological practices. These seven characteristics of the product needed were reflected on every chapter of the handbook. The first aspect, for example, was presented in Chapter I *The Beginning of Journey*. This chapter connects the concept of gamification in light of its relevance to the new movement from yesteryear learning to present. Chapter I was developed into four topics such as 1) 21st-century learning, 2) gamification, 3) implications on learning, 4) integrating gamification in EFL learning activities. It started with the introduction of the 21st-century learning. It covered the differences between yesteryear learning and 21st- century learning. Moreover, one of the learning frameworks, gamification, was also discussed. The concept of gamification, its implications, and also the integration of gamification especially in EFL learning activities were also displayed.

The second, third, fourth, fifth, and sixth aspects were presented in Chapter II *The Call to Adventure: Gamified-Based EFL Activities.* This chapter focuses on 1) A sample of gamified-design template, 2) snapshots of developed gamified-based EFL activities, and 3) Classroom strategies for gamified based EFL Activities. A sample of a gamified-design template was displayed in the first section. It was adapted from Kapp et al. (2014). Section two portrayed the snapshots of developed gamified-based EFL activities. To develop gamified activities, the synchronization of the chosen topics was done. The developed topics were descriptive text, recount text, narrative text, and songs. The development of the activities was done by creating a gamification plot to layer gamification activities with the contents.

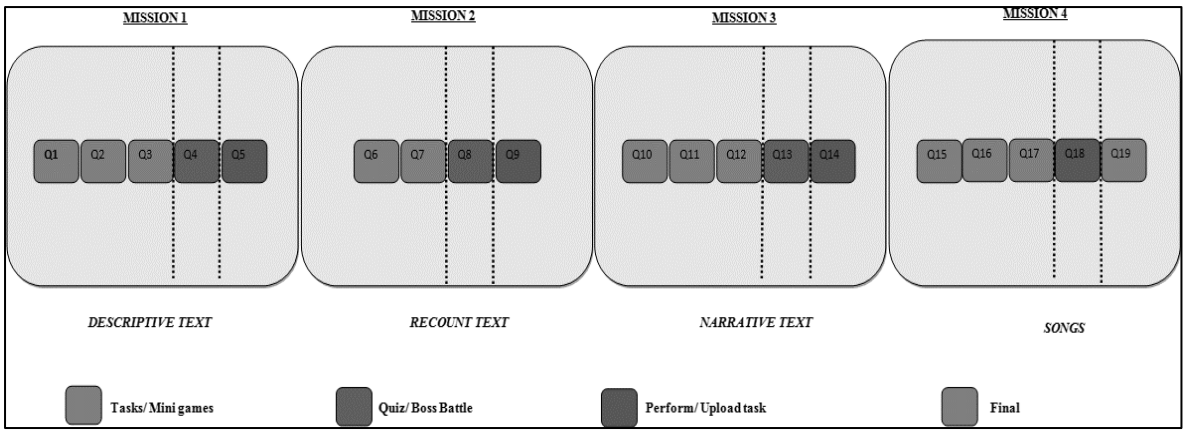

Figure 3. The synchronization of contents and gamification plot

In developing the existing learning materials, four contents were transformed into four missions with its storyline. Every mission consists of several quests that consist of tasks or mini games, the quiz or the battle, and the uploaded content or perform the tasks. After creating the scenes plot in every mission and aligned it with the contents, the next development was developed through gamified platform *Classcraft.*

Figure 4. The overview of the four missions

Figure 5. Snapshot of one quest path in the first mission

In the third section of chapter II, there were also some examples of classroom strategies ideas to be added to the gamified learning activities. Those strategies were QR codes hunts, the amazing race challenge, quest, side quest, grudge ball, boss battles, the daily podcast, danger cards, mystery box, post-it pause, graffiti, LEGO builds, music man, a problem-solving mindset, hexagonal thinking, mix master, curator of curiosity, Cs the Moment, Rory's story cubes, six-word challenge, letter to myself, human rhythm, poetry in sounds, get it done, getting to know you, and copy-cat. These classroom strategies can be transformed as mini-games, tasks, quests, side quests, or assessments for the students in the classroom.

The last aspect of the developed product needed was reflected in Chapter III *Seize the Sword: Tools and Treasures*. This chapter was developed to provide two important topics such as 1) Best practices to Gamification and 2) Tools to utilize gamification across content areas. The first section of chapter III is the best practice to gamification proposed by Kapp et al. (2014). The second section of chapter III displays tools to utilize gamification across content areas. Those include the descriptions of gamification platforms to support gamification in education and also the gamification tools with SOLO taxonomy. This chapter provides an exploration of best practices to gamification and also some considerations to activate some tools that can contribute to enhance teaching and learning.

Chapter IV *End of Journey* is the closure of the handbook. It consists of a conclusion and suggestion. This chapter provides the conclusion of all chapters covered in the handbook and suggestion for further development. After designing the contents of the handbook, supported media inside the handbook also needed to be designed. There were some pictures, learning media, QR codes that could access link, video, and also audio for the students.

The development of the gamified learning handbook was done by modifying the prototype of instructional material, or the draft of the gamification handbook before it became an effective final version. After revising the draft of the prototype unit descriptions, the revised content of the product was developed in the form of a handbook. After revising the design product according to the suggestion given by the expert judges, the researcher finally started to develop the product. The topic or the activities which had weak relevance were dropped and revised.

Evaluation

After completing the development of the content in every chapter suggested by the expert judges, the developed product was evaluated by two expert judges. The evaluation sheet consists of two important components such as the validity for the gamification EFL activities and the face validity of the handbook. For the material validity, there were ten descriptors to judge the quality of the material. On the face validity, there were ten descriptors to check the quality of the face of the handbook. The evaluation sheet can be examined in Appendix C.

Based on the result of the evaluation sheet, the first judge as the expert on material development gave 100 for the product, which means that the product was categorized as excellent. The second judge, as the ICT expert gave 92 for the product, which means that the product was categorized as excellent.

Based on the result of the evaluation, there were some aspects of the handbook that need to be revised. The first expert judge offered some constructive suggestions in terms of grammar used, the layout of the tables, the naming for classroom strategies, and also the relevance of examples provided to the language and learning. The second expert also provided constructive suggestions for the development of the contents. The revision was on the flows and ideas of the construction of the handbook. Besides, the learning activities need to be more practical, and also the layout, size, and font of the handbook need to be improved.

Regarding to the result of the evaluation sheets, the developed gamification handbook had met the criteria of a good handbook in which most aspects were categorized at the maximum score. Thus, the developed product could be categorized as an excellent product.

Final Product

After revising the handbook and adding the suggestions of the experts' judge, the final product of the gamified-based learning handbook was completed. In a nutshell, the handbook is categorized as an excellent handbook to equip digital literacy, technological practices and 21st-century learning for secondary students and teachers in EFL context.

Discussion

Findings from the gap analysis that had been conducted through observation, interview, and document analysis showed that the process of learning and textbook used for the secondary students in North Bali did not align with the 21st-century learning paradigm and the demands of national standards and international standards.

Findings from the classroom observation portrayed that teachers provided little opportunities for autonomous and engagement in their learning. Based on the findings of document analysis, some of the activities were still following teacher-centered learning, for example in the pronunciation practice provided in the textbook. Instead of assigning students to figureout how to pronounce the list of words themselves, the instruction assigned the students to listen to one source only, which was the teacher. It was also supported by the findings from the students' interviews. Based on the result of the interview, it was found that 60% of students had low involvement during the learning process. Meanwhile, it was only 40% of students admitted that they were engaged in the process of learning. From the interview, it was also found that around 87% of students stated that they did not like learning independently. They preferred to learn and listen to their teachers and work with the help of teachers or their peers. On the contrary, Partnership for 21st-Century Skills (2012) clearly states that 21st-century learning focuses on student-centered learning with teachers as the facilitator or collaborator.

From the findings of document analysis, it was also found that the learning activities on the textbook were lack of digital literacy and integration of technology practices. The learning activities were monotonous, focused on grammar and text structure. These are also in line with the findings from students' interviews that explained the learning activities were too monotonous and did not engage the students in the exploration by themselves and the integration of technology.

Whereas the demands from the national standards (i.e., Law number 20, 21, 22, and 24 the Year 2016, Law number 36 the Year 2018, Indonesian Partnership 21st-century skills standards framework) and the global standards (i.e., Common Core State Standards, and P21 Framework), require the utilization of technology into instruction to enhance learning. This is similar to the previous study by Rumahlatu et al. (2016) which states that teachers in the Indonesian context are not optimally prepared and lack of handbooks to equip the 21st-century learning and innovative skills in the classroom for teachers and students.

The findings from document analysis also revealed that the textbook used the same instruction for all students. This finding was also supported by the result of the class observation and interview. This is contrary to the 21st-century learning paradigm. Partnership for 21st-Century Skills (2012) states that the present learning needs personalized real-world tasks or differentiated tasks to meet individual needs. Therefore, the gap analysis along with some related studies show that the implementation of 21st-century learning in the classroom needed to be improved and there was a need to design the new innovative learning material to equip with the demands of national standards, international standards, and the 21st-century learning paradigm.

Considering these gap findings, new learning materials needed to be developed under the gamification framework. Gamification is stated to be one of the powerful ways to forge out into 21st-century learning. Some studies show the successful implementation of gamification to foster students' critical thinking, problem-solving, and the acquisition of 21st-century learning, digital literacy, and technological practices (Figueroa-flores, 2016; Kim, 2015; Ling, 2018; Smith, 2017).

Take, for example, a study conducted by Kingsley and Grabner-Hagen (2015) that shows how the integration of gamification framework in the process of learning can fulfill the development of the product needed that previously has been discussed. The results of the study reveal that gamification becomes a powerful way in education to support the new literacies and technological practices along with 4Cs Skills. In this study, the implementation of gamification was done to teach science and literacy skills through utilizing the gamification platform, 3D Game Lab, and other various apps and available online tools. The study reveals that 91.5 % of students learn the science matter easier than traditional tasks and 87.2 % of students state that the quality of their work is better.

The study conducted by Kingsley and Grabner-Hagen (2015) shows how gamification can provide students the experience of personalized learning, and the freedom to choose the topic they want to learn to complete the hierarchical quest. The study reveals those various interactive activities across subject matter work in line with the insertion of new literacy and technological practices. Some tasks can be completed based on students' decisions and should use various sources that can be integrated with the gamified platform. All the aspects of the product needed can be linked to the successful results of this study.

Some previous studies already implemented gamification towards learning, but the guidance for the teachers and students or the process of developing gamification to infuse 21st-century learning were not investigated or exposed yet, especially in the senior high school setting in the Indonesian EFL context. Thus, the development of the gamification handbook in this study can be the optional aid for the teachers and the learners to implement the effective content knowledge equipped with the insertion of digital literacy skills and technological practices to tackle some problems found and fulfill the new demands in the 21st-century learning that urges the development of innovative instructional material.

The development of gamified-based learning activities in the developed product were aimed at developing meaningful gamification learning activities. All the gamified-based learning activities were associated with the underlying theories of gamification such as, Self-Determination Theory (Deci & Ryan, 2015), Achievement Goal Theory (Hamstra et al., 2014), Social Learning Theory (Bandura, 1977) and Situated Learning Theory (Lave, 1991), and Feedback (Brookhart, 2017).

In the gamification handbook, the learning activities aimed at growing psychological needs such as autonomy, competence, and relatedness as it is in Self-Determination Theory (Deci & Ryan, 2015). These aspects can be seen through the development of the activities provided in the handbook. The autonomy can be gained by providing the students choices in theirlearning. In chapter II of the handbook, all tasks are given based on several choices in orderto complete the same goal of learning. Take, for example, the topic of learning is *Song* and the objective of learning is to make students create imaginative masterpiece through music. There are several choices that the students can choose such as, 1) to create creation and narrative writing by writing a story or a poem inspired by music, 2) to pen your own song by creating an original song related to the themes that have been provided in the prompt card, 3) informative and explanatory writing by connecting songs to the current events or 4) persuasive and argumentative writing by reviewing an artist album, band, or songs related to the themes provided in the prompt cards. The concept of autonomy provided in the gamification handbook was resulted through the interaction and collaboration among students. The choices in learning, the interaction and socialization with others were the foundation of autonomy.

The competence in Self-Determination Theory can be reflected through the challenge provided in the tasks. The development of gamified activities provided in the handbook was designed in hierarchical quests. Therefore, the students are assigned to complete the interesting challenges

and level in order to master every task. By providing this, the mastery or the competence can be gained by the students since the students cannot move forward before completing the first quest or task.

The relatedness in Self-Determination Theory is closely linked to the personal goals or interest or the shared goals within the students. This can be achieved by providing a meaningful purpose in their learning. In the developed product, this relatedness can be gainedby providing the students the storyline that transform their regular learning into the journey and the adventure quest that they need to complete. The students actively take big roles in the learning like being the warriors, mages, or healers and solve the missions with their group. Therefore, the aspects of Self-Determination Theory were associated with the developed gamified-based learning activities in the handbook.

The developed gamified activities in this handbook were also related to Achievement Goal Theory (Hamstra et al., 2014) in which the development of learning activities in the handbook consists of mastery goals and also performance goals. These goals were in lined with the students' characteristics and students' need. In this developed product, all theactivities were emphasized on social interaction of the students with the other students, the students with the teachers, the students with their parents, the parents with the teachers, and the whole interaction among them. In this context, the gamified activities were created by providing a highly engaging learning environment in a gamified platform, *Classcraft.* Thus, the gamified-based learning activities were constructed through social interaction (Bandura, 1977) and situated in authentic and personalised learning. In the developed product, another important aspect that empowers the activities was the feedback. In gamified-based learning activities, there were positive and negative feedback, external and internal feedback and also immediate feedback were supported. This was in line with Feedback Theory proposed by Brookhart (2017).

Conclusions

As technology advances, the demand for interactive learning instructional material also increases. The gap analysis revealed that the integration of 21st-century learning, digital literacy skills, and technological practices were not fully implemented yet in North Bali, Indonesia. The available textbook used also did not represent the advancement of the global needs for 21st-century learning. Thus, the present study developed the Gamification Handbook to engage students in their learning and also to integrate the 21st-century skills, digital literacy, and technological practices in the Indonesian EFL classroom. Gamification ineducation and learning will always evolve and create new discontinuities, as technology shows no signs of slowing down. This study and the developed handbook are only a stepping stone for the educational explorers like the students, teachers, researchers, and anyone interested in gamification. The further study still needs to be conducted to explore thespecific impact of gamification handbook on students' performance in learning.

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To cite this article

Santosa, M. H., Harismayanti, I. & Putra, I., N. A. (2022). Technology in Action: Developing Gamification Handbook in English Teaching and Learning for the 21st Century Learners. *Teaching English as a Second Language Electronic Journal (TESL-EJ), 26*(1). https://doi.org/10.55593/ej.25101a2

References

Afandi, A., Sajidan, Akhyar, M., & Suryani, N. (2019). Development frameworks of the Indonesian partnership 21 st -century skills standards for prospective science teachers: ADelphi study. *Jurnal Pendidikan IPA Indonesia*, *8*(1), 89–100. https://doi.org/10.15294/jpii.v8i1.11647

Amendments to the Regulation of the [Indoneisian] Minister of Education and Culture, 12 (2018).

Appiah, D. B. (2015). *Gamification in education: Improving elementary Mathematics through engagement in hybrid learning in the classroom* [Kwame Nkrumah University of Science and Technology].

Bandura, A. (1977). *Social learning theory*. Prentice Hall.

Brookhart, S. M. (2017). *How to give effective feedback to your students* (2nd ed, pp. 267–277). ASCD.

Burgers, C., Eden, A., van Engelenburg, M. D., & Buningh, S. (2015). How feedback boosts motivation and play in a brain-training game. *Computers in Human Behavior*, *48*, 94–103. https://doi.org/doi:10.1016/j.chb.2015.01.038

Carvalho, A. A., Araújo, I., & Zagalo, N. (2014). A framework for gamified activities based on mobile games played by Portuguese university students. *Proceedings of the International Conferences on Educational Technologies 2014 and Sustainability, Technology and Education 2014*, 89–96.

Deci, E. L., & Ryan, R. M. (2015). Self-determination theory. In *International Encyclopedia of the Social & Behavioral Sciences: Second Edition* (Second Ed, Vol. 11). Elsevier. https://doi.org/10.1016/B978-0-08-097086-8.26036-4

Deterding, S., Dixon, D., Khaled, R., & Nacke, L. (2011). From game design elements to gamefulness: Defining "gamification." *Proceedings of the 15th International Academic MindTrek Conference: Envisioning Future Media Environments, MindTrek 2011*, *September*, 9–15. https://doi.org/10.1145/2181037.2181040

Dicheva, D., Dichev, C., Agre, G., & Angelova, G. (2015). Gamification in education: A

systematic mapping study. *Educational Technology and Society*, *18*(3). https://www.jstor.org/stable/10.2307/jeductechsoci.18.3.75?seq=1&cid=pdf-reference#references_tab_contents

Figueroa-flores, J. F. (2016). Gamification and game-based learning: Two strategies for the 21st Century learner. *World Journal of Educational Research*, *3*(2), 507–522. https://doi.org/10.22158/wjer.v3n2p507

Funa, A. A., & Ricafort, J. D. (2019). Developing gamified instructional materials in genetics for grade 12 STEM. *International Journal of Engineering Science and Computing*, *9*(3), 20597–20600.

Goethe, O. (2019). *Gamification mindset* (D. Tan & J. Vanderdonckt (eds.); Human-Comp). Springer. https://doi.org/10.1007/978-3-030-11078-9

Gregory, R. (2007). *Psychology testing: History, principles, and applications*. Ally &Bacon.

Hamstra, M. R. W., W., van Y. N., Wisse, B., & Sassenberg, K. (2014). Transformational and transactional leadership and followers' achievement goals. *Journal of Business and Psychology*, *29*(3), 413–425.

Healey, D. (2019). *Gamification*. Macmillan Education.

Hendarman. (2016). Challenges for 21st Century Learning in Indonesia. *The Fourth International Conference on Education and Language (4th ICEL)*, *20-21 May*, 1–19. https://media.neliti.com/media/publications/171878-EN-challenges-for-21st-century-learning-in.pdf

Horizon Report 2017 Higher Education. https://library.educause.edu/resources/2017/2/2017-horizon-report

Kapp, K. M., Blair, L., & Mesch, R. (2014). *The gamification of learning and instruction fieldbook: Ideas into practice*. John Wiley & Sons, Inc.

Kim, B. (2015). *Understanding gamification* (P. Hogan (ed.)). American Library Association.

Kim, S., Song, K., Lockee, B., & Burton, J. (2018). *Advances in Game-Based Learning Gamification in Learning and Education Enjoy Learning Like Gaming* (D. Ifenthaler, S. J. Warren, & D. Eseryel (eds.)). Springer. https://www.springer.com/series/13094

Kingsley, T. L., & Grabner-Hagen, M. M. (2015). Gamification: Questing to integrate content knowledge, literacy, and 21st Century learning. *Journal of Adolesscent & Adult Literacy*, *59*(August), 51–61. https://doi.org/10.1002/jaal.426

Kivunja, C. (2014). Teaching students to learn and to work well with 21st Century skills: Unpacking the career and life skills domain of the new learning paradigm. *International Journal of Higher Education*, *4*(1), 1–11. https://doi.org/10.5430/ijhe.v4n1p1

Lave, J. (1991). Situating learning in communities of practice. In *Perspectives on socially shared cognition* (Issue 2, pp. 63–82).

Ling, L. T. Y. (2018). Meaningful gamification and students' motivation: A strategy for scaffolding reading material. *Online Learning Journal*, *22*(2), 141–155. https://doi.org/10.24059/olj.v22i2.1167

Marczewski, A. (2013). *A simple introduction and a bit more* (Kindle ed.). Amazon Digital Services.

Miles, M. B., & Huberman, A. M. (1994). *An expanded sourcebook: Qualitative data analysis*. Sage Publications.

National Governors Association Centers for Best Practices & Council of Chief State School Officers. (2010). *Common core state standards for English language arts and literacy inhistory/ social studies, science and technical subject*.

New Media Consortium. (2014). *Horizon report on technology and higher education*.

Partnership for 21st Century Skills. (2012). 21st Century skills map: Designed in cooperation with the nation's world language educators. In *03/11*. https://doi.org/10.4135/9781452219455.n2

Retnawati, H., & Nugraha, A. C. (2016). Vocational high school teachers' difficulties in implementing the assessment in curriculum 2013 in Yogyakarta Province of Indonesia. *International Journal of Instruction*, *9*(1), 33–48. https://journal.uny.ac.id/index.php/joe/article/viewFile/5757/4971

Richey, R. C., & Klein, J. D. (2007). *Design and development research: Methods, strategies, and issues*. Lawrence Erlbaum Associates Publishers.

Richey, R. C., & Klein, J. D. (2014). *Design and Development Research*. 141–150. https://doi.org/10.1007/978-1-4614-3185-5

Rosser, A. (2018). *Beyond access : Making Indonesia's education system work*. https://www.lowyinstitute.org/sites/default/files/Rosser_Beyond%20access%20-%20Making%20Indonesia%27s%20education%20system%20work_WEB_2.pdf

Rumahlatu, D., Huliselan, E. K., & Takaria, J. (2016). An analysis of the readiness and implementation of 2013 curriculum in the west part of Seram District, Maluku Province, Indonesia. *International Journal of Environmental & Science Education*, *11*(12), 5662– 5675.

Ryan, S., Ormond, T., Imwold, C., & Rotunda, R. J. (2002). The effects of a public address sys- tem on the off-task behavior of elementary physical education students. *Journal of Applied Behavior Analysis*, *35*(3), 305–308. https://doi.org/doi:10.1901/jaba.2002.35-305

Seifert, T. (2004). Understanding students' motivation. *Educational Research and Reviews*, *46*(2), 137–149. https://doi.org/10.1080/0013188042000222421

Simoes, J., Redondo, R. D., & Vilas, A. F. (2013). A social gamification framework for a K-6 learning platform. *Computers in Human Behavior*, *29*(2), 345–353. https://doi.org/doi:10.1016/j.chb.2012.06.007

Smith, T. (2017). Gamified modules for an introductory statistics course and their impact on attitudes and learning. *Simulation & Gaming*, *00*(0), 1–23. https://doi.org/10.1177/1046878117731888

Sukasni, A., & Efendy, H. (2017). The problematic of education system in Indonesia and reform agenda. *International Journal of Education*, *9*(3), 183–199. https://doi.org/10.5296/ije.v9i3.11705

Sundayana, W. (2015). Readiness and competence of senior high school English teachers to implement curriculum 2013. *Indonesian Journal of Applied Linguistics*, *5*(1), 29–36.

Susilo, S. (2015). Curriculum of EFL teacher education and Indonesian qualification framework: A blip of the future direction. *Dinamika Ilmu*, *15*(1), 11–24.

Vantassel-baska, J. (2014). Analyzing differentiation in the classroom: Using the COS-R. *Gifted Child Today*, *35*(1), 43–48. https://doi.org/10.1177/1076217511427431

Tomlinson, B. (2011). *Material development in language teaching* (2nd Ed). Cambridge University Press.

Zhu, H., Kraut, R., & Kittur, A. (2012). Effectiveness of shared leadership in online communities. *Paper Presented at the ACM 2012 Conference on Computer Supported Cooperative Work*. https://doi.org/10.1145/2145204.2145269

Zichermann, G., & Cunningham, C. (2011). Gamification by Design. *O'Reilly Media*

Appendices

Appendix A

Blueprint for Observation Sheet

No	Theory	Indicators	Items
1.	Vantassel-baska, J. (2014)	**General Teaching Behaviors**:	
		• Curriculum Planning & Delivery	1, 2, 3, 4, 5
		Differentiated Teaching Behavior:	
		• Individual Differences	6, 7, 8, 9
		• Problem Solving	10, 11, 12
		• Critical Thinking	13, 14, 15, 16
		• Creative Thinking	17, 18, 19, 20
2	Partnership for 21st Century Skills (2012)	• Technological practices	21, 22, 23, 24, 25

Observation Checklist

General Teaching Behavior **Curriculum Planning and Delivery** **The teacher**	**Yes**	**No**
1. set high expectations for the students' performance		
2. incorporated activities for students to apply new knowledge		
3. engaged students in planning, monitoring or assessing their learning		
4. encouraged students to express their thoughts		
5. had students reflect on what they had learned		
Differentiated Teaching Behaviors **Accommodations for Individual Differences** **The teacher**	**Yes**	**No**
6. provided opportunities for independent or group learning		
7. accommodated individual or subgroup differences		
8. encouraged multiple interpretations of events and situations		
9. allowed students to discover key ideas individually through structured activities and/or questions		
Problem Solving **The teacher**	**Yes**	**No**
10. employed brainstorming techniques		
11. engaged students in problem identification and definition		
12. engaged students in solution-finding activities and comprehensive solution		
Critical Thinking Strategies **The teacher**	**Yes**	**No**
13. encouraged students to judge or evaluate situations, problems, or issues		
14. engaged student in comparing and contrasting ideas		
15. provided opportunities for students to generalize the information		
16. encouraged students to summary the information		
Creative Thinking Strategies **The teacher**	**Yes**	**No**
17. solicited many diverse thoughts about issues or ideas		
18. engaged students in the exploration of diverse points of view to reframe ideas		

19. engaged students to demonstrate open-mindedness and tolerance of imaginative, sometimes playful solutions to problems		
20. provided opportunities for students to develop and elaborate their ideas & creativity		
Technology Practices **The teacher**	**Yes**	**No**
21. integrated ICT device in the lesson		
22. required students to gather evidence from multiple sources (print, non-print, internet, etc)		
23. provided opportunities for learners to use language beyond the classroom		
24. provided opportunities to present their work to other people beyond the classroom through other interactive platforms		
25. provided interactive media in learning that increased the interest of the students		

Comments/Suggestions

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Appendix B

Interview Guideline for the Teachers

Before Developing Gamified-Based Learning Handbook

The interview guideline was adapted from Appiah (2015)

Indicators	Items
Background information	1, 2, 3, 4, 5, 6
Instructional Experience	7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19
Learning materials	20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30

Background Information

1. Name
2. Gender
3. Do you have a professional qualification in teaching?
4. What is your academic qualification?
5. How long have you been teaching?
6. What grade level are you currently teaching?

Instructional Experience

7. Do your students attend classes regularly?
8. Do your students complain about them not getting understanding in some of the topics you teach in English?
9. Do the majority of your students participate in the doing the task in the classroom?
10. Do you reward your students after they complete an activity you give them in English?
11. If yes, how do you reward your students?
12. Do your students receive instant feedback from you on task you assign them in class?
13. If Yes to 12, how do you give this feedback to the students?
14. Does your lesson engage your students?
15. Do you differentiate the learning instructions?
16. Do you encourage collaborative learning in your lessons among your students?
17. Have you read about or heard of gamification?
18. If YES, do you incorporate gamification in your teaching?
19. Have you heard of gamification as an intervention in education?
20. Do you set clear and defined goals about topics you teach your students in English?

Learning Materials

21. What kind of learning materials do you use in teaching?
22. Have you ever used any platform or LMS in the process of learning?
23. What are the problems do you find in your current learning books?
24. Have you heard/read/attended seminars about 21st century learning?
25. Do you think the learning materials used in the classroom are in line with the demands of 21st century learning?
26. Are your learning materials already equipped with digital literacy and technological practices?
27. How do you use the learning materials in the process of learning?
28. Are the learning materials designed systematically and based on student's level?
29. What are the strengths and the weaknesses of your learning materials?
30. What do you expect for the improvement of your learning materials?

Blueprint of the Interview Guide for Students

Indicators	Items
Background information	1, 2, 3, 4
Learning experience	5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19
Learning materials	20, 21, 22, 23, 24, 25, 26

Background information

1. Name
2. Gender
3. How old are you?
4. What grade level are you?

Learning Experience

5. How often do you attend school?
6. Do you regularly do English class assignments?
7. Do you regularly do your English home assignments?
8. Do you like learning English?
9. Do you like the way your teacher teaches English in class?
10. Does your teacher break lessons into smaller challenging units?
11. Do you actively participate in the process of learning?
12. Do you get a reward after completing an activity assigned by the teacher in the class?
13. Do you receive instant feedback from the teacher?
14. Does your teacher show you your score after you finish performing a task in class?
15. Does your teacher use instructional material during lesson delivery?
16. In learning English, do you prefer to work independently or with the help of your peers or teacher?
17. Does your teacher use innovative technological practices in teaching English?
18. Does your teacher group the class into various groups and assign task to the group during English lesson?
19. Do you get differentiating instruction from your teacher in doing the task or assignments?
20. Do you know the criteria on how the task or assignment will be assessed?

Learning Materials

21. What kind of learning materials do you use in learning English?
22. Have you ever used any platform or LMS in the process of learning?
23. Do you find it difficult to understand your current English book?
24. Are your learning materials also equipped with digital literacy and technological practices?
25. What are the strengths and the weaknesses of your learning materials?
26. What do you expect for the improvement of your learning materials?

Appendix C

Evaluation Sheet

Gamification in English Teaching and Learning

Description

This evaluation sheet is used to judge the quality of the product entitled "Gamification in English Teaching and Learning". This handbook is developed to offer unique ways to combine learning content equipped with the insertion of digital literacy skills and technological practices to support the acquisition of 21st-century learning in EFL class. Regarding to this, we need your response and suggestion about the material and physical design (face) of this product.

Instruction

1. This evaluation sheet is filled by the expert judges
2. There are 5 scopes of scoring for every descriptor
3. Give checklist mark (√) in the scoring column with the following information:
   - 5 : Excellent
   - 4 : Good
   - 3 : Average
   - 2 : Below Average
   - 1 : Poor

No	Descriptor	The Scope of Scoring				
		Excellent	**Good**	**Average**	**Below Average**	**Poor**
	Gamified-Based Activities					
1.	The activities provide or relate to students' real-life problems.					
2.	The activities provide the students with tasks to participate in learning process.					
3.	The activities allow students to complete the task using various sources for example QR codes to access pictures, link, video, and audio.					
4.	The activities give the students opportunities to collaborate by doing a group work					
5.	The activities provide the students with a chance to reflect at the end of the lessons					
6.	The activities can be integrated with different subjects.					
7.	There are formative and summative assessments provided.					
8.	The activities let the students create or produce creative writing, drawings, podcast, digital story, and videos.					
9.	The activities let the students have personalized learning by providing them different choices in completing tasks.					
10.	The activities provide students opportunities to use the target language to achieve communicative purposes					
	Face Validity					

1.	The cover is attractive to users
2.	The layout is attractive to users
3.	The handbook gives motivation and ideas for the teachers to be innovative in teaching and encourage students to learn English
4.	The handbook provides pictures or illustrations
5.	The language is easy to be understood
6.	The activities in the handbook are interactive
7.	The handbook can help the users to develop gamified-based learning activities
8.	The handbook contains clear information and concept of gamification in education
9.	The handbook provides the acquisition of 21st century learning, digital literacy, and technological practices
10	The gamified handbook offers various interactive activities. These can be chosen based on the class situation and condition.

Comments/Suggestions

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