

## **The Potential of Digital Games to support English as the Second Language Learners in Bali**

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### **ABSTRAK**

*Nilai edukasi permainan digital terus mendapat perhatian, khususnya untuk pengajaran bahasa Inggris. Meskipun demikian, hubungan antara permainan digital dan pembelajaran ESL khususnya rumit dalam masyarakat yang mengadaptasi gaya pendidikan Konfusius seperti di Bali. Pemerintah Bali semakin menyadari pentingnya keterampilan komunikasi dan pembelajaran digital dalam pendidikan Bahasa Inggris sebagai Bahasa Kedua (ESL) karena pentingnya keterampilan komunikasi Bahasa Inggris sangat penting dalam industri pariwisata mereka. Dengan demikian, tinjauan studi ini bertujuan untuk memetakan potensi permainan digital dalam mendukung keterampilan komunikasi pelajar ESL Bali. Tinjauan pustaka sistematis tentang permainan digital ESL dari masyarakat serupa yang mengadaptasi gaya belajar Konfusius telah dilakukan. Temuan menunjukkan bahwa (1). Permainan MMORPG adalah permainan yang paling umum ditemukan diikuti oleh permainan tutorial dalam literatur (2). Permainan tutorial sering kali merupakan permainan yang dibuat khusus; (3). Sebagian besar peserta adalah pelajar ESL tingkat pemula; (4). Mayoritas permainan digital digunakan untuk membantu pengembangan dan pemahaman kosakata; (5). Tujuan mayoritas literatur adalah menerapkan permainan digital untuk mendukung komunikasi pelajar ESL; (6). Sebagian besar literatur menemukan dampak positif pada psikologi pembelajar bahasa Inggris di Asia Tenggara; (7). Permainan digital mampu mengembangkan keterampilan kontemporer pembelajar bahasa Inggris sebagai bahasa kedua. Secara keseluruhan, temuan ini menunjukkan kesesuaian penggunaan permainan digital untuk membantu pembelajar bahasa Inggris sebagai bahasa kedua di Bali.*

**Kata Kunci:** *Bahasa Inggris sebagai Bahasa Kedua, Pembelajar Bahasa Inggris sebagai Bahasa Kedua, Pembelajaran Bahasa, Permainan Digital, Tinjauan Pustaka*

### **ABSTRACT**

There is continuing attention to the educational value of digital games especially for English language teaching. Despite that, the relationship between digital games and ESL learning is particularly tricky in a society that adapted Confucius education style like in Bali. The Balinese government is becoming increasingly aware of the importance of communicative skills and digital learning in English as a Second Language (ESL) education due to the importance of English communication skills is crucial in their tourism industries. Thus, this study review aimed to map the potential of digital games in supporting Balinese ESL learners' communication skills. The systematic literature review on an ESL digital games from the similar society that adapted the Confucius learning style has been conducted. The findings indicated that (1). MMORPG games were the most common games found followed by tutorial games in the literatures (2). The tutorial games were often custom-built games; (3). Most of the participants were beginner level ESL learners; (4). The majority of digital games were used to aid vocabulary building and comprehension; (5). The majority literatures objectives were implemented digital games to support ESL learner's communication; (6). The majority literatures discovered positive impacts on SEA Learners

psychology; (7). The digital games are capable to develop ESL learners' contemporary skills. Taken as whole, these findings suggest the overall suitability of using digital games to aid ESL learners in Bali.

**Keywords:** English as the Second Language, ESL Learners, Language Learning, Digital Games, Literature review

## **INTRODUCTION**

The existent of digital games has been drawing educators' interest for over a decade. Through their studies, many experts believe that digital games successfully draw students' engagement in learning which later leads them to improve their academic achievement (Ke, 2016; Klopfer, Osterweil, & Salen, 2009). In some particular field like English as the second language teaching, digital games have greatly contributed to helping the learners to both understand and use the language that linguistically different from their first language. Moreover, Vygotsky (1998) emphasised playing as the important means to both construct and develop abstract and imaginative thinking regarding the goal that yet capable of achieving in real life.

The incorporation of digital games into English as the Second Language (ESL) teaching contexts since the last decade has led to the emergence of game-based learning as one of recognizing teaching approach. Ke (2016) explained, a language learning game is a playful activity that formed a systematic structures, rules, and measurable outcomes (e.g., winning condition and points). It also incorporates language learning objectives (e.g., enrich students' second language vocabulary). Furthermore, due to the advance of technology, the attempt to merged a learning game into digital technology has been conducted. Some digital learning games like *Hangman*, *Scrabble*, and *Crosswords* were invented for a purpose to help language learners to practice their target language. Recent literature found the interest on digital game-based learning has exceeded the interest on non-digital game-based learning (Boyle et al., 2016). Also, the mobile digital games (e.g. in Smartphone, tablet, and console) even catch more learners' interest in comparison with the computer-based digital game given to its flexibilities (Hung et al, 2018)

However, the literature often experimented the digital game-based learning mostly in a developed country with high-quality human's resources, how about implementing it in developing countries that still incorporate traditional teaching method in schools? Would that be effective? Is that even possible? Bali is a small island in a developing country Indonesia that still lack in the application of technology. This island is worldwide known as a tourism destination where tourist from global world visit to entertain themselves with nature, culture, or traditionally in Bali. Given that information, people would expect most of the Balinese people would be ably communicating a fluent English language since they have been running the tourism industry and been surrounded by many English native speakers every day. However, most Balinese people are unable to speak English due to the education system that still majority emphasises on teacher-center learning and the traditional way of learning. In responding to that matter, the governor in Bali in the

recent news was stating that communicative purpose on both formal education (i.e. Schools) and non-formal education (i.e. Language institutes) in Bali needs to be improved. *Republika* (2018) also reported that Mangku Pastika (The governor of Bali) stated that he has planned to equipped schools in Bali with adequate equipment to maximized the incorporation the digital learning in schools and empower the communicative education. A collaborative work between the local government and others educational stakeholders will enormously support the implementation of modern learning in Bali. In his speech, he also encouraged all educators to try and implement the various modern pedagogy that they know and hopefully, the education in Bali would be improved.

Therefore, given to the continuing attention on digital game for ESL learning and the Balinese government's urgency of the modern teaching method, this study is conducted to review the potential of a Digital Game to support the English as the second language (ESL) learners in Bali. The systematic literature review on the effectiveness of digital games in supporting the ESL learners who have been experiencing the similar education system would be conducted. Also, the finding regarding the suitability of DLLG to support the ESL learners in a similar context with the Balinese context will be presented.

## **METHOD**

The systematic literature method that is employed as the research method is based on Campbell Collaboration guidelines for conducting a systematic review (Hammerstrom, Wade, & Jorgensen, 2010). The authors highlighted the importance of methodically screening studies to discover the critical information to answer specific research questions. This review is concerned with the introduction of a new learning approach that is still viewed as sensitive and debatable by the target society. Therefore, it was important to establish a robust evidence base to inform education policy and practice in Bali.

## **RESULT AND DISCUSSION**

This section presents the findings that generated from the reviewed literatures by using the three coding themes. The section presents the genre of the digital games generated from the literatures along with the target learners. The impact on both ESL learners' SLA and Psychology will be presented. Lastly, the findings regarding the contemporary skills will be presented as the sub-section of the Psychology section.

### **Types of Digital Games**

The focus of this section is to highlight the trends of digital games and the platforms that are used in literature reviews and to state the general findings as reported in the literature. The top digital game types that have been utilised in supporting ESL learners are also presented.

### **Digital Games Genre**

Out of 20 reviewed literatures, variant games have been implemented to support ESL learners in SEA contexts. Both of the games' genres and definitions were adopted from the nine categories adapted from Hung et al., (2018), however, in 20 pool literatures only four games genre can be generated namely the MMORPG, Tutorial games, Simulation games and Adventure games. The presented table depicts the genre of digital games in the literatures.

**Table 1.** Digital Games' Genre

<b>GENRE</b>	<b>DEFINITIONS</b>	<b>LITERATURES</b>
<b>MMORPG (N=10)</b>	The types of games that present narrative experiences for the players through avatar and able to interact with other players or non-player in the artificial 2D or 3D game setting	Chen (2016) Chik (2014) Cornilie, Clarebout, & Desmet (2012) Gentile et al (2011) Pirainen-Marsh & Tainio (2009) Reinders & Wattana, S. (2015) Suh, Kim, & Kim, (2010) Thorne (2008) Young et al (2012)
<b>TUTORIAL GAMES (N=7)</b>	The types of games that integrate the teaching presence for improving learning through several learning methods (i.e. drill, quizzes, questions and answer, and puzzles)	Yang, Lin, & Chen (2017) Hwang et al (2016) Hwang & Wang (2016) Su & Cheng (2015) Yang,Quadir, & Chen (2016) Hung & Young (2015) Smith (2013)
<b>SIMULATION GAMES (N=2)</b>	The types of games that provide the players a contextual experience that mimics the real-life setting and activities	Niswah (2013) Ranalli (2008)
<b>ADVENTURE GAMES (N=1)</b>	The types of games that incorporated the fictional and fantasy adventure that rich of action elements.	Chen & Yang (2013)

**Table 1** clearly illustrates the variant genre digital games in the literature. Out of 20 literatures, the “massively multiplayer online role-playing game” or MMORPG were the most popular genre to be used (n=10) followed by tutorial games (n = 7), while simulation games and adventure games were less popular. This finding is consistent with Smith et al. (2013) and Thorne (2008) that the immersive games like MMORPG were getting popular for teaching English in genuine contexts. Peterson (2012) described MMORPG as heavily utilising real-time text-based interaction and Audio-communication features to engage players. In other word, this game provides features to do a live chatting or live communication (through microphone) with other players. These features also provide the players with an opportunity to communicate with Non-Player Characters (NPC). NPC is a in-game characters controlled by the computer and have equipped with predetermined responses or behavior. As per Piirainen-Marsh and Tainio (2009) NPC are equipped with English text and English audio that provides the players with the experience of an actual conversation when their avatars have to listen to and comprehend the NPC’s instructions to complete the mission. Moreover, Thorne (2008) highlighted the importance of communication with NPC when he noted they often provide critical assistance: instructions for a goal-directed task (also called Quests or Missions). Reinders and Wattana (2015) identify the communication features in MMORPG as a major advantage as the games incorporate English Language Teaching and Learning into the experience.

The MMORPG used in the literature were diverse: *World of Warcraft* or *WoW* (Thorne, 2008), *Wonderland* (Peterson, 2012) and *Quest of Atlantis* (Young et al., 2012). Those three games are examples of MMORPG that allow players to play a game while interacting with other players to achieve common goals or finish a quest (Chik, 2014). Especially in the *WoW* game, players are required to play in a team which consists of 5 different people to achieve a common goal (Thorne, 2008). However, Chen (2016) explained that MMORPG is not always restrained by fixed goals. For instance, in the *Viriantis* game, players are not given a fixed quest to accomplish. Instead, they are given the freedom to customise and build their avatar and world and conduct other activities that mimic real-world activities in the quest to upgrade their avatar or collect resources. Chen (2016) utilised *Viriantis* to build a virtual class and invited his ESL learners’ avatar to do learn in a virtual world. He incorporated Task-based Learning such as role playing while some players play as seller while the other half play as the buyers or gave them mission collecting specific items in the virtual world to let students utilise their English language skills. A similar finding was also discovered by Suh, Kim, & Kim (2012), where a MMORPG entitled *Nori Class* was utilized to present a virtual class to Korean ESL learners. However, in contra with Chen (2016) who purposely used the virtual classroom to mimic the real classroom, Suh, Kim & Kim (2012) maintained the sense of playing in a game and utilised English instruction to divide students into groups with a goal of slaying monsters in a virtual world. Peterson (2012) explained that the MMORPG experience supports ESL learners through interpersonal relationships, common

goals, and community formation thus allowing teachers to utilise the games' features in accordance with their learners' needs.

Moreover, some MMORPG in the literature do not belong in the Educational Game category. The presented MMORPG like *WoW* and *Virlandis* were initially designed for entertainment purposes (Chen, 2016; Suh, Kim, & Kim, 2012; Thorne, 2008). As per Peterson (2012) highlighted that the nature of MMORPG presents collaborative forums for ESL learners to negotiate, experience a learner-centred environment, exist in an informal setting for purposeful and meaningful communication and have a concrete context for enjoyable and engaging learning. In short, MMORPG provide ESL learners with an immersive environment where the language is used routinely to interact with others thus helps ESL learners to improve their communication skill. Also, MMORPG often cause the players to read purposeful texts. To illustrate, Chik (2014) claimed that MMORPG players often read game-related texts such as the games' *walkthrough* (guidance document) and join global discussion forums to complete the games. She emphasised that the players often carefully and enthusiastically read these game-related texts as they have a concrete purpose for doing so (i.e. to learn the games' instructions and strategy). Moreover, these game-related texts are often imaginative and highly sophisticated. As Thorne (2008) mentioned, these texts are rich lexical items and syntactic structures or languages. Thus, the literature pointed out that the contextual and meaningful features in non-educational MMORPG make them eligible for implementation into ESL learning.

## **Tutorial games**

The finding discovered major numbers of tutorial games incorporated in the literature even upon the emergence of MMORPG that massively support ESL learners' communication (Chik, 2014; Thorne, 2008). Cornilie, Clarebout, & Desmet (2012) explained that tutorial games provide an appropriate balance between learning and gaming. They explained that incorporating games into the learning process could possibly outweigh other forms of learning and learners would be predominantly drawn to the games. Moreover, they claimed that the majority of ESL learners still prefer learning the detailed metalinguistic features (such as phoneme, grammar) of the target language to maximized their understanding. In line with Yang et al. (2018), they discovered the urgency of additional support of ESL terms for digital game instructions (such as vocabulary) for low-level ESL learners. Moreover, Hwang et al. (2016) emphasis that games with a systematic vocabulary learning process are more effective to build ESL learners communicative skills. Therefore, literature (Cobb & Horst, 2011; Yang et al., 2018) suggested digital games with a specific language learning purpose and features are more beneficial to support beginner level ESL Learners.

Studies in the reviewed literature rarely incorporated a commercial tutorial games to support their ESL learners. Many of the games are custom-built (Hung & Young, 2015; Smith et al., 2013; Su & Cheng, 2015; Hwang et al., 2016; Yang, Quadir, & Chen, 2016) and created for the ultimate purpose of supporting ESL learners.

Hung & Young (2015) highlighted that a specific educational ESL game should avoid complex rules or overly-varied sequences. They are concerned with the integration of scaffolding methods such as the repetitive movement and lucky guess movement to support ESL learners' memorisation of the material they learn. In addition, Yang, Lin, & Chen. (2017) highlighted the importance of educational games used by ESL learners to reduce the potential of psychological drawbacks. Moreover, other experts agreed that tutorial games meet the required specifications for the sequence of learning (Su & Cheng, 2015): simple structure, simple instructions and simple rules (Hung & Young, 2015). The findings discovered several specific elements essential for tutorial games for ESL learners, thus the experts prefer to incorporate custom-built tutorial games so they possibly insert these elements into the games.

Moreover, the majority of the tutorial games were custom-built to support vocabulary building for ESL learners. Cobb & Horst (2011) in particular highlighted the complexity of acquiring and comprehending new vocabulary. According to Smith et al. (2013), ESL learners from Confucian education background often learn language through memorisation-techniques, especially new vocabulary. They claimed that learners primarily memorise vocabulary without it being presented in context, thus reducing their understanding regarding the word's meaning and function. Moreover, Cobb & Horst (2011) conveyed the lack of context in vocabulary learning as potentially disabling learners from memorizing the word for a long period of time. They emphasised that context can be presented by pairing and recycling the vocabulary so that ESL learners would be able to discover the context of the vocabulary they have learnt. Therefore, some literature (Cobb & Horst, 2011; Hung & Young, 2015; Smith et al., 2013) suggested that pairing and recycling features in the digital games are suitable to aid ESL learners' vocabulary building.

To summarize, the first finding has discovered that there are two main genres of digital games that are commonly used to support ESL learners in the Confucian society and of Confucian learning style: MMORPG and Tutorial games. On the one hand, both educational (see: Peterson, 2012) and non-educational (see: Chen, 2016; Thorne, 2008) MMORPG can be utilized to support ESL learners' communication skills. Both genres present a massive opportunity for players to experience the use of the English language (Pirainen-Marsh & Tainio, 2009,) and enhance their communication skills (Chik, 2014; Gentile et al, 2011; Peterson, 2012). On the other hand, the finding also found that tutorial games are more suitable for ESL learners who prefer systematic English learning (Cornilie, Clarebout, & Desmet, 2012); Hwang et al, 2016), and deeper lexical comprehension (Yang, Lin, & Chen. 2017). Ultimately, both of the games are esteemed by experts due to the features that enhance English learners' vocabulary.

## **Target Learners**

This section displays the variety of target learners that have been assisted by digital games to learn English as their second language, presents the distribution of learners based on their nationalities and first languages, and outlays the impact on ESL learners' language development.

The distribution of the target learners found in the reviewed literature is depicted in the following figure:



Figure 1. Target Learners

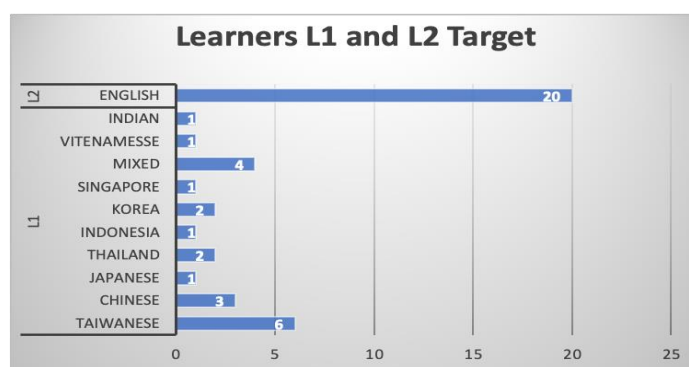


Figure 3. Learners L1 and their L2 target

Figure 2 displays the variety of learners from SEA countries who have inherited the Confucian learning style. The majority of target learners are Taiwanese. Six literatures (33,3 %) conducted experiments on Taiwanese learners at various educational stages: Elementary students (Example: Niswah, 2013; Suh, Kim, & Kim, 2010), Highschool students (Example: Hwang & Wang, 2016), and University students (Example: Chen, 2016). However, most of the learners' English competency was similar (Beginner level). Another majority of target learner found were the mixed categories with identical numbers, 33.3%. These categories were derived from literature that conducted an experiment on a group that consisted of ESL learners from various national backgrounds. For instance, Ranali (2008) conducted a digital games study on a group of ESL learners that consisted of Chinese, Korean, and Vietnamese learners. Young et al, (2012) experimented with digital games on a group of ESL learners from China and the Netherlands. Furthermore, Chen (2016) also conducted a study of digital games on a group of ESL learners from Sweden, India, and Thailand. It is important to note that even the Chen (2016) and Young et al. (2012) studies consisted of non-SEA learners. However, the SEA ESL learner population was dominating the group, thus their literature still fit the criteria. The other target learner population was considerably low in

comparison to these two categories. The distribution of target learners from Japan, Thailand, Indonesia and Singapore were 5% while China was 10%. This number is considerably consistent with Hwang et al (2016) that the use of digital games in Taiwan is gaining popularity because of the urgency of national curriculum for digital learning. However, the number of other target learners with a 5% distribution depicts the scarcity of digital game-based literature in their countries.

**Figure 3** displays the distribution of ESL learners from the reviewed literature' with respect to their first language and their target language. As this study was conducted on supporting ESL learners, 100% of the target language in the literature was English while the distribution of learners' first languages was more diverse compared to the target learners (see: **Figure 2**). The finding presents the first languages of ESL learners from 10 different SEA countries who participated in the literature. The table shows three additional populations compared to the target learners' population. It was due to ESL learners from the *mixed* category (See: **Figure 2**) also having a first language from SEA countries. While the learners in the *others* category (See: **Figure 3**) consists of ESL students from both SEA and non-SEA countries. For example, the Netherlands (Young et al., 2012), Sweden (Chen, 2016), Ukraine (Thorne, 2008), and France (Cobb & Horst, 2011). Chik (2014) explained that Asian society has a big interest in playing digital games especially during their leisure time, thus digital games would be suitable to be incorporated into education. Moreover, this finding is also parallel with (Reinders and Wattana, 2015) the discovery that for the last decade the majority of digital games-based study were conducted in context of SEA ESL learners.

### The Impact on SEA ESL Learners

As the purpose of this review is to synthesise and report the major impacts of digital games on ESL students, a total of 40 variables were generated from the 20 reviewed literatures. The variables were generated in accordance to the second theme (SLA Outcome) and the third theme (Psychological impact and Contemporary skills) for this study. Table. 5 displays the most frequent variables found in the literature. The distributions are presented as follows: SLA outcomes (n = 16), impact on contemporary competencies (n= 13), impact on psychological states (n = 11). Each variable will be further explained below and illustrated using the reviewed literature.

**Table 2.** The Distribution of Variable

<i>LITERATURES (N=20)</i>					
IMPACTS VARIABLE (N=40)	POSITIVE	NEGATIVES	NOT SIGNIFICANT	MIXED	TOTAL N=40
<b>SLA OUTCOMES (N = 16)</b>					
WRITING	2	0	0	0	2
SPEAKING	0	0	0	1	1
READING	1	0	0	0	1
LISTENING	2	0	0	0	2

VOCABULARIES	5	0	0	0	5
GRAMMARS	0	0	0	0	0
PRONUNCIATION	0	0	0	0	0
INTEGRATED SKILLS	4	0	0	0	4
<b>IMPACT ON CONTEMPORARY COMPETENCES (N = 13)</b>					
CRITICAL THINKING	0	0	0	0	0
CREATIVE THINKING	0	0	0	0	0
COLLABORATION	7	0	0	0	9
COMMUNICATIVE COMPETENCE	6	0	0	0	6
<b>IMPACT ON PSYCHOLOGICAL STATES (N=11)</b>					
MOTIVATION OR ENGAGEMENT	5	0	0	0	5
LEARNERS AUTONOMY	1	0	0	0	1
SELF-EFFICACY OR CONFIDENCE	0	0	0	0	0
COGNITIVE LOAD	0	1	0	0	1
PATHOLOGY	0	1	0	0	1
WILLINGNESS TO COMMUNICATE	4	0	0	0	4
<b>TOTAL = 40</b>	<b>36</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>n=40</b>

### **The Impact on SEA Second language Acquisition (SLA)**

**Table 2** depicts the impact of digital games in supporting ESL students from the reviewed literature. The variables that are being presented in this finding are the four English skills, the three major areas of English second language learning (See: Stockwell, 2007), and the integrated skills. It is important to note that, out of the 20 literatures, 15 literatures (75%) experimented on the impact of digital games toward ESL learners' SLA (For instance: Chik, 2014; Hung & Young, 2015; & Hwang et al, 2016) while 5 literatures (25%) specifically experimented the Digital games impact on ESL learners' psychology (For instance Cornilie, Clarebout, & Desmet, 2012); Yang, Quadir, & Chen, 2016). Moreover, out of those 15 literatures, 3 literatures (20%) experimented on both the digital games impact on ESL learners SLA and Psychology (For instance: Chen, 2016; Suh, Kim, & Kim, 2010). Thus, the findings' distributions are parallel with the previous experts (Cornilie, Clarebout, & Desmet, 2012), Reinders & Wattana, 2015; Yang, Lin & Chen, 2018) regarding the trends of literature from the past decade that reviewed the digital games' impact on ESL learners' language acquisition and their attitudes toward the digital games.

In terms of language acquisition, most literature experimented with digital games for vocabulary building and comprehension, instead of other less-popular

English skills: Writing (Hwang et al, 2014), Reading (Suh, Kim, Kim, 2010), and Listening (Yang, Lin, & Chen, 2017). Smith et al. (2013) experimented on the use of eBook matching games to aid ESL students' vocabulary building and comprehension; the learners managed to effectively increase their English vocabulary through matching a word with its synonym, antonym, meaning and function. This finding is parallel with Cobb & Horst (2011), Hwang et al. (2016), and Smith et al. (2013), who presented the benefit of digital games to aid vocabulary building.

Moreover, literature regarding research on acquiring grammar skills through playing digital games was unable to be found. Reinders & Wattana (2015) Explained that focus on grammar is considered to be what often reduces SEA ESL learners' motivation because of its complexity. In line with that, Su & Cheng (2015) tried to avoid explicit grammar teaching since it is strongly related to the traditional Confucian learning method. Thus, the element of grammar in the games is implicitly introduced through contextual tasks (Chen, 2016). In addition, the variables regarding integrated skills were frequently found in the literature. For instance, Suh, Kim, & Kim (2010) employed the MMORPG to improve Korean ESL learners' writing, speaking, reading and listening, while Hwang & Wang (2016) incorporated custom-built digital games to aid Taiwanese ESL learners' speaking, listening, and vocabulary comprehension. Both studies found their test groups were capable of outperforming their counterparts. This literature showed that through post-tests, the group's listening, reading, and vocabulary were significantly more advanced than their counterparts.

To summarise, the findings pointed out the attempt to shift the ESL pedagogy from the Confucius traditional pedagogy into a more modern pedagogy. In the literature, experts' objectives often lead learners to acquire English language for more meaningful, communicative, and engaging purposes. To illustrate, there was a major focus on acquiring a wider range of vocabulary and understanding its meaning, thus strengthening a learners' language foundation (Cobb & Horst, 2011; Smith et al., 2013). Consequently, the goals have shifted to aid learners in acquiring communication skills through integrated environments and to rarely focus on teaching an isolated skill (i.e. Reading) or passing a test (Hwang & Wang, 2016; Suh, Kim, & Kim, 2010). Through digital games, the experts have attempted to allow learners to engage in and become interested in learning the language by reducing linguistic elements, such as grammar, that potentially demotivate ESL learners (Reinders & Wattana, 2015). Thus, the last decade's literature incorporated digital games to begin a revolution in ESL teaching, from acquiring English as a learning subject, to engaging the learners in strengthening their language foundation and practical knowledge and using the aquired language skills in effective communication.

## **The Impact on SEA ESL Learners' Psychological States**

The variable discovered that digital games often enhance ESL learners' engagement (Cornilie, Clarebout, & Desmet, 2012), autonomy (Chik, 2014), self-

efficacy (Yang, Quadir, & Chen, 2016), and willingness to communicate using the English language (Chen, 2016; Reinders & Wattana, 2015). Some literature explored a specific game element in aiding ESL learners. For instance, Cornilie, Clarebout, & Desmet (2012) investigated the implicit corrective feedbacks (CF) element in the *Flemish* MMORPG towards ESL learners' motivation. They found that students often prefer the implicit CF since it gave them quicker feedback and less emotional stress. On the other hand, learners also found that implicit CF often lacked the correct response or clear metalinguistics explanation. A similar study was conducted by Yang, Quadir, & Chen (2016) where a digital badge system was incorporated into ESL digital games. They discovered that the digital badge system effectively increased ESL learners' self-efficacy. Chen (2016) incorporated the virtual setting into the *Virlantis* MMORPG. Through this implicit setting, he discovered that students were more encouraged to chat, joke, and enhance unique features of their English language skills compared to learners in real-world classrooms. Su & Ceng (2015) emphasised the importance of implicit elements (setting, feedback, and compliments) on SEA ESL learners, as they often avoid public criticism that potentially makes them ashamed of their language skills (Reinders & Wattana, 2015).

However, not all literature presented positive findings. Take Gentile et al. (2010) and Yang, Lin, & Chen (2017); they highlighted the potential of negative impacts of digital games on ESL learners. Gentile et al. (2010) found the potential of ESL learners in Singapore to become pathological gamers due to the integration of MMORPG games into the ESL pedagogy. They argue that the imbalance between education and entertainment content in the games resulted in learners becoming addicted to the games. Moreover, mental health issues such as depression possibly emerged when learners were unable to complete quests and were required to repeat them. The similar study by Yang, Lin, & Chen (2017) compared the learners' anxiety levels when they were playing custom-built ESL games (*GEILTS*) and when they were playing games for entertainment. The learners were more anxious when they were involved in a quest that incorporated ESL features compared to a quest that was undertaken purely for entertainment.

To summarize, the findings discovered both positive and negative elements that potentially affected ESL learners' psychological states. The literature highlighted the positive features that are suitable to support ESL learners from Confucian backgrounds such as indirect feedback (corrections, critique, or compliments) that allows for increased engagement in learning and assists in communication. Reinders and Wattana (2015) explained that communication is one of the biggest challenges for the SEA ESL learners considering they often avoid making mistakes so as not to be embarrassed in public. However, the literature also highlighted the potential of mental and emotional health issues for students (Gentile et al., 2010; Yang, Lin, & Chen, 2017). Thus, a concrete balance and time-limitation for using digital games to aid ESL Learners is essential, especially to maximise the learning outcomes.

## **Impact on SEA ESL Learners' contemporary competences**

Contemporary competences or 21<sup>st</sup> Century skills were also found in the literature (n=13). Cross-cultural interaction, collaboration, and communication were frequently found in the literature, especially in the MMORPG literature. Take Peterson (2012), for example - through the *Wonderland* MMORPG he discovered ESL learners' linguistics and social interactions present in the form of politeness and humor. He highlighted that both of the interactions above required a communication strategy across sociolinguistics, thus the learner developed linguistics, communication, and cross-cultural understanding. In line with this, Chik (2014) describes a similar communication strategy used by ESL learners in global game forums. She added that the learners were also experiencing authentic literacy practice or authentic translation practice when communicating in this forum. In addition, Thorne (2008) found that the *WoW* MMORPG players exercised the aforementioned competencies to play collaboratively as a team consisting of 5 different players. Moreover, they had also learned to understand the in-game linguistic complexity (i.e. game's commands and player-to-player interaction) to a functional capacity, allowing them to build a strategy, divide tasks, and complete the quest as a team. To summarise, despite the scarcity of literature, there is some concrete evidence that displays the potential of digital games in enhancing three valuable 21<sup>st</sup> century skills namely cross-cultural interaction, collaboration, and communication

## **CONCLUSION**

The current study has systematically review 20 Digital Games to support ESL learners from the South East Asian countries for the past decade. The majority of findings are summarized as follows: (1). MMORPG games were the most common games found in the literatures followed by the tutorial games; (2). The specific tutorial games for ESL learning were often custom-built games; (3). Most of the participants were beginner level ESL learners; (4). The majority of digital games were used to aid vocabulary building and comprehension; (5). The majority literatures objectives were implemented digital games to support SEA ESL learner's communication; (6). The majority literatures discovered positive impacts on SEA Learners psychology; (7). The digital games are capable to develop ESL learners' contemporary skills.

In relation to the research purposes, the aforementioned findings display the suitability of digital games to aid ESL Learners in Bali. To illustrate, there are the similarity among the popular games in use (1), the learning objectives and the target learners (4;5;6), the learning suitability with learning style (6). Lastly, regarding the policy and practice, the findings are also discovered the effective impact toward the 21<sup>st</sup> century skills (7) and learners' communicative competence (5). Thus, given the number of the similarities, it is likely the to incorporate the digital games to support ESL learners in Bali.

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Vol 5 No 2 (2025) 1172 – 1189 P-ISSN 2774-5058 E-ISSN 2775-7269

DOI: 47467/eduinovasi.v5i2.8208

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