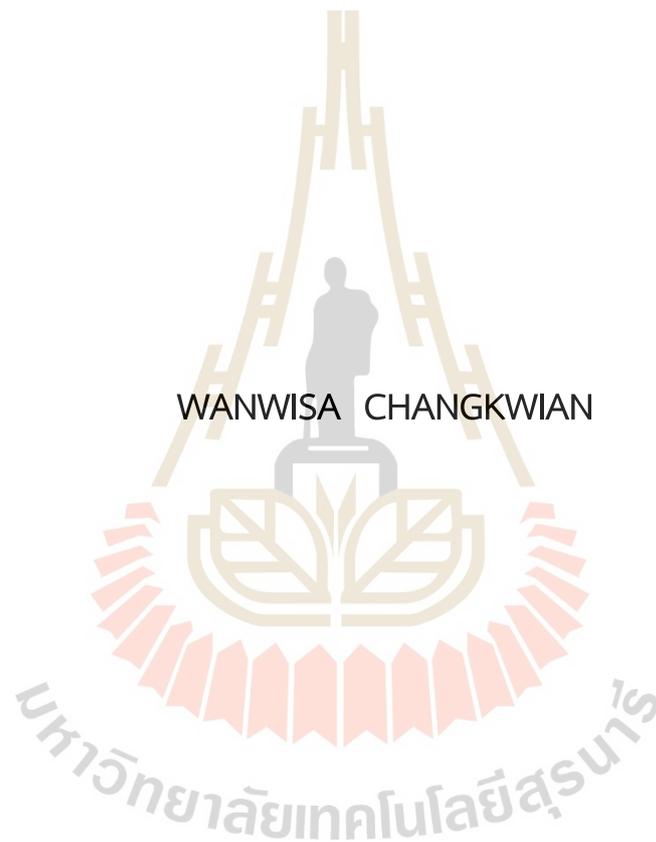


THE EFFECTS OF A MASSIVELY MULTIPLAYER ONLINE ROLE-  
PLAYING GAME ON READING FOR MAIN IDEA OF  
THAI EFL UNDERGRADUATE STUDENTS



A Thesis Submitted in Partial Fulfillment of the Requirements for the  
Degree of Master of Arts in English Language Studies  
Suranaree University of Technology  
Academic Year 2021

ผลของเกมออนไลน์แบบเล่นตามบทบาทสมมุติที่มีผู้เล่นจำนวนมาก  
ต่อการอ่านจับใจความสำคัญของนักศึกษาระดับปริญญาตรี  
ชาวไทยที่เรียนภาษาอังกฤษในฐานะภาษาต่างประเทศ



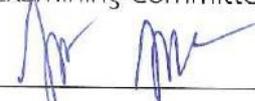
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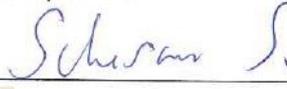
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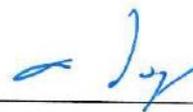
  
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วันวิสาข ช่างเกวียน : ผลของเกมออนไลน์แบบเล่นตามบทบาทสมมุติที่มีผู้เล่นจำนวนมาก ต่อการอ่านจับใจความสำคัญของนักศึกษาระดับปริญญาตรีชาวไทยที่เรียนภาษาอังกฤษในฐานะภาษาต่างประเทศ (THE EFFECTS OF A MASSIVELY MULTIPLAYER ONLINE ROLE-PLAYING GAME ON READING FOR MAIN IDEA OF THAI EFL UNDERGRADUATE STUDENTS) อาจารย์ที่ปรึกษา : อาจารย์ ดร.สุขสรณ์ ศุภเศรษฐเสรี, 206 หน้า.

คำสำคัญ: เกมออนไลน์แบบเล่นตามบทบาทสมมุติที่มีผู้เล่นจำนวนมาก/ เกมออนไลน์ /การอ่านจับใจความสำคัญ/ นักศึกษาระดับปริญญาตรีชาวไทย

ทักษะการอ่านถือเป็นทักษะที่สำคัญที่สุดอีกทักษะหนึ่งในบรรดาทักษะการเรียนรู้ภาษา เนื่องจากทักษะการอ่านนั้นเป็นต้นกำเนิดในการพัฒนาภาษาในองค์กรรวม หากจะเข้าใจภาษาให้ถ่องแท้ นักศึกษาจำเป็นต้องมีทักษะในการรับสาร นั่นก็คือทักษะการอ่านและทักษะการฟัง อย่างไรก็ตาม นักศึกษาชาวไทยยังคงประสบปัญหาในการเข้าใจเนื้อหาที่อ่าน โดยเฉพาะการอ่านจับใจความสำคัญ อีกทั้งความก้าวหน้าในเทคโนโลยีและรูปแบบการสอนแบบชีวิตวิถีใหม่มีผลเกี่ยวเนื่องให้การเรียนออนไลน์เข้ามามีบทบาทสำคัญ โดยเฉพาะการเรียนภาษาอังกฤษ ซึ่งประสบการณ์ในการเรียนที่ดีของ นักศึกษานั้นจะช่วยส่งเสริมให้นักศึกษาเรียนอย่างสนุกและมีแรงจูงใจ ในการศึกษาครั้งนี้ การใช้เกมออนไลน์แบบเล่นตามบทบาทสมมุติที่มีผู้เล่นจำนวนมาก ได้ถูกนำมาใช้ในการสอนนักศึกษาให้เรียนอย่างสนุกและเปิดโอกาสให้นักศึกษาได้เรียนรู้นอกห้องเรียน โดยงานวิจัยฉบับนี้มีวัตถุประสงค์เพื่อ ศึกษาผลของการใช้เกมออนไลน์แบบเล่นตามบทบาทสมมุติที่มีผู้เล่นจำนวนมากเพื่อการเรียนการอ่าน จับใจความสำคัญ และเพื่อศึกษาความคิดเห็นของนักศึกษชาวไทยที่มีต่อการใช้เกมออนไลน์แบบเล่นตามบทบาทสมมุติที่มีผู้เล่นจำนวนมากเพื่อการเรียนการอ่านจับใจความสำคัญ

ผู้มีส่วนร่วมกับงานวิจัยครั้งนี้คือ นักศึกษาชาวไทยในระดับมหาวิทยาลัย จำนวน 35 คน ซึ่งเป็นผู้ที่ลงทะเบียนเรียนหลักสูตรภาษาอังกฤษเพื่อจุดประสงค์ทางด้านวิชาการ ในปีการศึกษา 2564 ที่มหาวิทยาลัยเทคโนโลยีสุรนารี การวิจัยกึ่งทดลองแบบผสมวิธีได้ถูกนำมาใช้ในงานวิจัยครั้งนี้เพื่อ รวบรวมข้อมูลตลอดระยะเวลาการทดลอง โดยหลังจากการทดสอบก่อนเรียน นักศึกษาในการทดลอง ได้รับการเรียนการสอนโดยใช้เกมออนไลน์แบบเล่นตามบทบาทสมมุติที่มีผู้เล่นจำนวนมาก หลังจาก การทดลองสิ้นสุด นักศึกษากลุ่มนี้ได้รับการทดสอบหลังเรียน จากนั้น ตอบแบบสอบถามและเข้ารับ การสัมภาษณ์แบบกึ่งโครงสร้าง

ผลการวิจัยครั้งนี้พบว่า

1. เพื่อให้ทราบถึงผลของการใช้เกมออนไลน์แบบเล่นตามบทบาทสมมุติที่มีผู้เล่นจำนวนมาก เพื่อการเรียนการอ่านจับใจความสำคัญ ผลสัมฤทธิ์ของการเรียนรู้การอ่านจับใจความสำคัญของ นักศึกษาก่อนและหลังเรียนด้วยเกมออนไลน์แบบเล่นตามบทบาทสมมุติที่มีผู้เล่นจำนวนมาก สถิติที่

นำมาใช้เพื่อเปรียบเทียบคือ paired sample t-test โดยผลสัมฤทธิ์ของการเรียนรู้การอ่านจับใจความสำคัญที่ได้จากการวิเคราะห์การทดสอบหลังเรียน (ค่าเฉลี่ย = 14.26) ของนักเรียนนั้นสูงกว่าผลของการทดสอบก่อนเรียน (ค่าเฉลี่ย = 7.06) อย่างมีนัยยะสำคัญทางสถิติที่ระดับ .000

2. ในส่วนของแบบสอบถามและการสัมภาษณ์ถึงโครงสร้าง ผลการวิจัยชี้ว่านักเรียนมีความคิดเห็นที่ดีต่อการใช้เกมออนไลน์แบบเล่นตามบทบาทสมมุติที่มีผู้เล่นจำนวนมากเพื่อการเรียนการอ่านจับใจความสำคัญ ค่าเฉลี่ยเท่ากับ 4.40 (S.D. = 0.57) นอกจากนี้ ผลจากการสำรวจความคิดเห็นของนักเรียนยังเผยให้เห็นว่านักเรียนชอบการเรียนการอ่านจับใจความสำคัญด้วยเกมออนไลน์แบบเล่นตามบทบาทสมมุติที่มีผู้เล่นจำนวนมาก เนื่องจากเกมสนุก จูงใจ และสะดวกต่อการเรียนรู้

จากผลการศึกษา อาจกล่าวได้ว่า เกมออนไลน์แบบเล่นตามบทบาทสมมุติที่มีผู้เล่นจำนวนมาก เป็นวิธีการเรียนการสอนที่สามารถใช้เพื่อส่งเสริมการเรียนรู้การอ่านจับใจความสำคัญของนักเรียนได้



WANWISA CHANGKWIAN : THE EFFECTS OF A MASSIVELY MULTIPLAYER  
ONLINE ROLE-PLAYING GAME ON READING FOR MAIN IDEA OF  
THAI EFL UNDERGRADUATE STUDENTS.

THESIS ADVISOR : SUKSAN SUPPASETSEREE, Ph.D., 206 PP.

Keywords: Massively Multiplayer Online Role-Playing Game/ Online Games/ Reading  
for Main Idea/ Thai University Students

Reading is considered one of the most important skills among the four language skills as it can improve overall proficiency of the language. In order to fully understand the language, students should possess receptive skills which are reading and listening. However, some Thai students still have problems understand the reading texts, especially reading for main idea. Also, with the advance of technology and new normal learning modalities, online learning is a must, especially English language learning. Students' online learning experiences in learning can encourage them to learn with more fun and motivation. In this study, Massively Multiplayer Online Role-Playing Game (MMORPG) was used to enhance students to learn with fun and also provide more opportunity to learn outside the classroom. The purpose of this study were to investigate the effects of MMORPG on learning reading for main idea and to examine the Thai students' perception of learning reading for main idea via MMORPG.

The present study was conducted with 35 Thai EFL university students, who enrolled the English for Academic Purposes in academic year 2020 at Suranaree University of Technology (SUT). A mixed method quasi-experiment was implemented as a source for collecting data over the period of experiment. After taking a pretest, students in the experiment studied reading for main idea via MMORPG online. At the end of the experiment, students were asked to do the posttest. Later, the questionnaire and semi-structured interview were administered.

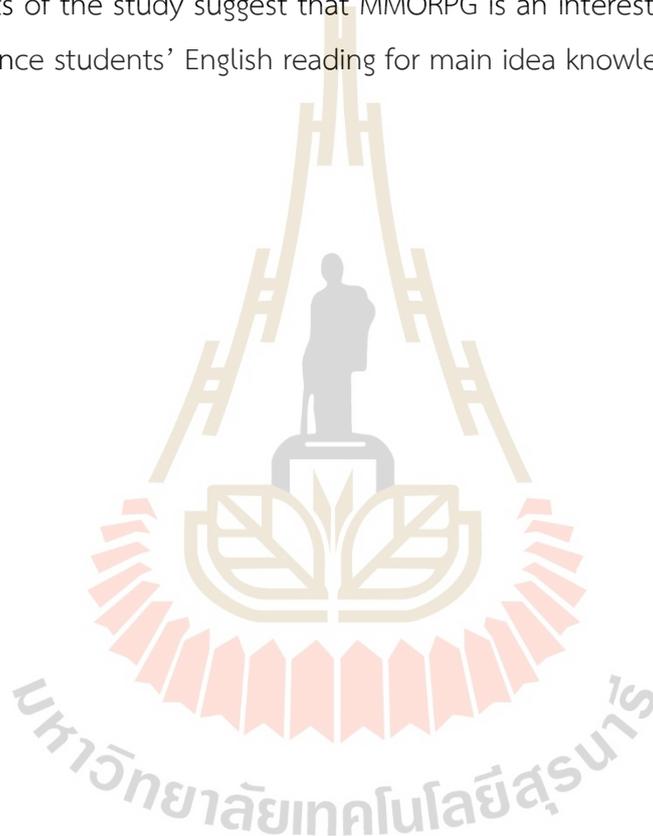
The results of the present study were illustrated in the following details.

(1) In response to the investigation of the effects of MMORPG on English reading for main idea knowledge, students' reading for main idea achievement before and after studying with MMORPG was compared. A paired sample t-test was used to determine the difference. The results of English reading for main idea achievement of

the students in posttest ( $\bar{X} = 14.26$ ) was higher than those in the pretest ( $\bar{X} = 7.06$ ) with statistically significant differences ( $p = .000, p < .05$ ).

(2) In regards to the questionnaire and semi-structured interview, the finding indicated that students had good perception about the use of MMORPG at the average score of  $\bar{X} = 4.40$  (S.D. = 0.57). Moreover, the results of students' perceptions also revealed that students liked learning English reading for main idea via MMORPG because it was fun, motivating, and convenient for their learning.

Results of the study suggest that MMORPG is an interesting tool which can be used to enhance students' English reading for main idea knowledge



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Wanwisa Changkwian

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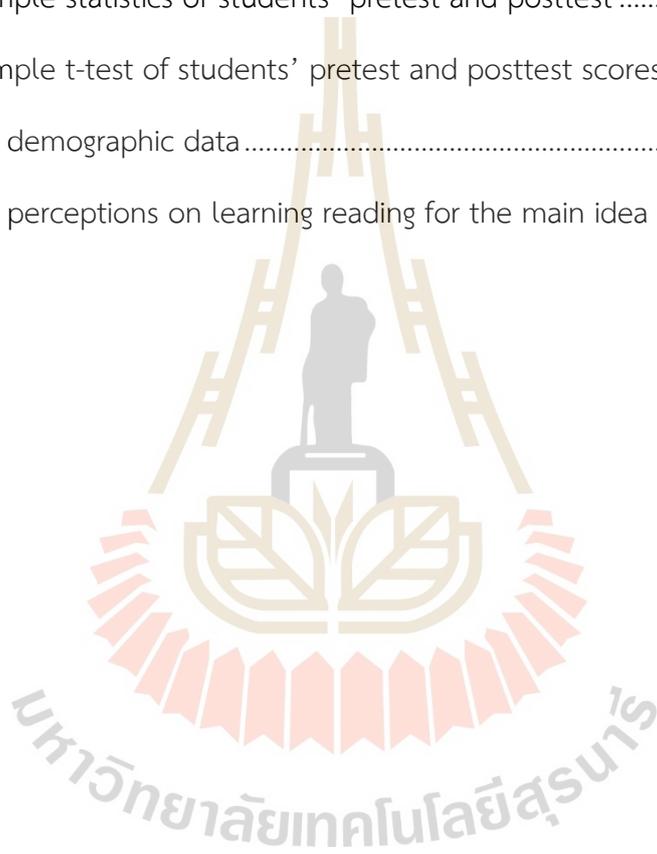
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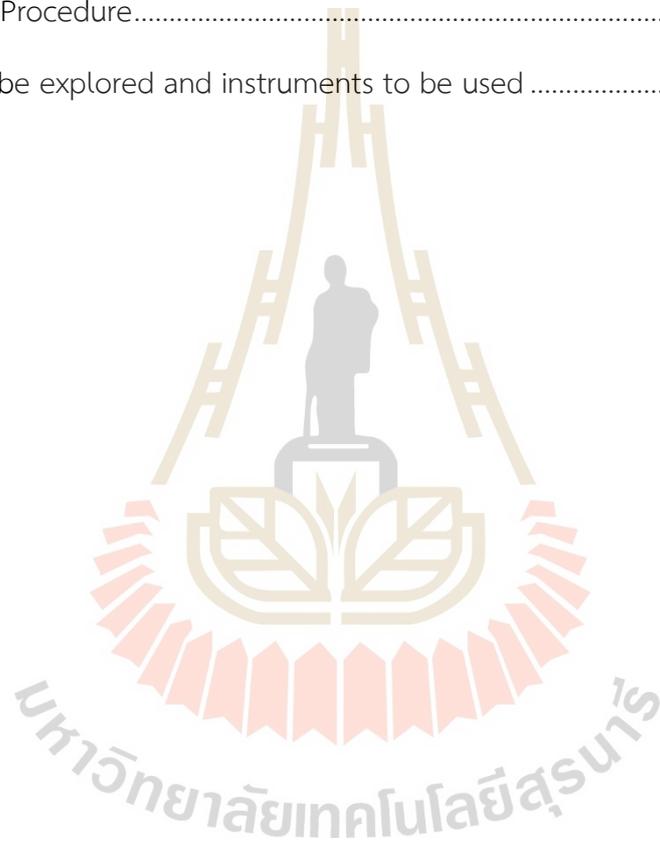
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## LIST OF ABBREVIATIONS

4W1H	Why When Who What How
CALL	Computer-Assisted Language Learning
CEFR	Common European Framework of Reference for Language
COVID-19	Coronavirus19
CSR	Collaborative Strategic Reading
DOTA2	Defense of the Ancients 2
EFL	English as a Foreign Language
ELLIS	European Laboratory for Learning and Intelligent Systems
EQ	EverQuest
ESL	English as a Second Language
IOC	Item Objective Congruence
MMOPRG	Massively Multiplayer Online Role-Playing Game
MOBA	Multiplayer Online Battle Arena
RPG	Role-Playing Game
RTA	Reciprocal Teaching Approach
SPSS	Statistical Package for the Social Sciences
SQ3R	Self-Regulated Reading Approach
SUT	Suranaree University of Technology
UK	United Kingdom
USA	United State of America
WOW	World of Warcraft

# CHAPTER 1

## INTRODUCTION

The present study aims to investigate how the Massively Multiplayer Online Role-Playing Game (MMORPG) could affect the reading for the main idea of EFL students. The researcher has developed a Massively Multiplayer Online Role-Playing Game (MMORPG) by integrating the game features into an online learning environment aiming to enhance students' reading for main idea knowledge. This chapter presents the background of the study, statement of the problems, rationale of the study, purposes of the study, research questions, significance of the study, and the definition of key terms used in the study. The chapter also provides the scope and limitations of the study.

### 1.1 Background of the Study

With the concept of globalization, the English language has become an important part of various aspects including being used as a tool for cross-cultural communication and as an instrument for economic success (Mohammed, 2020). Therefore, it is crucial for people nowadays to learn English, not only in class, but also in the real-world context to achieve the goal for their future career and so on.

There were 55 sovereign countries and 27 non-sovereign territories where English was an official language and has been spoken by about 1.35 billion people all over the globe. The language is used as a central language for people all over the world to communicate with one another, and it is also a second language in various countries. In some countries, English is used as an official language where people speak in their everyday life. For example, the US, with more than 300 million English speakers, is considered the largest English-speaking country (English-Speaking World, n.d.). In other countries, English is merely used as a means of communication. There are 750 million people who use English as a second language and about 1 billion people who speak

English as a foreign language (Breene, 2019). Also, Crystal (2006) suggested that one of the fundamental changes in people's attitudes to the English language which make English become the language spoken more widely than any other language in the world is that English has been spoken by more second language users than first language users. This means English is now being used and learned more as a second language (ESL) and as a foreign language (EFL) worldwide.

Referring back to the most influential model of Kachru (1992) the English languages are categorized into three concentric circles, the Inner Circle, the Outer Circle, and the Expanding Circle. The Inner Circle includes countries where English is spoken as the first language such as UK, USA, Canada, and Australia. The Outer Circle comprises countries where the people use English as their second language e.g., India, Singapore, Malaysia, and the Philippines due to the imperial expansion by English-speaking countries. The Expanding Circle are the countries that English does not play a historical or governmental role. Instead, the language is used as a medium of international communication. The countries in the Expanding Circle are the rest of the world's population not categorized above such as China, Egypt, Indonesia including Thailand. For example, in Thailand, the Thai language is used as the first language and English is used for communication with other people outside of the country. English has been taught in Thailand from kindergarten to university levels, especially English reading which is considered as one of the most crucial skills for university students nowadays (Levine, Ferenz & Reves, 2000).

In the process of learning English, there are four basic skills to develop: speaking, listening, reading, and writing; people gain knowledge through receptive skills (reading and listening) first then learn productive skills (speaking and writing). According to Krashen & Brown (2007), reading is considered one of the most important skills among four language skills as it can improve overall proficiency of the language. Furthermore, Levine, Ferenz, & Reves (2000) stated that university students who study English as a second language (ESL) and English as a foreign language (EFL) need to acquire the ability to read English academic texts. Therefore, learning English reading is a crucial matter for students, especially university students who study English as a second language and as a foreign language from over the globe, including Thailand (Zaid, 2011;

Moheidat & Baniabdelrahman, 2011; Zhou & Murphy, 2011; Cheng, 2011, Takallou, 2011).

In Thailand where English is taught as a basic learning content of all foreign languages, all universities have supplemented English as a mandatory subject in accordance with the policy from the Ministry of Education (2016). The Ministry of Education has announced the five policies to raise the bar of English language standard in Thai universities by having all universities set the plan to prepare their students to be capable of English for academic and professional purposes, and have all students attend English proficiency tests compared to Common European Framework of Reference for Languages (CEFR) results or other standardized tests in order to understand the ability of students in terms of English language learning (The Higher Education Commission, 2016). It is expected that all students will become successful in learning English. Moreover, the core curriculum from the Ministry of Education Thailand (2008) has aimed to set the standard of learning English as a tool for communication focusing on the use of English language skills including reading. Therefore, it is a must for university students in Thailand to study English reading according to the core curriculum and in order to possess the ability to improve other skills in English.

Reading is considered the most important skill because it is the chosen instrument to acquire knowledge. It is crucial for Thai people in various careers such as doctors, engineers, teachers, and hotel business people who need reading skills to read newspapers, academic textbooks, and journals. In addition, reading is very important for students studying English as a foreign language since most textbooks, the sources of scientific knowledge, and information on higher technology are published in English. As Nishanthi (2018) stated that knowing how to read in English will allow people to access tons of information that may not be otherwise available.

The study of English reading is mainly about understanding the reading texts, and the key reading comprehension skill is the ability to identify main ideas in reading text (Aulls, 1978). Consequently, studying how to find the main idea in a reading text is crucial for students who study reading in the very first stages. However, failure to grasp the main idea is still one of the topmost problems in Thai students when it comes to

English reading (Chuenta, 2002). Paksasuk (2013) stated there are many points that Thai students should improve in their reading such as their inability to identify the main idea, inadequate vocabulary, and other reading comprehension problems. Wannathong (2016) supported that lacking English reading skills such as finding the main idea becomes a major problem for Thai learners in reading comprehension. Since reading comprehension is based on recognizing the author's main idea, failure to be able to identify the main idea of reading texts is considered a failure in reading comprehension.

Thai students spend many years studying English, but the results are still questionable. The next section will discuss problems that students have faced when learning English.

## 1.2 Statement of the Problems

Even though English has been taught to Thai students from kindergarten to university level, most students still have some difficulties using English. According to EF English Proficiency Index, Thailand was placed 53<sup>rd</sup> out of 80 non-native English-speaking countries in 2018, and 64<sup>th</sup> out of 88 countries in 2019 which is considered as low (EF English Proficiency Index, n.d.). In 2019, an article titled "Thailand falls in English proficiency index: What's wrong with Thai education system?" shed new light on the Thai education that English proficiency ranking of Thai people had dropped for the third consecutive year to 74<sup>th</sup> out of total 100 non-native English-speaking countries (Thai PBS World, 2019). Besides, the report showed that Thailand's ranking dropped to 89<sup>th</sup> out of 100 in 2020, and at 100<sup>th</sup> out of 112 countries in 2021 with the English language proficiency score of 419 out of 800 which is considered "very low" (Bangkok Post, 2020). As it is clearly seen, the English language proficiency of Thai students is critically going down even though most schools in Thailand have set English as one of the mandatory subjects.

Having confronted with difficulties in Thai students may come from various factors. Some research studies have investigated factors contributing to the low level of English proficiency in Thai students (Noom-ura, 2013; Walakanon, 2014; Panichakul, 2015; Kaur,

Young, & Kirpatrick, 2016; Sreena and Ilankumaran, 2018). The main factors that affect students' English proficiency are low motivation in learning English, students' attitudes toward English usage, and unsuitable teaching methods.

Lacking English skills is considered as one of the major problems in learning English. One of the recommendations from research was to look at the significance of teaching English productive skills such as speaking and writing. In order to fully improve productive skills, students should develop their listening and reading skills which are receptive skills first, especially reading skills which are known as the very main source to obtain communication skills (Sreena and Ilankumaran, 2018).

With the importance of English reading, various universities in Thailand comprise English as a mandatory subject in their curriculum. For example, Mahidol University, Chulalongkorn University, and Chiang Mai University which are ranked as the best three universities in Thailand according to Times Higher Education Ranking (2020) add English as a compulsory subject for all students. However, the problem of learning English for Thai students is still a major problem that is needed to be solved urgently. For example, a research study conducted by Subphadoongchone (2000) indicated that sciences students' mean score of English vocabulary ability is still low. The results from the questionnaire also showed that students had problems with vocabulary knowledge and grammatical knowledge.

In addition, some other universities e.g., Suranaree University of Technology (SUT) have comprised English reading into the teaching curriculum. However, some SUT students still face problems with learning English, especially English reading. For example, some students had low reading comprehension ability due to the lack of reading strategies, improper instructional methods, and a learning environment (Chavangklang & Suppasetsee, 2018). Besides, when it comes to English reading, some students are unable to identify the main idea, supporting details, or make inferences from the reading texts. Therefore, the solutions to problems in English reading should be taken seriously.

Because identifying the main idea of reading texts is one of the strategies that are used in reading comprehension, in addition to summarizing, utilizing dictionaries, uttering context clues, or making inferences (Flavell, 1981), the readers can adjust

reading strategies according to their reading purpose in reading (Grabe and Stoller, 2000). Additionally, other researchers' investigations (Chuenta, 2002; Paksasuk, 2013; Wannathong, 2016) revealed that lack of ability to identify the main idea is also one of the major difficulties undergraduate students have faced in reading. Furthermore, the research study of Walakanon (2014) revealed that the reading problems students confronted are identifying the main idea, supporting details, and making inferences of the reading passage. According to a research study conducted by AD, Sutarsyah, and Suparman (2014), six main problems that students have faced in reading for the main idea are as follows: lack of students' interest, lack of vocabulary knowledge, length of the sentence, poor reading strategies, grammatical confusion, and ignorance of paragraph component. In this way, there should be more research studies to probe the reading strategies, especially reading for the main idea, of undergraduate students in other disciplines e.g., engineering, medical sciences, and so on.

Moreover, one of the main factors that students are poor at reading is that they lack interest in learning. It is because they have low motivation to learn. According to Siriphanich & Laohawiryanon (2010), generally, Thai students have low motivation to read English texts, and students' lack of motivation to learn may come from negative early learning experiences (Strauss, 2008). Therefore, in order to help students to have motivation in learning, teachers or instructors should provide positive experiences in students' learning environment. When learning in a meaningful environment or authentic context, students' learning motivation and achievement can be improved (Guan, Song, & Li, 2018; Zheng, 2010). Moreover, it is also helpful for fostering students' language ability. However, if the learning is in a decontextualized environment, students usually encounter difficulties when it comes to relevant knowledge resulting in poor learning achievements (Collins 1991).

Unsuitable teaching methods are also one of the main factors that obstruct English knowledge in Thai students (Panichakul, 2015). Some Thai teachers still teach English by asking students to translate the reading texts word by word which is an old way of teaching because many Thai students have low proficiency, and it is difficult for them to understand the content (Tieocharoen & Rimkeeratikul, 2019). This may be due to insufficient knowledge of English and teaching methodology in Thai teachers

(Thai Education, 2012). Therefore, it is crucial for Thai teachers to have sufficient knowledge of both English and teaching methodology so that they will know which methods can be applied in each English skill on different classes of students.

To sum up, there are various factors that affect students' English proficiency in learning English. These factors are low learning motivation, students' attitudes toward English usage, and unsuitable teaching methods. Moreover, actions to probe these problems should be taken seriously to help students become more effective English students.

### 1.3 Rationale of the Study

Regarding teaching reading, the researcher realizes that students at Suranaree University of Technology have low reading abilities due to reading strategies, grammar structures, vocabulary knowledge, and limited background knowledge (Thanasontornrerk, 2004; Walakanon, 2014; Chavangklang & Suppasetsee, 2018). Hence, the researcher decided to solve the problems by means of giving reading lessons which are considered the very first skills to be improved with a method that supports maximum use of class time and to create a better learning environment.

Regarding teaching in universities, Tinto (1993) stated that mastery of some fundamental academic skills is one of the existing pre-entry college attributes which make learning in a university successful. These attributes include the ability of reading, writing, critical thinking, oral presentation, and media literacy. However, some universities have not taught these skills at the higher level because it is assumed that these skills are either taught in secondary education or elsewhere in college (Erickson, Peters, & Strommer, 2006). Nonetheless, most university students lack academic reading skills because reading at the university level greatly differs from high school reading (Hermida, 2009). Furthermore, the ability to identify the main idea of the reading texts is also crucial for academic reading.

Implicitly teaching reading for the main idea may not be sufficient to totally claim the effectiveness. A common way to solve the problem of the lack of reading strategies is to explicitly teach reading strategies to students. One of the key strategies that affect

students' reading comprehension is reading for main idea strategies. A number of readings for main idea teaching methods have been claimed to be significant for students which should be included in reading for main idea instruction. After the extensive search of the literature on the subject (Carriedo, & Alonso-Tapia, 1996; Wilawan, 2012; Elashhab, 2013; Boudah, 2013), main idea instructions as following details are taught to EFL students: knowledge of different text structures, use of appropriate macrostructure formation, global reading strategies and support strategies, and adequate learning activities. Consequently, explicit teaching of reading for the main idea should be delivered to the students, where all related contexts are taken into account for the optimum effectiveness of the course delivery.

It is interesting that various research studies were conducted to examine the effects of implementing online games for teaching English reading and other skills on devices such as mobile phones, computers, and so on. However, the use of online games is not successfully used for teaching English reading as much as they should be due to some problems with the use of online games for teaching English reading which is categorized into three parts: the size of the phone screen, reading texts, and game design. Firstly, some research studies revealed that reading from small phone screens made it difficult for the students to handle extensive text (The Reading Agency, 2011). Secondly, because reading materials are always text-based, game developers should consider that the reading game might be text-rich, and the concept of the game should be for both entertainment and educational value (Keskitalo et al., 2015). Thirdly, some games were designed for pleasure, not for education, so it is vague to clarify if the game can actually enhance language learning.

In general, online games have been categorized into four genres (O'Brien, 2010): linear games, competitive games, strategic games, and role-playing games which are agreeing with five categories of learning outcomes from Gagne which educators can direct the instruction: intellectual skills, cognitive strategies, verbal information, motor skills, and attitudes. Among these four genres, role-playing games (RPGs) are greatly complex because they consist of the development of unique character identities, a diverse in-game social structure, a wide variety of obstacles, competition both on small and large scales and over the short and long term. The complexity creates the

possibility to engage players, and thus educators can address all of Gagne's learning objectives. Therefore, this study will clarify how implementing a Massively Multiplayer Online Role-Playing Game (MMORPG) for teaching English for the main idea can solve these problems, and help the students become more efficient learners in terms of knowledge for life-long learning and their future career.

First of all, the implementation of MMORPG can only be used on computers instead of mobile phones, so the students will be presented with texts by practicing reading from computer screens. The benefit of applying computers in English teaching and learning is that students can see the reading texts clearly leading to a sufficient view of reading texts compared to looking from phone screens. For example, reading a paragraph of 4-5 sentences on a computer screen is easier than reading from the phone screen due to the difference in sizes of such devices.

Second of all, most reading comprehension or reading for main idea texts are text-based, and too many texts can cause boredom to students as game players. Balancing the online game for teaching English reading is a challenging task for game designers. On the other hand, entertainment with less reading texts might cause the game less efficient. Thus, when designing an online game, developers should consider whether the game design is of educational value along with entertainment value.

Third of all, during the COVID-19 pandemic era when students are not able to participate in the classroom, the use of technology in teaching is more and more crucial. Technology has been applied in many aspects of life. On some grounds, technology has been used for entertainment such as YouTube videos, computer games, and simulations. On other grounds, technology has been used for education, e.g., online courses. Moreover, technology has unquestionably been used for English language study in numerous means. It is inevitable for both teachers and students to use technology in language teaching and learning. Therefore, online learning has become the main aspect in schools and universities nowadays. There are various online learning tools that teachers can use for teaching in schools and universities e.g., Google Classroom, Classcraft, and Moodle (Botmart, 2019). Moreover, using online games is also a good option for teaching online.

Last of all, most online games utilized in previous research studies are designed for recreation, so they are not truly considered as English reading educational games (Reinecke, 2009). Some researchers merely adopt the game functions that were designed for entertainment by adapting the learning lesson to suit the features of the games. Therefore, it is difficult to tell whether the game can actually implement language learning in many aspects. Moreover, several suggestions were made when designing educational games or using games for language learning as follows: designers should consider students' gaming experiences, students' schema, together with their cognitive load (Lin, Hwang, Fu, & Cao, 2020). Therefore, designers ought to provide tutorials, clear instructions, and playing rules to prepare students to face game difficulties.

From the discussion thus so far, the researcher can conclude that, in the search for better online games for improving students' reading for the main idea, MMORPG appears to be a promising over the conversational ones. Out of the MMORPGs for teaching English reading for the main idea, the researcher suggests DOTA2 which could effectively improve students' reading due to the mentioned reason. In fact, the original DOTA2 is not MMORPG, instead, it is considered as a multiplayer online battle arena (MOBA) game where two teams of 5 players each are occupying and defending their own base on the map. However, DOTA2 also has a custom game mode allowing both DOTA2 developers and the community to create their own games which are different from DOTA2 standard (DOTA2 Custom Games, n.d.). Therefore, the game can be customized into MMORPG as well as other types of games. After examining several MMORPGs, the researcher has decided to apply DOTA2 which is a customized game model for solving reading problems.

#### **1.4 Purposes of the Study**

The main aim of this study is to enhance students' reading for the main idea by using a Massively Multiplayer Online Role-Playing Game (MMORPG) with EFL students at Suranaree University of Technology. The purposes of the current study are listed below:

1. To investigate the effects of MMORPG on reading for the main idea of Thai EFL undergraduate students.
2. To examine Thai EFL undergraduate students' perceptions on learning reading for the main idea via MMORPG.

### 1.5 Research Questions

The research questions addressed in the study are:

1. What are the effects of MMORPG on reading for the main idea of Thai EFL undergraduate students?
2. What are Thai EFL undergraduate students' perceptions on learning reading for the main idea via MMORPG?

### 1.6 Significance of the Study

Students' reading for the main idea can be influenced by a number of factors such as appropriate teaching devices, lessons, and teaching instruction. In order to solve the problems of low reading comprehension and reading for the main idea among Thai EFL students, this study will introduce an MMORPG model as a major teaching method. In addition to being an online game of teaching instruction, the use of MMORPG provides an exclusive platform in order to customize the game map. The assumption was that when using this model of teaching to teach reading for the main idea, students would improve their reading ability and have positive experiences toward English language learning. Therefore, the significance of this study can affect not only the students, but also the instructors, educators, and researchers in the field.

Firstly, the implementation of the MMORPG could improve students' reading for the main idea resulting in students achieving their academic goals. In this way, students will become more effective readers and they may also apply the learning experiences in their future studies. When the learning outcomes are satisfied, students can be more motivated to learn.

Secondly, positive learning experiences can be provided by the implementation of MMORPG in learning reading for the main idea. When using pre-reading activities and

in-game activities with an online supported learning platform, students can be more motivated to learn and become more efficient readers and successful learners in the course. Supports from every part of the MMORPG implementation could work together to help students to become better learners and more motivated readers.

Thirdly, MMORPG could benefit the teachers, especially in the field of EFL reading for the main idea, by providing a proper way to deal with reading comprehension issues within the scope of educational game content. The teaching approach can also be applied to other subject areas. For example, within the technology-enhanced language learning, cooperative learning activities may be considered for teaching writing, listening, vocabulary, grammar, and other topics. Likewise, the platform can be used with a variety of content, as well as other instructional uses. In general, MMORPG and technological support will be beneficial to both teachers who teach reading as well as teachers of other applicable subjects.

Fourthly, educators may take advantage of MMORPG either from the online learning approach or from the use of educational technology. This refers to changes at the policy level where MMORPG can be one of the teaching methods that can be adapted to a wider context. When technologies are available as the results, the educational policy, the whole curriculum, or even the institution will make full use of MMORPG model.

Fifthly, the MMORPG used in this research study is a customized game whose content was specially designed for learning reading for the main idea for university students. It is different than other MMORPG because most of them are designed for pleasure, not specifically for academic purposes. Therefore, the MMORPG used in this research study is more specific for learning which can lead to more direct results.

Finally, the current study's results from the investigation of the use of MMORPG could contribute to bridging the research gap concerning reading for the main idea of Thai EFL university students. As there are many factors that can influence reading comprehension, the use of MMORPG is one feasible approach for tackling the problem. Therefore, this study can serve as a useful resource toward improving students' reading for the main idea through the use of an effective approach upon which further research can explore.

## 1.7 Definitions of Key Terms

Unless otherwise stated, the following terms used in the study have specific meanings as explained below:

**Massively Multiplayer Online Role-playing Game (MMORPG)** refers to a combination of role-playing video games and multiplayer online games in which a number of players interact together at one time with one another within a virtual world. MMORPG in this context also includes an online lesson which is a video of reading for the main idea and game practice. In this research study, the use of MMORPG called DOTA2 gameplay which is specially developed to match with the reading for main idea content is applied.

**Defense of the Ancients (DOTA2)** means the massively role-playing game platform developed by the researcher in order to improve students' reading for the main idea. In this study, the researcher created the customized game concurring reading for the main idea lesson which combines educational technologies and learning instruction together.

**Reading for the main idea** refers to one aspect of the strategies that focus on the main point of the paragraph where the author has located in the paragraph. The main idea is usually a sentence that describes the gist of reading texts which are considered the most important details of the reading paragraph. In this study, the students watch the video of reading for the main idea taught into 3 parts which are finding a topic, identifying the main idea, and identifying supporting details.

**Thai EFL Undergraduate students** are defined as Thai undergraduate students in Suranaree University of Technology who study English as a foreign language participated whose majors are not English, and study English in the university compulsory curriculum. The students are volunteer students who already have experience playing online games, especially MMORPGs. They have an average of fifteen years of English learning before entering university.

**Students' perceptions** refer to students' perceived learning experiences with learning reading for the main idea via MMORPG in terms of various aspects e.g., learning motivation and satisfaction. Students' perceptions are measured by 15 items of

questionnaire using the strategies from a 5-point Likert scale, and 5 questions of a semi-structured interview.

### 1.8 Scope and Limitations of the Study

Although the study is to develop MMORPG for teaching reading for the main idea, there are limitations as follows:

- (1) The main concern of this study aims to develop MMORPG for teaching reading for the main idea to Thai EFL undergraduate students at Suranaree University of Technology. Thus, the subjects of this study may not be representative of Thai EFL undergraduate students at other universities because the students may have different backgrounds, learning environments, and needs. The findings will be used to describe only the subjects of this study, that is, Thai EFL undergraduate students who study English III course in the third trimester of 2020 academic year at Suranaree University of Technology,
- (2) The implementation of MMORPG in this study focuses on reading for the main idea only, it may not be applied in other reading comprehension aspects or other reading strategies e.g., reading fluency, word recognition, predicting, making inferences, or questioning.

In this chapter, the researcher describes the statement of the problems, the rationale of the study. They are followed by the purposes of the study and research questions. Then, the scope and limitations of the study, and the significance of the study are presented followed by the definitions of key terms. Lastly, the outline of the thesis is concluded.

## CHAPTER 2

### LITERATURE REVIEW

The main purpose of this chapter is to review the related literature of the present study. This chapter initially presents reading in general concept, reading in English as a Foreign Language (EFL) and English as a Second Language (ESL) context, reading strategies, and teaching reading at the university level. Then, reading for the main idea and its importance are discussed. After that, online games including Massively Multiplayer Online Role-Playing Game (MMORPG) and Defense of the Ancient 2 (DOTA2) are also described in this chapter. Finally, online games in learning which include English language learning and online games for learning reading are explained.

#### 2.1 Reading

Reading is one of the most crucial skills that students who study English as a foreign language (EFL) and English as a second language (ESL) have to study for various reasons. Reading is defined by Nuttall (1982) in different meanings. However, they are categorized into three levels: speaking out, decoding, and understanding the core meaning. The third level, understanding the core meaning, is generally for advanced learners. According to Nuttall (1982), reading is not just articulating or deciphering, it is understanding the core meaning of the reading text. It is perceptible reading consists of the text, the reading process, and readers. Moreover, the reading process is the combination of three dimensions interacting together: the text, the reader, and the task.

Reading is categorized into three processes: cognitive, social, and socio-cognitive, according to Benhardt (1991). The cognitive view is the process that occurs automatically within an individual's brain which makes each reader understand the same context differently. The social view is a process explained that understanding the background of some culture will help a reader understand the reading text. The socio-cognitive view is an integration of cognitive view and social view meaning that

understanding the context of each reader comes from observing others and having their own schemata. Those three processes explain how readers draw comprehension to the reading text from different views.

Reading comprehension is the ability to process text, understand its meaning, and integrate it with what the reader already knows. Reading comprehension allows readers to know the meaning of words from context. Moreover, it provides the ability to identify the main thought of a passage. Furthermore, reading comprehension provides a reader's ability to determine the writer's purposes and intentions. Reading comprehension is taught in most EFL classrooms because it helps learners understand the English language more clearly.

The concept of reading comprehension is an interaction between a reader and text, then it is processed into other levels concurrently including decoding of linguistic information from print, text-information building phrases, and situation-model construction. Reading comprehension takes place at the word level, the level of proposition, coherence, macrostructure, and superstructure of the text together with the context of the reading event (Carpenter, Miyake & Just, 1994; Perfetti, 1994; Kintsch, 1998; Miller, 1988). Therefore, in order for readers to understand reading texts, the mentioned compositions are required. Moreover, in order to have effective reading, readers should understand the reading process thoroughly.

The reading process is categorized into three models that signify the role of the reader in reading (Dubin & Bycina, 1991). The first model is the bottom-up reading model. At this level, reading is a passive activity which the main focuses are on words, phrases, and word meanings. Readers in this model use their linguistic knowledge to impose orders on these signals. It is also called data-driven process. The second model is the top-down reading model. The reader plays an active part in this model. Background knowledge of the reader functions when reading in this model. Readers in the top-down model, also called concept driven process, bring a whole host of background information into the reading event about the meaning of the reading text (Brown, 1994). Moreover, there is the third model termed an interactive theoretical model which is the combination of both bottom-up model and top-down model. Dubin & Bycina (1991) added that interactive reading model can be used among EFL

intermediate learners to practice attack skills such as knowledge of simple structures, recognition of phrase clues, and connection of whole sentences. In this model, according to Burn, Roe & Ross, (1982), reading functions with a prediction from readers' background knowledge, and readers will do close reading when the assumption is not testified.

The background knowledge that a reader brings to a text is shaped by five influences (Aebersold & Field, 1997) which are family influence, community influence, school influence, cultural influence, and influence from individual characteristics. The family influence: reading behaviors of parents or foster families lead to reading children. The community influence: the more reading events that a child attends, the better background knowledge they will receive. The school influence: different school reading experiences give different reading backgrounds to children. The cultural influence: the culture where people give a high value of reading tends to have more reading people. The influence of individual characteristics: people who grow up in various situations have different reading experiences. What people already know about the history, culture, habits, politics, sports, and music of any given place helps them understand a reading text about that topic (Aebersold & Field, 1997). Those five influences create schemata of readers.

A schema is a representation of a plan of theory in front of an outline model. McNeil provided the details of reading comprehension as a cognitive process focusing on the schema. Moreover, there are four assumptions that cause the cognitive process. Firstly, the different schema of a reader creates different reading comprehension. Secondly, in order to understand text, a reader needs both concept-driven and data-driven processes. Thirdly, readers will understand more when they read each material a lot of times. Lastly, the context which is occurred while reading can affect understanding of reading.

There are two types of schemata according to Carrell (1987). A formal schema is knowledge that relates to texts, contents, and structure organizations. It is used by a reader when reading in bottom-up process. Another type of schema is called content schema. It is the knowledge that concerns readers' past experiences. A content schema is applied by a reader with top-down process and interactive process. Both

formal schema and content schema are parts of cognitive reading process. Whenever a reader has difficulties during the process, the reader will create an internal representation of it, according to Bernhardt (1991). Nevertheless, different readers may have different intrapersonal conceptualizations of the same problem which makes the output distinct.

There are several common difficulties that readers face while reading (Osborne, 2010) such as losing their place, losing their focus, not getting the point, and forgetting what they have read. Furthermore, a research study conducted by Qrgez & Ab Rashid (2017) investigated difficulties that students faced with EFL reading comprehension. The participants were 200 university students in Jordan. The questionnaires distributed to seek students' opinions consisted of two parts: demographic information, students' preferences, and students' reading difficulties. The results show that there were several problems that students faced in the reading process such as ambiguous words, unfamiliar vocabulary, and limited available time to cognitively process the text. In addition, it is teachers' concern to find effective ways to engage students in a meaningful reading experience. With the mentioned reading problems, several research studies on reading comprehension in EFL have been conducted to improve students' reading and assist students to become proficient readers.

### **2.1.1 Reading in EFL/ESL context**

Most research studies in English reading focus on primary topics: improving reading rates and comprehension (e.g., Chang & Millett, 2015; McLean, Rouault, 2017); reading comprehension difficulties among EFL learners (Rashid, 2017), including EFL learners' awareness of reading comprehension strategies (e.g., Zoghi, Mustaphab & Maasumc, 2010). Some of the research studies seek ways to improve students' reading comprehension using reading strategies. The reading strategies mentioned in the research studies are skimming and scanning, making inferences, and identifying the main idea and supporting details. According to Rashid (2017), several problems found in the reading process are ambiguous words, unfamiliar vocabulary, and limited available time to process the text cognitively.

Six cognitive strategies are used when readers face difficulties in reading texts. Firstly, clarifying is used when readers want to look up vague or missing

information. Secondly, predicting is the combination of the reader's prior knowledge and hints or clues in the text. Thirdly, readers make connections between information in the text and their background knowledge. Then, readers ask questions and look for answers to help them understand more about the text. Furthermore, visuals generate the clarification of the text. Finally, readers collect important information about the text by finding main ideas and supporting details (Kelley & Clausen-Grace, 2013). The above strategies together are considered as reading in the interactive model because they integrate the skills from both bottom-up and top-down models.

When readers confront reading difficulties, according to Dweck & Licht (1980), they tend to stop the task, and accept failure. However, successful readers try to use strategies to overcome obstacles. The strategies used in this process are self-monitoring, self-instruction, and reanalysis of the task at hand. Incidentally, reading strategies can be taught explicitly and implicitly by teachers making strategy use a part of students' daily life.

In seeking the degree of EFL/ESL learners' awareness of reading comprehension strategies and their potential comprehension failure, Zoghi, Mustaphab & Maasumc (2010) conducted a research study for more details. The participants were 12 EFL university students in Iran. Interview and questionnaire were applied in this study. The results show that students faced some difficulties while reading including failing to identify the main idea of the reading text. Suggestion from this research study is that the implementation of effective strategy instruction should enable poor readers to develop the skills that are necessary to construct an integrated and coherent representation of texts.

More research studies regarding EFL/ESL reading in students are also conducted (Alyousef, 2006; Wilawan, 2012; Manoli & Papadopoulou, 2012; Nachmani, 2015) to look into students' reading comprehension in various aspects such as students' factors of learning reading, ways to teach reading comprehension, and reading strategies.

In short, reading is considered one of the most important skills in learning. However, for learning reading in EFL/ESL context, there are still some problems students have faced. Hence, reading strategies are applied in reading to suit the reading

texts. Different reading strategies have been used in English reading classrooms to improve students' reading comprehension.

### **2.1.2 Reading Strategies**

Reading strategies are deliberate and conscious actions that readers constitute means to cope with difficulties they encountered while reading (Paris, Lipson, & Wixson, 1983; Urquhart & Weir, 1998). According to Carrell, Gasdusek, and Wise (1998), reading strategies are meaningful to those who have to manage their reading with written text, and the use of reading strategies is also related to effective reading comprehension.

Seven strategies that help with effective reading are monitoring comprehension, metacognition, graphic and semantic organizers, answering questions, generating questions, recognizing story structure, and summarizing (Adler, 2007) posted. Monitoring comprehension is that if students are aware of whether they understand what they are reading. It is beneficial for the students in terms of using appropriate strategies to resolve problems in comprehension. Metacognition is defined as thinking about thinking. Students can employ metacognitive strategies to control their own reading. After that, they are able to check their understanding of what they read. Graphic and semantic organizers help students focus on text structure differences as they read between fiction and non-fiction, and the graphic makes it is easier for the students to picture the reading text. Answering questions can be effective because it gives students a purpose for reading. Moreover, it can help students review the content and relate what they have learned to what they already know. By generating questions, students become aware of their understanding the reading text. They can try to ask the questions for themselves and think of the answer. Recognizing story structure helps students identify the content categories such as character, setting, events, problem, and resolution. Students often learn to recognize stories through the use of story maps. Finally, summarizing requires students to decide what the core of the reading text is. Instruction in summarizing can also help the student identify or generate main ideas.

Obviously, there are a number of techniques and strategies that can help students learn to read. However, Paris, Wasik & Turner (1991) stated that strategic learners are characterized by the selection of suitable strategies that fit the reading

text, purpose, and occasion rather than the number of techniques that they use (as cited in Olson, 2003). Therefore, it is necessary for all readers to select the suitable strategies used in the reading process in order to have the most effective reading out of the text. Readers should know the purpose of their reading, then decide on the best method to use in reading.

Various studies have proposed and evaluated different reading comprehension methods to improve students' reading comprehension skills such as comprehension monitoring, inference making, cooperative learning, question generating and answering summarizing, predicting, recognizing the structure, and identifying main idea (Gersten, Fuchs, Williams, & Baker, 2001; Mckeown, Beck, & Blake, 2009; National Reading Panel, 2000). A number of research studies have shown that reading comprehension strategies have been applied in English language classroom as follows.

With the investigation of cognitive organizers in students with reading comprehension problems, Boyle & Weishaar (1996) examined the effects of student-generated and expert-generated cognitive organizers in reading comprehension of students with learning disabilities. The participants were thirty-nine students with mild disabilities who exhibited poor reading comprehension. Students were divided into two groups: experimental group and control group. The students in the experimental group were taught to use student-generated and expert-generated cognitive organizers from reading passages. The results show that students who use their own cognitive organizers and expert-generated cognitive organizers demonstrated significantly higher scores than students in the control group.

A research study by Song (1998) was conducted to investigate whether reading strategies enhance the reading ability of EFL university students in Korea. The subjects were 68 university students in Korea who were enrolled in a Collage English for Liberal Arts course. Before and after the experiment, the participants were asked to take a reading proficiency pre-test and posttest accordingly. The reading strategies used in the research studies are making inferences, answering detailed questions, including identifying the main idea. The results show that strategy training is effective in enhancing EFL reading, and the effectiveness of the training varies with students' L2

reading proficiency. Moreover, the findings also suggest that foreign language reading pedagogy should include explicit and direct strategy teaching.

By investigating the ability of the first-year students who study English as a compulsory subject in identifying the positions of main idea sentences in three types of text structures, Apibansri (2003) divided the participants were asked to underline the main idea sentence in each of 18 paragraphs and identify which type of text structure of each paragraph was by choosing the best answer from three alternatives. The results show that students were able to identify the positions of main idea sentences when they were in the middle of the paragraph better than when they were at the end of the paragraph.

Regarding teaching reading with strategic reading, Riswanto's research study (2012) aims to discuss the philosophical concept of Collaborative Strategic Reading (CSR) concerning the rational and operational context of teaching reading. There was no participant in the research; instead, the researcher gathered information from a number of research and studied the collaborative strategic reading in various aspects. The strategy is about students' engagement to work in a small cooperative group by applying four reading strategies: preview, click and clink, get the gist, and wrap up. The results show that successful readers use various strategies in understanding the text, and a number of strategies implemented in reading is depending on the complexity of the text.

In addition to teaching reading with reading strategies, Wilaiwan (2012) investigated the application of cognitive and metacognitive processing strategies to improve EFL students' main idea comprehension. The research was done by reviewing literature from various research papers concerning strategic reading using cognitive and metacognitive strategies for reading comprehension. The reading task, according to Wilaiwan (2012) involves the simultaneous application of bottom-up, top-down, and metacognitive strategies. Moreover, there are three possible teaching methods that combined these three strategies as follows: The Reciprocal Teaching Approach (RTA), Self-Regulated Reading Approach (SQ3R), and Collaborative Strategies Reading (CSR). However, these three models require adjustment for implementation in the

classrooms together with other language aspects which should be taught to suit the students' learning styles and learning goals.

With the concern of teaching reading with strategies and reading awareness, Elashhab (2013) conducted a research study to investigate the relationship between awareness of reading strategies and their effective use in foreign language reading. In this study, participants were to indicate how often they use the strategies from a 5-point Likert scale. The strategies are divided into three categories as follows: global reading strategies, problem-solving strategies, and support reading strategies such as note-taking, translation, and underlining of keywords. From the research study, some students have problems distinguishing the main idea from supporting details of the text. In addition, all participants applied their background knowledge to understand what they were reading by recalling what they had heard or learned elsewhere about the reading text.

Apart from reading strategies, Phetmak (2016) conducted a research study to seek information about the learning strategies of grade 9 students. The participants of 100 students from two schools were to answer a questionnaire that investigated their learning styles, motivation of learning English, and their autonomous learning styles. The results show that motivation plays an important part in students' learning strategies as well as autonomous learning.

Having more to observe about reading, Gangl, Moll, Banfi, Huber, Schulte-Korne & Landerl (2018) investigated the spelling skills whether they are associated with the application of orthographic strategies during reading. In the study, the eye movements of 137 primary students were examined in the following aspects: typical reading and spelling skills, isolated spelling deficits, isolated reading deficits, and combined reading and spelling deficits. The results show that reading rests on orthographic strategies even if students' lexical representations are poor. Moreover, dysfluent reading does not result merely from overreliance on decoding.

Adding those reading strategies that are yet to be explored, Pomuen (2018) conducted a research study to investigate students' reading comprehension and reading for the main idea through the use of 4W1H technique. The participants were 15 grade-3 students in Thailand. The research instruments were instructional plans

based on 4W1H technique, reading comprehension test, multiple-choice achievement test, and a questionnaire. The results show that the implementation of the instructional plans based on the 4W1H technique increases students' ability in reading comprehension and main idea. Moreover, students were satisfied with the implementation of the 4W1H technique.

In short, there are various research studies concerning reading comprehension and reading strategies (Song, 1998; Apibansri, 2003; Zoghi, Mustaphab & Maasumc, 2010; Riswanto, 2012; Wlashhab, 2013; Phetmak, 2016; Gangl, Moll, Banfi, Huber, Schulte-Korne & Landerl, 2018; Pomuen, 2018), and readers are supported to apply suitable strategies when reading different texts. The ability to identify main ideas in the text is one of the key reading comprehension strategies (Aulls, 1978) that is crucial for readers. The reason why the main idea is important for reading comprehension is that it can lead to successful reading comprehension in terms of drawing inferences from the text, studying effectively, and reading critically (Williams, 1988). Therefore, the ability to identify the main idea of the paragraph is a crucial aspect that students should pay attention to when learning reading, especially university students who need to possess reading comprehension for both academic and professional purposes.

### **2.1.3 Teaching Reading in University Level in Thailand**

In Thailand, English has been taught as a compulsory subject since the primary level in both public and private schools concurring with one of the missions by the Ministry of Education Thailand which aims to enhance the quality and education standards towards the international level (Ministry of Education Thailand, 2008). This means that the English subject is as important as other subjects taught in schools and higher education in terms of preparing students to cope with the language barrier for their future careers. Moreover, according to the Basic Education Core Curriculum 2008 from the Ministry of Education Thailand (2008), the English language is set as a basic learning content while other languages such as French, German, Chinese, Japanese, and languages of neighboring countries are under the discretion of educational institutions. The English language section in Basic Education Core Curriculum 2008 focused on four major strands which are the language for communication, language

and culture, language and relationship with other learning areas, and language and relationship with the community and the world emphasizing the students' communicative competence and enable them to exchange ideas, express feelings, opinions on the various matter (Kaur, Young, & Kirkpatrick, 2016). Thus, English studying in the classroom is a requirement for every school in Thailand including higher education institutions e.g., universities. In Thai most universities, English is set as a compulsory subject for undergraduate students to pass before bachelor's degree graduation.

Higher education institutions in Thailand are divided into two categories: public, and private. There are 96 Public Higher Education and 67 Private Higher Education with the primary goal to produce Thai citizens who are high quality both academically and professionally with knowledge and skills needed for national development (Sinthunava, 2009). With the reform of higher education, the emphasis is on developing the structure and administrative system, and strengthening the mechanics and procedures to increase the quality of education together with improving teaching and learning research systems aiming to enable universities to produce highly-qualified graduates commensurable with the demand of social and economics. Moreover, universities should act as centers for creating knowledge to prepare students with a knowledge-based economy and society. Finally, the higher education faculty staff and personnel competencies are intended strengthened through support for continuing study and research activities (Office of the Education Council, 2006).

In the light of the importance of the English language in universities, a lot of universities in Thailand also add English as a mandatory subject in their curriculum. For example, in Thailand's best three universities, according to Times Higher Education Ranking 2020 (Study Portal, 2020), Mahidol University, Chulalongkorn University, and Chiang Mai University comprise the English language as a required subject for all students. The approximate requirement that all students must achieve is at least B1-B2 level of CEFR English proficiency test before graduating from the university (Mahidol University, n.d.; Suranaree University of Technology, n.d.).

One of the missions of Mahidol University is working towards global connectivity by gathering international institutions to be exposed to teaching in a global context. All students need to pass English subjects taken into 6 credits altogether (3 credits for each English course). Therefore, all first-year students are required to enroll in either English I or English II and one more consecutive English course of English III and English IV accordingly (Mahidol University, n.d.). Moreover, one of the courses students are required to take is ICME 100 (English Resource Skills) which is a remedial course that prepares students to read and write academic English at a level suitable for entry to intermediate English course ((Mahidol University, n.d.).

Some universities e.g., Chulalongkorn University has opened international programs for Bachelor's Degree, Master's Degree, and Doctoral Degree for various branches e.g., Accounting, Aerospace Engineering, Arts and Science in Integrated Innovation, and so on with the visions of becoming the world-class national university, and extending opportunities for the public to access valuable knowledge and available know-how. (Chulalongkorn University, n.d.). Therefore, a compulsory English course called 5500111 (Experiential English I) has been put to the curriculum of Chulalongkorn University for students to practice English four language skills for everyday communication emphasizing English reading and vocabulary from different sources (Marine Science Department – Chulalongkorn University, n.d.).

Likewise, Chiang Mai University also places English language courses such as Fundamental English 1 and Fundamental English 2 as compulsory subjects that all students are required to complete before their graduation (Chiang Mai University, n.d.). These courses are communication courses in English for everyday interaction which contain four skills of English (listening, speaking, reading and writing). Moreover, critical reading has been added to another course called ENGL201 (Critical Reading and Effective Writing) for students to become more effective in studying English (Chiang Mai University, n.d.).

In addition, to public universities as mentioned above, private universities ranking top 3 as of 2021: Asian Institute of Technology, Sripatum University, Assumption University (UniRank, n.d.), also pay attention to English teaching by offering English programs or international programs. For example, at the Asian Institute of Technology,

all programs are conducted in English; therefore, all applicants should submit their approved test of English language proficiency with good academic records. Therefore, it is inevitable for students to study English reading at a basic level in order to extend their proficiency level of learning other skills in the future.

Suranaree University of Technology (SUT), additionally, has set English as a compulsory subject (English I to English V) which requires every student to register and pass all the subjects with a minimum of 15 credits so that the students can graduate from the university. All five English courses are English for Communication 1, English for Communication 2, English for Academic Purposes, English for Specific Purposes, and English for Careers with the aim of developing students' ability to have effective communication in social and academic settings. (Suranaree University of Technology, n.d.). In addition, the two English courses at SUT that emphasize reading are English for Academic Purposes (213203) and English for Specific Purposes (213204).

Therefore, it is obvious that English reading has been taught in universities in many ways: being added as a compulsory subject, being integrated into study programs concurring with one of the government concerns. In addition, the Minister of Higher Education, Science, Research and Innovation has urged universities to adapt to digital disruption and shifting demographics. One of the statements is that universities should prepare students to become lifelong learners instead of focusing on providing them with the requisite skills and turning them into skilled workers to adapt to the fast-changing world of the 21<sup>st</sup> century (Mala, 2019). Therefore, lifelong learning skills should be integrated with university courses to prepare undergraduate and graduate students to become potential and skilled workers. On top of that, lifelong learning was first considered during the late sixties to early seventies (Husen, 1974) and it was seen as a means of overcoming the problems people have faced due to the change of the revolution era since then. The term lifelong learning has been used interchangeably with the concept of generic skills such as communication skills, problem-solving skills, and technological literacy with implications beyond disciplinary knowledge. According to Bolhuis (1996), lifelong learning can be done by different activities including, experimenting or learning by doing, talking with other people and observing their ways of doing things, reflecting on experience and information from media, and drawing

conclusions on what to do, and studying the information given in media e.g., books. Therefore, supporting students from primary school to university level to possess reading skills with reading comprehension can also enhance their lifelong learning, especially at the university level.

Furthermore, in order to prepare university students to cope with the technological revolution and the economic revolution, teachers have to be certain that their students possess lifelong learning skills such as basic learn-to-learn skills together with cognitive and metacognitive skills e.g., memory processing and/or self-reflecting process (Cornford, 2002). This concurs with the beneficial lifelong learning skills by Watanabe-Crockett (2019) that the ten most beneficial lifelong learning skills are as follows: creativity, problem-solving, critical thinking, leadership, communication, collaboration, information management, adaptability, and curiosity. Some of the mentioned skills require higher-order thinking skills. However, before scaffolding students to have such skills, teachers or instructors should assure that their students already have the literacy skills in both their own language and/or English. Literacy skills are skills concerning the awareness of language, print, the relationship between letters and sound. They are all the skills needed for reading and writing, vocabulary, spelling, and comprehension (Gee, 2011; Bainbridge, 2019). In other words, literacy includes reading and writing human language.

In many countries, reading is seen as a mandatory skill for an educated person (Gee, 2011). Therefore, it is necessary to provide students with both basic education such as literacy skills (reading and writing) together with lower and higher-order thinking levels of learning such as understanding and/or analyzing. It is obvious that no matter what skill it is, all of them start with either receptive skills; listening, or reading because they are the beginning of the learning process for every course in the world. One aspect that makes reading surpass listening is that readers can reach the texts without having to catch the unfamiliar accent or pronunciation, and they can design their speed of reading on their own (Daily Dictation, 2019). Since the ability to identify main ideas in reading texts is a key reading comprehension skill (Aulls, 1978; Harris & Sipay, 1980), this research study highlights the importance of reading for the

main idea that university students should have possessed. More details about main idea identification will be discussed in the next section.

#### 2.1.4 Reading for Main Idea

With the importance of main idea identification in the reading text, it is essential to first understand the concept of reading for the main idea. The main idea or macrostructure, according to Cunningham & Moore (1986), is a summary of the explicit contents of a passage achieved by creating generalized statements that colligate specific information then deleting redundant information. Williams (1988) noted that the importance of identifying main ideas from reading texts is needed for successful reading comprehension because it helps readers draw inferences from the reading text, study effectively, and read critically. However, the processing of the main idea can be imperfect because comprehension failures may occur occasionally. Due to some difficulties in building the macrostructural representation of reading texts, according to the observations in different kinds of empirical data. For example, children did not know how to summarize a text when they were asked to (Brown & Day, 1983). Students had problems when they were identifying the main ideas in expository texts. (Carriedo & Alonso-Tapia, 1991). Students were not able to extract main ideas from paragraphs, so they were unable to establish any relationship between sentences (Zoghi, Mustaphab & Maasumc, 2010).

Another explanation of the reason why EFL readers fail to locate and identify the main idea of the text is that they lack the following reading strategies: reading the introduction and the conclusion; focusing on the topic sentences of the paragraphs; and using appropriate macrostructure formation (Mannes and Kintsch, 1987). Jacobowitz (1990) added that in order to explain why the students could not recall the main idea of the reading text, it is important to stress the most crucial aspect of getting the author's thoughts to understand what they are trying to express by using the required strategies. Readers tend to stop reading when they confront with reading problems (Dweck & Licht, 1980). Therefore, it is crucial for the readers to be aware of the reading problems that they have confronted.

Although there are many certain reasons why students are not able to summarize and identify the main ideas of reading text, there is a great deal of evidence

showing that main idea comprehension can be improved if the instruction provides the students with knowledge and abilities to apply different strategies. Carriedo & Alonso-Tapia (1996) described nine aspects that help students understand text information: knowledge and use of different text structures, structures; application of macro rules e.g. suppression, generalization, and construction-integration; categorization skills practice; use of graphic organizers; adequate learning activities; practice to promote comprehension; the combination of reciprocal interaction situations between teacher and students and self-regulation strategies e.g. summary, explanations, questioning, and predictions.

As mentioned above, the main idea comprehension can certainly be trained and improved successfully with the application of different strategies to help students gain better comprehension. However, other factors occur while training instructional main idea program (Carriedo & Alonso-Tapia, 1996) e.g., length of the training period, type of task including the assumed concept of the main idea.

Regarding the teaching of main idea comprehension, Aulls (1978) states that the main idea statement can be explicit or implicit. However, the implied main idea can be much more difficult than the explicit one because it requires the cognitive capabilities of the EFL reader. If learners have limited linguistic ability, chances are that they are unable to understand the reading text. The main idea instructional methods are constructed with three essential processing components, according to Wilawan (2012), as follows: global comprehension, local comprehension, and self-monitoring. Moreover, an effective main idea instructional program (Carriedo, & Alonso-Tapia, 1996) should include these aspects: the main idea concept, expected learning models, reading task and instruction context, training duration and a number of training programs, test design, metacognitive aspects introduction, and learners' individual differences. These factors are essential for teachers to take into consideration for the effectiveness of the instruction. Furthermore, holistic comprehension (Pearson, & Dole, 1988) is focused on three variables: direct explanation of comprehension strategies from teachers, the guided practice of teachers and students together, and application of new teaching materials. There are five parts of teaching the main idea to students, according to Boudah (2013), as follows. The first part is pretesting and engaging

students for strategies learning. The second part is introducing students to essential knowledge and skills including paraphrasing. The third part is having students read passages according to their reading ability and practice reading strategies with teachers' aid until they become more independent in using reading texts or materials which is the process in the fourth part. The last part is post-testing students and facilitating the use of the strategies learned to other reading tasks. One of the most important things that teachers should consider when teaching reading for the main idea is teaching activities and how teachers will introduce reading for main idea instruction into the English classroom.

There has been the use of various methods to help reading for main ideas as follows. Graves (1986) compared the effects of different reading conditions of main idea identification on students with learning disabilities by dividing students into three groups with three different treatments: direct instruction only, direct instruction and self-monitoring, and a control group with no instruction. The results show that students in both experimental conditions who were taught explicit strategies for identifying main ideas of passages performed better than those in the control group. Moreover, the group that had been taught with a self-monitoring strategy was found to be more effective than merely direct instruction.

To enhance main idea comprehension, Jitendra, Hoppes & Xin (2000) investigated the effectiveness of the main idea strategy and self-monitoring instruction to improve students' comprehension. The participants were thirty-three students in the middle school divided into two groups: experimental and control. Students in the experimental group were trained to identify and generate the main idea statement using main idea strategy instruction and a self-monitoring procedure. The results show that students who were trained to use the main idea strategy and self-monitoring strategy outperformed those in the control group.

Obviously, from the above research studies, the teaching process of main idea identifying explicitly helps students learn more effectively, and finally become full comprehension of the reading text. In other words, main idea comprehension should be taught explicitly in a classroom environment. (Anderson-Inman, 1986) supported the idea that it is crucial to emphasize procedures that help promote the

application of learned skills. Moreover, teaching main idea comprehension in conjunction with self-monitoring training has yielded positive results for students learning.

Different teaching methods have been applied in teaching reading for the main idea such as using anchor charts, using pictures, emphasizing titles, and so on (The Teacher Next Door, n.d.). In addition, there is the use of games and online games in teaching English skills (Ariani, 2010; Gozcu & Caganaga, 2016; Ronimus, Eklund, Pesu & Lyytinen, 2019) including reading. The next section will discuss online games in English language learning.

## 2.2 Online Games

Nowadays, games have been seen as tools to increase people's interest, hence for education, both online and offline. They are on different platforms e.g., PCs, consoles, and mobile devices depending on their characteristics and the target market. Prensky (2001) added game characteristics or aspects as follows:

1. rules,
2. goals and objectives,
3. outcome and feedback,
4. conflict, competition, challenge, and opposition,
5. interaction, and
6. the representation of a story.

According to Heinich, Molenda, Rissel, & Smaldino (2002) there are ten categories of instructional methods that help learners to achieve the objectives or to internalize the content of learning. The ten categories are as follows. First, Presentation is the one-way communication controlled by the source or teacher with/without an immediate response from or interacting with the learner. It can be in the form of a textbook, an audiotape, a film, and so on. Demonstration helps the learners view a real or lifelike example of the skills for the learners to imitate a physical performance. The discussion involves the exchange of ideas among students or among students and teachers in order to help teachers establish rapport within the group to foster

collaborative and cooperative learning. It can be in a small group or large group. Drill and Practice help learners learn through a series of practice exercises to increase fluency in a new skill. It can be used for tasks such as math facts, foreign language learning, or vocabulary practicing. The tutorial is most often taught basic skills such as reading and arithmetic. It can be in the form of the instructor to the learner, learner to learner, or computer to the learner. Cooperative Learning supports students learning from each other when they work on a project as a team. This category can also be found in some computer games e.g., SimEarth: The Living Planet. Gaming provides a playful environment in which learners follow the rules when they are trying to achieve a challenging goal. It is considered a highly motivating technique that can be done individually or as a group. Simulation allows learners to confront a real-life situation placed in the game. It may involve participants' dialogue, manipulation of materials, or computer interaction. Discovery presents problems for the learner to solve through trial and error which aims to foster a deeper understanding of the content through student involvement. Lastly, Problem Solving can be a real-world challenge providing the starting point of learning. It involves placing students in the active role of being confronted with a problem situated in the real world. Over decades, the use of technology has been implemented to promote English teaching and learning.

Consequently, when designing an English course, teachers can use some of the above features together with technology to create an interesting learning environment in order to engage students. One of the most relevant aspects of using technology to aid language teaching and learning is the use of computer-assisted language learning (CALL). CALL has enhanced teaching and learning foreign languages by providing a wide range of applications about information and communication technology including all aspects of using computers in language instruction (Levy, 1997; Dudeney, 2002). Chapelle (2003) added the importance of CALL as it is related to understanding the cognitive and social process of classroom research on L2 learning. Using computer games in the language classroom is also one of the most interesting options for language teachers that should be taken for deliberation.

To engage students in a language class, teachers can use game aspects for teaching to make the classroom more fun. These aspects have also been applied in

language teaching and learning. For example, Aramruangsakul (2018) investigated the students' perception of the use of Kahoot as an educational tool in the English language classroom. The participants were eighty-six high school students in Thailand. Kahoot (Kahoot, n.d.) is the game-based learning platform used as educational technology in schools and other educational institutions which can be used for formative assessment or used as a break from traditional classroom activities. It was designed for social learning with learners gathered around a screen such as an interactive whiteboard, projector, or computer monitor. The finding of the research study showed that students' motivation level was increased when the teacher applied this gamification tool in class. Therefore, teachers can apply gamification such as Kahoot into language classrooms to engage students and increase their motivation. Apart from games in a non-game context, teachers can also employ learning content in online games to make the classroom more fun.

What is an online game? An online game is a video game that is primarily played through the internet or any computer network. Online games have been developed according to the change in people's daily lives. Then they are improved to become more commonplace with the addition of the ability for players to interact with other people (Horowitz, 2016).

### **2.2.1 Game Theories**

Using the game for language teaching and learning also contains further various aspects, for example, games can promote informal learning, problem-based learning, and socially mediated learning. Moreover, the use of the game for language teaching and learning also is beneficial in terms of practicing students to possess the special skills needed in the 21<sup>st</sup> century: collaboration, communication, critical thinking, and creativity. There are many aspects of game features that teachers should be aware of when adapting and adopting games into the classroom.

#### *Intrinsic Motivation*

Learners acquire more knowledge outside of the classroom in the subjects they choose by themselves regardless of their socio-cultural background, and that makes them more motivated in learning through their own experiences in informal contexts (Chen, 2015). Scribner & Cole 1973 suggested that when there are many

demands from in-class studying, and going to school, children seem to look at schools as their hostile institution because they have to cope with them for a long time.

In learning via online games, the learners are motivated intrinsically (Csikszentmihalyi & Hermanson, 1995) and determine their own learning of knowledge, skills, and/or abilities. The relevant factor that makes students more interested and motivated to learn is learning materials outside of the classroom Meyers et al. 2013). Because the assessment of informal learning outcomes is different than formal learning or learning in the classroom, students are assessed their learning by formative assessment e.g., observation, discussion, and small quizzes. Suggestion from Kleeman (2012) is that there are three areas in which to use assessments in informal learning: to evaluate their attitudes and reactions by discussion (Did they like it?), to use formative quizzes (Did they learning it?), and to measure performance and improvement by observation (Are they doing it?). The formative assessment is seen as a means that everyday learning activities can be seen as powerful assessment that provides evidence of student learning (Ruiz-Primo, 2011).

In order to have effective language teaching and learning, teachers should consider these aspects when introducing games into language classrooms together with the methods to make students more engaged in the study.

#### *Rewarding and Operant Conditioning*

Some aspects of a play favor regulated, centralized, and rule-based competition (Baudrillard, 2001). Gamification basically inclines towards the use of compulsory nature of progression promoting behavioral adjustments in players, especially to increase efficiency in players' everyday action by rewarding players for satisfied desired behavioral outcomes. By this benefit, a game can be applied as a positive set of potentialities focused on individual or collective control. Because games are rule-based systems designed for structuring play into ordered circumstances, game design and the resulting gameplay serve as a key aspect of gamification's relationship with control (Caillois, 1961). Therefore, game designers should include this gamification feature of rewarding when designing a game in order to make games more fun and more challenging. Moreover, the in-game rewarding systems can also create satisfied outcomes according to operant condition theory.

According to Skinner's (1938) Operant Conditioning, specific consequences are associated with voluntary behavior. Positive reinforcement includes the addition of a reinforcing stimulus following a behavior that makes the behavior is more likely to occur again in the future. When the outcome is satisfied after an action, the particular response or behavior will be continued. In other words, rewards are introduced to increase a behavior. For example, some computer games have rewards system functions, e.g., scores, money, competition, to attract players (Wang, & Sun, 2012). Salen and Zimmerman (2004) suggested that the goal of successful game design is creating a meaningful play that occurs when relationships between player actions and outcomes are discernable and integrated. Moreover, the fun and rewarding atmosphere can create engagement for learners or users.

Students' behaviors that are followed by the satisfaction of the learners are more likely to be repeated later on if it is under the same circumstances. In addition, if the behaviors are followed by the students' dissatisfaction, it is less likely to be repeated in the future under the same circumstances. When the game player makes a mistake or chooses wrong, a punishment will follow with the clue given again; furthermore, when the player succeeds, positive feedback will be given to reinforce the correct action (Erkkilä, 2017).

#### **Related Research Studies**

As stated earlier, online games (Online Games, n.d.) are played on various platforms such as PCs, consoles, and mobile devices which are in many genres divided by their features including linear games, competitive games, strategic games, and role-playing games (O'Brien, 2010). Role-Playing Games (RPGs) are considered as the highly complex games amongst four types of games, according to O'Brien (2010), as they can engage players by their features e.g., unique characters, settings, items, and inventory. In addition, there are several types of RPGs such as action RPG, tactical RPG, including Massively Multiplayer Online Role-Playing Games (MMORPGs) which is one of the most popular games (Yee, 2016) played by millions of people worldwide.

Moreover, there are several research studies investigated the effects of games on reading in various aspects. For example, there is a research study conducted by Doran (2010) investigated the use of video games to increase intrinsic motivation in

reading for university students. The results show that students' engagement and interest in the game resulted in habits of reading.

In addition, Keskitalo, Leinonen, Mansikkamaki, Kakela, Simila, Iivari, Kinnula & Molin-Juustila (2015) investigated the effects of adventure video games on reading and literacy skills. The results showed that the text-rich games provide possibilities to improve literacy skills in high school.

Gu (2017) conducted a research study to investigate the effect of vocabulary knowledge on students' reading comprehension. The participants were 124 second-year students who were studying English major in a Chinese university. The participants were to take their vocabulary knowledge which was included in both depth and breadth in vocabulary knowledge e.g., word definition, multiple-meaning vocabulary, and morphological awareness together with their reading comprehension ability. The results showed that vocabulary knowledge and English reading comprehension are positively correlated with each other. Moreover, it is concluded that in order to enhance students' reading ability, it is necessary for teachers and students to raise awareness of the importance of vocabulary knowledge and other factors that influence reading comprehension.

Furthermore, a research study by Mousavian, & Siahpoosh (2018) was conducted to investigate the effects of vocabulary pre-teaching and pre-questioning on EFL learners' reading comprehension ability. The participants were 60 Iranian EFL students whose native language was Turkish. The participants were divided into three groups: two experimental and one control group who were to take Oxford Placement Test then the pre-test before the experiment. The first experimental group received a vocabulary pre-teaching strategy, and the second experimental group received a pre-questioning procedure. The results indicated that the experimental vocabulary pre-teaching group outperformed the control group. To sum up, teaching vocabulary before reading the text is efficient when the keywords are directly taken from the text. Giving simple definitions or translations of vocabulary as pre-reading activities may be adequate (Lindsay, & Knight; 2006); also, it is often possible when this teaching process is applied when a teacher wants to build learners' interest and stimulate their background knowledge.

The next section will discuss MMORPG and how it is implemented in language teaching and learning. Also, Terry and Cheney's (2016) study discusses that massively multiplayer online role-playing games (MMORPGs) are popular compared to other game environments and then can help a player's motivation and engagement in their learning.

### 2.2.2 Massively Multiplayer Online Role-Playing Games

Implementation of online games can enhance language learning in terms of motivation. With the advance of technology, there is the use of various online games for language teaching and learning. Computer games are classified into eight different genres (Circa, 2000): action games, adventure games, fighting games, puzzle games, role-playing games, simulations, sports games, and strategy games. Massively Multiplayer Online Role-Playing Games (MMORPGs) have been used in language teaching and learning by teachers putting these games into the classroom. MMORPGs are combinations of role-playing video games and massively multiplayer online games in which a very large number of players interact with one another within a virtual world. Moreover, certain research studies have also been conducted to explore the effectiveness of MMORPGs in the language classroom.

Massively Multiplayer Online Role-Playing Game or MMORPG is an online game that combines features of Role-Playing Games (RPGs) with multiplayer gaming features. Most MMORPGs have common characteristics (MasterClass, 2021) as follow:

1. Multiplayer gameplay
2. Free-to-play or monthly subscription
3. Character creation
4. Character progression
5. Open-world exploration

Moreover, examples of MMORPGs are World of WarCraft (WoW), EverQuest (EQ), and Final Fantasy XIV with similar game characteristics which make most of them popular among game players.

With the implementation of MMORPGs and other online games in language learning, online games are beneficial for students in terms of giving effects to students' cognitive development. Cognitive abilities are brain-based skills people need to carry

out tasks from the simplest to the most complex (Sharp Brains, n.d.) such as sustained attention, logic and reasoning, and long-term memory. For example, children who play online games have a strong memory, better problem-solving skills, capabilities to synchronize their brains, hands, and their eyes, and they have a high comprehension skills.

When children unconsciously learn while playing a game, they also learn how to solve the problems and train their higher thinking because when playing games, children require to think of how to overcome the obstacles and/or how to pass each stage of the game hence continuing it to the next level (Fuad & Helminsyah, 2017). The higher level of the game, the more difficult to solve it. Therefore, it can be stated that the sense of thinking and problem-solving skills of a child come from playing games.

#### **Related Research Studies**

Supporting evidence comes from findings of research articles that disclose how students improve their reading skills via using computer games for learning (Chen, 2015; Kaylor, 2017; Zhang, Song, Liu, Tang, Chen & Zhang, 2017; Sousa Filho & Tomitch, 2017; Hapsari, Sari & Rais, 2019). Zhang et al. (2017) conducted a research study to find out the effects of using MMORPGs to enhance language learning. The results showed that reading skills and vocabulary are necessary for language learning emerged in playing MMORPGs (Chai, Barbeau, Soles, Callahan & Chen, 2016); conversely, reading skills can also be developed simultaneously by gamers' interaction in MMORPG-based instruction (Dourda, Bratitsis, Griva & Papadopoulou, 2014). The examples of MMORPGs are World of Warcraft (WOW), EverQuest, and Defense of the Ancient 2- (DOTA2) because these games contain simulations and interaction among game users.

A research study by Bryant (2006) was conducted to examine the social aspect of language acquisition from students playing MMORPGs called World of Warcraft at home interacting together with the researcher. The participant is one student who was a second-semester German student. The study focused on the use of modal verbs in German. The student was greeted with an audio greeting in German then presented with two reading paragraphs describing to the task. As the researcher adopted the already-existing virtual game environment in this study, the student had

to follow the instruction in the game to complete the game quest. The results show that the student was provided opportunities to use collaboration and communication skills while playing the game. Moreover, the student had a chance to look up unfamiliar words from a German dictionary after playing a game which is considered as intrinsic motivation the student had fetched from using MMORPGs for language learning.

Moreover, in searching for how a game can influence learning, Suh, Kim, & Kim (2010) investigated the effectiveness of MMORPG-based instruction in elementary schools in Korea. The participants of 220 students were divided into two groups: treatment group and control group. The treatment group of 118 students was taught with an English MMORPG while the control group of 102 students was taught in a face-to-face classroom. The results show that elementary school students who were taught English with online games had higher scores in listening, writing, and reading than those who were taught in face-to-face classroom instruction. Furthermore, the one of suggestions from this study is the most influential variables in English language learning achievement were motivation, prior knowledge, and internet connection in MMORPG-based instruction. Chen (2015) added that learners, regardless of their socio-cultural background, acquire more knowledge outside of school in subjects they choose and for which they are deeply motivated meaning that learning takes place through one's experiences in informal contexts.

Furthermore, Zhang et al. (2017) conducted a research study to find out the effects of using MMORPGs to enhance language learning. The results showed that reading skills and vocabulary are necessary for language learning emerged in playing MMORPGs (Chai et al., 2016); conversely, reading skills can also be developed simultaneously by gamers' interaction in MMORPG-based instruction (Dourda et al., 2014).

It is important to think of ways to teach reading in an L2 that will not only motivate the use of skills, strategies, and the execution of the reading processes but also make the reading developmental process more attractive. Thus, using games that foster the use of strategies as well as the execution of reading processes may have a significant impact on teaching reading in an L2 (Sousa Filho & Tomitch, 2017).

A research study by Hapsari, Sari, & Rais (2019) was conducted to investigate the opinion of gamers about the use of an online game called Defense of the Ancient 2 (DOTA2) in language learning. The participants of two gamers were observed, interviewed respectively. The results show that DOTA2 supported incidental learning of the English language because it was easy to use and understand the language in the game platform. Moreover, the games could also learn new English vocabulary and practice their reading skills while playing the game. However, the DOTA2 game merely focused on the action of strategies used in the game to win rather than purposing to learn the language.

According to the reported previous studies, there are several benefits of using online games in facilitating English language studies. However, some games were designed for pleasure, not for education. When researchers conducted research studies, they merely used the features that already exist in the game without developing them to match with learning lessons. It is difficult to tell that the games can really enhance language learning in students in many aspects.

Interestingly, a research study conducted by Terry & Cheney (2016) investigated the effect of MMORPGs on second language learning. Two participants were asked to play many MMORPGs on an international server where the English language was mainly used. The participants were asked to take ELLIS placement 3 for pre-and post-test. In this way, the researchers can assess whether students have progressed or achieved the original goal of the research study.

With the finding from various research studies, online games can improve students learning outcomes as well as provide enjoyment in the learning environment. Learning through games creates motivation and interest to learners via the role of fun in learning; therefore, students not only have progressions in learning but also have a passion for learning as well (Prensky, 2002). Protosaltis et al. (2011) added that a motivating game makes learners become more involved with playing in both emotional and cognitive ways because by engaging in a dual-level, their attention and motivation are increased to assist their learning.

In conclusion, various MMORPGs are used to implement language teaching and learning. Moreover, there is also one interesting game that is also used in language

learning (Hapsari, Sari, & Rais, 2019) called Defense of the Ancient 2 (DOTA2) to create experiences in an online learning environment together with increasing students' motivation. The next section will discuss one of the famous online games called DOTA2 and how it is used in language class.

### **2.2.3 Defense of the Ancient 2**

Defense of the Ancient 2 (DOTA2) was launched in 2010 and officially released as a free game to play as a computer game in 2013 for Window, Mac OS, and Linux. DOTA2 is considered a strategy game in which 5 members from two competing teams, Radiant and Dire, have to win the game by destroying the enemy Ancient inside their stronghold. The strongholds are guarded by multiple towers down 3 lanes. Each player control one Hero that has a strategically-powerful unit with unique ability and characteristics which can be improved over the course of the game. Along the way to conquer the enemy Ancient, players can collect (1) Gold by killing Creep, enemy heroes, and destroying the building, and (2) Experience when nearby creeps and heroes die. Gold is used to purchase items that provide various benefits and abilities to heroes. Experience is for increasing the hero's stats and at the most levels the hero gains a skill point, the hero's abilities can be upgraded (DOTA2, n.d.).

Actually, DOTA2 is categorized as a Multiplayer Online Battle Arena (MOBA) where two teams of players compete against each other on a predefined battlefield (Multiplayer Online Battle Arena, n.d.). However, in this study, the researcher has created a new map on DOTA2 platform to suit the learning content by allowing numerous players to play in the same story of the map; therefore, DOTA2 in this research study is considered as Massively Multiplayer Online Role-Playing Game (MMORPG).

#### **Related Research Studies**

There have also been some research studies concerning using an online game called Defense of The Ancient 2 (DOTA2), which is applied as the main tool in this research study, for language teaching and learning for various skills. For example, Moreira (2013) investigated the effects of DOTA2 as a tool for players to develop their English language skills by spotting video records of ten DOTA2 players. The study was intended to analyze how DOTA2 served as an effective tool for students to develop

different English language skills while engaging them in the game environment. The results show that (1) players can develop their language skills by interacting with other players through the chat feature in the game, (2) the players showed themselves very motivated to communicate with their team in the responses of their heroes, and (3) it is possible for the players to develop their English language skills through the situated meaning as they choose and compare different heroes' characteristics in a specific situation.

Mugot (2016) conducted a research study to examine the effects of DOTA2 on students' academic performance. The participants were 15 grade-8 students in the Philippines. The questionnaire was given to the respondents to test and analyze the relevant records. Then the data were statistically analyzed and interpreted. However, the results show that playing DOTA2 cannot affect the academic performance of students. Playing the game is only leisure for the students. Moreover, the research study suggested that students who played DOTA2 for fun needed guidance from their parents because game playing might interfere with time for their study, and they will not be too consumed by the game.

Nurafidha (2018) conducted a research study to search for DOTA2 players' lived experience on how they acquired English skills and components, and how English affected their emotions. The participants were three DOTA2 players who possessed high skills of playing the game so that the researcher could get vivid explanations related to their experience in playing DOTA2. The interview method was used in this study to get in-depth information. The exact same questions were asked to each participant so that the pattern of the answers would be shown clearly. The results show that players having a lot of interaction with the English language helps them acquire English skills, such as reading game instruction, listening to teammates, and expressing their ideas and emotion through writing and speaking in the game. Additionally, having good English language skills also motivates DOTA2 players to play because the language can help them communicate and manage the game.

Hapsari, Sari, & Rais investigate the opinion of gamers about the use of DOTA2 to learn English. The participants in this study were two gamers in Indonesia. Data were collected through field observation, semi-structured interview, and

documentation. The findings of the research are that (1) DOTA2 supports incidental English language learning because it is easy to use and to understand the language in the game platform, (2) the enjoyment while playing the game motivate games to practice English in team strategy discussions, and (3) the content encourages gamers to use English so that they can learn new vocabulary and practice English reading skills while playing. Nation (2001) stated that even though vocabulary knowledge is incomparable to reading comprehension, the reading comprehension process cannot be accessed without vocabulary knowledge. In the next section, online games in English language learning and learning reading will be presented.

## **2.3 Online Games in Language Learning**

This section will illustrate how online games are used in English language learning including learning reading and reading for main idea. Various type online games are applied in teaching and learning different skills of English language. Moreover, related research studies are also presented in this section to provide examples of online games used in language learning.

### **2.3.1 Online Games in English Language Learning**

In some countries, using online games is a concern because it also causes harm and addiction in young children. For example, in Thailand, an average of 8.1% of students in Bangkok spend more than eight hours per day playing online games at the weekend (“Youngsters’ Game Time Worrying,” 2019). Moreover, 64.66% of students nationwide revealed that they played online games for between three and five hours per day. It is believed that some games had been linked with aggression and mood changes among players, and some players admitted to gambling on online games spending an average of 1,000 baht per month. This is absolutely one of the serious issues in Thailand.

Although the playing game is quite a big concern in Thailand, apparently, online games are also beneficial for language teaching and learning in various fields. For example, Alyaz & Genc (2016) conducted a research study to investigate educational digital games in foreign language teaching to identify and the determining

reasons behind the pitfalls in applications and to explore the contribution of a serious game to the development of professional language skills of teachers. The participants were 60 pre-service teachers attending the department of German language teaching at a state university in Turkey. The game used in the study was a Role-Playing Game (RPG) called Adventure German-A Mysterious Mission. Pretest and Posttest were also applied together with semi-structured interviews in this study. The results show that there was a great improvement in pre-service teachers' professional language skills. Moreover, their attitudes towards using the games while teaching in the future would be positive. The use of the game in language classrooms plays an important part in teaching and learning. In order to employ online games in language teaching and learning, teachers or stakeholders should possess knowledge of game theories.

Another example of games for teaching language is that Homer, Plass, Raffaele, Ober & Ali (2018) investigated the students' cognitive skills improvement through the use of digital gameplay. The participants were high school students in a public school in New York. They were assigned to play an online game called Alien Game. The game was featured with levels of difficulty. At the end of each week, a leaderboard e-mail was sent to each student to indicate the total numbers of aliens each student saved. The results show that the Alien Game provided students' improvement, and was an effective tool for training cognitive skills when they were specifically designed for this purpose. Apart from using online games in the language classroom, it is crucial for teachers to understand the game theories to be able to see the detailed aspects using game to teach.

A number of research studies have shown that the use of online games has been implemented in language teaching. However, there are limited research studies on implementing online games for teaching reading for the main idea or reading comprehension because most research studies concerning online games were carried out for improving vocabulary learning.

### **2.3.2 Online Games in Teaching and Learning Reading**

As far as the researcher is aware, some research studies related to implementing online games for English reading are as follows. A research study was conducted to investigate the use of the digital game for teaching creative reading and

to encourage more people to read through online activity via computer and mobile platforms (The Reading Agency, 2011). The participants of unlimited online people were invited to read six books per person and record their reading in a diary in order to receive a certificate. The results show that the games that the researchers had chosen for review were ones that encourage people to read texts as parts of the game play.

With the investigation of game benefits on students' English language learning, Moreira (2013) analyzed how a massively multiplayer online role-playing game called DOTA2 improved students' English skills: listening, speaking, writing, and reading. Data collection was made by recording a video of 10 players separated into three parts of the interaction, players' identity, and situated meanings. The results show that players could improve their English reading and writing skills from playing the game as they read heroes' skills and item definitions. Moreover, one of the implications suggested from the research study is teachers should engage students in activities where they are able to practice their English writing and reading skills together with developing their creativity in playing games.

For the sake of video games of students' language learning, Erkkila (2017) conducted a research study to find out the effects of playing video games on students' language learning. The participants were Finnish 779 students from upper secondary schools and secondary schools who were to answer an online questionnaire about their experiences of playing the game together with their game habits. The results show that reading was one of the most improved skills when playing video games. Moreover, the suggestion from the study was computer games should be employed as material in second language reading.

A research study by Alchamdhani (2017) examining the influence of playing an online game toward vocabulary mastery was conducted on high school students in Indonesia. The difficulties related to English language learning that students had faced are related to students' motivation and capability, teachers and teaching methods, learning facilities, and teaching materials. The participants were 44 senior high school students who played the game. The research instruments were a questionnaire and one-side question interview. The results show that using online role playing games as

learning material is advantageous for teaching English because it can improve not only vocabulary mastery, but also four basics English skills: listening, speaking, reading, and writing.

In order to create and apply online games into the language classroom, developers and stakeholders should consider the game features whether are suitable and practical. The next section will provide information on game theories that affects language teaching and learning.

In summary, the current research will show the effects of MMORPGs on English reading for the main idea of Thai undergraduate students using the DOTA2 game platform and develop English reading content into the game to make it more fun and enjoyable. Moreover, the current study will apply a mixed methodology. According to Fraenkel & Wallen, (2005), while using the mixed methodology, the researcher merges or combines quantitative and qualitative research techniques, methods, and approaches into a single study. The current research study focuses more on designing an experimental game environment together with a questionnaire for statistical information and one-to-one interview for in-depth information to triangulate the research study. It is advisable to in applying a triangular approach (e.g., collecting information from two or more sources) in a research study because any one source of information is likely to be partial or incomplete (Richards, 2001). In the next chapter, the research methodology including subjects of the study, research instruments, research methodology, research design, data collection, data analysis, and the pilot study are then discussed.

## CHAPTER 3

### METHODOLOGY

This study is designed to investigate the effects of MMORPGs on English reading for the main idea of first-year non-English major students at Suranaree University of Technology. The purpose of this chapter is to describe how the study is carried out. It explains the background of the subjects, research design, and constructions of research instruments. Then research procedure and variables of the study are presented. Later, how data is obtained and analyzed in this study is explained. Finally, the pilot study is discussed.

#### 3.1 Population and Samples

The research was taking place at Suranaree University of Technology located in Nakhon Ratchasima in the Northeast of Thailand. The sample population of this study was the undergraduate students who were non-English major students at Suranaree University of Technology. They enrolled in English for Academic Purposes (213203) and English for Specific Purposes (213204) in the third trimester of the academic year 2020. The total number is 1,278 students.

The samples were 35 students who are non-English majors and enrolled in English for Academic Purposes (213203) and English for Specific Purposes (213204) in the third trimester of the academic year 2020 at Suranaree University of Technology. Students who were enrolled in those courses were the target students because the contents in both English for Academic Purposes and English for Specific Purposes were related to reading comprehension and reading for the main idea. However, due to the COVID-19 pandemic causing disruption in teaching and learning, students were selected in the study based on the availability basis to participate in the online class and they should have some experience in playing an online game before. Steps of selecting the participants are provided in the following details. At first, the researcher conducted a

survey about students' experiences of playing online games then asked if students were interested in participating in the research study. Mostly, the participants were selected on an available basis. The research study used volunteer sampling because it was concerned with the interest of the participants, and it was the only kind of sampling possible. Students who agreed to participate would need to sign in the informed consent in order to protect themselves from ethical issues (see appendix F). The students who participate in this study are assigned as the treatment group. Before the experiment, the reading ability of the students in this group were determined by their pretest scores to see how much their reading for main idea ability would be improved after the experiment.

### 3.2 Research Design

This study was designed to be mixed-method quasi-experimental research. The design is illustrated in the following figure.



**Figure 3.1 Research Design**

- X = Massively Multiplayer Online Role-Playing Game (MMORPG)
- $O_1$  = Pretest
- $O_2$  = Posttest

According to Figure 3.1, the study employed the pre-experimental design which had one group of the sample, the treatment group. Pretest ( $O_1$ ) was applied at the beginning of the experiment. Then, the treatment of MMORPG game playing which was the DOTA 2 game was applied to the group. After the treatment, Posttest ( $O_2$ ) was administrated to the group. Additionally, the samples were asked to respond to the questionnaire and interview. Data from the tests, questionnaire, and interview were then analyzed. The variables of the study were as follows:

1. Independent Variable: the independent variable in this study was a Massive Multiplayer Online Role-Playing Game (MMORPG) called DOTA2 to practice reading for the main idea to students at Suranaree University of Technology.
2. Dependent Variables: The dependent variables were:
  - 1) The pretest and posttest scores. They were measured through the use of SPSS program which is a powerful program that assists researchers to find the way to test the results through statistical tests. The posttest was conducted six weeks after the pretest.
  - 2) Students' perceptions of learning experiences using MMORPG in their reading for the main idea. The questionnaire and interview were used to seek in-depth information regarding students' perceptions of their learning experiences when learning via MMORPG. They were measured through SPSS program to find the statistical information of the questionnaire and coding the semi-structured interview into positive, neutral, and negative perceptions.

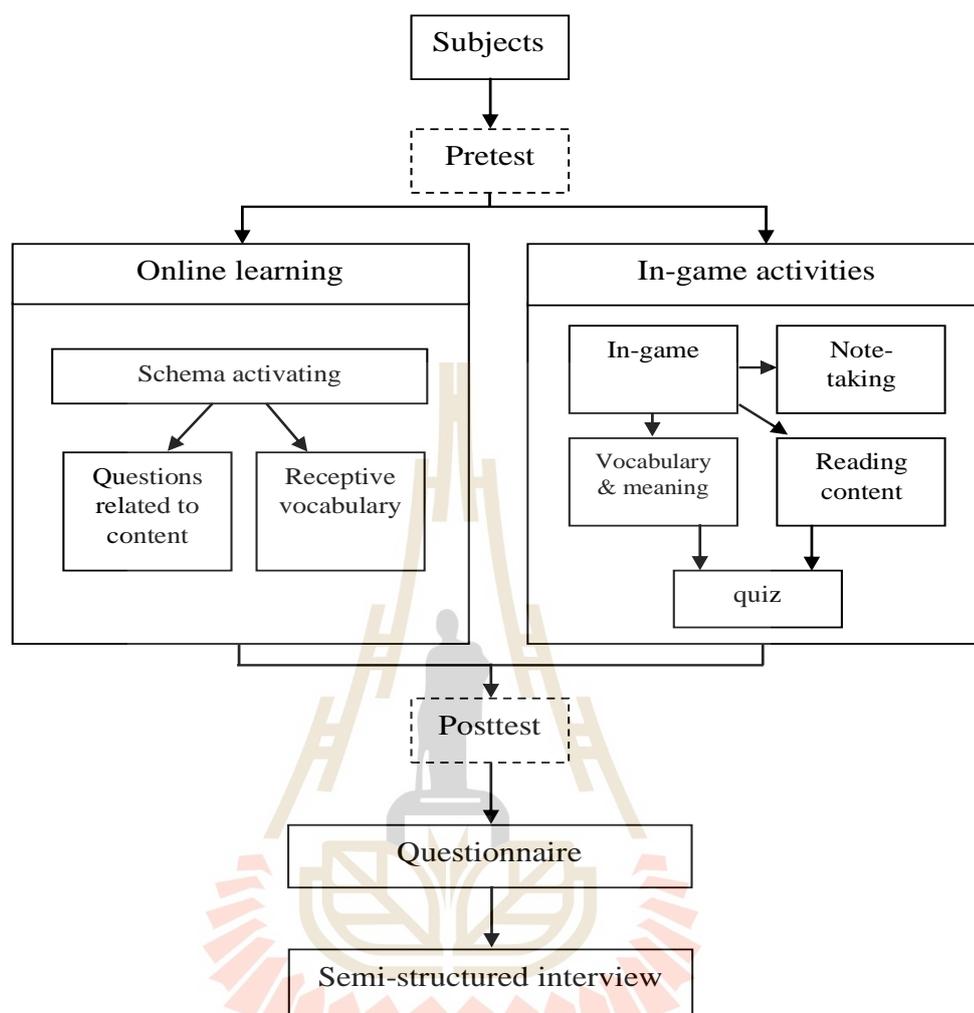


Figure 3.2 Steps of the current study

Steps of conducting the current research study is described as follows (figure 3.2).

**Step 1:** The subjects took a pretest of 25 items to measure their English reading for main idea proficiency level.

**Step 2:** The subjects participated in learning (video and online learning). In this step, they were asked questions related to the learning content, and they were introduced to the vocabulary needed for learning reading for the main idea in game.

**Step 3:** The subjects practiced in game. In this step, vocabulary and meaning and the reading for main idea content were shown to students. They were allowed to do note-taking in whatever device was convenient for them. After in-game practice for

each lesson, the subjects were asked to take quizzes of 1-2 questions about the content they learned.

**Step 4:** After the in-game practicing for all six weeks was completed, the subjects took the posttest.

**Step 5:** Questionnaire and semi-structured interview were conducted.

### 3.3 Research Instruments

There were five research instruments for this study: lesson plans, MMORPG, pretest/posttest, questionnaire, and semi-structured interview.

#### 3.3.1 Lesson Plans

The lesson plans of this research study included two parts: lesson plan and game practice. The lesson plan was constructed by the researcher, and the MMORPG was developed in the game platform called DOTA2. More details will be provided accordingly.

##### Lesson plan

The lesson plan for this study was constructed by the researcher based on reading for main idea contents. The contents of the whole course as well as the reading for main idea strategies were derived from English for Academic Purposes (213203) and English for Specific Purposes (213204) courses which are currently taught at Suranaree University of Technology.

Furthermore, the teaching according to the lesson plans was held online. Apart from the online study of the students in the treatment group, the practice of reading for the main idea via MMORPG lesson was allocated. Students were allowed to practice via game playing as frequently as they wish. The way to monitor the students' study time was through the submission of their homework or assignments. In addition, some parts of online in-game activities are managed and monitored by the screen recording of the video. The overall lesson is done according to the lesson plans. The lessons were divided into 6 main weeks: week 1 was for pretest and game demonstration; weeks 2-5 were for practicing of units 1-4; and week 6 was for posttest. For game practicing in units 1-4, the students could also design their own way of

practicing e.g., study time, practice time. In units 1-4, students would do a pre-reading activity, in game while-reading activity, and post-reading activity. For the pre-reading activity, students were given vocabulary and meaning that were essential for the game practice. For while-reading activity, students had to play MMORPG by reading sentences and reviewing the vocabulary. For the post-reading activity, students had to do the quizzes of 1-2 questions for each unit. (see Appendix D)

The lesson plans were developed by the researcher which contains the contents of reading for the main idea from English for Academic Purposes (213203) and English for Specific Purposes (213204). The steps to construct the lesson plans were as follows:

**Step 1:** The researcher studied English for Academic Purposes (213203) and English for Specific Purposes (213204) course syllabuses that were used at Suranaree University of Technology (SUT).

**Step 2:** The researcher developed lesson plans where learning activities were supported by the use of MMORPG.

**Step 3:** The lesson plans were examined by the three experts in the English language teaching field who has been teaching English for at least 5 years. The experts examined the lesson plans based on the criteria evaluation form. In this study, the overall content validity of the lesson plans was at the 'Suitable' level, with a mean score of 4.18 (S.D. = 0.51). Moreover, the lesson plans were then adjusted from the experts' advice (see Appendix D).

**Step 4:** The researcher improved and revised the lesson plans before using them with the subjects in the experiment.

#### **MMORPGs**

The Massively Multiplayer Online Role-Playing Game or MMORPG was developed by the researcher for students at Suranaree University of Technology for learning reading for the main idea. The MMORPG was designed based on the game theories of informal learning, which is one of the major trends in modern pedagogy. In this study, the MMORPG used for learning reading for the main idea is Defense of the Ancient 2 or DOTA2.

DOTA2 is a game where two teams of players compete with each other on the same battlefield. However, the game also allows players and game developers to develop or design their own games on the provided platform. Therefore, the researcher developed the game practice in reading for the main idea contained in a specific version to be used in this research study. The following are the details of how it is constructed.

**Step 1: Studying students' difficulties in learning the English language.**

The researcher studied students' difficulties in learning English language reading in order to explore the problems students have faced in learning English language reading and investigate the innovation that students want to learn in class.

**Step 2: Designing the contents and lessons for MMORPG.** The researcher studied the current curriculum of English for Academic Purposes (213203) and English for Specific Purposes (213204) courses for non-English major students at Suranaree University of Technology before designing lesson plans and content of MMORPG.

**Step 3: Developing the MMORPG.** The researcher developed the initial draft of the MMORPG prototype before launching the pilot study. Moreover, the assessment for content validity of MMORPG was sent to three experts for evaluation. The overall content validity of the MMORPG was at the 'Suitable' level, with a mean score of 4.17 (S.D. = 0.59).

**Step 4: Conducting the pilot study.** The MMORPG was used out of the classroom to find out if there were any problems, then the game design was changed and modified for further improvement according to the problems found.

**Step 5: Finalizing the MMORPG.** After the completion of modifications of the prototype based on results from the developing stage, the researcher finalized the MMORPG for use in the main experiment. (see Appendix E)

### 3.3.2 Pretest/Posttest

The pretest and posttest were used as the main tools for assessing students' reading for main ideas. Both tests have the same structure, consisting of reading passages and multiple-choice questions. The questions were designed to test students' reading for main idea ability at the literal level which can be achieved by employing reading for main idea strategies that were taught explicitly including finding a topic,

main idea, and supporting detail (as shown in test specification in Appendix A). There were 25 multiple choice questions test items for pretest and 25 multiple choice questions test items for posttest. Examples of the test in reading for main idea contents are illustrated as follows:

**Passage 1**

The best places to spritz perfume are on your body's pulse points. Those points include your wrists, neck, and the back of your knees. By applying perfume to these heat-emitting areas, your favorite fragrance won't irritate your skin.

1. What is the topic of this passage?
  - a. Your skin
  - b. Favorite fragrance
  - c. Heat-emitting areas
  - d. Points for applying perfume**
2. Which of the following sentences is the main idea of this passage?
  - a. Your favorite fragrance will irritate skin.
  - b. Perfumes should not be sprayed to heat-emitting areas.
  - c. The best places to spritz perfume are on your body's pulse points.**
  - d. Those points include your wrists, neck, and the back of your knees.
3. Which of the following sentences is the supporting detail of this passage?
  - a. Your favorite fragrance will irritate skin.
  - b. Perfumes should not be sprayed to heat-emitting areas.
  - c. The best places to spritz perfume are on your body's pulse points.
  - d. Those points include your wrists, neck, and the back of your knees.**

Pre-test and posttest were constructed using the following steps.

**Step 1: Preparation for test content.** The pretest and posttest were constructed by the researcher based on relevant theories and documents. The contents of the test included passages that required test-takers to use the main idea reading strategies to find the answers.

**Step 2: Writing out the tests.** The number of 70 items were created from the reading for the main idea concept. There were 24 reading passages, each of which was followed by 2 or 3 main questions of a topic, main idea, and supporting detail. The questions from each passage elicited reading for the main idea at a literal level.

**Step 3: Checking the validity of the content.** The 70 test items were then checked by three experts for content appropriateness as well as the index of item-objective congruency. The unaccepted items (having IOC less than 0.5) were improved upon as suggested by the experts. The criteria for assessing the IOC of the items were as follows:

- +1 means suitable item
- 0 means uncertain item
- 1 means unsuitable item

According to the experts' IOC results, there were 62 items that were acceptable and 8 items which needed more improvement (see Appendix A). The overall content validity of the test was at the 'Suitable' level with an average score of 0.85. The contents were then adjusted from their advice.

**Step 4: Trying out the test.** The improved items were administrated as a try out to English III students at Suranaree University of Technology who registered English III which was a reading comprehension course. The test took 30 minutes, at the beginning of the trimester 2 of the academic year 2020. A total number of 87 students completed the pretest and posttest. Then the scores from both tests were calculated in order to find out the item discrimination index ( $r$ ) and difficulty level ( $p$ ) of the test as shown in the following steps.

**Step 5: Checking the reliability of the content.** The try-out data were analyzed for the test's difficulty ( $p$ ) and discrimination ( $r$ ). Only 50 items with the most appropriate values of difficulty and discrimination are used for the tests. The whole test is also analyzed for reliability according to Kruder Richardson-20 method (KR-20).

Based on the analysis results (see Appendix A), the overall reliability of the test was 0.878. However, 12 items were deleted from the test because either their difficulty ( $p$ ) or discrimination ( $r$ ) value did not meet the minimal standard for passing the criteria of suitable items. In other words, they were too difficult/too easy ( $p$  values

were not in the 0.2-0.8 range) or had a weak discrimination power (less than 0.2). The 50 acceptable items were then chosen for the pretest and posttest.

These items were then equally divided into first and second halves, each containing 25 items, to be used as the pretest and posttest, respectively. This process was based on the Split Half method (Webb, et al, 2006). The complete set of pretest and posttest were also shown in Appendix A. Reliability of the pretest was 0.78 and posttest was 0.81.

### 3.3.3 Questionnaire

The questionnaire was used for collecting quantitative data on students' perceptions of MMORPG on reading for the main idea. It consisted of two sections: the general information of the students and the students' perceptions on learning reading for the main idea through the use of MMORPG. In order to gain the depth information from the subjects, the questionnaire was conducted in the native Thai language to prevent the language barrier to happen. The first part was about general information of the students, consisting of 4 questions. The second part was about the students' perceptions on learning English reading for the main idea through the use of MMORPG, consisting of 15 questions. The 5-point Likert scale was used to measure students' perceptions level. The five-point Likert scale included two parts: a declarative statement and a list of responses level ranging from "Very satisfied" to "Very dissatisfied".

- |   |           |                   |
|---|-----------|-------------------|
| 5 | refers to | Very satisfied    |
| 4 | refers to | Satisfied         |
| 3 | refers to | Neutral           |
| 2 | refers to | Dissatisfied      |
| 1 | refers to | Very dissatisfied |

Based on the Likert scale form, the statement in the questionnaire was constructed and developed using the following steps.

**Step 1:** The researcher studied the literature and reviewed documents about how to construct the questionnaire.

**Step 2:** The researcher constructed fifteen statements based on the use of M MORPG by adapting and adopting the questionnaires that are used in the related

field or content. The questionnaire was divided into 5 themes as follows: intrinsic motivation, collaboration, communication, rewarding and operant conditioning, and learning outcomes.

**Step 3:** All of the statements were examined by three experts in the English teaching field for content validity.

**Step 4:** The questionnaire was sent to the three experts to check the content validity by using the Index of Item-Objective Congruence (IOC) formula. The questionnaire was checked by three experts in the language field. The IOC was used to evaluate the items of the questionnaire based on the score ranged from -1 to +1. Incongruence = -1, Questionable = 0, and Congruence = +1. The items that had lower scores than 0.5 were revised (Rovinelli & Hambleton, 1977). In this study, the average IOC scores of the questionnaire was 0.87; therefore, all items in the questionnaire of the present study were reserved with little adjustment. (see Appendix B)

**Step 5:** After adjustment, the questionnaire items were administered as a tryout to first-year non-English major students at Suranaree University of Technology. The total mean score from the questionnaire is  $\bar{X} = 4.35$  (S.D. = 0.647), and it can be concluded that students had a good opinion toward learning English reading for the main idea via MMORPG (see Appendix B).

#### 3.3.4 Semi-Structured Interview

In this study, the semi-structured interview was used to gain in-depth data of students' perceptions after using MMORPG on learning reading for the main idea. The semi-structured interview was used to extract students' responses regarding their perceptions towards the use of MMORPG and their learning experiences. In the present study, students' perceptions were understood as to how the students evaluated the use of MMORPG and how they felt about learning through MMORPG in relation to their learning success. According to Johnson (1998), if the goal of the interview was to share perception, belief, or behavior among the relatively homogeneous group, the researchers do not need many participants. The interview was conducted online and one on one with the researcher taking directly to one interviewee at a time; moreover, in this study, the interview was held in the interviewee's native language (Thai) and

each interview lasted three or five minutes. The interview questions were constructed and developed using the following steps.

**Step 1:** The researcher studied literature and reviewed documents about how to construct the semi-structured interview.

**Step 2:** The researcher constructed 5 guided questions based on the use of MMORPG and the questionnaire statements. It was suggested when drafting interview questions that the researchers should not put too many issues into the agenda. Nonetheless, the list of questions should be sufficient to get information from the respondents (Adams, 2015). In addition, the questions were predetermined and there was sufficient flexibility to allow the interviewees an opportunity to shape the flow of information.

**Step 3:** The interview was sent to the three experts to check the content validity by using the Index of Item-Objective Congruence (IOC) formula based on the score range from -1 to +1. Congruence = +1, Questionable = 0, and Incongruence = -1. The items that have scores lower than 0.5 were revised. On the other hand, the items that had scores higher than or equal to 0.5 were reserved (Lambensa, 2017). In this study, the average IOC score of the interview questions was 0.93 (see Appendix C) which was considered suitable; therefore, all questions were reserved.

**Step 4:** The interview was then administered as a try-out to first-year non-English major students at Suranaree University of Technology.

The data from the interviews were useful to confirm and triangulate the results from the preliminary findings of this study. The data are collected during the treatment period of trimester 3 the academic year 2020. The data from the interview were classified into three parts: positive perspective, negative perspective, and neutral perspective. Then the data analysis was done by coding the frequent words into the same groups of the interview data.

### 3.4 Research Procedures

The present study was designed to be mixed-method quasi-experimental research that employs a quantitative method to analyze and interpret the collected data from pretest and posttest scores and parts of the questionnaire. For in-depth information

from the participants after the experiment, the data were collected through an open-ended questionnaire and a semi-structured interview. Then analysis and interpretation were demonstrated according to a quantitative process. The research design was illustrated in figure 3.1. Due to the fact that the present study aimed to enhance EFL reading for the main idea, the MMORPG had been employed as a treatment of the present study.

The research procedure started with the researcher setting the objectives of the research study, then designing lesson plans, developing MMORPG in custom mode, constructing pretest and posttest, questionnaire, and semi-structured interview. All of the mentioned elements were used as research instruments. After finishing the design of lesson plans, MMORPG, pretest and posttest, questionnaire, and semi-structured interview, they were all validated for content validity by English language professionals in Item Objective Congruence (IOC). After the process of validation, all items were used as a try-out with a group of students in the pilot study.

When the preparation of the research instruments has been finished, a pretest was given to the students. The experimental process was taken in the academic year 2020 for 4-6 weeks. Next, students were introduced to the MMORPG which was a treatment of this research study. The sample students would play 4 units of MMORPG and do exercises for each unit. After that, the posttest was provided to the students in order to examine the reading for main idea achievement. A questionnaire was administered to all students to complete, and finally, some students were selected purposively to respond to a semi-structured interview. The research procedure was demonstrated in figure 3.3.

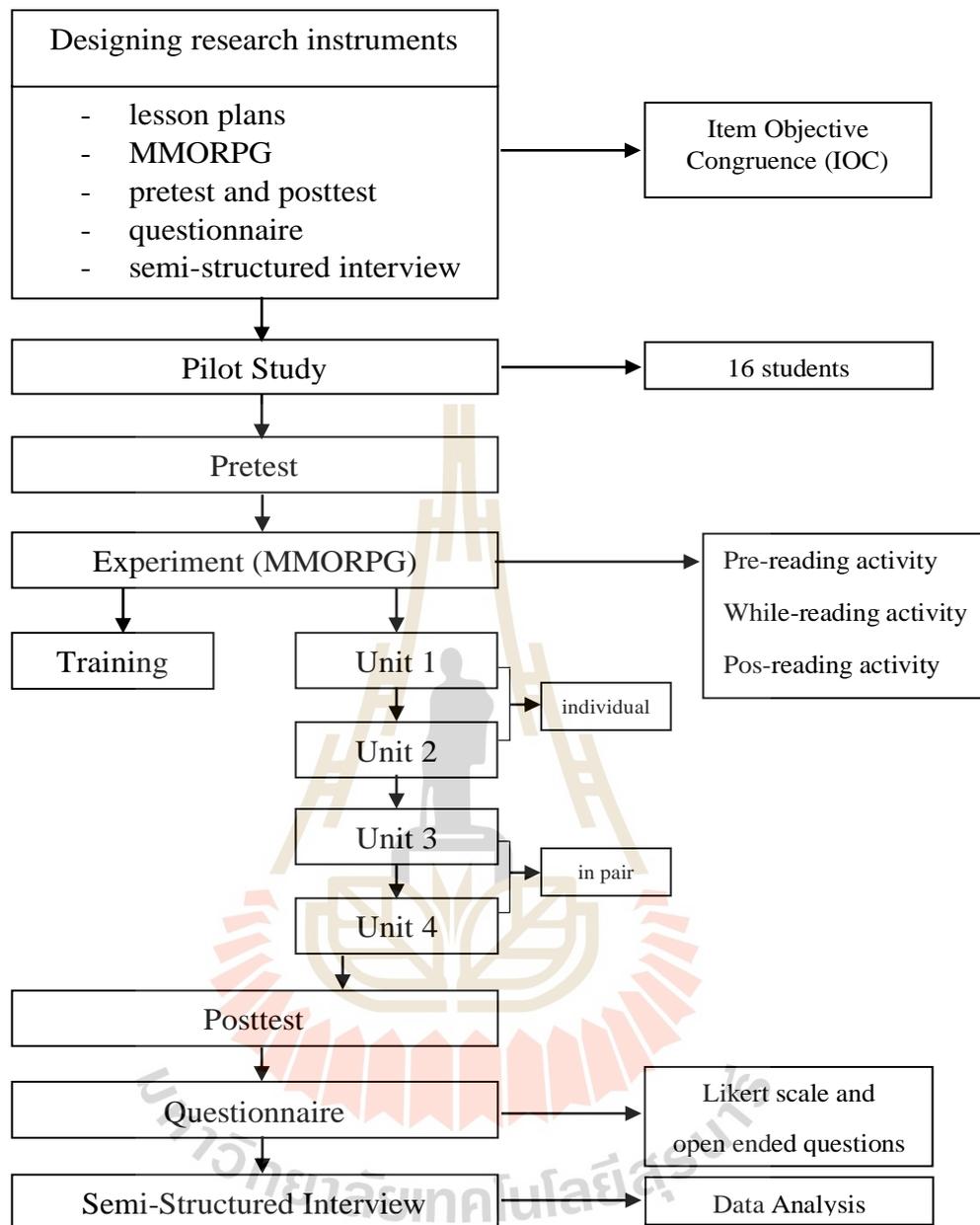


Figure 3.3 Research Procedure

### 3.5 Data Collection

The instruments to be used in the research are according to two research questions as shown in figure 3.3. Firstly, the researcher developed lesson plans for the whole course for teaching reading for the main idea. Then the pretest was administered to the students. After that, the use of MMORPG for teaching the main idea is applied to the students. After the treatment, the students were to take a

posttest to evaluate their reading for main idea proficiency. Finally, the questionnaire and semi-structured interview were applied to the students. The study consists of issues to be explored and instruments to be used for each data type in order to answer the questions as illustrated in figure 3.4.

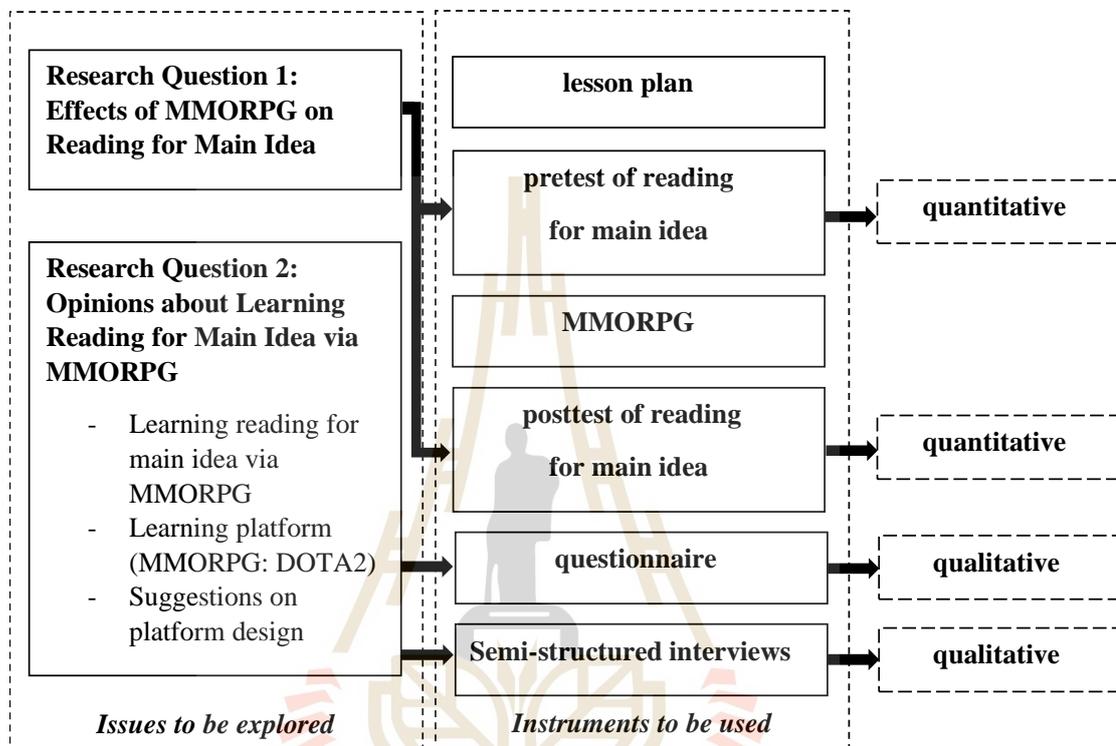


Figure 3.4 Issues to be explored and instruments to be used

In addition, the data collection steps are described as follows:

**Step 1:** Students in the treatment group took a pretest of reading for the main idea.

**Step 2:** Students studied reading for the main idea online through videos on google drive.

**Step 3:** Students practiced reading for the main idea via MMORPG, and did quizzes after finishing each unit of practicing.

**Step 4:** Students took the posttest after finishing reading for the main idea via MMORPG practice.

**Step 5:** The questionnaire was administered to the students learning through the MMORPG playing.

**Step 6:** Interviews were conducted with selected students based on their questionnaire responses.

### 3.6 Data Analysis

The data obtained from different methods are analyzed and interpreted as follows.

#### 3.6.1 Quantitative Data

1. For the pretest and posttest scores, the data were analyzed by means of the Statistical Package of Social Sciences (SPSS). The t-test was used for testing the pretest and posttest, and for analyzing the difference between pretest and posttest scores. Moreover, frequency and percentage were used to analyze the questionnaire data.
2. The questionnaires were analyzed and interpreted by mean ( $\bar{X}$ ) and standard deviation (S.D.) by using Microsoft Excel program. The data from the Likert scale were calculated in the arithmetic mean ( $\bar{X}$ ) which showed the students' perceptions toward the use of MMORPG on learning reading for the main idea. The criteria for assessing students' perception levels were based on the median score on the five-rating scale.

5	refers to	Very satisfied
4	refers to	Satisfied
3	refers to	Neutral
2	refers to	Dissatisfied
1	refers to	Very dissatisfied

#### 3.6.2 Qualitative Data

For qualitative data, a semi-structured interview was held in the students' native language. Each interview lasted 15-20 minutes. While interviewing, an audio-recorder was used then the data are transcribed. The interview data were classified as positive, negative, and neutral perspectives and analyzed by coding.

### 3.7 Pilot Study

The subjects in the pilot study were twenty Thai EFL undergraduate students with an average of fifteen years of English study, who took taking English for Academic Purposes (213203) course in the second trimester, the academic year 2020 at Suranaree University of Technology. They had already studied the content of reading for the main idea which was in one part of the course. The pilot study was designed to collect both quantitative and qualitative data. The purpose of the pilot study was to evaluate the accessibility, feasibility, and appropriateness of the MMORPG and other instruments (pretest, posttest, questionnaire, and interview). Moreover, the results from the pilot study were expected to provide significant data for developing and refining the instruments before the main experiment.

The pilot study was done under the same conditions that were employed in the main experiment. In order to make the process effective, the steps of piloting were conducted as follows:

Step 1: The researcher reviewed and studied how to conduct a pilot study.

Step 2: The researcher defined the objectives of conducting a pilot study.

Step 3: The researcher consulted with experts about the appropriateness of MMORPG for teaching English reading for the main idea. Then the MMORPG was modified to the lessons.

Step 4: The researcher specified a group of subjects, timeline, and evaluation approach and conducted the pilot study.

Step 5: After the pilot study was done, the questionnaire was administered to the students and conducted a semi-structured interview.

#### 3.7.1 Results from Pilot Study

After learning with MMORPG, students' reading for main idea knowledge had been improved as shown in table 3.1.

Table 3.1 Students' mean scores after learning English reading for the main idea via MMORPG

		Paired Differences					t	df	Sig. (2-tailed)
		Paired Differences			95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper			
Pair 1	Pretest - Posttest	-2.80000	1.82052	.47006	-3.80817	-1.79183	-5.957	14	.000

According to table 3.1, the mean score of the posttest was different from the pretest and the p-value was lower than 0.05 ( $p < 0.05$ ). Therefore, it can be concluded that there were strongly significant differences between the pretest and posttest mean scores and the use of MMORPG helped students improve their reading for main idea knowledge. Moreover, the results from the questionnaire also showed that students favored the use of MMORPG on learning English reading for the main idea.

The Likert scale was used for rating students' perceptions toward the use of MMORPG on learning English reading for the main idea. Students expressed their perceptions toward the use of MMORPG by rating each statement in the questionnaire according to their level of agreement. There were five points rating scale in the questionnaire, 5 = Very satisfied, 4 = Satisfied, 3 = Neutral, 2 = Dissatisfied, and 1 = Very dissatisfied.

The results from the questionnaire were grouped into three themes. First, the language gain, 92% of the students rated item 6 ( $\bar{X} = 4.60$ , S.D. = 0.632), and item 5 ( $\bar{X} = 4.73$ , S.D. = 0.458) as the first highest scores. They indicated that students strongly agreed that learning English reading for the main idea via MMORPGs was good because they can discuss the reading content with friends.

Secondly, regarding the game design, 94.6% of the students rated item 14 ( $\bar{X} = 4.73$ , S.D. = 0.458) as the second highest score. It showed that students thought that they have become active learners when learning reading for the main idea via MMORPG.

Thirdly, the students stated that they had motivation in learning English reading for the main idea via MMORPG with item 9 rated ( $\bar{X} = 4.47$ , S.D. = 0.516). This

means that students had a good attitude toward learning via MMORPG because they can use the chat in-game provided chat function to communicate with friends.

According to the total mean scores from the questionnaire ( $\bar{X} = 4.48$ , S.D. = 0.61). Because the overall score was over 4 which is considered as satisfied, it can be concluded that students had positive perceptions toward learning English reading for the main idea via MMORPG.

For the interview, there was a major problem in implementing the interview: time restriction. Due to the COVID-19 pandemic, the conducting of the pilot study was a bit delayed because of the lesson plans and teaching method from in class to online. In addition, during the trimester, the interviews were changed to the form of an online interview because the students had to take the final exam. Therefore, there were only three students who were respondents in this interview. In the interview, all three students mentioned that they liked learning English reading for the main idea via MMORPG because it was fun, and it was a new way of learning. In terms of learning outcome, the students could play games and practice reading at the same time; therefore, they understood more when they practiced. Students also mentioned in the semi-structured interview that they also wanted to practice other skills such as listening, vocabulary, and grammar for writing via MMORPG (see Appendix C).

Students also mentioned in the semi-structured interview that they felt excited when they had to choose game heroes and skills in MMORPG, and this also motivated them to learn better. Because these features were found to be fun, students did not feel like they were learning at all. In addition, students enjoyed collecting items to fetch sentences and vocabulary in the game. One student also added in the interview that they liked to collect sentence items as much as possible because they wanted to compete with other friends. They even studied more to choose heroes that walk fast or heroes that have different special abilities. This showed that students liked the MMORPG because they believed that learning through MMORPG allowed them to learn in a pleasurable and playful environment which also helped them improve their reading ability. The students also mentioned problems and suggestions which will be illustrated in the next section.

### 3.7.2 Summary of the Pilot Study

In summary, this chapter has provided details on the research methodology employed in the present study. It presented the subjects of the study, the instruments used to collect data, and the research design of the study. Then, the data collection and the analysis methods of the study were explained together with the results from the pilot study.

### 3.7.3 Problems Found and Improvement after Pilot Study

When asking students about the suggestions for improving Massively Multiplayer Online Role-Playing Game (MMORPG), the responses are issues about internet connection, game design, and quiz responses.

- *The game was too slow due to the internet connection.*
- *Some items which contain sentences were not clear to be seen in the game map.*
- *The feedback of the quizzes should come right after the answers were submitted.*
- *Some students did not have experience playing MMORPG before, there was a bit of confusion at the beginning of playing.*

After the students suggested improvement, here are the solutions that the researcher have concluded.

- *There should be a more stable internet connection provided to students when they play.*
- *For the unclear items in the map, the researcher has adjusted the locations of those items to be clearer to be seen. Some of the items are replaced by ones with bigger forms or shapes.*
- *For the suggestions regarding immediate feedback, Kahoot is used for quizzes because it is a game-based learning platform where students can join quizzes easily, and it provides immediate feedback.*
- *As some students had not experienced MMORPGs before, there was confusion when playing the game, and it could lead to boredom. In this*

*way, in the actual study, volunteer students should have experience of playing MMORPGs so that they know how to manage the game playing.*

More suggestions were made from the students in the semi-structured interview as follows.

- *The chat feature should be available when practicing reading for the main idea via MMORPG.*
- *It would be good if the lessons are in Thai.*
- *Teacher should be available when students want to ask questions or when they are not sure about the lesson.*

Furthermore, the pretest and posttest were changed as per the suggestion from the experts together with the test implementation process.

To sum up, conducting a pilot study helped the researcher to explore some problems that might occur during the main experiment. Some problems came from technology or the internet which is uncontrollable. The researcher expected that the solutions found in the pilot study might reduce some problems which could happen in the main experiment. Nonetheless, after the pilot study was done, the overall results from the reading test, questionnaire, and interview revealed that learning English reading for the main idea via MMORPG has helped students improve their reading proficiency.

In summary, this chapter provides details on the research methodology employed in the present study. It presents the subjects of the study, the instruments used in collecting data, and the research design of the study. Then, the data collection and the analysis methods of the study were explained. Finally, the pilot study is discussed.

## CHAPTER 4

### RESULTS

This chapter presents the results of the study by reporting the effects of Massively Multiplayer Online Role-Playing Game (MMORPG) on students' reading for the main idea, and students' perception about the use of MMORPG on learning reading for the main idea. The results of this research study are presented in both quantitative and qualitative aspects that reflect the study research questions one and two.

#### 4.1 Results

##### 4.1.1 Results of the effects of MMORPG on students' reading for the main idea knowledge

The following results are about research question 1: *What are the effects of MMORPG on reading for the main idea of Thai EFL undergraduate students?* Results from the study showed that there is a statistically significant difference between students' pretest and posttest scores. In this way, students' English reading for the main idea was measured in the form of scores in the pretest and posttest as shown in Table 4.1.

Table 4.1 Paired sample statistics of students' pretest and posttest

#### Paired Samples Statistics

	Mean	N	Std. Deviation	Std. Error Mean
Pair 1 POSTTEST	14.26	35	3.600	0.609
PRETEST	7.60	35	2.626	0.444

As shown in Table 4.1, the students' average score for the pretest and posttest was 7.60 and 14.26 respectively. The results indicated that the posttest scores were higher than the pretest scores. To investigate whether there was a statistically significant difference between the pretest score and posttest score, a paired sample t-test was utilized to compare. The results of the t-test are shown in Table 4.2.

**Table 4.2 Paired sample t-test of students' pretest and posttest scores**

		Paired Differences					t	Df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	POSTTEST - PRETEST	6.657	3.253	0.55	5.54	7.775	12.105	34	0

\* $p < 0.05$  (2-tailed)

As shown in Table 4.2, the paired-samples t-test has shown the improvement of the students' reading for main idea knowledge before and after learning with MMORPG. Students took the posttest at the end of the experimental period. The students' post-test scores increased from the pretests score at 6.657 ( $p = .000$ ). The score was significantly different with the p-value being lower than 0.05. Therefore, this can be concluded that MMORPG can enhance students' reading for main idea knowledge because students performed better after learning English reading for the main idea through MMORPG.

#### 4.1.2 Results of students' perception about the use of MMORPG on learning reading for the main idea

This section presents the results of research question 2: *What are Thai EFL undergraduate students' perceptions on learning reading for the main idea via MMORPG?* The results of students' perceptions were drawn from both quantitative and qualitative data. Quantitative results were analyzed from the responses of the questionnaire, while qualitative results were drawn from semi-structured interviews.

### A) Quantitative results of students' perception on the use of MMORPG in learning reading for the main idea

The questionnaire was designed to gather more information consisting of three parts. The first part was about the background information of the students which includes 5 questions (gender, age, study field, current English course, and students' experiences of playing online games). The second part was about the students' perception of learning reading for the main idea via MMORPG which includes 15 questions. The 5-point Likert scale was used to measure students' perception level consisting of two parts: declarative statements and a list of responses level ranging from "Very satisfied" to "Very dissatisfied". A voluntary response sampling method was used to select the subjects of the study.

#### 1) The students' background.

The students were asked to provide some background information which will be illustrated in table 4.3.

**Table 4.3 Students' demographic data**

Gender (N)		Age	Major	Current English course	RPG/MMORPG Experiences	
Male	Female				Yes	No
16	19	19	Engineering	English for Academic Purposes	23	12

35 Engineering students were participating in this study including 16 male and 19 female students. The subjects of the study were students who enrolled English for Academic Purposes course in the first trimester of the academic year 2021 at Suranaree University of Technology. The average age of the students was 19 years old. They all have had experience in playing the online game (MMORPG) before, and 23 students out of 35 had experience in playing Role-Playing Games or Massively Multiplayer Online Role-Playing games before.

#### 2) Students' perceptions

For the perceptions of students, they were asked about how they felt about learning reading for the main idea via MMORPG which will be illustrated in table 4.4.

Table 4.4 Students' perceptions on learning reading for the main idea via MMORPG

No.	Items	Mean	S.D.	Interpretation
1	I like learning to read for the main idea through a Massively Multiplayer Online Role-Playing Game because it is fun.	4.43	0.608	Satisfied
2	I like the various points of the map in the game very much because it makes me feel excited when learning English reading for the main idea through a Massively Multiplayer Online Role-Playing Game.	4.34	0.725	Satisfied
3	Learning English reading for the main idea through a Massively Multiplayer Online Role-Playing Game encourages me to participate more in class.	4.26	0.561	Satisfied
4	I enjoy learning English reading for the main idea through a Massively Multiplayer Online Role-Playing Game very much.	4.43	0.655	Satisfied
5	I like learning English reading for the main idea through a Massively Multiplayer Online Role-Playing Game because I can play it with my friend.	4.46	0.561	Satisfied
6	I like learning English reading for the main idea through a Massively Multiplayer Online Role-Playing Game with my friends because I can discuss the reading content with them.	4.34	0.539	Satisfied
7	I believe that learning English reading for the main idea through a Massively Multiplayer Online Role-Playing Game together with my friends helps me read English passages better.	4.40	0.553	Satisfied
8	I like the chat function of the Massively Multiplayer Online Role-Playing Game because I can contact my friends in real-time.	4.31	0.631	Satisfied
9	While learning English reading for the main idea through a Massively Multiplayer Online Role-Playing Game, I always discuss with my friends via the chat function.	4.06	0.539	Satisfied
10	I also share my reading sentences or vocabulary meaning via the chat function of Massively Multiplayer Online Role-Playing Game when learning reading for the main idea.	4.46	0.505	Satisfied
11	I like gold coins in the Massively Multiplayer Online Role-Playing Game because I can use them to buy items that make my hero get stronger.	4.60	0.553	Satisfied

Table 4.4 Students' perceptions on learning reading for the main idea via MMORPG

No.	Items	Mean	S.D.	Interpretation
12	I feel excited when I level up and finally won the Massively Multiplayer Online Role-Playing Game.	4.49	0.612	Satisfied
13	I want to play the Massively Multiplayer Online Role-Playing Game again to practice my reading in further steps.	4.63	0.490	Satisfied
14	I become an active learner when learning reading for the main idea through Massively Multiplayer Online Role-Playing Games.	4.40	0.553	Satisfied
15	I am interested in learning English reading for the main idea through a Massively Multiplayer Online Role-Playing Game because I want to know how games can support my learning.	4.34	0.539	Satisfied
<b>Total</b>		<b>4.40</b>	<b>0.57</b>	<b>Satisfied</b>

Table 4.4 shows students' responses to the questionnaire about their perceptions on learning reading for the main idea via Massively Multiplayer Online Role-Playing Game (MMORPG). The results revealed that students were satisfied with all fifteen statements from the questionnaire. Considering the mean scores for all fifteen items ( $x = 4.40$ ,  $S.D. = 0.57$ ), it is indicated that students had a good perception of learning reading for the main idea via MMORPG.

In this section, the results from the second part of the questionnaire were reported. Firstly, the first three highest-rated items from the questionnaire were reported regarding students' perceptions on learning reading for the main idea via MMORPG respectively. The first highest rated item was item 13 ( $x = 4.63$ ,  $S.D. = 0.490$ ), "I want to play the Massively Multiplayer Online Role-Playing Game again to practice my reading in further steps.". The second highest-rated item was item 11 ( $x = 4.60$ ,  $S.D. = 0.553$ ), "I like gold coins in the Massively Multiplayer Online Role-Playing Game because I can use it to buy items that make my hero get stronger.". The third highest-rated item was item 12 ( $x = 4.49$ ,  $S.D. = 0.612$ ), "I feel excited when I level up, and finally won the Massively Multiplayer Online Role-Playing Game." respectively.

Secondly, the three lowest-rated items from the questionnaire considering students' perception of the use of MMORPG on learning English reading for the main idea were also reported respectively. The first lowest rated was item 9 ( $x =$

4.06, S.D. = 0.539) “While learning English reading for the main idea through a Massively Multiplayer Online Role-Playing Game, I always discuss with my friends via the chat function.”. The second-lowest rated was item 3 ( $x = 4.26$ , S.D. = 0.561) “Learning English reading for the main idea through a Massively Multiplayer Online Role-Playing Game encourages me to participate more in class.” In addition, the third-lowest rated was item 8 ( $x = 4.31$ , S.D. = 0.631) “I like the chat function of the Massively Multiplayer Online Role-Playing Game because I can contact my friends in real-time.”. As shown in Table 4.3.1, these three items had the lowest mean score rated by the students, however, the mean scores were above 3.40-4.02 which can be interpreted at the “good perception” level. Therefore, overall, students favored MMORPG and had a good perception of the use of MMORPG on learning reading for the main idea.

To sum up, the overall perceptions that students have toward learning reading for the main idea via MMORPG is good, according to the 5-Likert scale.

#### **B) Qualitative results of students’ perception on the use of MMORPG in learning reading for the main idea**

The semi-structured interview was used in this study to gain in-depth data of students’ perception after using a Massively Multiplayer Online Role-Playing Game on learning English reading for the main idea. Nine students were purposively selected as interviewees. Five interview questions were predetermined. The results are reported about five questions from the interview.

##### **1) Students’ satisfaction of reading for the main idea via MMORPG**

In question 1, students were asked whether they like learning English reading for the main idea via MMORPG or not. All of the students answered that they liked learning English reading for the main idea via MMORPG for different reasons. The following themes were reported by students including fun and motivating, understanding text meaning, and memory respectively.

Firstly, students pointed out that learning English reading for the main idea via MMORPG was fun and motivating. This can be reflected that the majority of the students liked learning reading for the main idea via MMORPG because they thought it was fun and not boring which could be illustrated from the following statements:

SS1: *“MMORPG is similar to the game that I am playing now which is fun. I like the way that I can play games and learn English at the same time. I don’t feel like I’m learning in the classroom context at all.”*

SS9: *“This is a new experience of learning. It is good that there is a reading game which is fun and not boring when we learn.”*

Secondly, some students were informed that learning reading for the main idea via MMORPG could help them understand the reading texts and meaning. This could be reflected that MMORPG helped students to understand word meaning leading to understanding the reading text better as stated in the following sentences:

SS5: *“I can read when I know the meaning of words taught in the game. It can make me read better when I practice a lot.”*

SS6: *“I can understand what I read easier when I know the word meaning that I’ve learned from the game.”*

Some students thought that learning reading for the main idea via MMORPG could help them remember the reading content better. This could be reflected that the game features helped students to remember the reading content better as stated in the following sentences:

SS3: *“There are some game features such as characters and heroes that make it easy to remember the reading content. It’s fun so I can remember the content.”*

SS8: *“I can read better because I can remember the vocabulary that is provided in the game in the forms of items e.g., branches or fruits and they can help me read more smoothly.”*

## **2) Students’ reading knowledge improvement**

In question 2, the students were asked if they thought learning English reading for the main idea via MMORPG helped them improve their reading knowledge. All students answered that MMORPG could help improve their English reading for the main idea for different reasons. The following themes emerged from students’ answers

in the interview consisting of fun and motivation, memory, and time for practice respectively.

Firstly, students reported that MMORPG helped them improve their knowledge because they thought MMORPG made them want to learn more and more. Students thought that learning reading for the main idea via MMORPG was fun, so they wanted to learn more to become better readers. Also, one student thought that MMORPG was not boring, so they could continue reading for fun. This can be illustrated by student's comments as follows:

SS3: *"It makes me want to learn reading more and more. I think learning via game is fun, and I like learning English like this."*

SS4: *"It is not boring, so it can motivate me to continue reading for fun."*

SS8: *"It is fun, so it can motivate me to learn more and become a better reader."*

Secondly, students thought that MMORPG could help them remember the reading content better than reading from the plain texts. The explanation from their statement is as follows:

SS1: *"I can also remember the reading content that I have learned from playing the game and that makes me improve my reading."*

SS5: *"I can remember the vocabulary better because I remember the game items (e.g., mango, leaf) and that helps me read better."*

SS7: *"I think I can read better because it helps me remember the reading content by remembering the game items."*

Thirdly, students felt like they could learn via MMORPG to improve their reading for the main idea because they could learn anytime they want. They stated as follows:

SS2: *"I think if I can practice reading via MMORPG more and more, my reading will be improved."*

SS6: *“I like to play games in each unit anytime as I want to help me read better.”*

SS9: *“I can read better because I can practice reading many times, and it is an interesting game to play.”*

### 3) Practicing other skills via MMORPG

In question 3, the students were asked if they wanted to learn English via MMORPG in other skills. All students answered that they also wanted to practice other skills of English via MMORPGs. The following themes emerged from students' answers in the interview: vocabulary, speaking and writing respectively. Firstly, some of the students thought that they wanted to learn English vocabulary via MMORPG. Secondly, some students stated that they wanted to learn English via MMORPG for speaking skill improvement. Thirdly, some students thought that they also wanted to practice English writing skills via MMORPG.

SS1: *“I want to practice vocabulary.”*

SS6: *“I think I want to practice listening skills via MMORPG.”*

SS8: *“Vocabulary.”*

### 4) Difficulties found while learning reading for the main idea via MMORPG

In question 4, the students were asked if they had any difficulties while learning English reading for the main idea via MMORPG. Some students stated that they found difficulties while practicing reading for the main idea via MMORPG in the following themes: learning devices, and connection.

Some students had difficulties with their equipment and access to the game at the beginning. Only one student stated that *“My computer is old, so it took too long to download the game”* (S6). Moreover, due to the complicated process of logging in the game at the first time to access the game, a few students thought that there were too many processes when logging in to play the game at the first time, so this can also cause annoyance or boredom to the students as well but later on when students felt familiar with the system this problem was disappeared.

SS5: *“It is difficult to access the game at first.”*

SS6: *“My computer is old, so it took me too long to download the game.”*

### 5) Suggestions for teaching methods improvement

In question 5, the students were asked if there were any suggestions that the teaching method can be improved. The majority of students thought that the teaching methods were good enough and there should not be any further improvement while a few students had some suggestions regarding the teaching media and teaching content. They thought that the teaching media in the form of video could be switched to real-time online teaching such as live streaming so that the students would pay more attention to the lessons.

SS6: *“Learning online in real-time such as live streaming rather than video can get more attention from students.”*

Another suggestion is that there should be more examples and more exercises for finding the main idea so that they can learn and practice more.

SS2: *“I want to see more examples and exercises of main idea passages.”*

To sum up, this section reports the results of the study regarding two research questions and the information concerning the students' perceptions about learning reading for the main idea via MMORPG. It can be concluded that students had good perceptions about learning reading for the main idea via MMORPG and gaming experiences. In the next chapter, the discussions of the results and conclusion will be presented.

## CHAPTER 5

### DISCUSSIONS AND CONCLUSION

In this chapter, the discussions of the results from the previous chapter are presented, and the findings of the study are summarized. Finally, the limitations and implications of the study are then presented.

#### 5.1 Discussions

In this chapter, the results of the study are analyzed from three research tools: the pretest and posttest scores, the questionnaire results, and the transcription of the semi-structured interview. The results of the study showed that Massively Multiplayer Online Role-Playing Game (MMORPG) can help students improve English reading for the main idea.

According to the students' pretest and posttest scores, the mean score of the students increased after studying the reading for the main idea lesson and practicing via MMORPG. Moreover, the questionnaire results that all students took after the posttest showed that students were satisfied with learning reading for the main idea via MMORPG. After examining the students' perception via semi-structured interview, the results also illustrated that students thought that they liked learning reading for the main idea via MMORPG, and students also wanted to use MMORPG to practice other skills such as vocabulary, speaking, and writing.

According to the semi-structured interview transcription, the researcher noticed that some students practice each unit more than one time (students were asked to practice each unit at least one time) meaning that they liked practicing reading for the main idea via MMORPG. Some students stated that they want to practice many times because when practicing at first, they wanted to explore the map more because there might be some parts that they missed. In this way, the students wanted to learn more by themselves. Therefore, it can be concluded that MMORPG increased students'

motivation in learning reading for the main idea. In addition, from the interview results, students had a good time practicing reading for the main idea via MMORPG because they enjoyed fighting with monsters then got the hint items that contained reading sentences. After killing a monster, students would get gold coins to buy game items in order to increase their strength to kill another monster. In this way, they had a pleasurable experience while practicing reading for the main idea via MMORPG. When the game playing is satisfied, the students' behavior is likely to occur again. In this game, there is also a reward system (gold coins) for students to engage students to practice the game more and more.

In this part, more details of discussions are categorized into two groups: advantages and challenges /difficulties of learning reading for the main idea via MMORPG which are presented as follows:

#### **5.1.1 Advantages of Massively Multiplayer Online Role-Playing Game (MMORPG)**

##### **A) Fun and motivation from learning via MMORPG**

Students showed their favor learning reading for the main idea through MMORPG. They expressed in the results of the questionnaire that the MMORPG was fun ( $\bar{X} = 4.43$ ). Moreover, in the results of the interview, 100% of students (N = 9) were satisfied reading for the main idea via MMORPG in terms of fun and motivating learning experiences. Furthermore, the students also stated that they think learning reading for the main idea via MMORPG is motivating. Motivation is categorized into 4 aspects, according to Dornyei (1994). One of the aspects is related to the norm and reward system. It is concerned with motivation which is the external factor that affects students' learning via reward and punishment which leads to students' engagement in learning. This can be explained that the engagement and motivation the students had experienced in playing the game can help increase students' knowledge. The finding was consistent with the study from Nurafidha (2018) who investigate the effects of an online game called DOTA2. Nurafidha (2018) conducted a research study to seek DOTA2 players' live experience on how they acquire English skills and components, and how English affected their emotions. The participants were three DOTA2 players who possessed high skills of playing the game, so the researcher could get a vivid explanation with their experience in playing DOTA2. The interview method was used

in this study to get in-depth information. The exact same questions were asked to each participant so that the pattern of the answers would be shown clearly. The result showed that players having a lot of interaction with the English language were motivated to learn more. In addition, Hapsari, Sari & Rais (2019) investigated the opinion of gamers about the use of DOTA2 to learn English. The participants in this study were two gamers in Indonesia. Data were collected through field observation, semi-structured interview, and documentation. The finding of the research is that the enjoyment while playing the game motivated gamers to practice English in class activity. Also, a research study from Peterson (2012) indicated that students' interaction in MMORPGs was not only engaging and motivating, but also enjoyable. Therefore, fun and motivation are the main factors that make students want to practice more in reading for the main idea, and this would lead to successful learning afterward. It is clear that students enjoyed playing MMORPG because it can create motivation in learning. It can be seen that most research studies concur that MMORPG can help students become better in reading for the main idea with a more pleasurable learning environment, and that also resulted in positive learning outcomes. This also concurs with the theory of behavioral learning theory or Behaviorism specifying that consequences are associated with a voluntary behavior (Skinner, 1938). When the students had leveled up in the game or received gold coins in the game, they felt like they wanted to get more to be stronger and receive more coins to buy items in the game to fight with the monsters. This is a positive outcome that makes students want to continue learning accordingly.

#### **B) Students' memory development from learning via MMORPG**

The interview results show that MMORPG also helps students remember the reading for main idea content and vocabulary. It is related to students' working memory which is a small piece of information that is held in students' minds for the use of cognitive tasks (Cowan, 2014). The theory was originated by Baddeley & Hitch (1974) focusing on students' working memory and language learning, and it led to other researchers' interests in how working memory works for normal tasks like reading. Moreover, visual memory, according to Morin (n.d.), can help students remember the reading text better because they can recognize the reading texts with the graphics as

well. As mentioned by students' interview that they can remember the reading content and vocabulary better because they notice some game items such as mango or leaf in the game. While playing MMORPG, one student warned their friends not to eat mango because it contained important vocabulary and meaning that would be useful for reading texts in the game. Later, those students could remember the vocabulary that was in the mango because they recalled the moment of the warning. Moreover, some students stated that they also remember the reading content because of the game characters as well. For example, when they killed a big bear at a specific point in the game, they could remember the sentence after killing. This is consistent with a research study from Clemenson & Stark (2015) that playing an online game can improve students' memory because there is an engagement in game playing due to game character, setting, and events. Moreover, online games are designed to captivate and immerse the user into character and adventure. Blacker & Curby (2013) conducted a research study to investigate the visual short-term memory in action game players. The participants were 121 undergraduate students who completed a questionnaire about their video game habits before the experiment in terms of the number of gameplay hours and game playing habits. In the study, the participants were asked to indicate if the colors between the memory arrays and the test arrays were the same or different by a keypress. The results showed that video games provide the game players with a complex and changing visual environment resulting in accurate visual memory by playing games. The video game could be a useful tool to enhance memory in students. Therefore, their interests in games create engagement, and it leads to students remembering game content.

### **C) Reading skill improvement after learning via MMORPG**

Students believed that learning English reading for the main idea via MMORPG helped them improve their English reading for main idea knowledge that can help them read better. The use of games in the language classroom can provide students' engagement and involvement in reading hence developing students' literacy skills (Owston et. al., 2007). A part of engagement in game is caused by a rewarding system that makes students want to learn more via games. As stated by Skinner (1938) regarding operant conditioning that when the outcome is satisfied after an action, the

particular response or behavior will be continued. In addition, after students practiced reading via MMORPG many times, they were more familiar with the reading texts, and their reading had been improved. Students expressed in the results of the questionnaire that the MMORPG helps them read English passages better ( $\bar{X} = 4.40$ ). Furthermore, the results from the semi-structured interview also revealed that 100% of students in the interviews stated that MMORPG can improve their reading for main idea knowledge because the MMORPG motivates them to practice reading more often. In addition, one student stated the MMORPG also helped them remember the reading content better. This is in accordance with a research study by Zhang et al (2017). The research study was conducted to investigate the effects of using MMORPGs to enhance language learning by studying various research articles related to MMORPG and language learning. The results showed that students' reading skills are improved after game playing. Therefore, there is a significant relationship between MMORPG playing and students' reading for the main idea because MMORPG can improve students' reading for the main idea as shown in varied evidence.

#### **D) Convenience of MMORPG**

Students believed that when they practice reading for the main idea via MMORPG many times, they will become more successful learners. Some students mentioned that they had practiced the MMORPG in each unit more than one time because the game is interesting and fun. The game allows students to interact with one another and take control of their own learning which they can practice reading for the main idea via MMORPG anywhere and anytime which is convenient for them to learn on their own, and it led to satisfying learning outcomes as found in various existing research (Moreira, 2013; Alyaz & Gene, 2016; Chotipaktanasook & Reinders, 2018; Homer, Plass, Raffaele, Ober & Ali, 2018. Erkkila, 2017). Moreover, the game is easy to use, according to the students' semi-structured interview stating that it was similar to the games that they were playing at that time. When students learn via games, they felt more familiar with the way of learning and had more learning experience than learning in a normal classroom. Massively Multiplayer Online Role-Playing Game (MMORGP) provides students with a new experience of learning that offers them the playfulness activities such as collecting items, and hunting monsters

while learning to read for the main idea. Participation in games enhances students' enjoyment and motivation for language learning (Thorne, 2008). The more the students practice, the better readers they will become because they will have a chance to read many times as they want so their brain will memorize the reading texts as well as the vocabulary and their meaning. In addition, when they remember the reading text, it is easier for them to understand what they read. The game allows them to practice reading for the main idea via MMORPG anywhere and anytime they want, it is more convenient for them to learn.

#### **E) Students' vocabulary knowledge improvement by MMORPG**

The interview results showed that MMORPG could also improve students' vocabulary knowledge because they could remember the word that is provided in the game and that could help students read more smoothly. Vocabulary is counted as the foundation of any language to be learned because it is used to make up a language. People use vocabulary to communicate a language as stated by Wilkins (1972),

There is not much value in being able to produce grammatical sentences if one has not got the vocabulary that is needed to convey what one wishes to say ... While without grammar very little can be conveyed, without vocabulary nothing can be conveyed. (pp. 110- 111)

Students could remember the vocabulary and their meanings better because they could remember the items provided in the game that contain the words. When the games are used for informal contexts, students felt more relaxed when playing and they can acquire the vocabulary in practicing reading for the main idea via MMORPG. According to one of Krashen's (1982) Theory of Second Language Acquisition called the Affective Filter Hypothesis that students with high motivation, self-confidence, and low anxiety can acquire the second language more successfully. A research study conducted by Adris & Yamat (2015) revealed that students thought the MMORPG was providing an amount of vocabulary while playing the game, it, therefore, helped improve students' vocabulary knowledge from learning via MMORPG.

In addition, the reason why the researcher decided to implement MMORPG into online lessons was that the key elements of online games, such as various characters of heroes and monsters, game settings, leveling up systems in the

game are found to be fun and entertaining. Moreover, integrating online games into the online learning environment also provides students the opportunity to gain first exposure before class and more practice time because the lessons are available online, so the students can practice as many times as they want. The features in MMORPG make students want to learn more and more; in addition, the more the students' practice, the better readers they become. This is in accordance with positive reinforcement because when the students feel that their actions of playing games provide something in return e.g., pleasure after achieving game goals, they are likely to play more and more, and that makes them become more effective readers. There is an improvement in students' reading because they practice often.

### **5.1.2 Difficulties**

There are some difficulties that students faced while learning reading for the main idea via MMORPG. In the results of the study, some students stated that they found difficulties while practicing reading for the main idea via MMORPG in the following themes: students face a lack of learning equipment of facilities for online learning, and internet connection is not ready for online learning.

#### **A) Lacking learning equipment or facilities for online learning**

Before conducting the research study, the researcher had issued a survey to ask about students' experiences of playing online games. Some of the students play games via computers or laptops while others play games via mobile phones. However, the MMORPG used in this research study requires students to play only on computers due to the graphic in the game that requires more space to download. Therefore, this research study is especially limited to students with computers. Moreover, in the semi-structured interview, one student still stated that his/her computer is quite old, so it took too long for downloading the MMORPG because the game requires 8.9GB for downloading (Sam, 2021). In addition, the game contains graphic, inventory, and setting which needs good specification for computers; the use of the too old computer might not be suitable for learning this game due to the mentioned reasons. This study is in line with the research conducted by Wahab and Iskandar (2020). It mentioned that some students' parents and students do not have computers for learning and such condition makes them difficult in facing the reality of online learning.

## **B) Unready internet connection**

Some students mentioned in the semi-structured interview that some of them sometimes have difficulties connecting and logging into the MMORPG because of the internet connection. Even though the internet is in their hands, students still face difficulty accessing the internet network because of the places they live and they do not have an adequate budget to provide the internet network. The research carried out by Nashruddin, Alam, and Tanasy (2020) confirms that some students live in remote rural areas that are not covered by the internet. Furthermore, their cellular network is sometimes unstable, due to the geographical location which is quite far from the signal coverage. This is also a problem that occurs in many students who take online learning, so the implementation is less effective. This challenge is also a key concern for teachers and instructors when having students study reading for the main idea via MMORPG. The challenge also concurs with a research study by Adris & Yamat (2015) who conducted a research study to investigate the use of MMORPG as virtual grounds for ESL students. The results showed that the online learning equipment and internet connection should be ready for the students to learn.

### **5.1.3 Suggestions for improvement**

Students were asked in the semi-structured interview whether there are any suggestions that the teaching can be improved. Some suggestions were made regarding the teaching media and the teaching content.

#### **A) Suggestion for live online teaching**

The teaching media in this research study was done through teaching videos posted on the Facebook group. Some students mentioned that it was good because they could study the content of reading for the main idea at their convenience. However, there are some students who suggested that the reading for the main idea content should be live because they can ask questions immediately when they did not understand the learning content. Live streaming, in particular, is a very useful technology for online learning. It allows for real-time interaction and a virtual classroom-like feel. (Top 10 online Streaming Class Platforms for Remote Learning, 2022) In addition, the students thought that learning from the live video was more engaging and more interesting. The researcher quite agreed that the content of

reading for the main idea can be done live on Facebook or other media, but not compulsory to the students. Some students that could not attend at that time can also learn via the videos that were posted after the live version was finished. In this way, the students who want to learn read-time can ask questions immediately if they like, and students who were not available at that time can also watch the video later.

### **B) Suggestion for more examples of reading for the main idea**

Some students suggested that more examples of reading for the main idea should be provided in the learning video. Moreover, students also want to do more exercises for finding the main idea so that they can learn and practice more. The researcher agrees that adding more examples of reading for the main idea in the teaching material in soft files e.g., MS Word or PDF would lead to students' preparation and practice, and the students can download those files before or even after learning reading for the main idea from the video. Students who spend more time studying and practicing learning exercises are one of the best ways to maximize learning and it actually helps students better remember what they have learned since they have better long-term recall of the materials. (How to Become a More Effective Learner, 2020). Therefore, students are allowed to practice reading for the main idea via both soft files and MMORPG to improve their English reading skills.

This section has presented and discussed the results of the research study. The elements and steps for developing the MMORPG, the effects of the use of MMORPG on reading for the main idea, and the students' perceptions about using MMORPG on reading for the main idea were examined. In the next section, the conclusion, implications, and limitations of the study are then presented.

## **5.2 Conclusion**

The present study was conducted to 1) investigate the effects of the Massively Multiplayer Online Role-Playing Game (MMORPG) on reading for the main idea of Thai EFL undergraduate students and 2) examine Thai EFL undergraduate students' perceptions on learning reading for the main idea via the Massively Multiplayer Online Role-Playing Game (MMORPG). Based on the objectives, the study was carried out to

answer two research questions regarding the effects of MMORPG on reading for the main idea and students' perceptions on learning reading for the main idea via MMORPG.

In order to examine these research aspects, the mixed method was applied in this study. The quantitative research method was used to investigate the effects of MMORPG on students' reading for main idea learning. The quantitative method was also used to explore students' perceptions on the use of MMORPG on learning reading for the main idea. The study tools include: the MMORPG, lesson plans, pretest and posttest, questionnaire, and semi-structured interview.

The results of the present study can be summarized as follows:

- 1) The scores of pretest and posttest were compared and analyzed with a paired sample t-test. The results revealed that there was a significant difference between the pretest scores and posttest scores ( $p = .000$ ,  $p < 0.5^*$ ). This also showed that students' reading for main idea knowledge had progressed and improved significantly.
- 2) The results of the questionnaire and semi-structured interviews revealed that the students had a good perception toward the use of MMORPG on learning reading for the main idea ( $\bar{X} = 4.39$ ). This implied that the students favored the use of MMORPG because it was suitable to enhance students' English reading for main idea knowledge.

To sum up, the findings of the present study were consistent with other previous studies, and they suggest that the MMORPG can be considered as a teaching and learning tool for improving students' reading for main idea knowledge. However, this study revealed findings that allow a more specific explanation regarding how Massively Multiplayer Online Role-Playing Game elements could support students' reading for main idea achievement. The researcher suggests that many other aspects need to be investigated for the effectiveness of the Massively Multiplayer Online Role-Playing Game in various contexts.

### 5.3 Limitations of the Study

In this study, the MMOPRG was developed to improve English reading for the main idea of Thai EFL university students; hence, the limitations of this study were as follows:

1) The sample size which is relatively small (31 volunteer students) may not be able to generalize to the whole population of the EFL students in Thailand.

2) The MMORPG was developed to help students at Suranaree University of Technology (SUT) improve their English reading for main idea knowledge. Therefore, the subjects of this study cannot represent the university students in the same fields at other universities because students had different backgrounds, learning experiences, and needs. The findings were used to examine only the subject of this study, the volunteer students who were currently studying at Suranaree University of Technology.

3) The MMORPG was conducted as a supplementary tool in order to serve the purpose of this study. Therefore, it is only used as a tool that is already rated by the experts in the fields of English Language teaching with the expectation to improve students' English reading for main idea knowledge for SUT students.

4) There is limited information on the research instrument which is MMORPG (developed in DOTA2 platform). Since there is no solid instruction on how to develop the DOTA2 game to be a tool for practicing reading for the main idea, it takes a long time to develop this tool. As far as the researcher is aware, there is no DOTA2 game developed as a reading game yet due to limited information and game features. Moreover, as it is a newly developed tool, the course developer should be aware of how MMORPG can enhance students' reading for main idea ability. Therefore, a suggestion from the research study is that course development can also apply another learning platform to develop the learning tools for students to practice English reading and other skills.

### 5.4 Implications of the Study

In this section, the implications from this student are as follows:

**1) Implications for course developers.** This study employed the feature of MMORPG on the Defense of the Ancient 2 (DOTA2) platform to manage the reading for

main idea lesson and activities, especially, the online parts where course developers can also apply MMORPG in their lesson in order to enhance students' language learning. Moreover, when developing the MMORPG model, the systematic process of designing the tool was very crucial to help reach the learning goals. Therefore, the course developer should carefully decide which learning theories should be applied as well as which materials should be used to analyze in order to reach the students' needs. In this study, the MMORPG has been developed based on the game elements and reading for the main idea contents. There are various points for the course developers to utilize the MMORPG or other types of online games. The developers may also consider developing a course using different types of games and choose the one that suits the course content. In addition, requirements from students or learning need survey might be helpful for course developers because they can provide the suitable learning lessons and learning tools to meet student needs.

**2) Pedagogical implications.** As the MMORPG has been found to be a good learning tool for learning reading for the main idea, the instructors of the English language may consider MMORPG as an alternative method for teaching similar subjects. The study has shown that MMORPG has the ability to motivate students to learn and engage with the subject matter. Moreover, the ability to access the lessons before class also plays important role in improving students' reading for main idea knowledge. Therefore, MMORPG should be applied in other courses as a means to help students master and understand the essential knowledge of particular lessons in addition to the online learning environment. In this study, the researcher created the learning content to ensure that learning did occur properly.

Another aspect of pedagogical implication is that, in this study, teachers or instructor are taking all initiatives in class or learning environment. In this way, teachers are the ones who provide guidelines to students so that they can study according to the lesson plans and practice MMORPG on their own. Once students have questions or issues, they will get back to teachers to ask for suggestions. In this way, the students will be encouraged to learn own their pace anywhere and anytime as long is the internet connection is available.

## 5.5 Recommendations for further studies.

In this section, the implications from this student are as follows:

**1) Recommendation for course developers.** Results of this study revealed the improvement of students' reading for the main idea, and students also had good perceptions toward the use of MMORPG on learning reading for the main idea. However, some suggestions are also made from students regarding the game features to be more joyful and suitable for the learning contents and lessons. Therefore, there is room for further research to investigate. For instance, a researcher may apply different learning theories for developing the activities to support students learning. Moreover, researchers may consider investigating the use of MMORPG in different contexts, subjects' areas, students' level of study, etc. A further suggestion from the researcher is that the course developers apply to learn tools that are convenient for them to develop and make it suitable for the learning lessons.

**2) Recommendation for programmers.** In this study, the MMORPG was developed to match with the reading for main idea content in DOTA2 platform. As the DOTA2 game allows community to build their own map in its platform, the researcher use this good point as a means to make learning environment more fun and interesting with the game functions. However, because the researcher is neither an expert of DOTA2 game nor a programmer, it took quite some time to study how to develop and write computer coding in order to make DOTA2 a learning tool for reading for main idea. Therefore, it would be better if the programmers also find this as a good opportunity to develop MMORPG or other online games into reading games. In this way, teachers and/or stakeholders will be able to utilize the game and make it popular among English learning field.

In this study, discussions and conclusion are made to summarize the effects of a Massively Multiplayer Online Role-Playing Game (MMORPG) on reading for main idea. Furthermore, limitations of the study are presented. Lastly, implications and recommendations are made to provide guidelines for further study. This study revealed the findings regarding how MMORPG helps students improve their English reading for main idea; researcher suggests that many aspects need to be investigated

for the effects of how Massively Multiplayer Online Role-Playing Game works in other different contexts.



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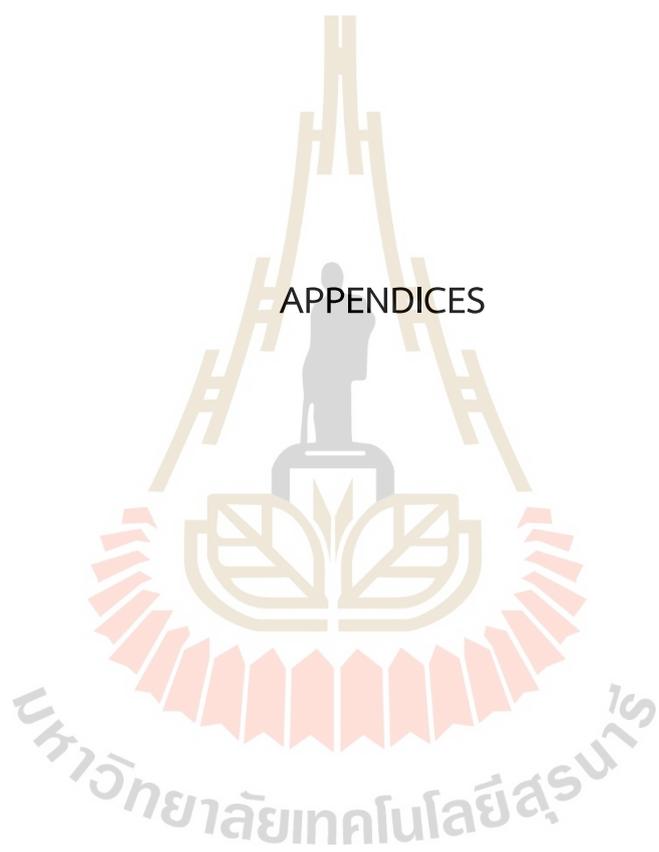
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APPENDICES



## APPENDIX A

### READING TEST

#### A) Test Specifications

Test Specifications 70 items

	Reading for Main Idea			# of items	% of items
	Topic	Main Idea	Supporting details		
# of items	24	23	23	70	
% of items	34	33	33		100

Students: EFL university students who take English for academic purposes course at Suranaree University of Technology

Purposes of test: To investigate the effects of Massively Multiplayer Online Role-Playing Game in English reading for main idea

Type of Test: Multiple Choices total 50 items (Pretest: 25, Posttest: 25)

Scoring: 1 point for correct answer; 0 point for incorrect answer

Duration: 30 minutes

	Reading			# of items	% of items
	Topic	Main Idea	Supporting Details		
Unit 1: Food and Health	6	6	6	18	36
Unit 2: Our Bond with Animals	5	5	2	12	24
Unit 3: Urban Underworlds	3	3	2	8	16
Unit 4: Global Warming	4	4	4	12	24
# of items	18	18	14	50	
% of items	36	36	28		100

## B) IOC Assessment Form for Pretest and Posttest Items

The pretest and posttest are the main tools for assessing students' reading for main idea ability. Both tests have the same structure, consisting of reading passages and multiple-choice questions. The questions are designed to test students' reading for main idea ability at the literal and inferential levels which can be achieved by employing reading for main idea strategies that are taught explicitly.

**Checking the validity of content.** The 70 test items will be checked by three experts for content appropriateness as well as the index of item-objective consistency. The unaccepted items (having IOC less than 0.5) will be improved upon suggested by the experts. The criteria for assessing the IOC of the items are as follows:

+1	means	suitable item
0	means	uncertain item
-1	means	unsuitable item

## IOC Assessment Form for the Pretest and Posttest Items

No.	Objectives (Main Idea)	Items	IOC			Comments
			-1	0	+1	
<b>Unit 1: Food and Health</b>						
<b>Passage 1</b>						
The best places to spritz perfume are on your body's pulse points. Those points include your wrists, neck, and the back of your knees. By applying perfume to these heat-emitting areas, your favorite fragrance won't irritate your skin.						
1.	Topic	What is the topic of this passage? a. Your skin b. Favorite fragrance c. Heat-emitting areas <b>d. Points for applying perfume</b>				
2.	Main Idea	Which of the following sentences is the main idea of this passage? a. Your favorite fragrance will irritate skin. b. Perfumes should not be sprayed to heat-emitting areas. <b>c. The best places to spritz perfume are on your body's pulse points.</b> d. Those points include your wrists, neck, and the back of your knees.				
3.	Supporting Detail	Which of the following sentences is the supporting detail of this passage? a. Your favorite fragrance will irritate skin. b. Perfumes should not be sprayed to heat-emitting areas. c. The best places to spritz perfume are on your body's pulse points. <b>d. Those points include your wrists, neck, and the back of your knees.</b>				
<b>Passage 2</b>						
There are several ingredients of making sushi. Sushi often contains fish like tuna and salmon, which have omega-3s and protein. Many sushi rolls have cucumber,						

No.	Objectives (Main Idea)	Items	IOC			Comments
			-1	0	+1	
		avocados, a seaweed wrap, and ginger on the side. Sushi also includes all three macronutrients-carbs, fats, and protein.				
4.	Topic	<p>What is the topic of this passage?</p> <p>a. Sushi rolls</p> <p>b. Sushi making</p> <p><b>c. Sushi Ingredients</b></p> <p>d. Three macronutrients</p>				
5.	Main Idea	<p>Which of the following sentences is the main idea of this passage?</p> <p>a. Tuna and salmon contain only omega-3s.</p> <p>b. Sushi also includes all three macronutrients.</p> <p><b>c. There are several ingredients of making sushi.</b></p> <p>d. Sushi rarely contains ingredients like tuna and salmon.</p>				
6.	Supporting Detail	<p>Which of the following sentences is the supporting detail of this passage?</p> <p>a. Tuna and salmon contain only omega-3s.</p> <p><b>b. Sushi also includes all three macronutrients.</b></p> <p>c. There are several ingredients of making sushi.</p> <p>d. Sushi rarely contains ingredients like tuna and salmon.</p>				
<b>Passage 3</b>						
<p>Serious depression has definite warning signs. One symptom of depression is a change in sleep patterns-either sleeplessness or sleeping too much. In addition, abnormal eating patterns may develop, either eating too much or loss of appetite. The third sign is trouble in thinking or concentrating-even to the point of finding it difficult to read a magazine or newspaper. And last of all, a general feeling of hopelessness may signal depression. People feel indifferent to their families and jobs and may begin to think that life is not worth living.</p>						
7.	Topic	<p>What is the topic of this passage?</p> <p>a. Sleep patterns</p>				

No.	Objectives (Main Idea)	Items	IOC			Comments
			-1	0	+1	
		b. Loss of appetite c. Trouble in thinking d. <b>Signs of Depression</b>				
8.	Main Idea	Which of the following sentences is the main idea of this passage? <b>a. Serious depression has definite warning signs.</b> b. People take good care of their families and jobs. c. You find it difficult to read a magazine or newspaper. d. One depression symptom is a change in sleep patterns.				
9.	Supporting Detail	Which of the following sentences is NOT the supporting detail of this passage? a. Abnormal eating patterns may develop. <b>b. People take good care of their families and jobs.</b> c. A third sign is trouble in thinking or concentrating. d. One depression symptom is a change in sleep patterns.				
<b>Passage 4</b> Peking Duck is one of the most popular dishes at Chinese New Year dinner because it represents a happy, healthy, and prosperous year. The skin of finished Peking Duck is red which is a lucky color in Chinese culture. Peking Duck are served thinly sliced, with pastry, hoisin sauce, cucumbers, and scallions.						
10.	Topic	What is the topic of this passage? <b>a. Peking Duck</b> b. Popular Dishes c. Chinese culture d. Chinese New Year dinner				

No.	Objectives (Main Idea)	Items	IOC			Comments
			-1	0	+1	
11.	Main Idea	Which of the following sentences is the main idea of this passage? a. The skin of uncooked Peking Duck is red. b. Red is a jinxed color in Chinese culture. c. Duck represents a happy, healthy, and prosperous year. <b>d. Peking Duck is a popular dish at Chinese New Year dinner.</b>				
12.	Supporting Detail	Which of the following sentences is the supporting detail of this passage? a. The skin of uncooked Peking Duck is red. b. Red is a jinxed color in Chinese culture. <b>c. Duck represents a happy, healthy, and prosperous year.</b> d. Peking Duck is a popular dish at Chinese New Year dinner.				
<p><b>Passage 5</b></p> <p>Wasabi is a great condiment for sushi which is considered a healthy food. It is an excellent source of a compound shown to help nerve cells known as dendrites and axons expand and communicate with each other. In terms of minerals, wasabi contains calcium, iron, manganese, magnesium, zinc, phosphorus, and potassium which are all necessary for a balanced diet. You can find wasabi in a tube or as a powder in specialty stores.</p>						
13.	Topic	What is the topic of this passage? <b>a. Wasabi</b> b. Forms of wasabi c. Menus from wasabi d. Dendrites and axons				
14.	Main Idea	Which of the following sentences is the main idea of this passage? a. Wasabi is cooked in many ways. b. Wasabi helps nerve cells expand. <b>c. Wasabi is considered a healthy food.</b>				

No.	Objectives (Main Idea)	Items	IOC			Comments
			-1	0	+1	
		d. You are unable to buy wasabi in specialty stores.				
15.	Supporting Detail	Which of the following sentences is the supporting detail of this passage? a. Wasabi is cooked in many ways. <b>b. Wasabi helps nerve cells expand.</b> c. Wasabi is considered a healthy food. d. You are unable to buy wasabi in specialty stores.				
<p><b>Passage 6</b></p> <p>Sleeping in an airplane can be comfortable. It is all about making yourself as comfy as possible. You can wear loose-fitting clothing and take off your shoes, raise your feet above the ground with your briefcase or personal bag. It will pull the strain of your lower back. Whether or not you recline is totally up to you, but be mindful of the person behind you because their personal space is substantially reduced when you lean back.</p>						
16.	Topic	What is the topic of this passage? a. Flying on an airplane b. Uncomfortable sleeping <b>c. Sleeping in an airplane</b> d. Surrounding by strangers				
17.	Main Idea	Which of the following sentences is the main idea of this passage? a. It will pull the strain of your lower back. <b>b. Sleeping in an airplane can be comfortable.</b> c. You can wear loose clothing and take off your shoes. d. Their personal space is reduced when you bend down.				
18.	Supporting Detail	Which of the following sentences is the supporting detail of this passage? a. It will pull the strain of your lower back.				

No.	Objectives (Main Idea)	Items	IOC			Comments
			-1	0	+1	
		b. Sleeping in an airplane can be comfortable. <b>c. You can wear loose clothing and take off your shoes.</b> d. Their personal space is reduced when you bend down.				
<b>Unit 2: Our Bond with Animals</b> <b>Passage 7</b> The best ways to figure out your cat's message is by looking at what else is going on. If it's dinnertime, or if the purring is more frequent, your furry friend might have food on the brain. If your kitty nips at you or swipes with her paws, she's probably annoyed or mad-even if she's purring. Also be listening for continuous, insistent vocalizing from your cat, whether that's purring or meowing (or both). If the vocalizing goes on for 24 to 36 hours, this could be one of the signs your cat is actually sick. But a cat purring away while curled up on your lap is probably just enjoying your company.						
19.	Topic	What is the topic of this passage? a. Vocalizing <b>b. Cat's message</b> c. Cats' dinnertime d. Your furry friend				
20.	Main Idea	Which of the following sentences is the main idea of this passage? a. Your cat always has food on their brain. b. Your cat nips at you because she is sick. c. If the purring is frequent, your cat might be hungry. <b>d. You know your cat's message by looking at what else is going on.</b>				
21.	Supporting Detail	Which of the following sentences is the supporting detail of this passage? a. Your cat always has food on their brain. b. Your cat nips at you because she is sick.				

No.	Objectives (Main Idea)	Items	IOC			Comments
			-1	0	+1	
		<p>c. If the purring is frequent, your cat might be hungry.</p> <p>d. You know your cat's message by looking at what else is going on.</p>				
<p><b>Passage 8</b></p> <p>Sharky is a Pitbull who has protective instincts toward creatures smaller than himself. He loves being surrounded by his babies, Max, a Siamese cat, and a group of chicks. The young dog and his family are oddly fond of one another. Their human mom cherishes their bond as much as they do. She loves catching them sprawled out in the yard, sky-gazing, or mimicking one another by sitting the exact same way.</p>						
22.	Topic	<p>What is the topic of this passage?</p> <p>a. Sharky</p> <p>b. Their mom</p> <p>c. A Siamese cat</p> <p>d. The Pitbull and the chicks</p>				
23.	Main Idea	<p>Which of the following sentences is the main idea of this passage?</p> <p>a. Sharky loves being surrounded by his babies.</p> <p>b. Their human mom loves to sprawl out in the yard.</p> <p>c. Their mom mimics Sharky by sitting the same way.</p> <p>d. Sharky has protective instincts toward creatures smaller than himself.</p>				
24.	Supporting Detail	<p>Which of the following sentences is the supporting detail of this passage?</p> <p>a. Sharky loves being surrounded by his babies.</p> <p>b. Their human mom loves to sprawl out in the yard.</p> <p>c. Their mom mimics Sharky by sitting the same way.</p>				

No.	Objectives (Main Idea)	Items	IOC			Comments
			-1	0	+1	
		d. Sharky has protective instincts toward creatures smaller than himself.				
<p><b>Passage 9</b></p> <p>The earliest butterfly fossils date back to Paleocene Epoch, were about 56 million years ago. (Dinosaurs became extinct about 65 million years ago.) Experts believe that butterflies came into existence at about the same time as flowering plants, and originated on the supercontinent Pangea, which explains why most families of the insect are represented on most continents.</p>						
25.	Topic	<p>What is the topic of this passage?</p> <p>a. Dinosaurs</p> <p>b. Butterflies</p> <p><b>c. Butterfly fossils</b></p> <p>d. Paleocene Epoch</p>				
26.	Main Idea	<p>Which of the following sentences is the main idea of this passage?</p> <p>a. Dinosaurs became extinct about 56 million years ago.</p> <p>b. Butterflies are originated at about the same time as flowering plants.</p> <p><b>c. The earliest butterfly fossils were about 56 million years ago.</b></p> <p>d. Most families of the insect are represented on the supercontinent Pangea.</p>				
27.	Supporting Detail	<p>Which of the following sentences is the supporting detail of this passage?</p> <p>a. Dinosaurs became extinct about 56 million years ago.</p> <p><b>b. Butterflies are originated on the supercontinent Pangea.</b></p> <p>c. The earliest butterfly fossils were about 56 million years ago.</p> <p>d. Most families of the insect are represented on the supercontinent Pangea.</p>				

No.	Objectives (Main Idea)	Items	IOC			Comments
			-1	0	+1	
<b>Passage 10</b> California’s Monterey Bay Aquarium scientists have worked to rehabilitate orphaned sea otters for decades. They raised the young pups, taught them to dive, and caught seafood with mixed success. One day, they placed a two-week old otter with Joy, a female otter who had been abandoned as a pup, and who’d recently had a stillborn birth. To their delight, she readily accepted him and reared him until he was ready to be released. Joy turned out to be natural mom, and helped raised more than 20 orphaned pups, with 12 of them making smooth transitions to the wild.						
28.	Topic	What is the topic of this passage? a. Scientists b. Orphaned pups <b>c. Joy, the mother sea otter</b> d. California’s Monterey Bay Aquarium				
29.	Main Idea	Which of the following sentences is the main idea of this passage? <b>a. Joy turned out to be natural mom.</b> b. Joy accepted a baby otter and reared him. c. The scientists raised pups, and taught them to dive. d. The aquarium scientists helped orphaned sea otters.				
30.	Supporting Detail	Which of the following sentences is the supporting detail of this passage? a. Joy turned out to be natural mom. <b>b. Joy accepted a baby otter and reared him.</b> c. The scientists raised pups, and taught them to dive. d. The aquarium scientists helped orphaned sea otters.				
<b>Passage 11</b> Dolly, a female domestic sheep, was the first mammal cloned from an adult cell in 1996. Dolly’s birth proved that a technique called somatic cell nuclear transfer, a						

No.	Objectives (Main Idea)	Items	IOC			Comments
			-1	0	+1	
		technique in which the cell nucleus from an adult cell is transferred into an unfertilized egg, blasted with electricity, then implanted into a surrogate, could work. Dolly died of a lung disease at age six, but the cloning technique used to produce her was later employed on other larger mammals, including pigs, deer, horses, and bulls.				
31.	Topic	What is the topic of this passage? <b>a. Dolly</b> b. Cloning c. Mammal d. Lung disease				
32.	Main Idea	Which of the following sentences is the main idea of this passage? a. Large mammals are pigs, deer, horses, and bulls. b. Cell nucleus from adult cell is transferred into an egg. <b>c. Dolly was the first mammal cloned from an adult cell.</b> d. Dolly's birth proved that a somatic cell nuclear transfer doesn't work.				
33.	Supporting Detail	Which of the following sentences is the supporting detail of this passage? a. Large mammals are pigs, deer, horses, and bulls. b. Cell nucleus from adult cell is transferred into an egg. c. Dolly was the first mammal cloned from an adult cell. <b>d. Dolly's birth proved that a somatic cell nuclear transfer could work.</b>				
<b>Passage 12</b>						
Scientists used to believe that humans alone possessed the ability to make and use tools, but David Greybeard had revealed chimpanzees' true intelligence. On						

No.	Objectives (Main Idea)	Items	IOC			Comments
			-1	0	+1	
		November 4, 1960, Jane Goodall observed a chimpanzee named David Greybeard using a grass stalk to extract termites from a termite hill. Later, Goodall observed David Greybeard and another chimp constructing fishing tools by stripping the leaves off twigs. She said David was the first chimpanzee who let her come close, who lost his fear. He helped introduce her to this magic world out in the forest.				
34.	Topic	What is the topic of this passage? a. Jane Goodall b. Chimpanzees c. Scientists' belief <b>d. David Greybeard</b>				
35.	Main Idea	Which of the following sentences is the main idea of this passage? a. Jane Goodall observed David Greybeard. b. Scientists believed that only humans could make and use tools. <b>c. David Greybeard had revealed chimpanzees' true intelligence.</b> d. David and another chimp constructed fishing tools by stripping the leaves off twigs.				
36.	Supporting Detail	Which of the following sentences is the supporting detail of this passage? a. Jane Goodall observed David Greybeard. b. Scientists believed that only humans could make and use tools. c. David Greybeard had revealed chimpanzees' true intelligence. <b>d. David and another chimp constructed fishing tools by stripping the leaves off twigs.</b>				
<b>Unit 3: Urban Underworlds</b> <b>Passage 13</b> Some of the more outlandish legends claim that New York City has a whole colony of gators living beneath its streets. While this is far from the norm, there have been						

No.	Objectives (Main Idea)	Items	IOC			Comments
			-1	0	+1	
		several real accounts of full-grown gators living in sewers, especially in the southern United States. In states like Florida, where alligators live in the wild, storms and flooding can wash full-sized gators into the sewer system. And police officers did pull a two-foot-long baby gator from a New York City sewer in 2010. But the gator colonies are pure myth-a full-grown gator couldn't survive a New York City winter.				
37.	Topic	<p>What is the topic of this passage?</p> <p>a. Winter gators</p> <p>b. Florida gators</p> <p><b>c. Gator colonies</b></p> <p>d. New York City</p>				
38.	Main Idea	<p>Which of the following sentences is the main idea of this passage?</p> <p>a. In states like Florida, alligators live in the wild.</p> <p>b. A full-grown gator couldn't survive a New York City winter.</p> <p><b>c. There have been several real accounts of full-grown gators living in sewers</b></p> <p>d. Police officers pull a two-foot-long baby gator from a New York City sewer system.</p>				
39.	Supporting Detail	<p>Which of the following sentences is the supporting detail of this passage?</p> <p>a. In states like Florida, alligators live in the wild.</p> <p>b. A full-grown gator couldn't survive a New York City winter.</p> <p>c. There have been several real accounts of full-grown gators living in sewers</p> <p><b>d. Police officers pull a two-foot-long baby gator from a New York City sewer system.</b></p>				
<p><b>Passage 14</b></p> <p>The murderer known as Jack the Ripper terrorized the Whitechapel area of London back in 1888, killing at least five women and leaving their bodies mutilated in a way that indicated he was more than just a little familiar with human anatomy. Could he have been a surgeon? A mortician? No one knows because he was never caught,</p>						

No.	Objectives (Main Idea)	Items	IOC			Comments
			-1	0	+1	
		and it is unlikely his identity will ever be known. It ranks as one of the world's most infamous unsolved mysteries.				
40.	Topic	<p>What is the topic of this passage?</p> <p>a. The mortician</p> <p><b>b. Jack the Ripper</b></p> <p>c. Whitechapel area</p> <p>d. Unsolved mysteries</p>				
41.	Main Idea	<p>Which of the following sentences is the main idea of this passage?</p> <p>a. Jack the Ripper is a surgeon.</p> <p>b. He was not familiar with human anatomy.</p> <p>c. He killed at least five women and left their bodies mutilated.</p> <p><b>d. Jack the Ripper terrorized the Whitechapel area of London in 1888.</b></p>				
42.	Supporting Detail	<p>Which of the following sentences is the supporting detail of this passage?</p> <p>a. Jack the Ripper is a surgeon.</p> <p>b. He was not familiar with human anatomy.</p> <p><b>c. He killed at least five women and left their bodies mutilated.</b></p> <p>d. Jack the Ripper terrorized the Whitechapel area of London in 1888.</p>				
<p><b>Passage 15</b></p> <p>There are cogent, logical reasons why the sewer system is not a fit habitat for an alligator. None of the thousands of men who have worked to build, maintain, or repair the sewer system has ever seen one, and a 10-foot, 800-pound alligator would be hard to miss. Still, New York City is a big place, and known for its strangeness. Some people have exotic pets, and it's possible that there are one or more doomed, miserable baby alligators somewhere. But finding (or putting) an alligator in a New York City sewer does not mean that decades of stories about giant alligators in sewers are true.</p>						

No.	Objectives (Main Idea)	Items	IOC			Comments
			-1	0	+1	
43.	Topic	What is the topic of this passage? a. Alligators <b>b. Sewer gators</b> c. Sewer System d. New York City				
44.	Main Idea	Which of the following sentences is the main idea of this passage? a. New York City is a big place. b. Some people have exotic pets. <b>c. The sewer system is not a fit habitat for an alligator.</b> d. No men who worked in the sewer system has ever seen an alligator.				
45.	Supporting Detail	Which of the following sentences is the supporting detail of this passage? a. New York City is a big place. b. Some people have exotic pets. c. The sewer system is not a fit habitat for an alligator. <b>d. No men who worked in the sewer system has ever seen an alligator.</b>				
<b>Passage 16</b> The city of Puebla in Mexico discovered that it sat on 6-mile tunnels. The team that made the strange discovery was a construction crew working on the city's newest underpass, not a team of archaeologists. When they carved into the terrain to start building, they found they weren't breaking new ground at all. A year after the initial discovery, an official excavation effort began. Experts estimate that a complete assessment of the tunnels won't be available until about 2031, but you can visit them right now if you want to.						
46.	Topic	What is the topic of this passage? a. Mexico <b>b. Secret tunnels</b> c. Construction crew				

No.	Objectives (Main Idea)	Items	IOC			Comments
			-1	0	+1	
		d. Strange discovery				
47.	Main Idea	Which of the following sentences is the main idea of this passage? a. You can visit them right now if you want to. <b>b. Puebla city discovered that it sat on tunnels.</b> c. They found they weren't breaking new ground at all. d. The team that made the strange discovery was a construction team.				
48.	Supporting Detail	Which of the following sentences is the supporting detail of this passage? a. You can visit them right now if you want to. b. Puebla city discovered that it sat on tunnels. c. They found they weren't breaking new ground at all. <b>d. The team that made the strange discovery was a construction team.</b>				
<p><b>Passage 17</b></p> <p>When the New York City subway opened in 1904, the very first train departed from the old City Hall station. The station was historically significant, and it was architecturally stunning, with vaulted tile ceilings, a skylight of leaded stained glass, and chandeliers. Unfortunately, the station was shut down in 1945 because it was too small to accommodate new larger modern trains. It has remained closed and preserved underground ever since.</p>						
49.	Topic	What is the topic of this passage? a. New York City subway b. Brooklyn Bridge station c. New York Transit Museum <b>d. Old City Hall subway station</b>				
50.	Main Idea	Which of the following sentences is the main idea of this passage?				

No.	Objectives (Main Idea)	Items	IOC			Comments
			-1	0	+1	
		a. It has remained closed and preserved underground ever since. <b>b. In 1904, the very first train departed from the old City Hall station.</b> c. It was architecturally stunning, with vaulted tile ceilings and chandeliers. d. The station was shut down in 1945 because it was too small to accommodate new larger modern trains.				
<p><b>Passage 18</b> – no main idea nor clear supporting details</p> <p>This Arkansas-based urban legend about a werewolf-like dog man roaming around the town of Quitman merely embellishes a true tale. In 1954, a boy named Gerald Bettis was born. The rumors around town held that he was cruel and sadistic, and that he liked to capture stray animals and do twisted experiments on them. His cruelty only grew as he got older, and he was abusive to his aging parents. In 1981, his father was found dead in the family home, and his death is surrounded in mystery; the newspapers said it was illness, but many townspeople believed it was murder.</p>						
51.	Topic	What is the topic of this passage? a. The rumors b. Townspeople <b>c. Gerald Bettis</b> d. The town of Quitman				
52.	Supporting Sentence	Which of the following sentences is NOT the supporting sentence of this passage? a. His cruelty only grew as he got older. b. Many townspeople believed it was murder. c. In 1954, a boy named Gerald Bettis was born. <b>d. An urban legend about a werewolf-like dog man in Quitman embellishes a true tale.</b>				
53.	Supporting Detail	Which of the following sentences is the supporting detail of this passage? <b>a. His cruelty only grew as he got older.</b>				

No.	Objectives (Main Idea)	Items	IOC			Comments
			-1	0	+1	
		b. Many townspeople believed it was murder. c. In 1954, a boy named Gerald Bettis was born. d. An urban legend about a werewolf-like dog man in Quitman embellishes a true tale.				
<b>Unit 4: Global Warming</b> <b>Passage 19</b> The marine environment is taking a big hit from our daily disposal of plastic. Our plastic consumption is directly affecting the marine life in the ocean including fish, which is a main source of food for humans as well. Every piece of plastic that has ever been created will remain in the environment in some form, but once we conveniently throw out our trash at home, wind and runoff carry our waste from landfills and streets down the sewer and directly to the ocean. The average American throwing away 185 pounds of trash per year and globally producing over 320 million tons of plastic annually. Often our society is so focused on making our lives more convenient in the short term, but in the long run, our health and the health of marine life are at the expense of those everyday conveniences.						
54.	Topic	What is the topic of this passage? a. Environment b. Source of food c. Waste disposal <b>d. Plastic and the ocean</b>				
55.	Main Idea	Which of the following sentences is the main idea of this passage? a. We conveniently throw out our trash at home b. Plastic will remain in the environment in some form. <b>c. The marine environment is taking a big hit from our daily disposal of plastic.</b> d. Our plastic consumption is directly affecting the marine life in the ocean including fish.				
56.	Supporting Detail	Which of the following sentences is the supporting detail of this passage? a. We conveniently throw out our trash at home				

No.	Objectives (Main Idea)	Items	IOC			Comments
			-1	0	+1	
		b. Plastic will remain in the environment in some form. c. The marine environment is taking a big hit from our daily disposal of plastic. <b>d. Our plastic consumption is directly affecting the marine life in the ocean including fish.</b>				
<b>Passage 20</b>						
<p>Sea anemones are beautiful and so pleasingly colored. But this group of marine carnivores, living near and on coral reefs, spend their time waiting for prey to pass that they can tangle up in their poison-filled tentacles. Usually, they feed on small fishes as well as a variety of invertebrates. Some of them, terrifyingly, can grow to six feet across. Many of them have symbiotic relationships with algae, protecting it in exchange for a snack of oxygen and sugar the algae makes via photosynthesis.</p>						
57.	Topic	What is the topic of this passage? a. Coral Reefs <b>b. Sea Anemone</b> c. Marine carnivores d. Photosynthesis of sea anemones				
58.	Main Idea	Which of the following sentences is the main idea of this passage? a. Many of them have symbiotic relationships with algae. b. Some of them, terrifyingly, can grow to six feet across. <b>c. Sea anemones are beautiful, but terrifying for their preys.</b> d. Sea anemones spend their time waiting for prey to pass.				
<b>Passage 21</b>						
<p>The summer of 1980 was one of the hottest on record, especially in the south. Temperatures in states such as Texas and Tennessee stayed in the triple digits for more than 40 days at a clip. In Dallas Fort Worth, the temperature soared to 113</p>						

No.	Objectives (Main Idea)	Items	IOC			Comments
			-1	0	+1	
		degrees-and stayed there for three consecutive days. The heat wave claimed at least 1,700 lives (elderly people living without access to air conditioning are most at risk during heat waves) and caused more than \$20 billion in agricultural damage.				
59.	Topic	<p>What is the topic of this passage?</p> <p>a. Dallas</p> <p>b. 133 Degrees</p> <p>c. Frank Bosco</p> <p><b>d. The 1980 Heat Wave</b></p>				
60.	Main Idea	<p>Which of the following sentences is the main idea of this passage?</p> <p>a. The high temperature stayed there for three days.</p> <p><b>b. The summer of 1980 was one of the hottest on record.</b></p> <p>c. In Dallas Fort Worth, the temperature soared to 113 degrees.</p> <p>d. Elderly people living without access to air conditioning are most at risk during heat waves.</p>				
61.	Supporting Detail	<p>Which of the following sentences is the supporting detail of this passage?</p> <p>a. The high temperature stayed there for three days.</p> <p>b. The summer of 1980 was one of the hottest on record.</p> <p><b>c. In Dallas Fort Worth, the temperature soared to 113 degrees.</b></p> <p>d. Elderly people living without access to air conditioning are most at risk during heat waves.</p>				
<p><b>Passage 22</b></p> <p>Recent evidence suggests that some risk factors associated with climate change may have been overstated. Sea levels are now expected to rise by approximately one</p>						

No.	Objectives (Main Idea)	Items	IOC			Comments
			-1	0	+1	
		meter, not two meters, as previously thought. This is because some glaciers and ice sheets appear to be contracting, the Arctic, for example, while others, such as the Antarctic, appear to be expanding. Also, it is now thought that the Gulf Stream is unlikely to vanish. It may, therefore, be possible to scale back plans for flood defenses in coastal areas.				
62.	Topic	<p>What is the topic of this passage?</p> <p>a. Sea levels</p> <p>b. Gulf stream</p> <p><b>c. Climate change</b></p> <p>d. Arctic and Antarctic</p>				
63.	Main Idea	<p>Which of the following sentences is the main idea of this passage?</p> <p>a. The Antarctic appears to be expanding.</p> <p>b. It may be possible to scale back plans for flood defenses in coastal areas.</p> <p>c. Sea levels are now expected to rise by about one meter, not two meters, as previously thought.</p> <p><b>d. Recent evidence suggest that some risk factors associate with climate change may have been overstated.</b></p>				
64.	Supporting Detail	<p>Which of the following sentences is the supporting detail of this passage?</p> <p>a. The Antarctic appears to be expanding.</p> <p>b. It may be possible to scale back plans for flood defenses in coastal areas.</p> <p><b>c. Sea levels are now expected to rise by about one meter, not two meters, as previously thought.</b></p> <p>d. Recent evidence suggest that some risk factors associate with climate change may have been overstated.</p>				

No.	Objectives (Main Idea)	Items	IOC			Comments
			-1	0	+1	
<b>Passage 23</b> The American Lung Association states that Hawaii-especially Honolulu-has some of the cleanest air in the United States and anywhere else. The environmental website ‘Mother Nature News’ points to Hawaii’s trade winds: these year-round breezes carry any air particulates out to sea. Possibly related: Hawaii also happens to be one of the states with the fewest heart attacks per year. Guidebooks show pristine sands and clear waters, but this is what the world’s most polluted beaches used to look like.						
65.	Topic	What is the topic of this passage? <b>a. Hawaii</b> b. Round breezes c. Mother Nature News d. Hawaii’s trade winds				
66.	Main Idea	Which of the following sentences is the main idea of this passage? a. Guidebooks show pristine sands and clear waters. b. Hawaii’s trade winds carry air particulates out to sea. <b>c. Hawaii has some of the cleanest air in the US and anywhere else.</b> d. Hawaii is also one of the states with fewest heart attacker per year.				
67.	Supporting Detail	Which of the following sentences is the supporting detail of this passage? a. Guidebooks show pristine sands and clear waters. <b>b. Hawaii’s trade winds carry air particulates out to sea.</b> c. Hawaii has some of the cleanest air in the US and anywhere else. d. Hawaii is also one of the states with fewest heart attacker per year.				

No.	Objectives (Main Idea)	Items	IOC			Comments
			-1	0	+1	
<b>Passage 24</b> Gurugram took the crown as the most polluted city in the world, according to IQ Air's 2018 world air quality report. Gurugram is not alone in India. Of the top 20 most polluted cities worldwide, 15 are in India. Because it is so close to the capital of New Delhi, Gurugram is developing rapidly. However, nonstop construction and an exploding population have had harsh environmental and health consequences.						
68.	Topic	What is the topic of this passage? <b>a. Gurugram</b> b. New Delhi c. Environment d. Capital of India				
69.	Main Idea	Which of the following sentences is the main idea of this passage? a. Gurugram is not developing rapidly. b. Of the top 20 most polluted cities worldwide, 15 are in India. <b>c. Gurugram took the crown as the most polluted city in the world.</b> d. Nonstop construction and an exploding population had harsh environmental and health consequences.				
70.	Supporting Detail	Which of the following sentences is the supporting detail of this passage? a. Gurugram is not developing rapidly. b. Of the top 20 most polluted cities worldwide, 15 are in India. c. Gurugram took the crown as the most polluted city in the world. <b>d. The city is polluted because the nonstop construction and exploding population.</b>				

### C) Experts' IOC Results of the Test Items.

The 70 items were sent to the experts to find the content validity. There were 62 items that were acceptable and 8 items needed more improvement.

Item	Expert 1	Expert 2	Expert 3	The IOC Index	Interpretation
1	1	1	1	1.00	Accepted
2	1	1	1	1.00	Accepted
3	1	1	1	1.00	Accepted
4	1	1	1	1.00	Accepted
5	1	1	1	1.00	Accepted
6	1	1	1	1.00	Accepted
7	1	1	1	1.00	Accepted
8	1	1	1	1.00	Accepted
9	1	0	1	0.67	Accepted
10	1	1	1	1.00	Accepted
11	1	1	1	1.00	Accepted
12	1	1	1	1.00	Accepted
13	1	1	1	1.00	Accepted
14	1	1	1	1.00	Accepted
15	1	1	1	1.00	Accepted
16	1	1	1	1.00	Accepted
17	1	0	1	0.67	Accepted
18	1	1	1	1.00	Accepted
19	1	1	1	1.00	Accepted
20	1	1	1	1.00	Accepted
21	1	1	1	1.00	Accepted
22	1	1	1	1.00	Accepted
23	1	1	0	0.67	Accepted
24	1	1	0	0.67	Accepted
25	1	1	1	1.00	Accepted
26	1	1	1	1.00	Accepted
27	1	1	-1	0.33	Need Improvement
28	1	1	1	1.00	Accepted
29	1	1	0	0.67	Accepted
30	1	1	1	1.00	Accepted
31	1	1	1	1.00	Accepted
32	1	1	1	1.00	Accepted
33	1	1	-1	0.33	Need Improvement

Item	Expert 1	Expert 2	Expert 3	The IOC Index	Interpretation
34	1	1	0	0.67	Accepted
35	1	1	1	1.00	Accepted
36	1	1	1	1.00	Accepted
37	1	1	-1	0.33	Need Improvement
38	1	1	-1	0.33	Need Improvement
39	1	1	-1	0.33	Need Improvement
40	1	1	1	1.00	Accepted
41	1	1	1	1.00	Accepted
42	1	1	1	1.00	Accepted
43	1	0	1	0.67	Accepted
44	1	1	1	1.00	Accepted
45	1	1	1	1.00	Accepted
46	1	1	1	1.00	Accepted
47	1	1	1	1.00	Accepted
48	1	1	1	1.00	Accepted
49	1	1	1	1.00	Accepted
50	1	1	1	1.00	Accepted
51	1	1	-1	0.33	Need Improvement
52	1	1	-1	0.33	Need Improvement
53	1	1	-1	0.33	Need Improvement
54	1	1	0	0.67	Accepted
55	1	1	1	1.00	Accepted
56	1	1	0	0.67	Accepted
57	1	1	1	1.00	Accepted
58	1	1	0	0.67	Accepted
59	1	1	0	0.67	Accepted
60	1	1	1	1.00	Accepted
61	1	1	1	1.00	Accepted
62	1	1	1	1.00	Accepted
63	1	1	1	1.00	Accepted
64	1	1	1	1.00	Accepted
65	1	1	0	0.67	Accepted
66	1	1	1	1.00	Accepted
67	1	1	0	0.67	Accepted
68	1	1	1	1.00	Accepted
69	1	1	1	1.00	Accepted
70	1	1	0	0.67	Accepted
<b>Average</b>				<b>0.85</b>	

## D) Item Analysis Results

Item	p	Interpretation	r	Interpretation	Item Quality
1	0.69	right difficult	0.54	positive discrimination	RETAIN
2	0.71	right difficult	0.42	positive discrimination	RETAIN
3	0.48	right difficult	0.38	non discrimination	REVISE
4	0.33	right difficult	0.42	positive discrimination	RETAIN
5	0.50	right difficult	0.42	positive discrimination	RETAIN
6	0.44	right difficult	0.54	positive discrimination	RETAIN
7	0.75	right difficult	0.42	positive discrimination	REVISE
8	0.54	right difficult	0.42	positive discrimination	RETAIN
9	0.46	right difficult	0.42	positive discrimination	RETAIN
10	0.67	right difficult	0.50	positive discrimination	RETAIN
11	0.65	right difficult	0.63	positive discrimination	RETAIN
12	0.58	right difficult	0.42	positive discrimination	RETAIN
13	0.71	right difficult	0.50	positive discrimination	RETAIN
14	0.38	right difficult	0.42	positive discrimination	RETAIN
15	0.35	right difficult	0.46	positive discrimination	RETAIN
16	0.92	easy	0.17	non discrimination	REVISE
17	0.73	right difficult	0.46	positive discrimination	RETAIN
18	0.63	right difficult	0.42	positive discrimination	RETAIN
19	0.81	easy	0.21	non discrimination	REVISE
20	0.69	right difficult	0.54	positive discrimination	RETAIN
21	0.33	right difficult	0.58	positive discrimination	RETAIN
22	0.63	right difficult	0.67	positive discrimination	RETAIN
23	0.54	right difficult	0.42	positive discrimination	RETAIN
24	0.48	right difficult	0.46	positive discrimination	RETAIN
25	0.65	right difficult	0.38	non discrimination	REVISE
26	0.33	right difficult	0.50	positive discrimination	RETAIN
27	0.17	difficult	0.08	non discrimination	DISCARD
28	0.38	right difficult	0.42	positive discrimination	RETAIN
29	0.33	right difficult	0.42	positive discrimination	RETAIN
30	0.25	difficult	0.42	positive discrimination	REVISE
31	0.33	right difficult	0.50	positive discrimination	RETAIN
32	0.46	right difficult	0.42	positive discrimination	RETAIN
33	0.17	difficult	0.25	non discrimination	DISCARD
34	0.31	right difficult	0.46	positive discrimination	RETAIN
35	0.73	right difficult	0.46	positive discrimination	RETAIN

Item	p	Interpretation	r	Interpretation	Item Quality
36	0.54	right difficult	0.50	positive discrimination	RETAIN
37	0.17	difficult	-0.17	non discrimination	DISCARD
38	0.33	right difficult	-0.17	non discrimination	DISCARD
39	0.46	right difficult	0.00	non discrimination	DISCARD
40	0.94	easy	0.13	non discrimination	REVISE
41	0.58	right difficult	0.50	positive discrimination	RETAIN
42	0.56	right difficult	0.54	positive discrimination	RETAIN
43	0.31	right difficult	0.54	positive discrimination	RETAIN
44	0.71	right difficult	0.42	positive discrimination	RETAIN
45	0.54	right difficult	0.67	positive discrimination	RETAIN
46	0.33	right difficult	0.42	positive discrimination	RETAIN
47	0.46	right difficult	0.42	positive discrimination	RETAIN
48	0.67	right difficult	0.58	positive discrimination	RETAIN
49	0.60	right difficult	0.54	positive discrimination	RETAIN
50	0.52	right difficult	0.54	positive discrimination	RETAIN
51	0.21	difficult	-0.33	non discrimination	DISCARD
52	0.10	difficult	0.13	non discrimination	DISCARD
53	0.15	difficult	0.21	non discrimination	DISCARD
54	0.69	right difficult	-0.04	non discrimination	RETAIN
55	0.54	right difficult	0.42	positive discrimination	RETAIN
56	0.52	right difficult	0.54	positive discrimination	RETAIN
57	0.48	right difficult	0.46	positive discrimination	RETAIN
58	0.50	right difficult	-0.08	non discrimination	REVISE
59	0.94	easy	0.04	non discrimination	REVISE
60	0.67	right difficult	0.50	positive discrimination	RETAIN
61	0.54	right difficult	0.42	positive discrimination	RETAIN
62	0.48	right difficult	0.46	positive discrimination	RETAIN
63	0.60	right difficult	0.54	positive discrimination	RETAIN
64	0.35	right difficult	0.46	positive discrimination	RETAIN
65	0.50	right difficult	0.25	non discrimination	REVISE
66	0.71	right difficult	0.42	positive discrimination	RETAIN
67	0.44	right difficult	0.54	positive discrimination	RETAIN
68	0.69	right difficult	-0.04	non discrimination	REVISE
69	0.67	right difficult	0.42	positive discrimination	RETAIN
70	0.42	right difficult	0.50	positive discrimination	RETAIN

## E) Item Analysis for Reading Test 70 Items

Items	Level of Difficulty (p)	Discrimination Index (r)	Pretest	Posttest
1	0.69	0.54	✓	
2	0.71	0.42	✓	
3	0.48	0.38	✓	
4	0.33	0.42		✓
5	0.50	0.42		✓
6	0.44	0.54		✓
7	0.75	0.42	✓	
8	0.54	0.42	✓	
9	0.46	0.42	✓	
10	0.67	0.50		✓
11	0.65	0.63		✓
12	0.58	0.42		✓
13	0.71	0.50	✓	
14	0.38	0.42	✓	
15	0.35	0.46	✓	
16	0.92	0.17		✓
17	0.73	0.46		✓
18	0.63	0.42		✓
19	0.81	0.21	✓	
20	0.69	0.54	✓	
21	0.33	0.58	✓	
22	0.63	0.67		✓
23	0.54	0.42		✓
24	0.48	0.46		✓
25	0.65	0.38		
26	0.33	0.50		
27	0.17	0.08		
28	0.38	0.42		✓
29	0.33	0.42		✓
30	0.25	0.42		
31	0.33	0.50	✓	
32	0.46	0.42	✓	
33	0.17	0.25		
34	0.31	0.46		✓
35	0.73	0.46		✓
36	0.54	0.50		

Items	Level of Difficulty (p)	Discrimination Index (r)	Pretest	Posttest
37	0.17	-0.17		
38	0.33	-0.17		
39	0.46	0.00		
40	0.94	0.13		✓
41	0.58	0.50		✓
42	0.56	0.54		✓
43	0.31	0.54	✓	
44	0.71	0.42	✓	
45	0.54	0.67		
46	0.33	0.42		✓
47	0.46	0.42		✓
48	0.67	0.58		✓
49	0.60	0.54		
50	0.52	0.54		
51	0.21	-0.33		
52	0.10	0.13		
53	0.15	0.21		
54	0.69	-0.04	✓	
55	0.54	0.42	✓	
56	0.52	0.54	✓	
57	0.48	0.46		
58	0.50	-0.08		
59	0.94	0.04	✓	
60	0.67	0.50	✓	
61	0.54	0.42	✓	
62	0.48	0.46	✓	
63	0.60	0.54	✓	
64	0.35	0.46	✓	
65	0.50	0.25		
66	0.71	0.42		
67	0.44	0.54		
68	0.69	-0.04		✓
69	0.67	0.42		✓
70	0.42	0.50		✓
Reliability (KR-20) = 0.878			25 items	25 items

## F) Item Analysis for Pretest 25 Items

Items	Level of Difficulty (p)	Discrimination Index (r)	Pretest
1	0.69	0.54	✓
2	0.71	0.42	✓
3	0.48	0.38	✓
4	0.75	0.42	✓
5	0.54	0.42	✓
6	0.46	0.42	✓
7	0.71	0.50	✓
8	0.38	0.42	✓
9	0.35	0.46	✓
10	0.81	0.21	✓
11	0.69	0.54	✓
12	0.33	0.58	✓
13	0.33	0.50	✓
14	0.46	0.42	✓
15	0.31	0.54	✓
16	0.71	0.42	✓
17	0.69	-0.04	✓
18	0.54	0.42	✓
19	0.52	0.54	✓
20	0.94	0.04	✓
21	0.67	0.50	✓
22	0.54	0.42	✓
23	0.48	0.46	✓
24	0.60	0.54	✓
25	0.35	0.46	✓
Reliability (KR-20) = 0.779			25 items

## G) Item Analysis for Posttest 25 Items

Items	Level of Difficulty (p)	Discrimination Index (r)	Posttest
1	0.33	0.42	✓
2	0.50	0.42	✓
3	0.44	0.54	✓
4	0.67	0.50	✓
5	0.65	0.63	✓
6	0.58	0.42	✓
7	0.92	0.17	✓
8	0.73	0.46	✓
9	0.63	0.42	✓
10	0.63	0.67	✓
11	0.54	0.42	✓
12	0.48	0.46	✓
13	0.38	0.42	✓
14	0.33	0.42	✓
15	0.17	0.25	✓
16	0.31	0.46	✓
17	0.94	0.13	✓
18	0.58	0.50	✓
19	0.56	0.54	✓
20	0.33	0.42	✓
21	0.46	0.42	✓
22	0.67	0.58	✓
23	0.69	-0.04	✓
24	0.67	0.42	✓
25	0.42	0.50	✓
Reliability (KR-20) = 0.810			25 items

## H) Pretest and Posttest

## PRETEST

213203 English for Academic Purposes

Questions: 25 items Duration: 30 minutes

Instruction: Read the passages and choose the best answer for each question.

## Passage 1

The best places to spritz perfume are on your body's pulse points. Those points include your wrists, neck, and the back of your knees. By applying perfume to these heat-emitting areas, your favorite fragrance won't irritate your skin.

1. What is the topic of this passage?
  - a. Your skin
  - b. Favorite fragrance
  - c. Heat-emitting areas
  - d. Points for applying perfume**
  
2. Which of the following sentences is the main idea of this passage?
  - a. Your favorite fragrance will irritate skin.
  - b. Perfumes should not be sprayed to heat-emitting areas.
  - c. The best places to spritz perfume are on your body's pulse points.**
  - d. Those points include your wrists, neck, and the back of your knees.
  
3. Which of the following sentences is the supporting detail of this passage?
  - a. Your favorite fragrance will irritate skin.
  - b. Perfumes should not be sprayed to heat-emitting areas.
  - c. The best places to spritz perfume are on your body's pulse points.
  - d. Those points include your wrists, neck, and the back of your knees.**

**Passage 2**

Serious depression has definite warning signs. One symptom of depression is a change in sleep patterns-either sleeplessness or sleeping too much. In addition, abnormal eating patterns may develop, either eating too much or loss of appetite. The third sign is trouble in thinking or concentrating-even to the point of finding it difficult to read a magazine or newspaper. And last of all, a general feeling of hopelessness may signal depression. People feel indifferent to their families and jobs and may begin to think that life is not worth living.

4. What is the topic of this passage?
- a. Sleep patterns
  - b. Loss of appetite
  - c. Trouble in thinking
  - d. Signs of Depression**
5. Which of the following sentences is the main idea of this passage?
- a. Serious depression has definite warning signs.**
  - b. People take good care of their families and jobs.
  - c. You find it difficult to read a magazine or newspaper.
  - d. One depression symptom is a change in sleep patterns.
6. Which of the following sentences is NOT the supporting detail of this passage?
- a. Abnormal eating patterns may develop.
  - b. People take good care of their families and jobs.**
  - c. A third sign is trouble in thinking or concentrating.
  - d. One depression symptom is a change in sleep patterns.

**Passage 3**

Wasabi is a great condiment for sushi which is considered a healthy food. It is an excellent source of a compound shown to help nerve cells known as dendrites and axons expand and communicate with each other. In terms of minerals, wasabi contains

calcium, iron, manganese, magnesium, zinc, phosphorus, and potassium which are all necessary for a balanced diet. You can find wasabi in a tube or as a powder in specialty stores.

7. What is the topic of this passage?

- a. **Wasabi**
- b. Forms of wasabi
- c. Menus from wasabi
- d. Dendrites and axons

8. Which of the following sentences is the main idea of this passage?

- a. Wasabi is cooked in many ways.
- b. Wasabi helps nerve cells expand.
- c. **Wasabi is considered a healthy food.**
- d. You are unable to buy wasabi in specialty stores.

9. Which of the following sentences is the supporting detail of this passage?

- a. Wasabi is cooked in many ways.
- b. **Wasabi helps nerve cells expand.**
- c. Wasabi is considered a healthy food.
- d. You are unable to buy wasabi in specialty stores.

#### Passage 4

The best ways to figure out your cat's message is by looking at what else is going on. If it's dinnertime, or if the purring is more frequent, your furry friend might have food on the brain. If your kitty nips at you or swipes with her paws, she's probably annoyed or mad—even if she's purring. Also be listening for continuous, insistent vocalizing from your cat, whether that's purring or meowing (or both). If the vocalizing goes on for 24 to 36 hours, this could be one of the signs your cat is actually sick. But a cat purring away while curled up on your lap is probably just enjoying your company.

10. What is the topic of this passage?
- a. Vocalizing
  - b. Cat's message**
  - c. Cats' dinnertime
  - d. Your furry friend
11. Which of the following sentences is the main idea of this passage?
- a. Your cat always has food on their brain.
  - b. Your cat nips at you because she is sick.
  - c. If the purring is frequent, your cat might be hungry.
  - d. You know your cat's message by looking at what else is going on.**
12. Which of the following sentences is the supporting detail of this passage?
- a. Your cat always has food on their brain.
  - b. Your cat nips at you because she is sick.
  - c. If the purring is frequent, your cat might be hungry.**
  - d. You know your cat's message by looking at what else is going on.

### Passage 5

Dolly, a female domestic sheep, was the first mammal cloned from an adult cell in 1996. Dolly's birth proved that a technique called somatic cell nuclear transfer, a technique in which the cell nucleus from an adult cell is transferred into an unfertilized egg, blasted with electricity, then implanted into a surrogate, could work. Dolly died of a lung disease at age six, but the cloning technique used to produce her was later employed on other larger mammals, including pigs, deer, horses, and bulls.

13. What is the topic of this passage?
- a. Dolly**
  - b. Cloning
  - c. Mammal
  - d. Lung disease

14. Which of the following sentences is the main idea of this passage?

- a. Large mammals are pigs, deer, horses, and bulls.
- b. Cell nucleus from adult cell is transferred into an egg.
- c. Dolly was the first mammal cloned from an adult cell.**
- d. Dolly's birth proved that a somatic cell nuclear transfer doesn't work.

### Passage 6

There are cogent, logical reasons why the sewer system is not a fit habitat for an alligator. None of the thousands of men who have worked to build, maintain, or repair the sewer system has ever seen one, and a 10-foot, 800-pound alligator would be hard to miss. Still, New York City is a big place, and known for its strangeness. Some people have exotic pets, and it's possible that there are one or more doomed, miserable baby alligators somewhere. But finding (or putting) an alligator in a New York City sewer does not mean that decades of stories about giant alligators in sewers are true.

15. What is the topic of this passage?

- a. Alligators
- b. Sewer gators**
- c. Sewer System
- d. New York City

16. Which of the following sentences is the main idea of this passage?

- a. New York City is a big place.
- b. Some people have exotic pets.
- c. The sewer system is not a fit habitat for an alligator.**
- d. No men who worked in the sewer system has ever seen an alligator.

### Passage 7

The marine environment is taking a big hit from our daily disposal of plastic. Our plastic consumption is directly affecting the marine life in the ocean including fish, which is a main source of food for humans as well. Every piece of plastic that has ever been

created will remain in the environment in some form, but once we conveniently throw out our trash at home, wind and runoff carry our waste from landfills and streets down the sewer and directly to the ocean. The average American throwing away 185 pounds of trash per year and globally producing over 320 million tons of plastic annually. Often our society is so focused on making our lives more convenient in the short term, but in the long run, our health and the health of marine life are at the expense of those everyday conveniences.

17. What is the topic of this passage?
- a. Environment
  - b. Source of food
  - c. Waste disposal
  - d. Plastic and the ocean**
18. Which of the following sentences is the main idea of this passage?
- a. We conveniently throw out our trash at home
  - b. Plastic will remain in the environment in some form.
  - c. The marine environment is taking a big hit from our daily disposal of plastic.**
  - d. Our plastic consumption is directly affecting the marine life in the ocean including fish.
19. Which of the following sentences is the supporting detail of this passage?
- a. We conveniently throw out our trash at home
  - b. Plastic will remain in the environment in some form.
  - c. The marine environment is taking a big hit from our daily disposal of plastic.
  - d. Our plastic consumption is directly affecting the marine life in the ocean including fish.**

The summer of 1980 was one of the hottest on record, especially in the south. Temperatures in states such as Texas and Tennessee stayed in the triple digits for more than 40 days at a clip. In Dallas Fort Worth, the temperature soared to 113 degrees- and stayed there for three consecutive days. The heat wave claimed at least 1,700 lives (elderly people living without access to air conditioning are most at risk during heat waves) and caused more than \$20 billion in agricultural damage.

20. What is the topic of this passage?

- a. Dallas
- b. 133 Degrees
- c. Frank Bosco
- d. The 1980 Heat Wave**

21. Which of the following sentences is the main idea of this passage?

- a. The high temperature stayed there for three days.
- b. The summer of 1980 was one of the hottest on record.**
- c. In Dallas Fort Worth, the temperature soared to 113 degrees.
- d. Elderly people living without access to air conditioning are most at risk during heat waves.

22. Which of the following sentences is the supporting detail of this passage?

- a. The high temperature stayed there for three days.
- b. The summer of 1980 was one of the hottest on record.
- c. In Dallas Fort Worth, the temperature soared to 113 degrees.**
- d. Elderly people living without access to air conditioning are most at risk during heat waves.

### Passage 9

Recent evidence suggests that some risk factors associated with climate change may have been overstated. Sea levels are now expected to rise by approximately one meter, not two meters, as previously thought. This is because some glaciers and ice

sheets appear to be contracting, the Arctic, for example, while others, such as the Antarctic, appear to be expanding. Also, it is now thought that the Gulf Stream is unlikely to vanish. It may, therefore, be possible to scale back plans for flood defenses in coastal areas.

23. What is the topic of this passage?

- a. Sea levels
- b. Gulf stream
- c. Climate change**
- d. Arctic and Antarctic

24. Which of the following sentences is the main idea of this passage?

- a. The Antarctic appears to be expanding.
- b. It may be possible to scale back plans for flood defenses in coastal areas.
- c. Sea levels are now expected to rise by about one meter, not two meters, as previously thought.**
- d. Recent evidence suggest that some risk factors associate with climate change may have been overstated.

25. Which of the following sentences is the supporting detail of this passage?

- a. The Antarctic appears to be expanding.
- b. It may be possible to scale back plans for flood defenses in coastal areas.
- c. Sea levels are now expected to rise by about one meter, not two meters, as previously thought.**
- d. Recent evidence suggest that some risk factors associate with climate change may have been overstated.

## POSTTEST

213203 English for Academic Purposes

Questions: 25 items Duration: 30 minutes

Instruction: Read the passage and choose the best answer for each question.

**Passage 1**

There are several ingredients of making sushi. Sushi often contains fish like tuna and salmon, which have omega-3s and protein. Many sushi rolls have cucumber, avocados, a seaweed wrap, and ginger on the side. Sushi also includes all three macronutrients—carbs, fats, and protein.

1. What is the topic of this passage?
  - a. Sushi rolls
  - b. Sushi making
  - c. Sushi Ingredients**
  - d. Three macronutrients
  
2. Which of the following sentences is the main idea of this passage?
  - a. Tuna and salmon contain only omega-3s.
  - b. Sushi also includes all three macronutrients.
  - c. There are several ingredients of making sushi.**
  - d. Sushi rarely contains ingredients like tuna and salmon.
  
3. Which of the following sentences is the supporting detail of this passage?
  - a. Tuna and salmon contain only omega-3s.
  - b. Sushi also includes all three macronutrients.**
  - c. There are several ingredients of making sushi.
  - d. Sushi rarely contains ingredients like tuna and salmon.

**Passage 2**

Peking Duck is one of the most popular dishes at Chinese New Year dinner because it represents a happy, healthy, and prosperous year. The skin of finished Peking Duck is red which is a lucky color in Chinese culture. Peking Duck are served thinly sliced, with pastry, hoisin sauce, cucumbers, and scallions.

4. What is the topic of this passage?

- a. **Peking Duck**
- b. Popular Dishes
- c. Chinese culture
- d. Chinese New Year dinner

5. Which of the following sentences is the main idea of this passage?

- a. Red is a jinxed color in Chinese culture.
- b. The skin of uncooked Peking Duck is red.
- c. Duck represents a happy, healthy, and prosperous year.
- d. **Peking Duck is a popular dish at Chinese New Year dinner.**

6. Which of the following sentences is the supporting detail of this passage?

- a. Red is a jinxed color in Chinese culture.
- b. The skin of uncooked Peking Duck is red.
- c. **Duck represents a happy, healthy, and prosperous year.**
- d. Peking Duck is a popular dish at Chinese New Year dinner.

**Passage 3**

Sleeping in an airplane can be comfortable. It is all about making yourself as comfy as possible. You can wear loose-fitting clothing and take off your shoes, raise your feet above the ground with your briefcase or personal bag. It will pull the strain of your lower back. Whether or not you recline is totally up to you, but be mindful of the person behind you because their personal space is substantially reduced when you lean back.

7. What is the topic of this passage?
- a. Flying on an airplane
  - b. Sleeping in an airplane**
  - c. Uncomfortable sleeping
  - d. Surrounding by strangers
8. Which of the following sentences is the main idea of this passage?
- a. It will pull the strain of your lower back.
  - b. Sleeping in an airplane can be comfortable.**
  - c. You can wear loose clothing and take off your shoes.
  - d. Their personal space is reduced when you bend down.
9. Which of the following sentences is the supporting detail of this passage?
- a. It will pull the strain of your lower back.
  - b. Sleeping in an airplane can be comfortable.
  - c. You can wear loose clothing and take off your shoes.**
  - d. Their personal space is reduced when you bend down.

#### Passage 4

Sharky is a Pitbull who has protective instincts toward creatures smaller than himself. He loves being surrounded by his babies, Max, a Siamese cat, and a group of chicks. The young dog and his family are oddly fond of one another. Their human mom cherishes their bond as much as they do. She loves catching them sprawled out in the yard, sky-gazing, or mimicking one another by sitting the exact same way.

10. What is the topic of this passage?
- a. Sharky**
  - b. Their mom
  - c. A Siamese cat
  - d. The Pitbull and the chicks

11. Which of the following sentences is the main idea of this passage?
- a. Sharky loves being surrounded by his babies.
  - b. Their human mom loves to sprawl out in the yard.
  - c. Their mom mimics Sharky by sitting the same way.
  - d. Sharky has protective instincts toward creatures smaller than himself.**
12. Which of the following sentences is the supporting detail of this passage?
- a. Sharky loves being surrounded by his babies.**
  - b. Their human mom loves to sprawl out in the yard.
  - c. Their mom mimics Sharky by sitting the same way.
  - d. Sharky has protective instincts toward creatures smaller than himself.

### Passage 5

California's Monterey Bay Aquarium scientists have worked to rehabilitate orphaned sea otters for decades. They raised the young pups, taught them to dive, and caught seafood with mixed success. One day, they placed a two-week old otter with Joy, a female otter who had been abandoned as a pup, and who'd recently had a stillborn birth. To their delight, she readily accepted him and reared him until he was ready to be released. Joy turned out to be natural mom, and helped raised more than 20 orphaned pups, with 12 of them making smooth transitions to the wild.

13. What is the topic of this passage?
- a. Scientists
  - b. Orphaned pups
  - c. Joy, the mother sea otter**
  - d. California's Monterey Bay Aquarium
14. Which of the following sentences is the main idea of this passage?
- a. Joy turned out to be natural mom.**
  - b. Joy accepted a baby otter and reared him.
  - c. The scientists raised pups, and taught them to dive.
  - d. The aquarium scientists helped orphaned sea otters.

**Passage 6**

Scientists used to believe that humans alone possessed the ability to make and use tools, but David Greybeard had revealed chimpanzees' true intelligence. On November 4, 1960, Jane Goodall observed a chimpanzee named David Greybeard using a grass stalk to extract termites from a termite hill. Later, Goodall observed David Greybeard and another chimp constructing fishing tools by stripping the leaves off twigs. She said David was the first chimpanzee who let her come close, who lost his fear. He helped introduce her to this magic world out in the forest.

15. What is the topic of this passage?

- a. Jane Goodall
- b. Chimpanzees
- c. Scientists' belief
- d. David Greybeard**

16. Which of the following sentences is the main idea of this passage?

- a. Jane Goodall observed David Greybeard.
- b. David Greybeard had revealed chimpanzees' true intelligence.**
- c. Scientists believed that only humans could make and use tools.
- d. David and another chimp constructed fishing tools by stripping the leaves off twigs.

**Passage 7**

The murderer known as Jack the Ripper terrorized the Whitechapel area of London back in 1888, killing at least five women and leaving their bodies mutilated in a way that indicated he was more than just a little familiar with human anatomy. Could he have been a surgeon? A mortician? No one knows because he was never caught, and it is unlikely his identity will ever be known. It ranks as one of the world's most infamous unsolved mysteries.

17. What is the topic of this passage?
- a. The mortician
  - b. Jack the Ripper**
  - c. Whitechapel area
  - d. Unsolved mysteries
18. Which of the following sentences is the main idea of this passage?
- a. Jack the Ripper is a surgeon.
  - b. He was not familiar with human anatomy.
  - c. He killed at least five women and left their bodies mutilated.
  - d. Jack the Ripper terrorized the Whitechapel area of London in 1888.**
19. Which of the following sentences is the supporting detail of this passage?
- a. Jack the Ripper is a surgeon.
  - b. He was not familiar with human anatomy.
  - c. He killed at least five women and left their bodies mutilated.**
  - d. Jack the Ripper terrorized the Whitechapel area of London in 1888.

### Passage 8

The city of Puebla in Mexico discovered that it sat on 6-mile tunnels. The team that made the strange discovery was a construction crew working on the city's newest underpass, not a team of archaeologists. When they carved into the terrain to start building, they found they weren't breaking new ground at all. A year after the initial discovery, an official excavation effort began. Experts estimate that a complete assessment of the tunnels won't be available until about 2031, but you can visit them right now if you want to.

20. What is the topic of this passage?
- a. Mexico
  - b. Secret tunnels**
  - c. Construction crew
  - d. Strange discovery

21. Which of the following sentences is the main idea of this passage?
- a. You can visit them right now if you want to.
  - b. Puebla city discovered that it sat on tunnels.**
  - c. They found they weren't breaking new ground at all.
  - d. The team that made the strange discovery was a construction team.
22. Which of the following sentences is the supporting detail of this passage?
- a. You can visit them right now if you want to.
  - b. Puebla city discovered that it sat on tunnels.
  - c. They found they weren't breaking new ground at all.
  - d. The team that made the strange discovery was a construction team.**

### Passage 9

Gurugram took the crown as the most polluted city in the world, according to IQ Air's 2018 world air quality report. Gurugram is not alone in India. Of the top 20 most polluted cities worldwide, 15 are in India. Because it is so close to the capital of New Delhi, Gurugram is developing rapidly. However, nonstop construction and an exploding population have had harsh environmental and health consequences on the city.

23. What is the topic of this passage?
- a. Gurugram**
  - b. New Delhi
  - c. Environment
  - d. Capital of India
24. Which of the following sentences is the main idea of this passage?
- a. Gurugram is not developing rapidly.
  - b. Of the top 20 most polluted cities worldwide, 15 are in India.
  - c. Gurugram took the crown as the most polluted city in the world.**
  - d. The city is polluted because the nonstop construction and exploding population.

25. Which of the following sentences is the supporting detail of this passage?
- Gurugram is not developing rapidly.
  - Of the top 20 most polluted cities worldwide, 15 are in India.
  - Gurugram took the crown as the most polluted city in the world.
  - The city is polluted because the nonstop construction and exploding population.**

I) Try Out Results of Students Reading Test (Pretest-Posttest Scores)

No.	Pretest	Posttest	Differences
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
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20			
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22			
23			

No.	Pretest	Posttest	Differences
24			
25			
26			
27			
28			
29			
30			
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39			
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57			

No.	Pretest	Posttest	Differences
58			
59			
60			
61			
62			
63			
64			
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**APPENDIX B**  
**QUESTIONNAIRE**

**A) The IOC Scores of the questionnaire from the experts.**

The 15 items of questionnaire were sent to the experts to find the content validity. All 15 items have the IOC values higher than 0.5 which mean all items can be reserved.

No.	Items	Expert's IOC			IOC	Interpretation
		No.1	No.2	No.3		
1	I like learning reading for main idea through a Massively Multiplayer Online Role-Playing Game because it is fun. (ฉันชอบการเรียนรู้การอ่านจับใจความภาษาอังกฤษผ่านทางเกมออนไลน์แบบเล่นตามบทบาทสมมุติที่มีผู้เล่นจำนวนมากเพราะมันสนุก)	0	1	1	0.67	Accepted
2	I like the various points of map in the game very much because it makes me feel excited when learning English reading for main idea through a Massively Multiplayer Online Role-Playing Game. (ฉันชอบด้านต่าง ๆ ของเกมมากเพราะมันทำให้ฉันตื่นเต้นเมื่อการเรียนรู้การอ่านจับใจความภาษาอังกฤษผ่านทางเกมออนไลน์แบบเล่นตามบทบาทสมมุติที่มีผู้เล่นจำนวนมาก)	1	1	0	0.67	Accepted
3	Learning English reading for main idea through a Massively Multiplayer Online Role-Playing Game encourages me to participate more in class. (การอ่านจับใจความภาษาอังกฤษผ่านทางเกมออนไลน์แบบเล่นตามบทบาทสมมุติที่มีผู้เล่นจำนวนมากกระตุ้นให้ฉันมีส่วนร่วมในห้องเรียนมากขึ้น)	1	1	1	1.00	Accepted
4	I enjoy learning English reading for main idea through a Massively Multiplayer Online Role-Playing Game very much. (ฉันสนุกกับการเรียนรู้การอ่านจับใจความภาษาอังกฤษผ่านทางเกมออนไลน์แบบเล่นตามบทบาทสมมุติที่มีผู้เล่นจำนวนมาก)	1	1	1	1.00	Accepted

No.	Items	Expert's IOC			IOC	Interpretation
		No.1	No.2	No.3		
5	I like learning English reading for main idea through a Massively Multiplayer Online Role-Playing Game because I can play it with my friend. (ฉันชอบการเรียนรู้การอ่านจับใจความภาษาอังกฤษผ่านทางเกมออนไลน์แบบเล่นตามบทบาทสมมุติที่มีผู้เล่นจำนวนมากเพราะฉันได้เล่นกับเพื่อน)	1	1	0	0.67	Accepted
6	I like learning English reading for main idea through a Massively Multiplayer Online Role-Playing Game with my friends because I can discuss the reading content with them. (ฉันชอบการเรียนรู้การอ่านจับใจความภาษาอังกฤษผ่านทางเกมออนไลน์แบบเล่นตามบทบาทสมมุติที่มีผู้เล่นจำนวนมากกับเพื่อนเพราะฉันสามารถหาหรือเนื้อหาที่อ่านกับเพื่อนได้)	1	1	1	1.00	Accepted
7	I believe that learning English reading for main idea through a Massively Multiplayer Online Role-Playing Game together with my friends helps me read English passage better. (ฉันเชื่อว่าการเรียนรู้การอ่านจับใจความภาษาอังกฤษผ่านทางเกมออนไลน์แบบเล่นตามบทบาทสมมุติที่มีผู้เล่นจำนวนมากกับเพื่อนช่วยให้ฉันอ่านบทความภาษาอังกฤษได้ดีขึ้น)	1	1	1	1.00	Accepted
8	I like the chat function of the Massively Multiplayer Online Role-Playing Game because I can contact my friends in real time. (ฉันชอบระบบการใช้การสนทนาของเกมออนไลน์แบบเล่นตามบทบาทสมมุติที่มีผู้เล่นจำนวนมากเพราะฉันสามารถพูดคุยกับเพื่อนได้ในขณะที่เล่นเกม)	1	1	1	1.00	Accepted
9	While learning English reading for main idea through a Massively Multiplayer Online Role-Playing Game, I always discuss with my friends via chat function. (ในขณะที่การเรียนรู้การอ่านจับใจความภาษาอังกฤษผ่านทางเกมออนไลน์แบบเล่นตามบทบาทสมมุติที่มีผู้เล่นจำนวนมาก ฉันมักจะหารือกับเพื่อนผ่านระบบสนทนาในเกม)	1	0	1	0.67	Accepted
10	I also share my reading sentences or vocabulary meaning via the chat function of Massively	1	0	1	0.67	Accepted

No.	Items	Expert's IOC			IOC	Interpretation
		No.1	No.2	No.3		
	Multiplayer Online Role-Playing Game when learning reading for main idea. (ฉันยังแบ่งปันประโยชน์หรือความหมายของคำศัพท์ผ่านระบบสนทนาของเกมออนไลน์แบบเล่นตามบทบาทสมมุติที่มีผู้เล่นจำนวนมากเมื่อเรียนการอ่านจับใจความภาษาอังกฤษผ่านอีกด้วย)					
11	I like gold coins in the Massively Multiplayer Online Role-Playing Game because I can use it to buy items that make my hero get stronger. (ฉันชอบเหรียญทองในเกมเกมออนไลน์แบบเล่นตามบทบาทสมมุติที่มีผู้เล่นจำนวนมาก เพราะฉันสามารถใช้มันซื้อของในเกมที่ทำให้ตัวละครของฉันเก่งขึ้น)	1	1	1	1.00	Accepted
12	I feel excited when I level up, and finally won the Massively Multiplayer Online Role-Playing Game. (ฉันรู้สึกตื่นเต้นเมื่อได้เลเวลเพิ่มขึ้นจนชนะเกมออนไลน์แบบเล่นตามบทบาทสมมุติที่มีผู้เล่นจำนวนมากในที่สุด)	1	1	1	1.00	Accepted
13	I want to play the Massively Multiplayer Online Role-Playing Game again in to practice my reading in further steps. (ฉันอยากเล่นเกมออนไลน์แบบเล่นตามบทบาทสมมุติที่มีผู้เล่นจำนวนมากอีกครั้งเพื่อฝึกการอ่านของฉันในขั้นต่อไป)	0	1	1	0.67	Accepted
14	I become an active learner when learning reading for main idea through Massively Multiplayer Online Role-Playing Game. (ฉันกลายเป็นนักเรียนที่กระตือรือร้นเมื่อเรียนการอ่านจับใจความสำคัญผ่านเกมออนไลน์แบบเล่นตามบทบาทสมมุติที่มีผู้เล่นจำนวนมาก)	1	1	1	1.00	Accepted
15	I am interested in learning English reading for main idea through a Massively Multiplayer Online Role-Playing Game because I want to know how game can support my learning. (ฉันสนใจการเรียนการอ่านจับใจความสำคัญผ่านเกมออนไลน์แบบเล่นตามบทบาทสมมุติที่มีผู้เล่นจำนวนมากเพราะฉันอยากรู้ว่าเกมสามารถส่งเสริมการเรียนของฉันอย่างไร)	1	1	1	1.00	Accepted
<b>Total</b>					<b>0.87</b>	<b>Accepted</b>

**B) An English version of questionnaire for asking students' satisfactions in learning English reading for main idea through a Massively Multiplayer Online Role-Playing Game**

**Questionnaire: Students' satisfactions in learning English reading for main idea through a Massively Multiplayer Online Role-Playing Game**

The questionnaire intends to collect information related to students' satisfactions in learning English reading for main idea through a Massively Multiplayer Online Role-Playing Game. The questionnaire consists of 2 parts:

Part 1 Personal Information

Part 2 Students' satisfactions in learning English reading for main idea through a Massively Multiplayer Online Role-Playing Game

Note: Your answers are ANONYMOUS and Confidential. There is no effect on your English course grading.

Directions: Please read each statement and ✓ in rating that most describes your idea.

**Part 1: General Information**

1. Gender  Male  Female
2. School of ..... Institute of ..... Year .....
3. Age .....
4. What English course you are taking in this trimester? .....

**Part 2: Students' satisfactions in learning English reading for main idea through a Massively Multiplayer Online Role-Playing Game: Revision after proposal defense**

5 = Very satisfied, 4 = Satisfied, 3 = Neutral, 2 = Dissatisfied, 1 = Very dissatisfied

Statement	5	4	3	2	1	Note
1. I like learning reading for main idea through a Massively Multiplayer Online Role-Playing Game because it is fun.						
2. I like the various points of map in the game very much because it makes me feel excited when learning English reading for main idea through a Massively Multiplayer Online Role-Playing Game.						
3. Learning English reading for main idea through a Massively Multiplayer Online Role-Playing Game encourages me to participate more in class.						
4. I enjoy learning English reading for main idea through a Massively Multiplayer Online Role-Playing Game very much.						
5. I like learning English reading for main idea through a Massively Multiplayer Online Role-Playing Game because I can play it with my friend.						
6. I like learning English reading for main idea through a Massively Multiplayer Online Role-Playing Game with my friends because I can discuss the reading content with them.						
7. I believe that learning English reading for main idea through a Massively Multiplayer Online Role-Playing Game together with my friends helps me read English passage better.						
8. I like the chat function of the Massively Multiplayer Online Role-Playing Game because I can contact my friends in real time.						
9. While learning English reading for main idea through a Massively Multiplayer Online Role-Playing Game, I always discuss with my friends via chat function.						

Statement	5	4	3	2	1	Note
10. I also share my reading sentences or vocabulary meaning via the chat function of Massively Multiplayer Online Role-Playing Game when learning reading for main idea.						
11. I like gold coins in the Massively Multiplayer Online Role-Playing Game because I can use it to buy items that make my hero get stronger.						
12. I feel excited when I level up, and finally won the Massively Multiplayer Online Role-Playing Game.						
13. I want to play the Massively Multiplayer Online Role-Playing Game again in to practice my reading in further steps.						
14. I become an active learner when learning reading for main idea through Massively Multiplayer Online Role-Playing Game.						
15. I am interested in learning English reading for main idea through a Massively Multiplayer Online Role-Playing Game because I want to know how game can support my learning.						

C) A Thai version of questionnaire for asking students' satisfactions in learning English reading for main idea through a Massively Multiplayer Online Role-Playing Game.

แบบสอบถามความพึงพอใจของนักศึกษาในการเรียน

ส่วนที่ 1 ข้อมูลทั่วไป

ส่วนที่ 2 ความพึงพอใจของนักศึกษาในการใช้

หมายเหตุ ข้อมูลที่ได้ จะถูกเก็บเป็นความลับ และไม่มีผลกระทบต่อคะแนนในรายวิชาภาษาอังกฤษ

คำชี้แจง กรุณากรอกข้อมูลส่วนตัวของท่าน และทำเครื่องหมาย ✓ หน้าคำตอบที่ตรงกับความคิดของท่านมากที่สุด

ส่วนที่ 1 ข้อมูลทั่วไป

1. เพศ  ชาย  หญิง
2. สำนักวิชา.....สาขาวิชา.....ชั้นปี.....
3. อายุ.....ปี
4. ท่านกำลังเรียนภาษาอังกฤษวิชาใดในภาคการศึกษานี้.....

ส่วนที่ 2 ความพึงพอใจของนักศึกษาในการเรียนคำศัพท์ภาษาอังกฤษผ่านทาง MMORPGs

5 = พึงพอใจอย่างยิ่ง, 4 = พึงพอใจ, 3 = เฉย ๆ, 2 = ไม่พึงพอใจ, 1 = ไม่พึงพอใจอย่างยิ่ง

ความคิดเห็น	5	4	3	2	1	หมายเหตุ
1. ชอบการเรียนการอ่านจับใจความภาษาอังกฤษผ่านทางเกมออนไลน์แบบเล่นตามบทบาทสมมุติที่มีผู้เล่นจำนวนมากเพราะมันสนุก						
2. ฉันชอบด้านต่าง ๆ ของเกมมากเพราะมันทำให้ฉันตื่นเต้นเมื่อเรียนการอ่านจับใจความภาษาอังกฤษผ่านทางเกมออนไลน์แบบเล่นตามบทบาทสมมุติที่มีผู้เล่นจำนวนมาก						
3. การอ่านจับใจความภาษาอังกฤษผ่านทางเกมออนไลน์แบบเล่นตามบทบาทสมมุติที่มีผู้เล่นจำนวนมากกระตุ้นให้ฉันมีส่วนร่วมในห้องเรียนมากขึ้น						
4. ฉันสนุกกับการเรียนการอ่านจับใจความภาษาอังกฤษผ่านทางเกมออนไลน์แบบเล่นตามบทบาทสมมุติที่มีผู้เล่นจำนวนมาก						

ความคิดเห็น	5	4	3	2	1	หมายเหตุ
5. ฉันชอบการเรียนรู้การอ่านจับใจความภาษาอังกฤษผ่านทางเกมออนไลน์แบบเล่นตามบทบาทสมมุติที่มีผู้เล่นจำนวนมากเพราะฉันได้เล่นกับเพื่อน						
6. ฉันชอบการเรียนรู้การอ่านจับใจความภาษาอังกฤษผ่านทางเกมออนไลน์แบบเล่นตามบทบาทสมมุติที่มีผู้เล่นจำนวนมากกับเพื่อนเพราะฉันสามารถหาหรือเนื้อหาที่อ่านกับเพื่อนได้						
7. ฉันเชื่อว่าการเรียนรู้การอ่านจับใจความภาษาอังกฤษผ่านทางเกมออนไลน์แบบเล่นตามบทบาทสมมุติที่มีผู้เล่นจำนวนมากกับเพื่อนช่วยให้ฉันอ่านบทความภาษาอังกฤษได้ดีขึ้น						
8. ฉันชอบระบบการใช้การสนทนาของเกมออนไลน์แบบเล่นตามบทบาทสมมุติที่มีผู้เล่นจำนวนมากเพราะฉันสามารถพูดคุยกับเพื่อนได้ในขณะเล่นเกม						
9. ในขณะที่การเรียนรู้การอ่านจับใจความภาษาอังกฤษผ่านทางเกมออนไลน์แบบเล่นตามบทบาทสมมุติที่มีผู้เล่นจำนวนมาก ฉันมักจะหาหรือกับเพื่อนผ่านระบบสนทนาในเกม						
10. ฉันยังแบ่งปันประโยคหรือความหมายของคำศัพท์ผ่านระบบสนทนาของเกมออนไลน์แบบเล่นตามบทบาทสมมุติที่มีผู้เล่นจำนวนมากเมื่อเรียนการอ่านจับใจความภาษาอังกฤษผ่านอีกด้วย						
11. ฉันชอบเหรียญทองในเกมออนไลน์แบบเล่นตามบทบาทสมมุติที่มีผู้เล่นจำนวนมาก เพราะฉันสามารถใช้มันซื้อของในเกมที่ทำให้ตัวละครของฉันเก่งขึ้น						
12. ฉันรู้สึกตื่นเต้นเมื่อได้เลเวลเพิ่มขึ้นจนชนะเกมออนไลน์แบบเล่นตามบทบาทสมมุติที่มีผู้เล่นจำนวนมากในที่สุด						
13. ฉันอยากเล่นเกมออนไลน์แบบเล่นตามบทบาทสมมุติที่มีผู้เล่นจำนวนมากอีกครั้งเพื่อฝึกการอ่านของฉันในขั้นต่อไป						
14. ฉันกลายเป็นนักเรียนที่กระตือรือร้นเมื่อเรียนการอ่านจับใจความสำคัญผ่านเกมออนไลน์แบบเล่นตามบทบาทสมมุติที่มีผู้เล่นจำนวนมาก						
15. ฉันสนใจการเรียนรู้การอ่านจับใจความสำคัญผ่านเกมออนไลน์แบบเล่นตามบทบาทสมมุติที่มีผู้เล่นจำนวนมากเพราะฉันอยากรู้ว่าเกมสามารถส่งเสริมการเรียนรู้ของฉันอย่างไร						

D) Try out results of questionnaire showed students' opinion toward the use of MMORPG on learning English reading for main idea.

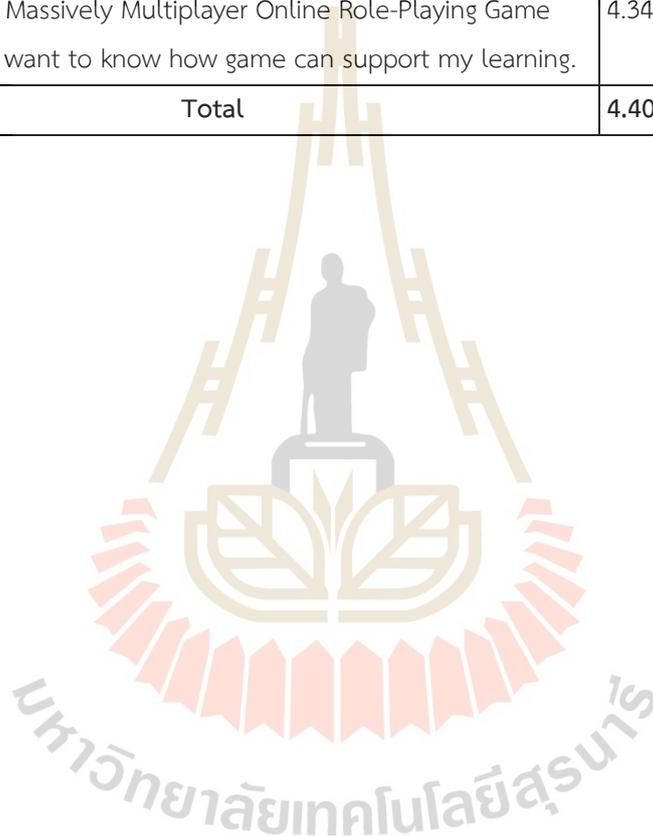
No.	Items	Mean	S.D.	Interpretation
1	I like learning reading for main idea through a Massively Multiplayer Online Role-Playing Game because it is fun.	4.40	0.737	Satisfied
2	I like the various points of map in the game very much because it makes me feel excited when learning English reading for main idea through a Massively Multiplayer Online Role-Playing Game.	4.33	0.816	Satisfied
3	Learning English reading for main idea through a Massively Multiplayer Online Role-Playing Game encourages me to participate more in class.	4.60	0.507	Satisfied
4	I enjoy learning English reading for main idea through a Massively Multiplayer Online Role-Playing Game very much.	4.13	0.640	Satisfied
5	I like learning English reading for main idea through a Massively Multiplayer Online Role-Playing Game because I can play it with my friend.	4.73	0.458	Satisfied
6	I like learning English reading for main idea through a Massively Multiplayer Online Role-Playing Game with my friends because I can discuss the reading content with them.	4.60	0.632	Satisfied
7	I believe that learning English reading for main idea through a Massively Multiplayer Online Role-Playing Game together with my friends helps me read English passage better.	4.53	0.743	Satisfied
8	I like the chat function of the Massively Multiplayer Online Role-Playing Game because I can contact my friends in real time.	4.13	0.640	Satisfied
9	While learning English reading for main idea through a Massively Multiplayer Online Role-Playing Game, I always discuss with my friends via chat function.	4.47	0.516	Satisfied

No.	Items	Mean	S.D.	Interpretation
10	I also share my reading sentences or vocabulary meaning via the chat function of Massively Multiplayer Online Role-Playing Game when learning reading for main idea.	4.40	0.507	Satisfied
11	I like gold coins in the Massively Multiplayer Online Role-Playing Game because I can use it to buy items that make my hero get stronger.	4.53	0.743	Satisfied
12	I feel excited when I level up, and finally won the Massively Multiplayer Online Role-Playing Game.	4.47	0.640	Satisfied
13	I want to play the Massively Multiplayer Online Role-Playing Game again in to practice my reading in further steps.	4.60	0.632	Satisfied
14	I become an active learner when learning reading for main idea through Massively Multiplayer Online Role-Playing Game.	4.73	0.458	Satisfied
15	I am interested in learning English reading for main idea through a Massively Multiplayer Online Role-Playing Game because I want to know how game can support my learning.	4.67	0.488	Satisfied
	<b>Total</b>	<b>4.48</b>	<b>0.61</b>	<b>Satisfied</b>

E) Results from main experiment of questionnaire showed students' perception toward the use of MMORPG on learning English reading for main idea.

No.	Items	Mean	S.D.	Interpretation
1	I like learning reading for main idea through a Massively Multiplayer Online Role-Playing Game because it is fun.	4.43	0.608	Satisfied
2	I like the various points of map in the game very much because it makes me feel excited when learning English reading for main idea through a Massively Multiplayer Online Role-Playing Game.	4.34	0.725	Satisfied
3	Learning English reading for main idea through a Massively Multiplayer Online Role-Playing Game encourages me to participate more in class.	4.26	0.561	Satisfied
4	I enjoy learning English reading for main idea through a Massively Multiplayer Online Role-Playing Game very much.	4.43	0.655	Satisfied
5	I like learning English reading for main idea through a Massively Multiplayer Online Role-Playing Game because I can play it with my friend.	4.46	0.561	Satisfied
6	I like learning English reading for main idea through a Massively Multiplayer Online Role-Playing Game with my friends because I can discuss the reading content with them.	4.34	0.539	Satisfied
7	I believe that learning English reading for main idea through a Massively Multiplayer Online Role-Playing Game together with my friends helps me read English passage better.	4.40	0.553	Satisfied
8	I like the chat function of the Massively Multiplayer Online Role-Playing Game because I can contact my friends in real time.	4.31	0.631	Satisfied
9	While learning English reading for main idea through a Massively Multiplayer Online Role-Playing Game, I always discuss with my friends via chat function.	4.06	0.539	Satisfied
10	I also share my reading sentences or vocabulary meaning via the chat function of Massively Multiplayer Online Role-Playing Game when learning reading for main idea.	4.46	0.505	Satisfied
11	I like gold coins in the Massively Multiplayer Online Role-Playing Game because I can use it to buy items that make my hero get stronger.	4.60	0.553	Satisfied

No.	Items	Mean	S.D.	Interpretation
12	I feel excited when I level up, and finally won the Massively Multiplayer Online Role-Playing Game.	4.49	0.612	Satisfied
13	I want to play the Massively Multiplayer Online Role-Playing Game again in to practice my reading in further steps.	4.63	0.490	Satisfied
14	I become an active learner when learning reading for main idea through Massively Multiplayer Online Role-Playing Game.	4.40	0.553	Satisfied
15	I am interested in learning English reading for main idea through a Massively Multiplayer Online Role-Playing Game because I want to know how game can support my learning.	4.34	0.539	Satisfied
<b>Total</b>		<b>4.40</b>	<b>0.57</b>	<b>Satisfied</b>



## APPENDIX C

## SEMI-STRUCTURED INTERVIEW

## A) The IOC value for the guided questions of semi-structured interview

The 5 guided questions for semi-structured interview were sent to the experts to find the content validity. All 5 questions have IOC values higher than 0.5, so all items are reserved.

Interview Items	Experts' IOC			Mean	Validity
	1	2	3		
1. Do you like learning English reading for main idea via Massively Multiplayer Online Role-Playing Game (MMORPG)? Why or why not? คุณชอบการเรียนรู้ อ่านจับใจความภาษาอังกฤษผ่านทางเกมออนไลน์ประเภทเล่นตามบทบาทสมมุติของตัวละครหรือไม่ เพราะเหตุใด	1	1	1	1	Suitable
2. Do you think learning English reading for main idea via MMORPG help you improve your reading knowledge? Why or why not? คุณคิดว่าการเรียนการอ่านจับใจความภาษาอังกฤษผ่านทางเกมออนไลน์ประเภทเล่นตามบทบาทสมมุติของตัวละครช่วยคุณพัฒนาการอ่านหรือไม่ เพราะเหตุใด	1	1	1	1	Suitable
3. Do you want to learn English via MMORPG in other skills? Why or why not? คุณต้องการให้มีการเรียนภาษาอังกฤษผ่านเกมออนไลน์ประเภทเล่นตามบทบาทสมมุติของตัวละครในการเรียนทักษะภาษาอังกฤษอื่น ๆ อีกหรือไม่ เพราะเหตุใด	1	1	0	0.67	Suitable
4. Do you have any problems while learning English reading for main idea via MMORPG? If yes, specify the problem. คุณพบปัญหาอะไรในระหว่างการเรียนรู้ อ่านจับใจความภาษาอังกฤษผ่านทางเกมออนไลน์ประเภทเล่นตามบทบาทสมมุติของตัวละครหรือไม่ ถ้ามี โปรดระบุ	1	1	1	1	Suitable
5. In what areas do you think this teaching method could be improved? Learning materials, way of teaching, video contents, online activities. คุณคิดว่าการเรียนการสอนครั้งนี้ ควรได้รับการปรับปรุงอย่างไรบ้าง เช่น สื่อการเรียน วิธีการสอน เนื้อหาวิดีโอ กิจกรรมการเรียนออนไลน์	1	1	1	1	Suitable
<b>Total</b>				<b>0.93</b>	<b>Suitable</b>

### B) An English version of the guided questions of semi-structured interview

1. Do you like learning English reading for main idea via Massively Multiplayer Online Role-Playing Game (MMORPG)? Why or why not?
2. Do you think learning English reading for main idea via MMORPG help you improve your reading knowledge? Why or why not?
3. Do you want to learn English via MMORPG in other skills? Why or why not?
4. Do you have any problems while learning English reading for main idea via MMORPG? If yes, specify the problem.
5. In what areas do you think this teaching method could be improved? Learning materials, way of teaching, video contents, online activities.

### C) A Thai version of the guided questions of semi-structured interview

1. คุณชอบการเรียนรู้การอ่านจับใจความภาษาอังกฤษผ่านทางเกมออนไลน์ประเภทเล่นตามบทบาทสมมุติของตัวละครหรือไม่ เพราะเหตุใด
2. คุณคิดว่าการเรียนรู้การอ่านจับใจความภาษาอังกฤษผ่านทางเกมออนไลน์ประเภทเล่นตามบทบาทสมมุติของตัวละครช่วยคุณพัฒนาการอ่านหรือไม่ เพราะเหตุใด
3. คุณต้องการให้มีการเรียนภาษาอังกฤษผ่านทางเกมออนไลน์ประเภทเล่นตามบทบาทสมมุติของตัวละครในการเรียนทักษะภาษาอังกฤษอื่น ๆ อีกหรือไม่ เพราะเหตุใด
4. คุณพบปัญหาอะไรในระหว่างการเรียนรู้การอ่านจับใจความภาษาอังกฤษผ่านทางเกมออนไลน์ประเภทเล่นตามบทบาทสมมุติของตัวละครหรือไม่ ถ้ามี โปรดระบุ
5. คุณคิดว่าการเรียนการสอนครั้งนี้ ควรได้รับการปรับปรุงอย่างไรบ้าง เช่น สื่อการเรียน วิธีการสอน เนื้อหาวิดีโอ กิจกรรมการเรียนออนไลน์

#### D) Results of Semi-Structured Interviews: Pilot Study

1. Do you like learning English reading for main idea via Massively Multiplayer Online Role-Playing Game (MMORPG)? Why or why not?

No.	Answer	Reasons
1	Yes.	Because it is something new when learning reading for main idea. I didn't know there is a game like this before.
2	Yes.	Not boring.
3	Yes.	I have more fun and playing game is more interesting than learning reading in a big classroom.
<b>N=3</b>	<b>100%</b>	

2. Do you think learning English reading for main idea via MMORPG help you improve your reading knowledge? Why or why not?

No.	Answer	Reasons
1	Yes.	When reading is more fun, I want to practice more. The more I practice, the better reader I become.
2	Yes.	The in-game vocab makes the reading more understandable.
3	Yes.	I can practice reading while playing game at the same time. I can understand more on how to find the main idea of the reading.
<b>N=3</b>	<b>100%</b>	

3. Do you want to learn English via MMORPG in other skills? Why or why not?

No.	Answer	Reasons
1	Yes.	Maybe to practice Listening.
2	Yes.	Vocabulary.
3	Yes.	I want to practice more on vocabulary learning and grammar for writing.
<b>N=3</b>	<b>100%</b>	

4. Do you have any problems while learning English reading for main idea via MMORPG? If yes, specify the problem.

No.	Answer	Reasons
1	Yes.	The items which I should pick up to find the sentences were unclear.
2	Yes.	There were game lags sometimes.
3	No	I don't have any problem for playing game since I had some experience playing DOTA2 before.
N=3	66.67%	

5. In what areas do you think this teaching method could be improved?  
Learning materials, way of teaching, video contents, online activities.

No.	Answer
1	I want the chat feature so that I can type the sentences.
2	I think if the lessons are in Thai, it would be ok.
3	I want to contact the teacher and ask some questions right away when I don't understand or I'm not sure about some lessons.
N=3	

#### D) Results of Semi-Structured Interviews: Main Experiment

1. Do you like learning English reading for main idea via Massively Multiplayer Online Role-Playing Game (MMORPG)? Why or why not?

No.	Answer	Reasons
1	Yes.	Because it is similar to the game that I am playing which is really fun.
2	Yes.	Reading would have been boring without the game. > fun
3	Yes.	There are game characters that makes it easy to remember the reading content. It's fun so I can remember the content.
4	Yes.	It can help to choose main ideas. It's fun when I can find the main idea.
5	Yes.	I can read when I know the meaning of words.
6	No.	The map is too big, but there are only 5 monsters.
7	Yes.	I can understand what I read (if I know the word meaning)
8	Yes.	I can read better.

No.	Answer	Reasons
9	Yes.	New experiences. > Fun
N=9	100%	N = 4 learning outcomes N = 4 fun and motivating N = 1 not satisfied

2. Do you think learning English reading for main idea via MMORPG help you improve your reading knowledge? Why or why not?

No.	Answer	Reasons
1	Yes.	I can also remember the reading content that I have learned.
2	Yes.	I think if I can practice more and more, my reading will be improved.
3	Yes.	Because it makes me want to learn reading.
4	Yes.	It is not boring, so it can motivate me to continue reading.
5	Yes.	-
6	Yes.	I think I can read better.
7	Yes.	-
8	Yes.	It is fun, so it can motivate me to learn more and become better reader.
9	Yes.	I can read better.
N=9	100%	N = 3 have motivation to learn reading N = 1 help remember reading content N = 1 practice more

3. Do you want to learn English via MMORPG in other skills? Why or why not?  
What skill?

No.	Answer	Reasons
1	Yes.	Vocabulary
2	Yes.	Speaking.
3	Yes.	Writing.
4	Yes.	Vocabulary.
5	Yes.	Vocabulary
6	Yes.	Speaking.
7	Yes.	Speaking.

No.	Answer	Reasons
8	Yes.	Vocabulary.
9	Yes.	Writing.
N=9	100%	N = 4 Vocabulary N = 3 Speaking N = 2 Writing

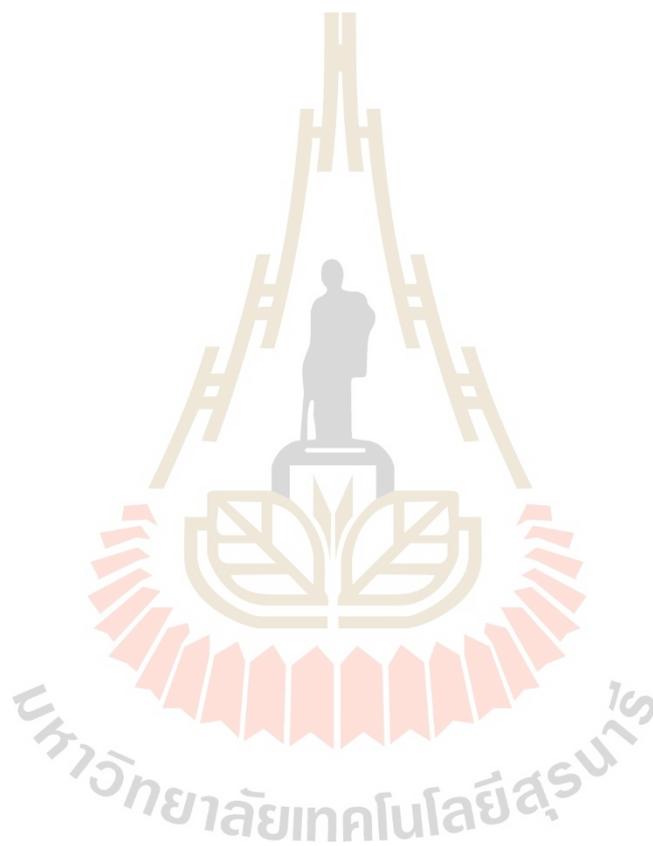
4. Do you have any problems while learning English reading for main idea via MMORPG? If yes, specify the problem.

No.	Answer	Reasons
1	Yes.	Not enough mana.
2	Yes.	I want the monster killing to be more difficult and challenging.
3	No.	-
4	Yes.	I need to have more vocabulary knowledge to play the game.
5	Yes.	It is difficult to access the game at first.
6	Yes.	My computer is old, so it took me too long to download the game.
7	Yes.	It should be more monsters in the game.
8	Yes.	There are too many steps when logging in the game at first.
9	No.	
N=9	100%	N = 3 game features N = 3 computer and connection N = 1 learning content

5. In what areas do you think this teaching method could be improved?  
Learning materials, way of teaching, video contents, online activities.

No.	Answer	Reasons
1		Teaching method is good.
2		More examples of main idea passages.
3		All is good.
4		-
5		Good teaching techniques.
6		Video is good. Get attention.

No.	Answer	Reasons
7		Learning online in real time rather than video can get more attention from students.
8		It is already good.
9		-
N=9	100%	N = 2 teaching method N = 2 teaching materials N = 1 lesson content



## APPENDIX D

## LESSON PLAN

## A) The IOC value for lesson plan

The 7 statements of evaluation list of the lesson plan were sent to the experts to find the content validity. All 7 questions have the IOC values higher than 0.5 which mean all items can be reserved.

1 = very unsuitable, 2 = unsuitable, 3 = moderately suitable,  
4 = suitable, 5 = very suitable

Item	Statements	Experts			Mean	S.D.	Validity
		1	2	3			
1	Study time is suitable.	4	4	5	4.33	0.58	Suitable
2	The activity is relevant to the objectives.	4	4	4	4.00	0.00	Suitable
3	The activity is appropriate for the students.	4	4	4	4.00	0.00	Suitable
4	The objectives conform to the contents that the students learn.	4	5	4	4.33	0.58	Suitable
5	The evaluation aligns with the objectives.	4	4	4	4.00	0.00	Suitable
6	The activities of MMORPG can motivate students in learning reading.	5	5	4	4.66	0.58	Suitable
7	The activities in game such as “finding the sentences” can encourage students to participate in game actively.	5	4	3	4.00	1.00	Suitable
<b>Total</b>					<b>4.18</b>	<b>0.51</b>	<b>Suitable</b>

## B) Lesson Plans

## Lesson Plans

## READING FOR MAIN IDEA

## Lesson Plan (Reading for Main Idea)

**Lesson Name:** Course Introduction

**Course:** Reading Comprehension

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**Course Description:**

This course focuses on improving students reading comprehension and reading for main idea. All skills are integrated into the whole lesson. In this lesson, the students are required to practice reading for main idea via a massively multiplayer online role-playing game (MMORPG). The game provides students opportunities to expose to the language because students will be able to learn more repeatedly and they can design their own learning pace. As a result, students will become more efficient readers. Additionally, in-game activities allow students to participate in class and interact with other friends. These activities can promote students' engagement and motivation to learn.

**Course Objectives**

Students are able to:

1. understand the key point of reading for main idea.
2. identify main idea of reading passages learned via MMORPG.
3. access and complete online quizzes concerning reading for main idea.

**Pre-reading activities:** Pre-reading activities are mostly designed to set a task for the learners, help them prepare for the task, and motivate them to read.

Pre-reading activities in this lesson are divided into two parts: online in-class pre-reading activity and in-game pre-reading activity. Online in-class pre-reading activity will be completed before students playing MMORPG. In the activity, students will be

asked one or two questions related to the reading text of the lesson each week. In addition, in-game activity will be operated at the beginning of the game playing where students are taught receptive vocabulary in order to prepare them with the reading texts in the game. Therefore, in this stage, students are involved with pre-reading vocabulary as it is necessary for them to acquaint with essential words before reading and to activate their background knowledge before reading the text.

**While-reading activities:** While-reading activities are usually divided into three types: teacher-learner interaction activities, learner-learner interaction activities, and text-only activities. In this lesson, two aspects are included in this stage which are collaborative learning and note-taking activity. In-game learning as a group allows students to discuss what they have learned. In this way, students are able to check whether their understanding is correct. Moreover, the students are suggested to take note of important vocabulary or content while playing the game which is categorized as one of text-only activities. In this way, students can take notes of the key points while they read. Consequently, it helps activate students' working memory, including their cognitive effort in doing so. To sum up, in this stage, students are linked with two activities, collaborative learning and note-taking, which help them to work collaboratively and activate their cognition in learning reading for main idea.

**Post-reading activities:** Post-reading activities require students to return to the text and reread it in order to search for specific information. In this lesson, the learning objectives of post-reading are mainly about in-game activities. Students are required to answer the question of multiple-choice question in the end of the game. In this way, the main idea of the reading text in each lesson is tested to the students whether they understand what they read. Moreover, students are required to do one more post-reading quiz for each week which contain four main goals accordant with first four objectives of Bloom's taxonomy: remembering, understanding, applying, and analyzing. Hence, in post-reading activities, students will be prompted to review the reading texts. Moreover, students can also review their comprehension by answering questions through quizzes.

Following details are describing in-game activities and their underlying theories.

### **In Game Pre-reading Activities**

**Theory:** Schema Theory, Bottom Up

**Description:** The in-game pre-reading activities help activate students' background knowledge. In this activity, teachers or instructors have to be certain that students have the relevant schema for understanding the reading texts. Since it is essential for the students to possess vocabulary knowledge when they read, the pre-teaching vocabulary activity is mandatory. Moreover, before playing the game, students are asked questions related to the reading texts before they read. In this way, the gap between the text content and the readers' prior knowledge is bridged.

### **In Game While-Reading Activities**

**Theory:** Collaborative Learning, Cognitive View

**Description:** The in-game while reading activities can help the students to work together as a group of 3 or 4 people. In this stage, the students can work collaboratively in order to enhance their learning through working with the task in game together. Furthermore, students taking notes while playing the game is also a way to improve their cognitive effort in learning reading through game. While taking notes, students must try to comprehend the information in the reading text, then store that information in long term memory by writing it down.

### **Post-reading Activities**

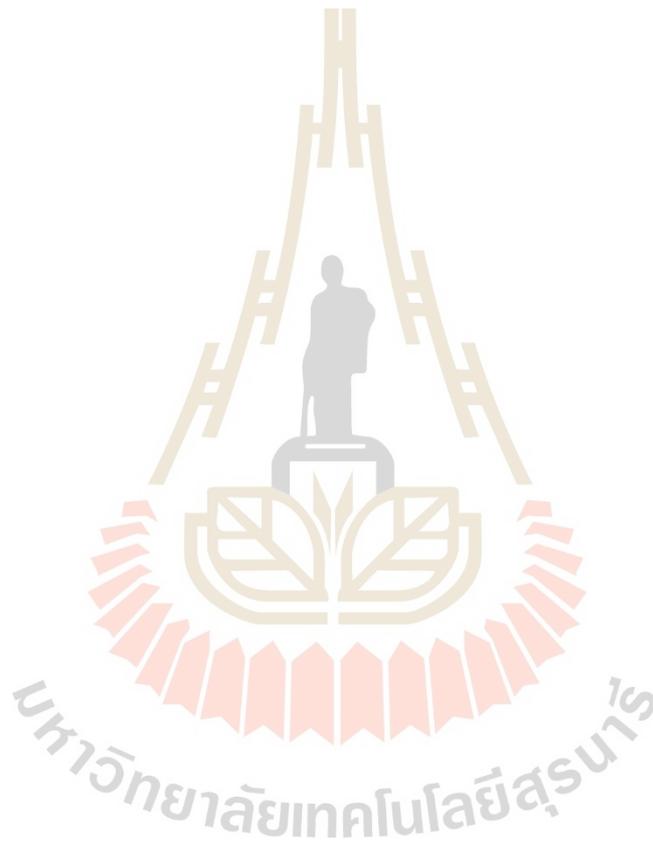
**Theory:** Metacognition, Constructivism

**Description:** For post-reading activities, students will construct their knowledge and meaning from the past experiences with the information they received from playing the game. Moreover, students can develop their metacognitive strategies via game. Metacognition is a thinking theory related to constructivism because one has to think and monitor their own thinking in order to build understanding on derived information.

### Course Assessment and Evaluation

Students are shown activities to be accessed and how they will be evaluated in this course. Hence, they need to complete the required tasks for the course evaluation in following activities.

- 1) Viewing lesson videos and contents
- 2) Completing individual online quiz of each lesson
- 3) Taking Pretest and Posttest



### Week 1: Pre-test and Game Demonstration

Date:

Duration: 1 hour

**Objectives:** After finishing the class, students are able to log into the game, understand how to fetch vocabulary, and retrieve each sentence of information.

Topic/Theme	Techniques/Instructional Activities	Time	Materials
Lesson Opener	<ul style="list-style-type: none"> <li>• Greetings to get students ready for the lesson</li> <li>• Students are share their experiences of playing online games and what games they are playing verbally.</li> </ul>	5 min	Online via zoom meeting
Pre-test	<ul style="list-style-type: none"> <li>• Students take the online pre-test before learning reading for main idea via MMORPG (game).</li> </ul>	30 min	Google form
Training hour	<ul style="list-style-type: none"> <li>• Students watch a video of how to log into MMORPG and how to play the game.</li> <li>• Students are shown a video of how to fetch vocabulary, retrieve each sentence of information, and how to answer the question in each unit.</li> <li>• Students try to log into MMORPG by themselves. And report the problem, if any.</li> </ul>	20 min	PPT, MMORPG, video clip
Assignment	<ul style="list-style-type: none"> <li>• Students are assigned to log in and play MMORPG in training mode at home.</li> <li>• Students are assigned to study reading for main idea video at home.</li> </ul>		MMORPG
Closing	<ul style="list-style-type: none"> <li>• Teacher closes the day's class and wrap up what students have learned.</li> </ul>	5 min	

## Week 2: In-game activities “Unit 1 – Food and Health”

Date:

Duration: 1 hours

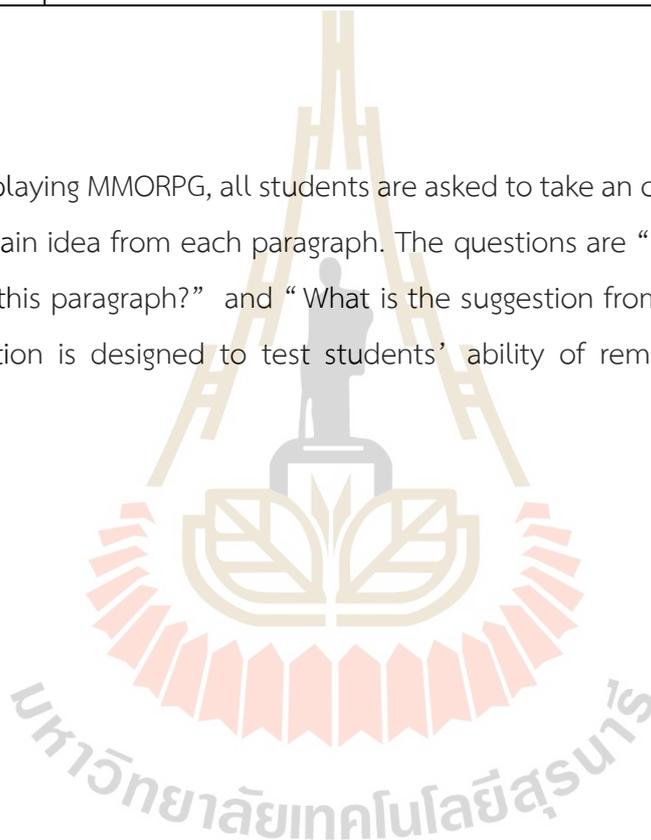
**Objectives:** After finishing the class, students can identify main idea and supporting details of the reading text after playing MMORPG. Moreover, students can remember the content of the reading text and do a quiz related to what they have learned from the lesson.

Topic / Theme	Techniques / Instructional Activities	Time	Materials
Lesson Opener Warm-up	<ul style="list-style-type: none"> <li>● Greeting</li> <li>● Students share their experiences or problems of playing MMORPG in training mode online verbally.</li> </ul>	5 min	Online via zoom meeting
Pre-reading activities	<ul style="list-style-type: none"> <li>● Students log into the game</li> <li>● Verbally via zoom meeting, students are asked questions related to unit 1 “Food and Health” to activate their schemata and guess the meaning of words related to the lesson.</li> <li>● The questions are “Do you like frozen food?” and “What frozen food do you like?”</li> <li>● Students answer the questions verbally via zoom meeting and share their experiences about frozen food.</li> </ul>	10 min	Zoom meeting, PPT
Practice In-game while -reading activities	<ul style="list-style-type: none"> <li>● While-reading activity: Students play online game and work in a group of 2-4 people. Each of them is given pieces of information from the game to share with other students in the group. Moreover, they are encouraged to do notetaking of the information they retrieve from playing game on their computer note or paper at their convenience.</li> <li>● Students discuss verbally about what is the main idea of the passage.</li> </ul>	25 min	MMORPG
Post-reading activities	<ul style="list-style-type: none"> <li>● Post-reading activity: After practicing, students find out the main idea and supporting details of</li> </ul>	15 min	PPT, quiz link

Topic / Theme	Techniques / Instructional Activities	Time	Materials
	the reading text and answer the in an online quiz related to the content of what they have read.		
Assignment	<ul style="list-style-type: none"> <li>Students are assigned to practice MMORPG unit 1 at home at their convenience.</li> </ul>		
Closing	<ul style="list-style-type: none"> <li>Teacher closes the day's class verbally online.</li> </ul>	5 min	Online via zoom meeting

### Evaluation

After playing MMORPG, all students are asked to take an online quiz of choosing the correct main idea from each paragraph. The questions are “Which sentence is the main idea of this paragraph?” and “What is the suggestion from this passage?”. The second question is designed to test students’ ability of remembering the reading content.



### Week 3: In-game activities “Unit 2 – Our Bond with Animals”

Date:

Duration: 1 hours

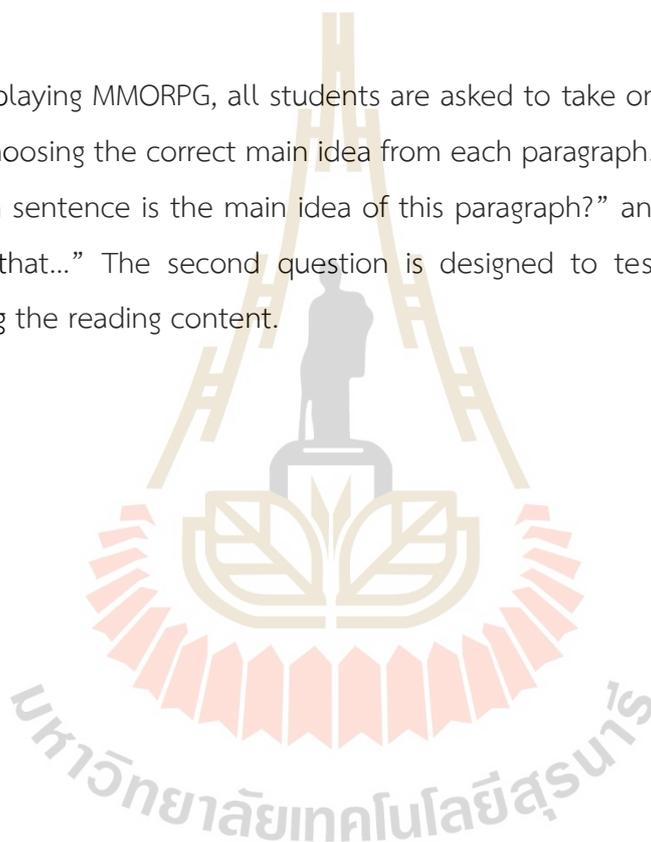
**Objectives:** After finishing the class, students can identify main idea and supporting details of the reading text after playing MMORPG. Moreover, students can understand, apply, and analyze the content of the reading text and do a quiz related to what they have learned from the lesson.

Topic / Theme	Techniques / Instructional Activities	Time	Materials
Lesson Opener Warm-up	<ul style="list-style-type: none"> <li>● Greeting</li> <li>● Students share their experiences or problems of playing MMORPG unit 1 online verbally.</li> </ul>	5 min	Online via zoom meeting
Pre-reading activity	<ul style="list-style-type: none"> <li>● Students log into the game</li> <li>● Verbally via zoom meeting, students are asked question related to unit 2 “Our Bond with Animals” to activate their schemata and asked to guess the meaning of words related to the lesson.</li> <li>● The question is “Do you know how sharks smell?”</li> <li>● Students answer the questions verbally via zoom meeting and share their experiences about sharks.</li> </ul>	10 min	Zoom meeting, PPT
Practice In-game while -reading activities	<ul style="list-style-type: none"> <li>● While-reading activity: Students play online game and work in a group of 2-4 people. Each of them is given pieces of information from the game to share with other students in the group. Moreover, they are encouraged to do notetaking of the information they retrieve from playing game.</li> <li>● Students discuss what is the main idea of the passage verbally.</li> </ul>	25 min	MMORPG
Post-reading activity	<ul style="list-style-type: none"> <li>● Post-reading activity: Students find out the main idea and supporting details of the reading text and do an online quiz related to the content of what they have read.</li> </ul>	15 min	PPT, quiz link

Topic / Theme	Techniques / Instructional Activities	Time	Materials
Assignment	<ul style="list-style-type: none"> <li>Students are assigned to practice MMORPG more in unit 2,3, and 4 at home and follow the link in PPT to do quizzes.</li> </ul>		PPT, MMORPG
Closing	<ul style="list-style-type: none"> <li>Teacher closes the day's class and wrap up what students have learned.</li> </ul>	5 min	online

### Evaluation

After playing MMORPG, all students are asked to take online quizzes in unit 2, 3, and 4 of choosing the correct main idea from each paragraph. The questions in unit 2 are: "Which sentence is the main idea of this paragraph?" and "From this passage, we can say that..." The second question is designed to test students' ability of understanding the reading content.



### Week 4: In-game activities “Unit 3 – Urban Underworlds”

Date:

Duration: 1 hours

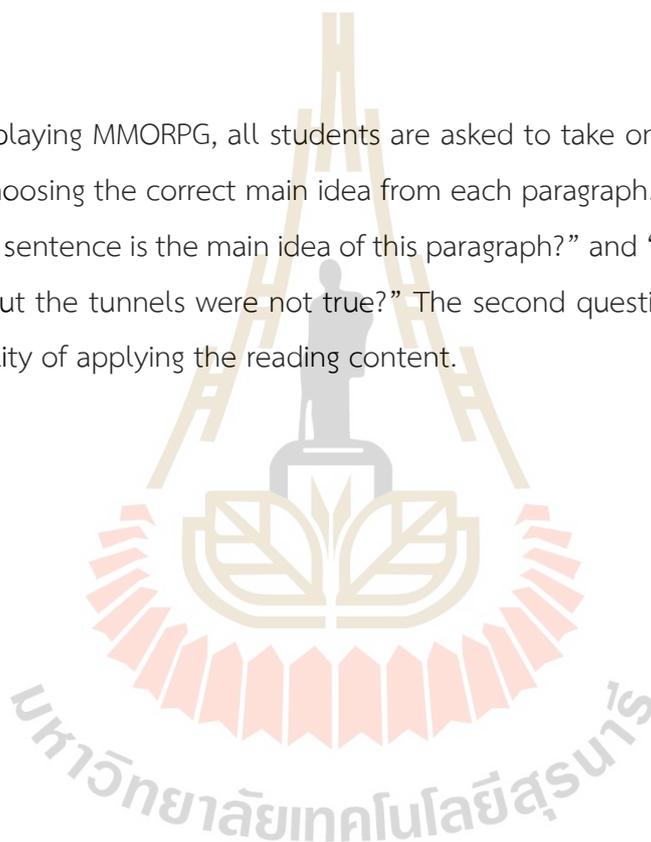
**Objectives:** After finishing the class, students can identify main idea and supporting details of the reading text after playing MMORPG. Moreover, students can understand, apply, and analyze the content of the reading text and do a quiz related to what they have learned from the lesson.

Topic / Theme	Techniques / Instructional Activities	Time	Materials
Lesson Opener Warm-up	<ul style="list-style-type: none"> <li>● Greeting</li> <li>● Students share their experiences or problems of playing MMORPG unit 2 online verbally.</li> </ul>	5 min	Online via zoom meeting
Pre-reading activity	<ul style="list-style-type: none"> <li>● Students log into the game</li> <li>● Verbally via zoom meeting, students are asked question related to unit 3 “Urban Underworlds” to activate their schemata and asked to guess the meaning of words related to the lesson.</li> <li>● The question is “Why did people think the story about the tunnels were not true?”</li> <li>● Students answer the questions verbally via zoom meeting and share their experiences about sharks.</li> </ul>	10 min	Zoom meeting, PPT
Practice In-game while - reading activities	<ul style="list-style-type: none"> <li>● While-reading activity: Students play online game and work in a group of 2-4 people. Each of them is given pieces of information from the game to share with other students in the group. Moreover, they are encouraged to do notetaking of the information they retrieve from playing game.</li> <li>● Students discuss what is the main idea of the passage verbally.</li> </ul>	25 min	MMORPG
Post-reading activity	<ul style="list-style-type: none"> <li>● Post-reading activity: Students find out the main idea and supporting details of the reading text and do an online quiz related to the content of what they have read.</li> </ul>	15 min	PPT, quiz link

Topic / Theme	Techniques / Instructional Activities	Time	Materials
Assignment	<ul style="list-style-type: none"> <li>Students are assigned to practice MMORPG more on unit 2,3, and 4 at home and follow the link in PPT to do quizzes.</li> </ul>		PPT, MMORPG
Closing	<ul style="list-style-type: none"> <li>Teacher closes the day's class and wrap up what students have learned.</li> </ul>	5 min	online

### Evaluation

After playing MMORPG, all students are asked to take online quizzes in unit 2, 3, and 4 of choosing the correct main idea from each paragraph. The questions in unit 3 are: "Which sentence is the main idea of this paragraph?" and "Why did people think the story about the tunnels were not true?" The second question is designed to test students' ability of applying the reading content.



### Week 5: In-game activities “Unit 4 – Global Warming”

Date:

Duration: 1 hours

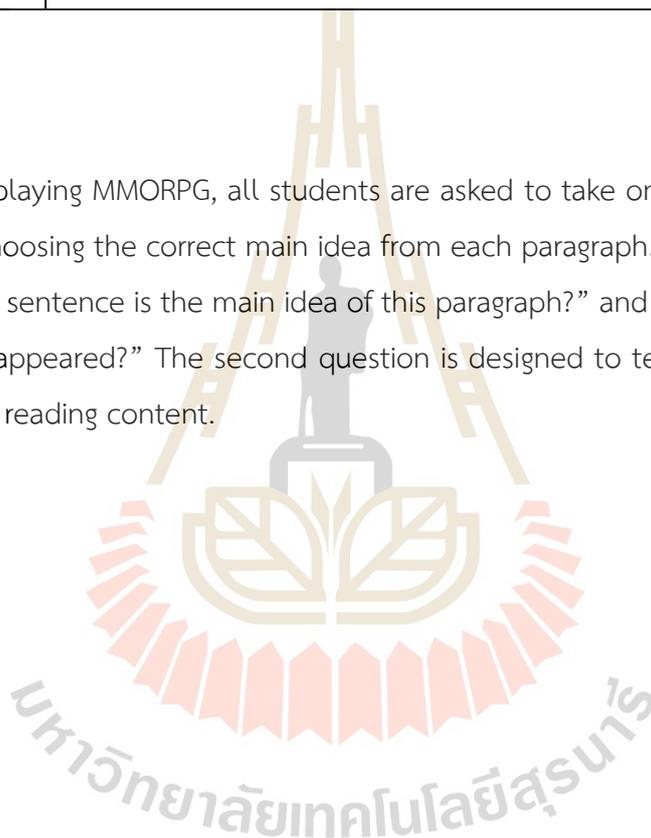
**Objectives:** After finishing the class, students can identify main idea and supporting details of the reading text after playing MMORPG. Moreover, students can understand, apply, and analyze the content of the reading text and do a quiz related to what they have learned from the lesson.

Topic / Theme	Techniques / Instructional Activities	Time	Materials
Lesson Opener Warm-up	<ul style="list-style-type: none"> <li>● Greeting</li> <li>● Students share their experiences or problems of playing MMORPG unit 3 online verbally.</li> </ul>	5 min	Online via zoom meeting
Pre-reading activity	<ul style="list-style-type: none"> <li>● Students log into the game</li> <li>● Verbally via zoom meeting, students are asked question related to unit 4 “Global Warming” to activate their schemata and asked to guess the meaning of words related to the lesson.</li> <li>● The question is “What would happen if the sun disappeared</li> <li>● Students answer the questions verbally via zoom meeting and share their experiences about sharks.</li> </ul>	10 min	Zoom meeting, PPT
Practice In-game while -reading activities	<ul style="list-style-type: none"> <li>● While-reading activity: Students play online game and work in a group of 2-4 people. Each of them is given pieces of information from the game to share with other students in the group. Moreover, they are encouraged to do notetaking of the information they retrieve from playing game.</li> <li>● Students discuss what is the main idea of the passage verbally.</li> </ul>	25 min	MMORPG
Post-reading activity	<ul style="list-style-type: none"> <li>● Post-reading activity: Students find out the main idea and supporting details of the reading text</li> </ul>	15 min	PPT, quiz link

Topic / Theme	Techniques / Instructional Activities	Time	Materials
	and do an online quiz related to the content of what they have read.		
Assignment	<ul style="list-style-type: none"> <li>Students are assigned to practice MMORPG more on unit 2,3, and 4 at home and follow the link in PPT to do quizzes.</li> </ul>		PPT, MMORPG
Closing	<ul style="list-style-type: none"> <li>Teacher closes the day's class and wrap up what students have learned.</li> </ul>	5 min	online

### Evaluation

After playing MMORPG, all students are asked to take online quizzes in unit 2, 3, and 4 of choosing the correct main idea from each paragraph. The questions in unit 4 are: "Which sentence is the main idea of this paragraph?" and "What would happen if the sun disappeared?" The second question is designed to test students' ability of analyzing the reading content.



### Week 6: Post Test

Date:

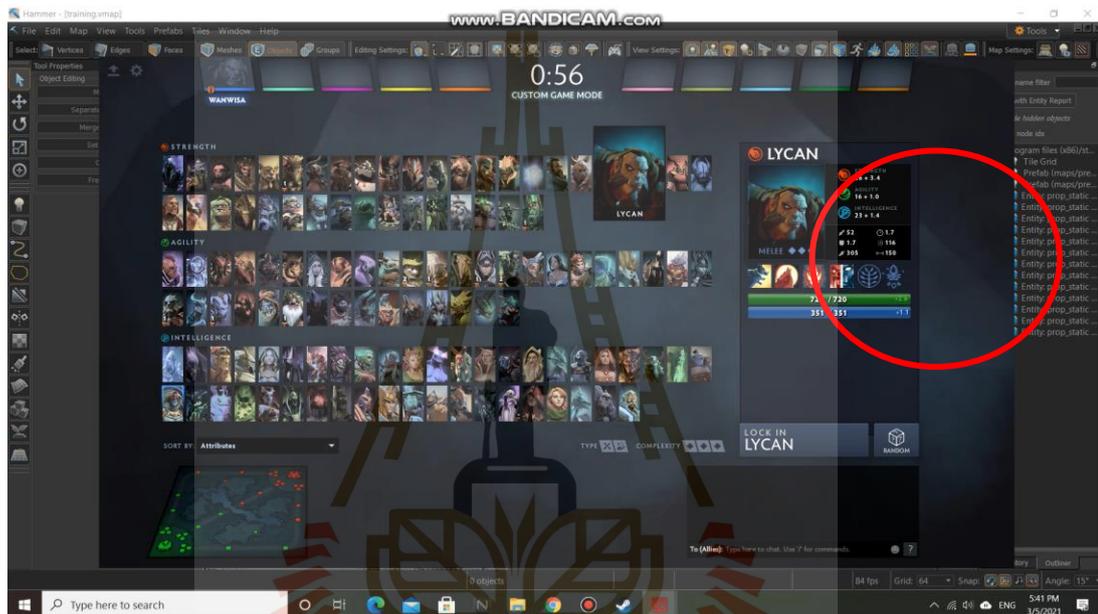
Duration: 1 hours

**Objectives:** After finishing the class, students can identify main idea and supporting details of the reading text after playing MMORPG and become more efficient readers.

Topic / Theme	Techniques / Instructional Activities	Time	Materials
Lesson Opener Warm-up	<ul style="list-style-type: none"> <li>Greeting</li> <li>Students share their experiences or problems of playing MMORPG unit 2, 3, and 4 online.</li> </ul>	5 min	Online via zoom meeting
Posttest	<ul style="list-style-type: none"> <li>Students take the online posttest before learning reading for main idea via MMORPG.</li> </ul>	30 min	Google form
Questionnaire	<ul style="list-style-type: none"> <li>Students share their experience of practicing English reading for main idea via MMORPG.</li> </ul>	20 min	Google form
Closing	<ul style="list-style-type: none"> <li>Teacher closes the day's class.</li> </ul>	5 min	Zoom

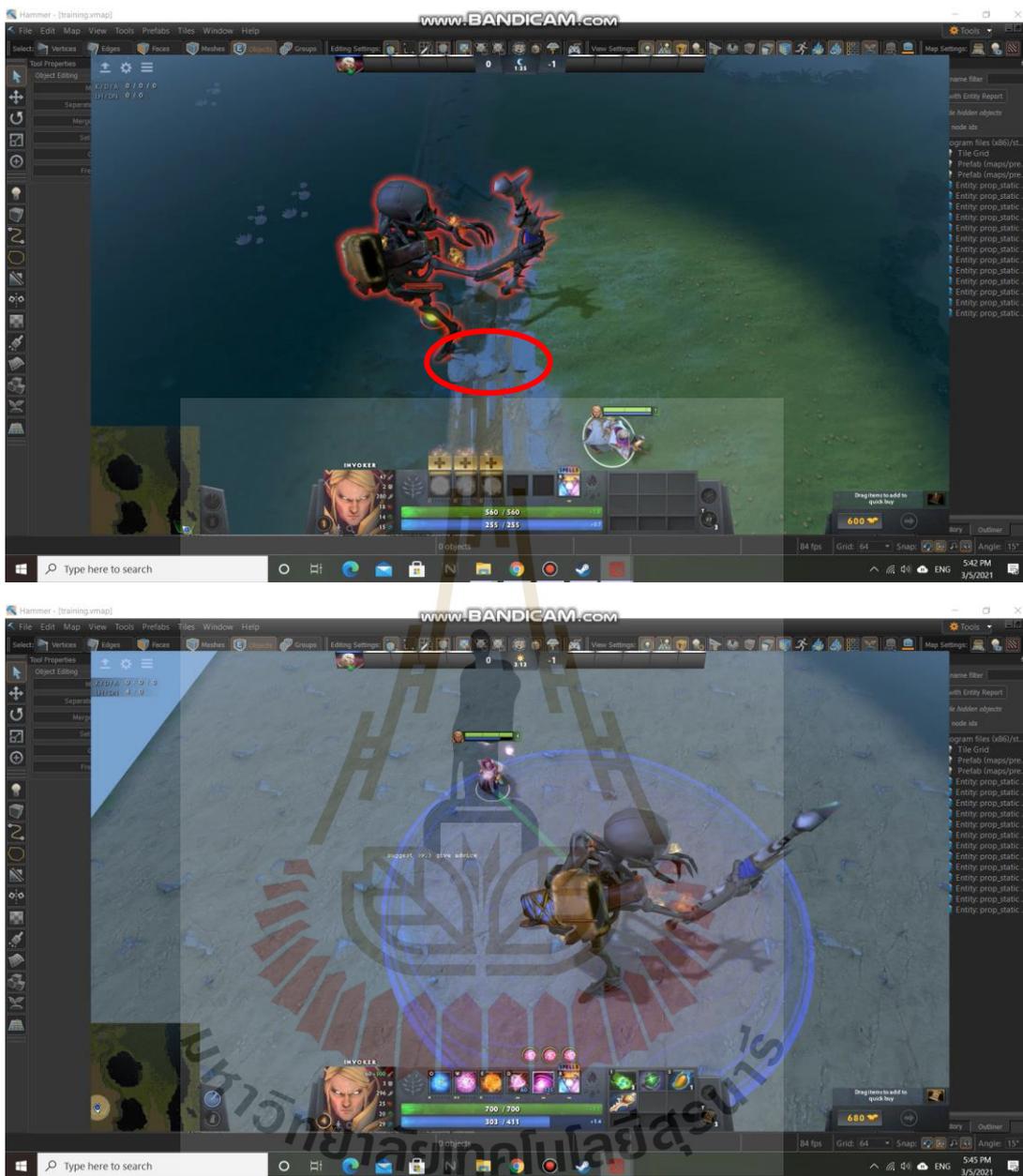
APPENDIX E  
MASSIVELY MULTIPLAYER  
ONLINE ROLE-PLAYING GAME

A) Manual for Game Training



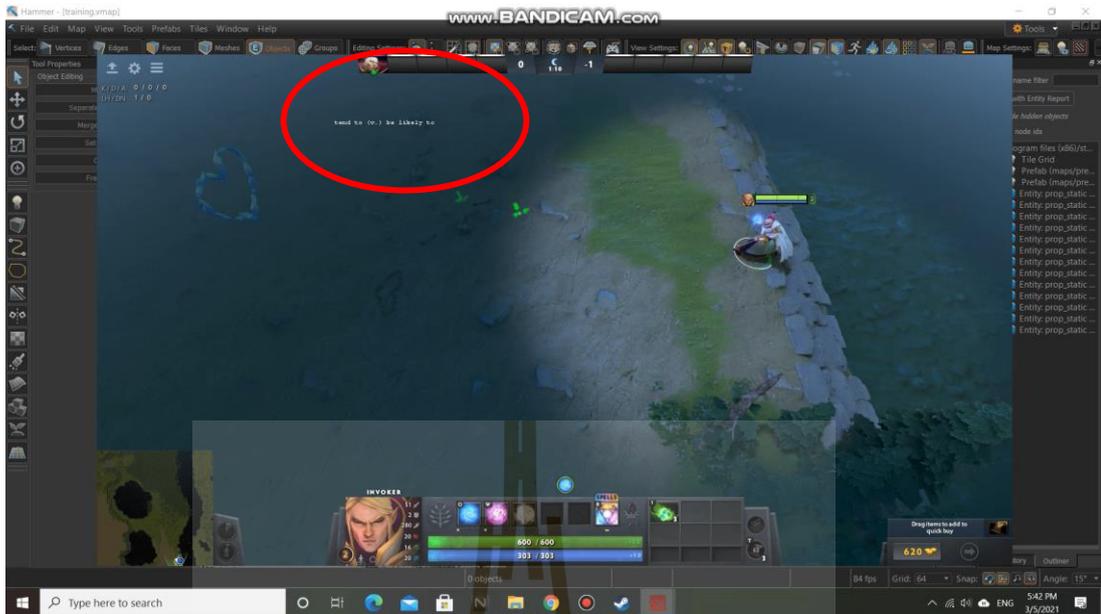
Choose a hero you want to play.

เลือกฮีโร่ที่ต้องการเล่น



Fight with an enemy and pick up an item that contains a sentence.

ต่อสู้กับศัตรู แล้วเก็บไอเท็ม (สิ่งของ) ที่บรรจุประโยคต่าง ๆ

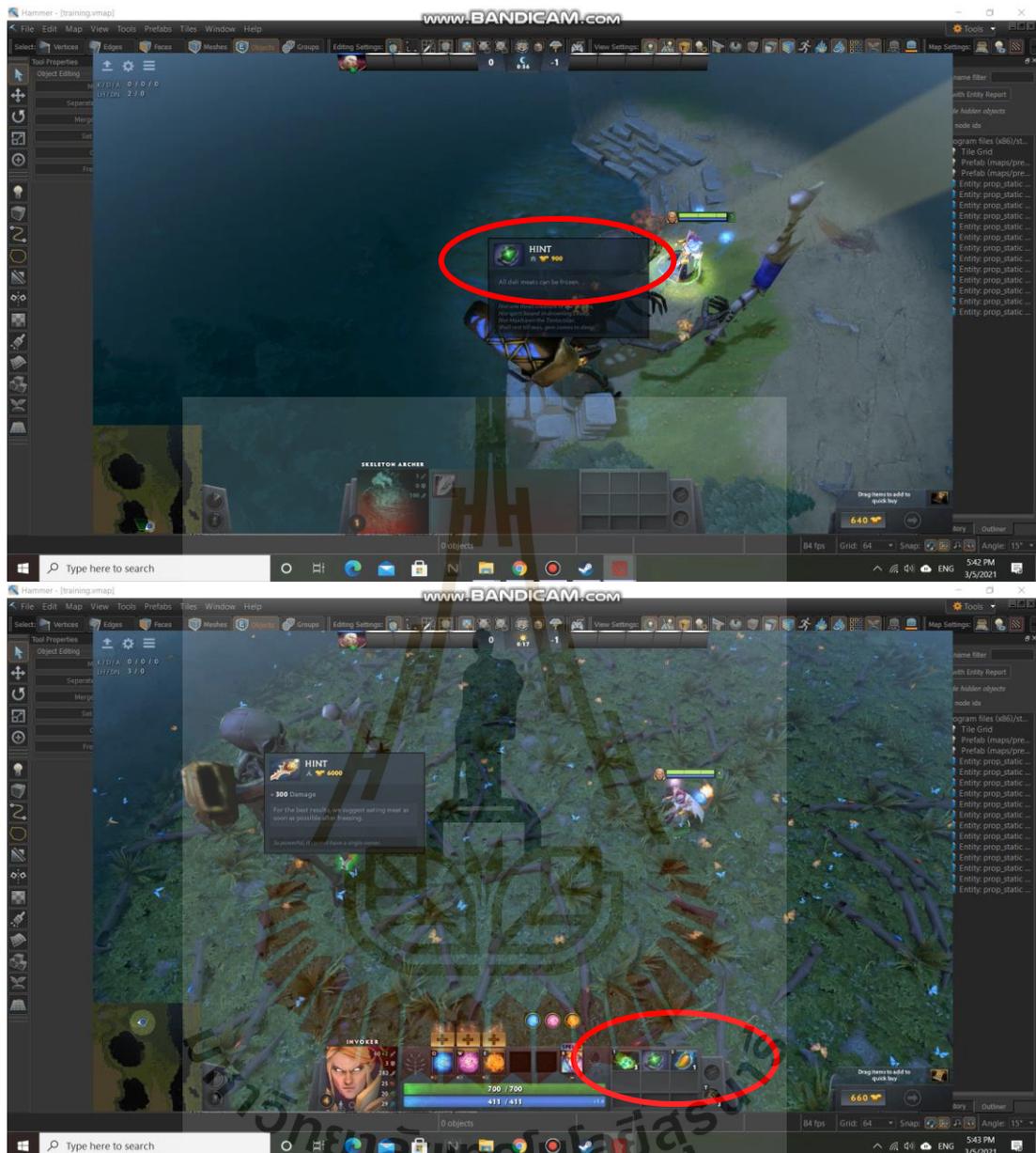


Vocabulary needed in reading is also provided all around in the map.

คำศัพท์ต่าง ๆ ที่จำเป็นต่อการอ่านประโยค

จะมีให้ตามจุดต่าง ๆ ของแผนที่

มหาวิทยาลัยเทคโนโลยีสุรนารี



Pick up an item and get a hint sentence.

เก็บไอเท็มขึ้นมา เพื่ออ่านประโยคคำใบ้



Win the game when all missions of picking up sentences, reading vocabulary and killing enemies are completed.

คุณจะชนะ เมื่อปฏิบัติภารกิจในการเก็บประโยค อ่านคำศัพท์ และฆ่าศัตรูสำเร็จ

มหาวิทยาลัยเทคโนโลยีสุรนารี

## B) Experts' Assessment for Content Validity of the Massively Multiplayer Online Role-Playing Game (MMORPG)

1 = very unsuitable, 2 = unsuitable, 3 = moderately suitable,  
4 = suitable, 5 = very suitable

Statements	Expert's IOC			Mean	S.D.	Validity
	No.1	No.2	No.3			
1. The picking up of sentences activity is aligned with the learning objectives.	4	5	4	4.33	0.58	Suitable
2. The picking up of sentences activity is suitable for learning via MMORPG.	4	3	5	4.00	1.00	Suitable
3. The reading contents are aligned with the learning objectives.	4	4	4	4.00	0.00	Suitable
4. The reading contents are suitable for learning via MMORPG.	5	4	4	4.33	0.58	Suitable
5. The in-game pre-reading vocabulary activity provided is suitable for learning objectives.	4	4	5	4.33	0.58	Suitable
6. The in-game pre-reading vocabulary activity is suitable for learning via MMORPGs.	5	4	5	4.33	0.58	Suitable
7. The quizzes are aligned with the learning objectives.	4	4	4	4.00	0.00	Suitable
8. The quizzes are suitable for learning via MMORPG.	4	3	5	4.00	1.00	Suitable
<b>Total</b>				<b>4.17</b>	<b>0.59</b>	<b>Suitable</b>

## APPENDIX F

## RESEARCH ETHICS

COA no. 92/2564



## คณะกรรมการจริยธรรมการวิจัยในมนุษย์ มหาวิทยาลัยเทคโนโลยีสุรนารี

## เอกสารรับรองโครงการวิจัยในมนุษย์

คณะกรรมการจริยธรรมการวิจัยในมนุษย์ มหาวิทยาลัยเทคโนโลยีสุรนารี ดำเนินการให้การรับรองการพิจารณาจริยธรรมแบบเร่งรัดโครงการวิจัยตามแนวทางหลักจริยธรรมการวิจัยในมนุษย์ที่เป็นมาตรฐานสากล ได้แก่ Declaration of Helsinki, The Belmont Report, CIOMS Guideline, International Conference on Harmonization in Good Clinical Practice (ICH-GCP) and 45CFR 46.101(b)

**โครงการ** : ผลของการใช้เกมออนไลน์แบบเล่นตามบทบาทสมมุติที่มีผู้เล่นจำนวนมาก เพื่อการเรียนรู้การอ่านจับใจความสำคัญของนักศึกษาระดับปริญญาตรีชาวไทยที่เรียนภาษาอังกฤษในฐานะภาษาต่างประเทศ

**รหัสโครงการ** : EC-64-95

**ชื่อหัวหน้าโครงการ** : นางสาววันวิสาข์ ช่างเกวียน

**สังกัด** : สำนักวิชาเทคโนโลยีสังคม

**วิธีทบทวน** : Expedited

**รายงานความก้าวหน้า** : ส่งรายงานความก้าวหน้าอย่างน้อย 1 ครั้ง/ปี หรือส่งรายงานฉบับสมบูรณ์หากดำเนินโครงการเสร็จสิ้นก่อน 1 ปี

**เอกสารรับรอง** : ข้อเสนอโครงการ, เอกสารชี้แจงผู้เข้าร่วมการวิจัย, หนังสือแสดงเจตนายินยอมแบบสอบถาม (version 2.0, 3 ตุลาคม 2564)

ลงชื่อ.....

(ผู้ช่วยศาสตราจารย์ แพทย์หญิงปัทมา ทองดี)

ประธานคณะกรรมการจริยธรรมการวิจัยในมนุษย์

มหาวิทยาลัยเทคโนโลยีสุรนารี

วันที่รับรอง : 14 ตุลาคม 2564

วันหมดอายุ : 13 ตุลาคม 2565

ทั้งนี้ การรับรองนี้มีเงื่อนไขดังที่ระบุไว้ด้านหลังทุกข้อ (ดูด้านหลังของเอกสารรับรองโครงการวิจัย)



## CURRICULUM VITAE

Wanwisa Changkwian, born on 22 May 1986, was an English teacher at a tutor school in Nakhon Ratchasima, Thailand. She has been teaching primary, secondary, and high school students since October 2016. She received her Bachelor of Arts in English Major (Cum Laude) from Burapha University, Thailand. She has studied Master of Arts in English Language Studies at Suranaree University of Technology since 2018. Her research interests include English language teaching, technology-enhanced language learning, and game-based learning.

