THE USE OF DIGITAL STORYTELLING ACTIVITIES FOR ENHANCING EFL UNIVERSITY STUDENTS' SPEAKING ABILITY AND SELF-DIRECTED LEARNING

SUTTHINEE PONHAN

A Dissertation Submitted to University of Phayao

In Partial Fulfillment of the Requirements

for the Doctor of Philosophy in English

May 2020

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May 2020

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Sutthinee Ponhan

เรื่อง: การใช้กิจกรรมการเล่าเรื่องผ่านสื่อดิจิตอลเพื่อพัฒนาความสามารถทางด้านการพูดและการเรียนรู้แบบชี้นำตนเองของนักศึกษาที่เรียนภาษาอังกฤษเป็นภาษาต่างประเทศในระดับมหาวิทยาลัย

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คำสำคัญ: ความสามารถทางด้านการพูด, กิจกรรมการเล่าเรื่องผ่านสื่อดิจิตอล, การเรียนรู้แบบชี้นำตนเอง

บทคัดย่อ

งานวิจัยนี้มีจุดประสงค์เพื่อ 1) ศึกษาการใช้กิจกรรมการเล่าเรื่องผ่านสื่อดิจิตอลเพื่อพัฒนาความสามารถการพูดภาษาอังกฤษ 2) ศึกษาการใช้กิจกรรมการเล่าเรื่องผ่านสื่อดิจิตอลเพื่อพัฒนาการเรียนรู้แบบชี้นำตนเอง ของนักศึกษามหาวิทยาลัยราชภัฏอุบลราชธานี โดยการเก็บข้อมูลจาก แบบทดสอบการพูด การสัมภาษณ์ การเขียนสะท้อนคิด จากผู้เข้าร่วมวิจัยที่เป็นอาสาสมัครที่ถูกแบ่งตามความสามารถทางภาษาอังกฤษเป็น 3 ระดับ ดังนี้ 1) ผู้เรียนที่มีความสามารถระดับสูง 2) ผู้เรียนที่มีความสามารถระดับปานกลาง และ 3) ผู้เรียนที่มีความสามารถระดับต่ำ โดยใช้ข้อสอบภาษาอังกฤษพื้นฐานในการทดสอบความสามารถเพื่อแยกระดับ วิเคราะห์ข้อมูลโดยเชิงปริมาณและเชิงคุณภาพ จากการหาค่า T-test และการวิเคราะห์เนื้อหา

ผลการวิจัยพบว่า การใช้กิจกรรมการเล่าเรื่องผ่านสื่อดิจิตอลช่วยพัฒนาความสามารถทางการพูดและการเรียนรู้แบบชี้นำตนเองได้ นอกจากนั้น การวิจัยครั้งนี้ยังสามารถพัฒนาทักษะการเขียนและค้นพบความสัมพันธ์ของการพัฒนาการพูดโดยผ่านการเรียนรู้แบบชี้นำตนเอง ความสัมพันธ์ระหว่างกันของกิจกรรมการเล่าเรื่องผ่านสื่อดิจิตอลระหว่างการพัฒนาความสามารถทางการพูดและการเรียนรู้แบบชี้นำตนเอง นอกจากนั้นการใช้เทคโนโลยีเพื่อพัฒนาการเรียนการสอนในห้องเรียนถือว่ามีประสิทธิภาพ

Title: THE USE OF DIGITAL STORYTELLING ACTIVITIES FOR ENHANCING EFL UNIVERSITY STUDENTS' SPEAKING ABILITY AND SELF-DIRECTED LEARNING

Author: Sutthinee Ponhan, Dissertation: Ph.D. (English), University of Phayao, 2020

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Key words: Speaking Ability, Digital Storytelling activities, Self-Directed Learning

ABSTRACT

This study aimed to 1) investigate the effects of digital storytelling activities on speaking ability and to 2) investigate the effects of digital storytelling activities on self-directed learning. Data was collected from speaking test results, semi-structured interviews, and reflective writing from nine volunteer students, divided into three groups with different English ability levels, which were high proficiency students, mid proficiency students and low proficiency students. The data were analyzed using t-test and content analysis.

The results revealed that using digital storytelling activities enable learners to develop their speaking ability and self-directed learning.Furthermore, this research showed that using digital storytelling activities could enhance writing skills. Moreover, this study found a relationship between digital storytelling activities, speaking ability, and self-directed learning. In addition, using technology can effectively enhance student instructions.

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CHAPTER I

INTRODUCTION

Rationale and Background of the Study

English language ability is incredibly important for global communication. English is recognized as the official language of global in international communication. Nearly every country in the world teaches English as part of their national education curricula using various study courses. Of all of the four keys language skills (listening, speaking, reading & writing), speaking is considered to be the most necessary when using a second language (Khamkhien, 2010). Thai students have reported that their speaking skills have serious English drawbacks (Kahim, 2015). Few Thai people are able to speak English to foreigners competently even they though they have studied English since childhood at school right through to completion of their bachelor degrees. Despite 14 years of learning English (graduates), Thai people continue to be frightened of speaking English. Within the Thai learners' English classroom, it is tough for the students to demonstrate the results of their learning and that they do not feel acquainted with English, so they keep quiet and remain frightened of speaking with their teachers. Several previous studies have reviewed the matter of Thai learners speaking English. Goldsmith (2016) clearly identified that many of the Thai EFL student respondents, in his research, did not feel confident using English in the classroom because they were afraid of making mistakes. The respondent students also stated that this was because Thai English teachers always focused on grammar first, which made the student have no confidence when they spoke English. According to Ulfayusica (2014), the reluctance of Thai learners to talk English is because they are concerned about making mistakes, shyness, lack of confidence, lack of motivation, and anxiety. Wiriyachitra (2003), states that English learning in Thailand is not terribly productive as a result of most students lack the opportunities to learn and practice context based English. Students' tension, excitement, and lack of confidence when speaking within the time constraint are the issues in teaching and learning English (Ratanapinyowong, Poopon, & Honsa, 2007). Even though English–speaking skills are a real and enduring problem of Thai EFL learners,

there are many methods that can be used to develop English-speaking skills, such as role-play, using pictures, watching films, using song, using audio-lingual method, situational interactive context learning, and digital storytelling, etc.

Storytelling has long been studied. It can enhance learners' skills in many ways. Previous studies have used storytelling to enhance classroom instruction. Lauren & Hunter's (2010) study on Storytelling as an Educational Strategy for Midwifery Students found that storytelling increased cognitive leaning, role transition, and emotional clarification. Moreover, storytelling improved motivation. David's (1991) study, entitled Learning Storytelling: Storytelling to Learn Management Skills, shows that storytelling practice builds students' "performance" and "learning" skills even management performance and enhancing their chances for scripting a healthier, happier, and more terrific story for their working lives. In addition, storytelling enhances reading skills and vocabulary (Mokhtar, Halim & Kamarulzaman, 2011). Furthermore, according to Miller and Pennycuff (2008), storytelling improved the academic performance of students in the areas of reading and writing enhanced the arts in education, and motivated children to connect with their learning. It can be acknowledged that storytelling is an effective learning process that enhances classroom learning.

Digital storytelling, which combines the art of storytelling with a variety of interactive media tools, can benefit language learning in a variety of ways. Minga et.al (2014) found that digital storytelling could encourage and motivate students to improve their communication skills and enable them to build conceptual skills and technological skills. Moreover, digital storytelling enhances the promotion of interactive communication skills, interpersonal skills, technology literacy skills, as well as language skills. A study by Hung, Hwang & Huang (2012) focused on project-based learning with digital storytelling to enhance the learning performance of students. They found that this strategy could effectively enhance the students' science learning motivation, problem-solving competence, and learning achievement. Abdolmanafi-Rokni and Qarajeh (2014) in their study, entitled 'Digital Storytelling in EFL Classrooms: The Effect on The Oral Performance, found that digital storytelling enhanced reading and speaking a lot as well as its effects on students' motivation toward language learning in general and speaking in particular. Therefore, it is a motivational tool, which encourages learning, good communication skills, and engagement

with writing. In addition, an action research written by Yumac & Mustafa (2016) revealed that digital storytelling enhanced students' ideas, organization, word choice, sentence fluency, conventions in terms of writing quality, collaboration among students in the classroom, and improved their motivation to write. Moreover, the study of Nassim (2018) found the efficacy of Digital storytelling as a tool for improving students' connection with the process of learning and improving their reading, writing and creative skills. Thus, the research clearly shows that digital storytelling is a highly recommended tool for English Language students. Another example of a very recent study by Kallinikou and Nicolaidou (2019) found that digital storytelling improved oral and speaking skills in foreign language learning and revealed that learning personalization supported by technologies brings changes to classroom management practices and strengthens teacher, student, and peer-to-peer collaboration.

Self-direction is currently perceived as an important 21st Century skill for our learners (Chee, T., et al., 2011). Some previous studies have used self-directed learning to enhance education. Victory and Lockhart's (1995) study used a self-directed programme for enhancing students' metacognition in order to prepare them for approaching their own learning autonomy. In addition, Wichadee (2011) created a Self-directed Learning Instructional Model to enhance reading skills and self-directed learning and showed that a self-directed learning environment provided for the students enhances their reading skills and self-directed learning ability. Moreover, a study entitled A Development of the Writing Instructional Model Based on Blended and Self-Directed Learning to Promote EFL University Students' Writing Ability and Self-Directed Learning (Sriwichai and Inpin 2018) found that their model improved self-monitoring and self- planning in the skill of writing. A study by Swatevacharkul (2017), also showed that SDL improves learners' reading ability in terms of "increasing awareness of reading strategy use" (51.52%), "developing learning responsibility and effort" (21.21%), "providing freedom to learn" (21.21%), and "building self-confidence to read" (6.06%). It can be seen that self-directed learning is important and beneficial in 21st century education.

However, only a small number of researchers found that speaking skills could be enhanced by digital storytelling despite recognizing that the process of digital storytelling can enhance self-directed learning, but they did not improvement in both skills at the same

time. Thus, this study focused on enhancing both skills by using digital storytelling activities for finding the relationship among digital storytelling, speaking skill and self–directed learning to develop learning skills.

This research aims to identify, whether the use of digital storytelling can improve speaking skills and self–direct learning at the same time. This study will prove and complete the model of enhancing speaking skills and self–directed learning as a model for English language learning.

Objectives of the Study

1. To investigate the effects of digital storytelling activities on speaking ability.
2. To investigate the effects of digital storytelling activities on self – directed learning.

The scope of study

1. Scope of population

Adult students of Ubon Rachathani Rajabhat University, working in different field and varying years, consisting of students from English for Communication and Work, semester 3, 2016. The reason why this research selected these participants is that the strategic plan of this university seriously focuses upon improving the English language of students who would otherwise lack the opportunity to improve their English language and the weakness of their English use in general.

2. Scope of place

Ubon Rachathani Rajabhat University, Thailand.

3. Scope of time

The third semester of the academic year of 2016.

Basic Assumption

There are 10 participants in this study: a teacher and nine students which nine students were classified into three levels: low proficiency level, moderate proficiency level and high proficiency level. The reason why this study classified the students into three

levels is because this study focuses on investigating the ability of speaking English among three levels of students and investigating the way of self–learning by using digital storytelling activities to enhance their speaking ability and self–directed learning.

Expected benefits and applications

Definitions of Terms

Self–Directed Learning means the ability to learn something by oneself, even from certain guidance. The learners who have the abilities of self–planning, self–assessing resources, self–control and self–reflection.

Speaking ability means a productive skill that indicates the ability to speak via the verbal form, including fluency, pronunciation, vocabulary content, and grammar.

Digital Storytelling activities means the activity of creating storytelling combines recording video, text, photo, voice and share to social media in the way of using smart phone application to be the tool to create digital storytelling.

Significance of the study

1. The area of education can use this study to promote speaking skill and self–directed learning to learner.

2. This study can be the model of learning through digital storytelling to enhance other fields of education and entertainment.

3. This study can be used to integrate in the curriculum and project based on the 21st century skills.

Conceptual Framework

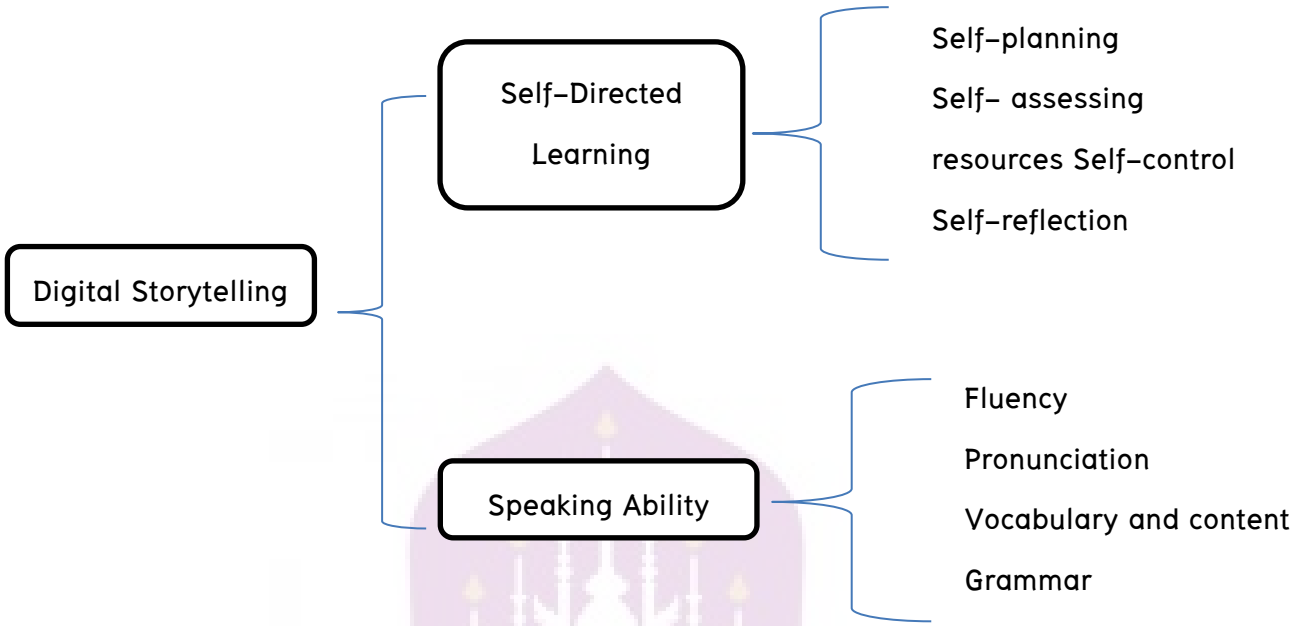

Figure 1. Conceptual Framework

This conceptual framework manifests digital storytelling to enhance two skills: self–directed learning and speaking ability which they are subdivided into four points. Self–directed learning consists of self–planning, self –assessing resources self–control, and self–reflection. Speaking ability consists of Fluency Pronunciation Vocabulary and content Grammar.

CHAPTER II

REVIEW OF RELATED LITERATURE AND RESEARCH

This chapter was on the review of the literature and previous studies. The review was on the following topics.

Self–directed learning as a tool for the 21st century and Thai education

1. Self–directed learning as a tool for the 21st century
2. Thai education and Curriculum

Self–directed learning

1. Definition of Self–directed Learning
2. Self–directed Learner and teacher
3. Self–directed learning and language learning context

Speaking ability

1. Definition of speaking skill
2. The Importance of speaking skill
3. Speaking skill and Assessment

Digital storytelling

1. The Definition of Digital Storytelling
2. Aspects of Digital Storytelling
3. The Forms of Digital Storytelling
4. The digital storytelling in language learning

English for communication and work s' course syllabus

Related Researches

1. Previous studies related to digital storytelling to enhance speaking skill
2. Previous studies related to digital storytelling to enhance self–directed learning

Self–directed learning as a tool for the 21st century and Thai education

1. Self–directed learning as a tool for the 21st century

In the 21st century education, teachers and their administrators strive to ensure that they teach information that is context based and applies to real world situations. In addition, teachers must strive to inspire their learners' curiosity as this will ensure that they remain lifelong learners.

The Victorian Council of School Organization Inc. (VICCSO, 2012) points out that 21st Century curricula must be emphasise quality and learning of all students and it should have seven aspects, as follows:

1) The content is deep, wide, balanced and should continue from kindergarten to high school

2) Include theory, operation, and problem solving

3) Autonomous learning, deeper and more powerful learning, whole life learning, and personal future learning.

4) Integrate contents, pedagogy, technology, popularity, principle, and goals particularly and clearly.

5) Teachers, students, and others should exchange opinion together.

6) Learn languages in context for all students and within all schools

7) Integrate locally, regionally, and globally.

There is a variety of skills that youngsters desire and require in order to achieve success in the 21st century. Some of the most important and necessary 21st century skills include collaboration skills, networking and social group skills, cognitive skills, public speaking skills, communication skills, technological skills, critical thinking skills, analytical skills, problem solving skills, and a disposition to look at civic and world problems and seek solutions. Self–directed learning (SDL) is recorded as a key part of 21st Century education. SDL is additionally, although unpredictably, connected to lifelong learning, which has been recorded as an interest for an innovative society by international associations, including, UNESCO and OECD.

It can be concluded that self–directed learning is a very important skill for the 21st century, which every country must acknowledge and incorporate, and promote into their current and future curricula and educational plans.

2. Thai education and Curriculum

Thailand education is managed by the Ministry of Education. The government administrates directly and provides open opportunity to private organization who can participate from primary education level to higher education. All Thai people must graduate secondary education and go to school by the age of 7 years. This compulsory education is a part of fundamental education that can be divided into 2 levels: primary education for 6 years and secondary and high school education for 6 years, which the government have to administrate with quality without expenses. Higher Education is administrated by the Office of the Higher Education Commission, which is responsible for education, analysis, research, problem identification, and solving, and development of a higher education system and suggesting the policy and the standards of higher education. Moreover, they also ensure that higher education remains consistent with national society and economy developmental requirements, and monitor discipline. In addition, the Office of the Higher Education Commission is responsible for acquiring necessary resources, setting up and allocating budgets for higher education including commissioning new facilities, abolishing older facilities, combining and adjusting facilities, as well as cancelling higher education institutes.

Importance of information and communication technology (ICT) has been placed highly within the Thai government's policy for education as stated in several official documents. ICT can be a tool for encouraging self-directed learning in the 21st century.

The National Education Act 2542 B.E. (1990) clearly highlights the importance of technologies for education:

Section 63: The state shall give out every media communication for use in formal, non-formal, and informal education, and improvement of cultural affairs, religious, and artistic as essential.

Section 64: The state shall facilitate cultivation and production of books, and other technologies for enhancing education.

Section 65: The production and utilization of personnel development shall have steps for both producers and users of the effective technologies.

Section 66: Learners shall have sufficient ability to use technologies in their education and on a continual lifelong basis.

Section 67: The state shall encourage the effective and appropriate use of technologies of research and development to the learning process of Thai people.

Section 63: The State shall distribute frequencies, signal transmission devices, and other infrastructure necessary for radio broadcasting, television, telecommunication radio, and other media of communication for use in provision of formal, non–formal, and informal education and enhancement of religious, artistic, and cultural affairs as necessary (Office of the National Education Commission, 2003, pp. 29–31).

Section 64: The State shall promote and support the production and refinement of textbooks, reference books, academic books, publications, materials, and other technologies for education through acceleration of production capacity; provision of financial subsidy for production and incentives for producers; and development of technologies for education. In so doing, fair competition shall be ensured.

Section 65: Steps shall be taken for personnel development for both producers and users of technologies for education so that they shall have the knowledge, capabilities, and skills required for the production and utilization of appropriate, high quality, and efficient technologies.

Section 66: Learners shall have the right to develop their capabilities for utilization of technologies for education as soon as feasible so that they shall have sufficient knowledge and skills in using these technologies for acquiring knowledge themselves on a continual lifelong basis.

Section 67: The State shall promote research and development; production and refinement of technologies for education; as well as following–up, checking and evaluating their use to ensure cost–effective and appropriate application to the learning process of the Thai people.

Section 68: Financial resources shall be mobilized for the establishment of the Technology for Education Development Fund. These resources shall include state subsidies, concession fees, and profits from enterprises relating to mass media and information, and communication technologies from all sectors concerned, namely, state sector, the private sector, and other public organizations. Special fees shall be charged for the application of these technologies for human and social development. The criteria and procedures for distribution of the fund for the production, and research and development of technologies for

education shall be as prescribed in the ministerial regulations. National Education Act B. E. 2542 (1999) and Amendments (Second National Education Act B.E. 2545 (2002))

Section 69: The State shall establish a central unit responsible for proposing policies, plans, promotion, and co-ordination of research, development, and utilization of technologies for education, including matters relating to the evaluation of the quality and efficiency of the production and application of the technologies for education.

It can be seen that Thai government policy for education clearly highlights the importance of technologies for education and support for technologies to have an important role in education at every level. In addition, the importance of technologies is also clearly stated in the High Education Developing Plan 11 (2012-2016). Their educational goals and indicators are consistent with the division in 2559. One of their seven indicators is concerned with English language and technologies:

(4) Percent of graduated students that passed the test license for specific major as 100% (cover the knowledge of English and information technology)

The policy of Thailand's Ministry of Education emphasizes the development of youth in the country for the 21st century world and promotes enhancing the quality of Thai people in order to be immune to any changes and progression within Thailand in the future. The 21st century skill scales comprise of three factors, which are; 1) Learning and Innovation Skills, 2) Information, Media and Technology Skills, and 3) Life and Career Skills derived from Partnership for 21st Century Skills (Ongardwanich, Kanjanawasee & Tuipae, 2015).

From the above Thai official government documents, it is clear that the Thai government realizes the significance of ICT for national development, including education. The Thai government policy drives the country towards Thailand 4.0. The Ministry of Education is focusing on developing creativity, developing innovative, learning through the internet, creating a Smart Farmer & Smart Start-up, labour, and specialization. It can be seen that this policy is focused on using the Internet to learn and support instruction to improve lifelong learning skills and self-directed learning.

Self–directed learning

1. Definition of Self–directed Learning

Gibbons (2002) defines self–directed learning as learners who can direct their own leaning, transmit testing exercises, improve self–assessing resources and opinions, and find effective solutions for any difficulties. Knowles (1975) described SDL as a way to take the initiative personally, with or without help from others, when analysing their learning needs; their learning goals; identifying human and material resources for learning; choosing and implementing appropriate learning strategies, and evaluating their learning outcomes. Candy (1991) discussed SDL and related it to learning strategies. He assumed that learning situations that aids learner to create their own knowledge could be filled with practice opportunities and memorable experiences. Iwasiw (1987) considers autonomous learning to be a variety of study behaviours within which people have responsibility for coming up with implementing and evaluating their own work. Spencer and Jordan (1999) outline autonomous learning as once students take the initiative for his or her own learning, diagnosing desires, formulating goals, finding characteristic resources, implementing acceptable activities, and evaluating outcomes. Slevin and Lavery (1991) contend that definitions of autonomous learning are ambiguous as the concept means various things to very different individuals. However, the key feature of the definitions within the literature is that they describe a method of learning supporting the principles of class (Nolan & Nolan 1997a). Each individual finds out regarding very different subjects during a means and kind that most closely fits them (Roberson, 2012).

It can be seen that the educators and researchers defined the meaning of self–directed learning in several different ways (Gibbon 2002). Knowles (1975), and Candy (1991), defined that learners take charge of their learning by thinking, planning, managing, controlling, and assessing. They support other definition by many educators and the meaning of self–directed learning is very clear and understandable.

2. Self–directed Learners and Teachers

A teacher can play a significant role as one engages in self–directed learning and can support the process. Roger Hiemstra (1994), a scholar of adult learning and self–directed learning, addressed this question in "Self–Directed Learning: Individualizing Instruction – Most Still Do It Wrong!" In his essay, he proposes six important elements, which

are “content resource, a resource locator, interest stimulator, positive attitude generator, creativity and critical thinking stimulator, and evaluation stimulator.” In other words, the teacher helps to cultivate an environment that is conducive to self–directed learning and provides assistance for individuals and groups of learners. The instructor makes rich substance and assets, which will profit singular learners, open and accessible. This substance may be computerized, customary writings, ancient rarities, experiential, help planning visits and meetings, or it may simply be conversational (substance gained through exchange with the educator, associates, or others). The educator provides direction and outlets for the students. Hiemstra (1994) discusses this regarding helping learner’s take part in outlets that assist with basic and inventive consideration (diverse types of journaling, intelligently written work for a crowd of people as may happen with blogging or adding to a wiki, taking part in little gathering talks, work shopping, and so on.). The educator helps the learner to take part in an evaluative procedure, helping the learner as he or she recognizes approaches to check his advance toward specific objectives and sets up approaches to assess the advantages and constraints of his work. This process can begin with reviewing the students as each learner creates a learning contract.

Hiemstra (1994) additionally depicts the instructor as having a supportive part regarding the social, passionate, and mental parts of the learner encounters; offering encounters that may help with inspiration and certainly working, for instance. In order to advance the moral duty of the students, Heimstra (1994) as identified six instructional components. They are:

1) Content asset – offering mastery and information to learners through composed material, pages, presentations, eye to eye or online dialogs, and somebody prompting, discussions, advising, and honing.

2) Asset locator – finding and sharing different learning assets to address issues distinguished and developed amid learning knowledge. These can be composed materials, internet web assets, and encouraging individuals to arrange encounters, for example, organization reviews or visits, small temporary positions, and chatting with subject experts.

3) Premium stimulator – orchestration and utilisation, face to face or via the internet, and different assets and learning encounters intended to maintain learner premium,

for example, gaming gadgets, little gathering discourses, online offbeat discussions, visitor moderators, and amusing PPT presentations.

4) Uplifting state of mind generator – Helping learners by means of useful input, individual consolation, encouraging feedback, and broad scrutiny of composed material.

5) Innovativeness and basic speculation stimulator – Fortifying a learner's imaginative and basic intuition aptitudes through exchanges or electronic study bunches, composing diaries, perusing logs intelligently, pretending, and re-enacting genuine encounters. Extra means incorporate helping learners create pages, web journals, and wikis as a method for sharing what they have created.

6) Assessment Stimulator–Assessing learner advance and animating learners' self-assessment. The learning contract gives a chance to learners to consider how they can utilize an educator, associates, and others to upgrade individual assessment of their learning endeavours.

According to a study by Ley (2005), a self-directed learner can be defined as follows:

1. The learner can prepare the learning environment.
2. The learner can set learning goal.
3. The learner can organize learning resources.
4. The learner can monitor learning process.
5. The learner can evaluate learning effectively.
6. The learner can build self-efficiency and effort/strategy attributes.

According to Gibbon (2002), the characteristics of self- directed learner are as follows:

1. Goal Setting: Learner can identify a topic, theme, or field. Leaner can generate aspects of the topic to study. Leaner can select an aspect, and express it as a goal.

2. Planning: Learner can list the resources on hand or accessible. Generate a list or Learner can web of activities for reaching your goal. Learner can organize these activities into a coherent procedure, story, or pathway. Learner can use reverse or straight-ahead planning.

3. Assessment: Learner can arrange for regular feedback on your progress. Learner can decide how you will prove your learning success and demonstrate your achievement. Learner can state the criteria by which your work will be judged.

It can be seen that the role of teacher and learner in self–directed learning has changed from the past. The teacher is not the centre of learning but is now the facilitator who encourages, guides, and suggests how the students find their way of learning. Students are self–centred for their learning, self–planning, have self–control, are able to find resources independently, and are self–reflective. The self–directed learners must develop their own strategy to manage their study and their life.

3. Self–directed learning and language learning context

The globalized environment nowadays has driven people and firms to empower self–directed learning through innovation, be it for individual or proficiency reasons. Utilizing online programmes, apps, or virtual instructor–led training (VILT) to wander into the world of remote dialects is progressively common. In addition, live online learning offers an entirely customisable learning encounter, where the learner can plan and choose what to watch, where to watch, and how often to watch, irrespective of the desired dialect or culture. In this manner, he or she can learn anytime and anywhere, as and when they're motivated to do so.

Moradi, (2018) claimed that integrating modern technology into the language learning classroom is essential to enhancing students' abilities because it trains students who value autonomous and self–directed learning; i.e. learners who are responsible for their own learning process, style, progress and evaluation. Learners learn many things and obtain a lot of knowledge from several sources and experiences. This affects different aspects of their daily lives including decision–making. Thus, self–directed learning (SDL) has an essential role in academic life nowadays. Leaners can learn autonomously using their own experiences and other available sources. In addition, (Botero, Questier & Zhu, 2018) support that self–directed learning can enable learners to learn outside of the classroom by using mobile–assisted language learning (MALL). Students can use their mobile phones to maintain self–motivation, manage themselves, and monitor themselves, which is essential for language learning outside the classroom and enhances language development anytime and anywhere. The pace of technical progression within the 21st century frequently renders capable learning out

of date as learners move on from postsecondary establishments. Likewise, certain acquired skills, for example, foreign languages, require consistent support after learners leave the classroom (Du, 2013). The term self-directed learning demonstrates where language learners are organizing their thoughts, person goals, resources, and assessment. Consequently, the education is tailored to the individual learner's needs.

Self-directed language learning depends on the learner having obtained learner independence. In order for the student to be autonomous, they first need to learn and memorise. To do this effectively, the learner will need the aid of a suitable trained and qualified teacher, who in this case is a language instructor. Any student must learn to be autonomous. The role of instructors in self-directed language learning is distinctive from conventional instructing, as they need to be advisors rather than traditional instructors. As advisors, the teachers direct the students towards expanded independence by making them mindful of the study process, their methodologies, and their convictions on language learning. In this way, the learners can take control of their studies and adapt them to meet their personal needs (University of Iceland). Holec (1981) combined the ideas of self-directed learning with language learning and considered that the ability of learners to take charge of their own learning is recognized as a major goal in the field of language education. According to Thornton (2010), instructors can assist learners to accept more responsibility and accountability for their learning, and in this way, the students ended up more viable language learners. Du's (2013) confirmed the utility of SDL as a powerful learning methodology for students of foreign languages since it could lead to development of meta-cognitive skills, inspiration, and the knowledge domain.

The above information clearly shows that self-directed learning is related to language learning. As we know, language learning can be improved by context-based practice, and not by simply trying to remember grammar, thus classroom learning is not enough. The learner should learn outside. Listening and speaking skills are necessary and can be practiced by oneself. More practice is more experience, thus self-directed learning plays an important role in promoting productive skills in the language learning classroom, and in particular, the speaking skill.

Speaking skill

Speaking is thought of as extremely important for communication and when learning a brand new language. Kamonpan (2010) indicated that speaking is the primary communication skill to be developed in both 1st and 2nd learning acquisition. Moreover, of all the four English language skills (listening, speaking, reading, and writing), speaking is the most necessary ability required for communication (Zaremba, 2006). There is a variety of things to be considered when monitoring English-speaking performance. Pronunciation, vocabulary, and collocations are dominant factors emphasized in building fluency for English language learners. However, assessing a student's speaking ability and proficiency relies on the ability of scholars using the four language skills as well as pronunciation, fluency and grammatical accuracy.

1. Definition of speaking skill

According to Brown (1994), speaking was considered as the method of manufacturing and then encoding into words, phrases, and sentences that would be understood by the listener. Chaney & Calamity Jane (1998) represented speaking as verbal and nonverbal signs that had been created to share the meaning. Nunan (2003) mentioned that speaking happens once individuals manufacture associate vocalization in order to deliver a message. Bailey (2005), for one, expressed that speaking is "an interactive method of constructing meaning that involves manufacturing, receiving and process data, usually spontaneous, open-ended and evolving, however it's not utterly unpredictable." Richard (2006) expressed that when speaking; the speaker must manufacture and communicate fluently, and accurately. Brown (2007) expressed that someone has ability in speaking once he or she is doing his or her actual speaking of the language. Hammer (2007) additionally states that the speaker needs to perceive speaking events, and basic language operates and is transactional, functional, and interpersonal.

From the definitions above, it can be determined that speaking is the method of making, manufacturing a meaningful message and delivering the message to others vocally.

2. The importance of speaking skill

English has become a global language that helps to link multiple global facets. Darasawang (2007) explicitly states that the target of learning a foreign language is for communication, education, and business career opportunities. Concerning the four language

skills, speaking is claimed to be the foremost vital talent (Ur, 1996). Currently, the role of speaking is not simply thought–about as a basic talent for communication at intervals the ESL room, they are crucial for communication in, and with, the communicative world. At the policy–making level, the Ministry of Education stresses the importance of English learning by promoting programs on language for communication and development for all Thai students.

As a result, all ESL/EFL instructors should seek the best techniques to market and teach speaking and communication for college students together with pronunciation, and listening skills (Murcia, 2001: p.110). Moreover, Palmer (2010) states, "the students' language development is the initial reason for why a teacher shall focus on communication in the class." Several educators in English language learning incessantly propose new teaching techniques for developing communication ability for college students. Wiliam (2010), calls attention to the importance of giving the understudies direction during their college years in order that they will improve their accents a high as capability. It is the one thing that may be connected to any or all outside learning educating, whatever the purpose is for the understudies to create their communicatory aptitudes within the recent and therefore new curriculum (Skolverket, 2011).

3. Speaking skill and Assessment

Learning a new language effectively is highly involved with communication and interaction with people. Speaking in English teaching is referred to as an interactive process of constructing meaning that involves producing, receiving, and processing information (Brown, 1994; Burns & Joyce, 1997). Furthermore, Richards (1990) states that the mastery of the speaking skill in English is seen as a priority for many EFL learners across the world because learners often evaluate their success in language learning based on how well they have improved in their spoken language skills in including comprehension, vocabulary, grammar, and pronunciation. (Srikaew, Tangdhanakanond & Kanjanawasee, 2015) claimed that language assessment has been found to be lacking in terms of reliability compared to other aspects. Thus, the development of a reliable model for English–speaking skills assessment is essential and will hopefully bring about English language teaching enhancement. In their study, they found that using a portfolio regarding English–speaking assessment is effective. The seven steps are: 1) planning, 2) preparation for students, 3) evidence collecting, 4) progress monitoring, 5) improvement of performance, 6) reflection,

and 7) displaying the works. The tasks concerned in English–speaking skill evaluation include interviewing, oral presentation, storytelling, and making picture descriptions. An analytic rating scale was used as scoring criteria on vocabulary, syntax, cohesion, pronunciation, ideational function, and fluency. There are two rubric scores for assessing the speaking skill. They are the analytic rubric score and the holistic rubric score

Analytic Rubrics

Analytic rubrics provide lecturers the chance to deconstruct the learners' performance into separate and different dimensions. Distinguishing which criteria to be surveyed makes a difference and analytic rubrics offer point–by–point, centred and exact appraisal (Ounis, 2017). Rubric scores keep the instructors' and the learners' consideration centred on the pre–established viewpoints that have to be evaluated (Arter & McTighe, 2001). According to Nitko (2001), analytic rubrics assist learners getting particular criticism about their created work. Accordingly, they provide data about the students' individual strengths, weaknesses, and learning needs (Moskal, 2000; Andrade, 2000). Similarly, Lazear (1998) argues for the positive and formative application of evaluation with rubrics.

Holistic Rubrics

Holistic rubrics are scoring guidelines based upon the assessors' general and overall impression of the level or quality of the students' speaking ability (Ounis, 2017). As such, they portray assessment on its "unidimensional level" (Mertler, 2001) as assessors do not assess each separate criteria independently (Nitko, 2001). Instead, they utilise a single review that utilizes the degree of learners' verbal aptitudes as an entirety. Thornbury (2005) quotes the use of holistic rubrics as "quick" and convenient in informal testing formats (p. 127). Assessors find holistic rubrics as attainable and common sense with a large number of learners. However, the disadvantage of holistic rubrics is that they are not suitable for formative assessmens, as they do not give particular input on zones that require changes in students' verbal preparations (Ounis, 2017).

Clearly, there are two distinct assessment rubrics, which each have their advantages and disadvantages, depending upon the assessor.

There are many ways to enhance speaking skill such as role–play, context based interaction, pictures, and storytelling, etc., but a new and interesting method that will encourage learners to improve their speaking skills is digital storytelling.

Digital storytelling

1. The Definition of Digital Storytelling

Regarding the definition of the digital storytelling, the Digital Storytelling Association defines it as follows, "Digital Storytelling is the modern expression of the ancient art of storytelling. Throughout history, storytelling has been used to share knowledge, wisdom, and values. Stories have taken many different forms. Stories have been adapted to each successive medium that has emerged, from the circle of the campfire to the silver screen, and now the computer screen" (DeNatale, 2008).

Digital storytelling is a short story disseminated via the use of digital media, such as images, voice, video clips with a storyteller's descriptive voice in which the created story consists of an emotional component (Songkram, 2554, p. 37)

According to Churchill, et al. (2008), digital storytelling can be one system that when fittingly connected in the classroom, may give an apparatus to educators to adequately confront the difficulties to advanced proficiency learning. Advanced narrating is a contemporary technique for formation of computerized mixed media content for communicating thoughts, speaking to learn, and generally conveying data through advanced curios. In the creation of digital storytelling, understudies coordinate modalities, for example, music, sound effects, content, moves, illustrations, and pictures. It is therefore conceivable that recordings and activity can be incorporated into advanced story preparations.

A digital story is clip of interactive media made utilizing pictures, video, and sound for others to listen to or watch. Like all stories, a digital story needs a storyteller and furnishes people with a chance to share their thoughts, trusts, and fears. They can record and reflect on what they have done, investigate the results of past choices, and engage others. A story gives a capable system to string together a progression of occasions or encounters in some related and possibly innovative way. These are immeasurably critical qualities when asking students to reflect on their business aptitudes improvement (Curwin, 2010).

Digital storytelling is a late technique for the formation of digital multimedia content, which include pictures, sound, and video, for communicating thoughts, speaking to learn, and conveying data through computerized innovation. As indicated by Churchill (2007),

digital storytelling as a classroom action can be actualized using the accompanying three phases:

1. Planning

In the first stage of planning, instructors deliver students the subject or let them find their own interesting points for their digital stories. They may work independently or in groups, depending on the teachers' goals.

2. Production

In the production stage, students collect and edit the media materials required for integration. For their illustrations, they take digital photos, scan pictures, draw outlines, and record voices. At this stage, instructors need to remind their students to focus on the substance of their story instead of on its innovative perspectives (Ohler, 2004, cited in Churchill, 2007).

3. Presentation

Within the final presentation stage, all students get to show their own digital stories within the classroom to get reflective feedback and comments from instructors and their fellow students. Students can also present their stories on an internet website that can be accessed by their classmates and instructors. Both instructors and students can also post their feedback online or the rate the stories with a score. Instructors have to be enable their students an opportunity to propose and create and their own stories within the classroom (Warlick, 2005), whilst permitting them to make and display their own stories. In additions, there is also the method of digital storytelling, which clarifies the steps of making a story.

When making a digital story, Jakes (2006) suggests that the digital storytelling process is complicated and highlights the following steps:

Step 1: Writing

Firstly, digital storytelling begins with writing. Students write, edit, rewrite, and produce different draft scripts until their story is of a reasonable standard. The application of digital storytelling within the curriculum is certainly open. However, in most cases writing takes the shape of an individual story, a specific story from a student's life, or something that interests them.

Step 2: Script

After the narrative is completed, of which the digital story is made, the script form and the incorporation of the different mixed media components serve to rebuild the story.

Step 3: The Storyboard

In this step, students are required to complete a storyboard to organize the stream of their movie

Step 4: Locating Multimedia

In this step, students utilize search devices to find still–frame symbolism or video. Students may scan pictures from photos from individual collections at this point.

Step 5: Creating the Digital Story

In this step, students produce their digital stories utilizing a video editing and production program, such as Quik, Adobe Premiere Clip, iMovie, WeVideo, Clips, Splice, Cameo, KineMaster, PowerDirector, LumaFusion, VideoGrade, Pinnacle Studio, PicPlayPost, VivaVideo, Videoshop, Magisto, Funimate, ALIVE Movie Maker, Vizmato, FilmoraGo, and VideoShow, which are all accessible to them. In this study, Window Movie Maker is utilized.

Step 6: Share

Students' movies are published and presented in the class or online, enabling examination and allowing feedback comments to each other. They can post their story on the classroom social media website. Digital storytelling gives an engaging learning experience, which mixes writing, innovation, and the desire to produce a compelling product of value. This method is one that students can utilize all through their whole lives to tell their stories. In any case, the most essential point around digital storytelling is that it gives an opportunity for student–centred learning.

There is a wide range of definitions for "digital storytelling", yet they all spin around joining the craft of recounting stories with an assortment of advanced mixed media, including, pictures, sound, and video. Most computerized stories unite some blend of advanced illustrations, content, recorded sound portrayal, video, and music to present data on a particular point. This is similar to conventional narrating, where advanced stories spin around a picked subject and frequently contain a specific perspective. The stories are normally only a couple of minutes long and have an assortment of elements, including the

recounting of individual stories, the relating of recorded occasions, or as a way to illuminate or educate on a specific point (Robin, 2006).

2. Aspects of Digital Storytelling

According to Songkram (2554, p.43), digital storytelling is not only the art of language but it is the presentation of a story about oneself, family, any experience or about society. The digital story may be truth or fiction. However, digital storytelling has specific aspects, which can be easily explained as follows:

1. Description

The storytellers must tell their story by themselves with feeling and emotion throughout their voice.

2. Digital media

Digital storytelling should consist of images, video, voice, and text from several resources. Moreover, they must be created and presented in digital form.

3. The aspects of presentation

Digital storytelling must not only be retelling or reporting, but it must also present with emotion, perspective, and analysis.

4. Content

The content must challenge and persuade the audience interested in digital storytelling.

5. Presentation the experience

Good digital storytelling must include what benefits the storyteller gets by showing that their digital story has value and meaning.

3. The Forms of Digital Storytelling

Based on Songkram's description (2011), digital storytelling is something that is told by a teller to an audience through the teller's perspective. The story may be taken from a self–learning experience developed from the inner feeling of the teller by transmitting digital images, voice, and music. The forms of digital storytelling are not limited to stories about oneself but several stories can be presented. Digital stories can be divided as follows:

1. Presentation of digital storytelling dealing with history, scientist, literature, or political events

2. Presentation about tellers' story or perspective consisting of using a song, a poem, and/or a message to transmit a deeply meaningful speech

3. Creating digital stories with a beautiful and meaningful poem for an audience's appreciation

4. Presentation by a scientist's, and

5. Presenting digital stories about personal experiences and perspectives of the previous projects.

The Seven elements of digital storytelling

Dreon, et al., (2011) present seven elements of digital storytelling

1. The point of view: the story initially outlines the point of the story and the opinions.

2. A dramatic question: Sets the pressure of the story by distinguishing issues to be settled.

3. Passionate substance: engage the audiences through common feelings and topics (adore, torment, humour)

4. The blessing of your voice: Support the audience and provide meaning for the pictures.

5. The power of the soundtrack: Sets the emotion of the story.

6. Economy: Equalizations the sound–related and visual tracks of meaning.

7. Pacing: Maintains consideration of the audience by setting up and adjusting the rhythm of the story.

Learners are familiar with watching movie from an early age, such as, cartoons, documentaries, and movies, etc. Mostly, they are presented as a story with images and speech. Foreign countries use digital storytelling in instruction, such as telling story taken from history, legends, and contemporary events. Primary schools use fables such as Oliver Twist for indicating the use of suitable language (Songkram, 2011, p.9).

Since the early 1990s, Lambert and the Centre for Digital Storytelling (CDS) have provided training and help for people interested in making and sharing their individual stories (Centre for Digital Storytelling, 2005). There are different ways that digital storytelling can be utilized as a portion of instruction. One of the main choices to be made when choosing to utilize this process within the instructive programs is whether an instructor will make the

Digital Stories or have their learner do it (Robin, 2006). Digital stories made by teachers may be utilized to enhance current lessons as an approach to energize dialog about the topics and as a strategy for making the theoretical or calculated substance more justifiable. Whereas various teaches still do not have a strong arrangement for planning blended media into their direction, an improving number of teachers are sharp on examining approaches to drawing in their students by including pictures, sound and video components in their classrooms (Robin, 2006).

4. Digital storytelling in language learning

According to Jenkins and Lonsdale (2007), digital storytelling is reported as a means of supporting student engagement and reflection. A combination of still images with an audio track, was generated in different learning contexts at the University of Gloucestershire, and included students' transitioning into higher education programmes, student presentations, and capturing reflections on personal development. Assessment indicated that staff and students found this approach to be a positive experience for supporting student creativity.

A study by Kim (2014), entitled "Developing autonomous learning for oral proficiency using digital storytelling", explored whether ESL learners can improve their oral proficiency through independent study by using online self-study resources, online recording programs, speech-text-programs (STP), and getting feedback in an autonomous learning environment. This experimental study was designed to provide five ESL learners at the City College of San Francisco, opportunities for recording stories on weekly topics outside the classroom.. In order to evaluate the participants' autonomy for oral proficiency improvement, this research used both qualitative and quantitative approaches. Four assessments were used to check the participants' developing speaking improvement in storytelling about silent movie clips onto Voice Thread and three questionnaires to evaluate their opinion on this autonomous learning. The results revealed that using self-study resources empower learners to improve their speaking skills and build considerable self-confidence. Participants indicate that learning from storytelling can be learner-centred and can enhance autonomy in oral proficiency. Moreover, this research indicated that the instructor's feedback and role were also essential during the development of the learners' learning autonomy, which was based on their engagement.

In Sadik's (2008) study, "Digital storytelling: A meaningful technology–integrated approach for engaged student learning", the objective was to assist Egyptian teachers improve their instruction through the application of a particular digital technology. The students were emboldened to work through the process of producing their own digital stories using MS Photo Story while being introduced to desktop production and editing tools. They also presented, published, and shared their own stories with other students in the class. Quantitative and qualitative instruments, including digital story evaluation rubric, integration of technology observation instruments and interviews for evaluating the effectiveness of digital storytelling into learning were implemented to examine the extent to which students were engaged in authentic learning tasks using digital storytelling. The result from the analysis of student–produced stories showed that students did well in their projects and their stories met many of the pedagogical and technical attributes of digital stories. The findings from classroom observations and interviews revealed that despite problems observed and reported by teachers, they believed that the digital storytelling projects could increase students' understanding of curricular content and they were willing to transform their pedagogy and curriculum to include digital storytelling.

In a study by Baim (2015), entitled "Digital Storytelling: Conveying the Essence of a Face–to–Face Lecture in an Online Learning Environment", the selection and preparation of video–based digital storytelling learning modules are discussed in the context of meeting the self–directed learning preferences of students enrolled in a senior–level undergraduate leadership course. An example video produced on the topic of mentorship illustrates how the gap between personalized face–to–face storytelling in a lecture–based course and the less personal asynchronous learning in an online section of the same course may be bridged to maintain student comprehension of the key concepts involved.

English for communication and work's course syllabus

English for communication and work is a required subject for students who study at Ubon Ratchathani Rajabhat University. All students have to enrol and pass. The course number of this subject is 90211.3+. The credit is 3 (3–06).

The course description of this subject is vocabulary, idioms, grammar, and conversation including listening, speaking, reading, and writing for English communication in daily living, working and studying in various contexts. The objectives of this subject are:

1. Greet, introduce people, and say goodbye.
2. Describe people, characteristics, and hobbies.
3. Give and ask for information and advice.
4. Express feelings
5. Practice conversation about positions, responsibility, workplaces, directions, and office equipment.
6. Deal with visitors.
7. Identify announcements, advertisements, labels, and manuals.
8. Identify the structures of letters, invitations, greeting cards, and news.
9. Fill out job application forms, and interviews.

The content and duration

In this course, students will study for 9 weeks including a midterm examination and final examination. There are six units in the accompanying book, which is as follows:

Unit 1: People

Unit 2: Work, Rest, and Play

Unit 3: Going places

Unit 4: Food

Unit 5: Sport

Unit 6: Destinations

The course syllabus for English for communication and work covers several topics and this module focusses on improving many skills, especially speaking, which this research investigates the improvement of speaking and is therefore why attendees of this module were selected as the sample group in this research.

Related Researches

1. Previous studies related to digital storytelling to enhance speaking skill

Kallinikou and Nicolaidou (2019) examined the relationship between adults' engaged in digital storytelling and their speaking skills and motivation when learning a foreign language. The study used a pre–test, post–test control group design with two groups of 20 Russians who were beginners in learning Greek as a foreign language (n = 40). The 12–h intervention was technology–supported only for the experimental group. Even though the comparison of participants' recorded speech pre–intervention and post–intervention revealed a statistically significant decrease of mistakes made during speech from pre–intervention to post–intervention for both groups, an independent samples t–test to compare the groups' post–intervention speaking performance revealed a statistically significant difference in favour of the experimental group (t–test = 4.05, $p < 0.05$). The analysis of results from a motivation questionnaire administered pre–intervention and post–intervention showed a statistically significant increase in the motivation of the experimental group only.

Afrilyasanti and Basthomi (2011) investigated the implementation of digital storytelling when teaching speaking to EFL students. The results show that students may easily produce communicative and comprehensible stories using digital storytelling. They could easily understand their friends' stories, and they contributed actively and supportively in speaking class activities.

Eissa (2019) found why adults are unable to speak English as Foreign language (EFL) within the Kingdom of Saudi Arabia. Moreover, they tested the pedagogy of adopting the strategy of Digital Story Telling (DST) in teaching English as a foreign language. The primary question raised during this study was whether the standard strategies of teaching are the reason behind the students' failure to speak English and whether the modification within the pedagogy of teaching affects the learners' English speaking skills. Data was collected via a questionnaire following the implementation of the DST strategy. The findings reveal that the learners at the chosen university found problem in speaking English. After applying DST as a pedagogy, the students were able to develop their overall speaking skill.

Somdee & Suppasetseree (2013) investigated the implementation of digital storytelling for developing English speaking skills and the satisfaction toward learning from digital storytelling of fifty Thai students who registered within the English compulsory course

at Suranaree University of Technology in Trimester 2/2012. Before making digital stories, the students took a pre-test to identify their pre-experiment speaking ability. After that, the students were inspired to produce their own digital stories by telling their stories at the side of the pictures using Windows Film Maker. Their speaking skills improved with practiced as they developed their digital stories. Afterwards, all of the digital stories were published and presented online so that they could share their concepts with their friends within the classroom. After the presentation, the post-test was completed to assess how well the students' English speaking skills had developed.

Abdolmanafi-Rokni and Qarajeh (2014) investigated the impact of two differing ways of storytelling upon the speaking skills of Iranian EFL learners. This mixed methodology study measured the variations between the impact of digital storytelling and storytelling aloud using qualitative and quantitative methods. The data were collected from forty-two students who were aged nineteen to twenty-five years old at Payam Noor University in Gorgan, Iran. The forty-two students were pre-tested before the experiment using a TOEFL speaking check. The forty-two students were then divided into two groups and each group of twenty-one students were exposed to one of the two-storytelling methodologies. Following each groups exposure to one of the storytelling methodologies, all forty-two students took an identical post-experiment TOEFL speaking check. The students were also given a questionnaire to collect data about how they regarded the effectiveness of their digital storytelling course on their motivation to enhance their speaking ability. The data analysed using the SPSS software and showed the potency of digital storytelling on the oral performance of EFL learners.

Pardo (2014) investigated students' writing and speaking skills by engaging them during a project in which traditional and digital narrative were combined. The first goal was to reinforce foreign language acquisition and development of EFL college students. The second goal was to examine a number of the distinctive features of DST, and describe a method that students had followed in order to complete the task and eventually discuss the results.

James, Yong and Yonus (2019) investigated the utilization of digital storytelling for enhancing students' English speaking skills and their perceptions of the employment of digital storytelling to enhance their speaking skills. The study was administered with twenty

students studying in a suburban school in Pahang, Malaysia. The main instrument employed in this study was the School Based Oral Assessment (SBOA) form, which was used for the pre-test and post-test. The students' language proficiency was rated as high intermediate through the SBOA. The results show that there was an improvement in the students' speaking skills after the creation of their Scribe videos. The students also had positive perceptions of digital storytelling.

Abdelmageed (2018) investigated the effect of digital storytelling on learners' oral skill, and secondly determined to what extent the learners were satisfied with the digital storytelling. The study employed a quasi-experimental design in which eight first-year university students at the University of Science and Technology in Egypt participated. Data was collected from a pre- and post- speaking skills test, an interview, and written reflections. The findings confirmed that there was a statistically positive impact on learners' oral performance. The study also found out that the participants were substantially satisfied.

Wulandari, Sada, & Arifin (2016) investigated the effectiveness of digital Storytelling (DST) to increase English club student's capacity in talking English. The students were selected from SMK-SMTI Pontianak during the academic year 2014/2015. The method used in this research was a pre-experimental oral overall performance test and post-test to assess the effectiveness of the experiment. The research sample was eight participants in an English club. The research proved that the usage of digital storytelling is strongly effective for broadening students' speaking potential.

Yamac & Ulusoy (2016) investigated the effects of digital storytelling for developing the writing skills of third grade learners enrolled in rural primary schools. The writing performances of the learners were measured before and after the teaching procedures of digital storytelling. Then, the process of narrative writing with digital storytelling was profoundly and carefully explored through observation and field notes, interviews, audio and video records, student diaries and documents, and student products. The results showed that advanced narrating improved students' thoughts, organization, word choice, sentence familiarity, and traditions in terms of composing quality.

Tarigan and Liana (2018) aimed to prove whether digital storytelling enhances students writing competency. The study used classroom action research (CAR). The data in this study are quantitative and qualitative. The quantitative data was collected using an

essay test. The qualitative data was collected using observation, field notes, and a questionnaire. The results of the study show that writing text significantly increased when using digital storytelling. The score of students' writing descriptive text kept increasing from pre-test until post-test. It was proved by the data, which showed that the mean of the students' score in post-test II (86.4) was higher than the post-test I (72.2), and also higher than the pre-test (54.8). Hence, digital storytelling altogether progresses students' scores when composing expressive content. Moreover, it can be concluded that digital storytelling is beneficial when utilized for instructing composing ability, particularly in graphic content.

2. Previous studies related to digital storytelling to enhance self-directed learning

Kim (2014) investigated whether ESL learners can enhance their oral proficiency through independent study by the use of online self-study resources, online recording program and speech-text-program (STP), and feedback in a self-reliant learning environment. This experiment was designed to provide five advanced (high intermediate) ESL learners, from city college in San Francisco, possibilities for recording testimonies on weekly topics outside the classroom. In order to check participants' autonomy for oral proficiency development, this research employed both qualitative and quantitative techniques. Four tests were used to test the participants' developing speaking improvement in storytelling about silent movie clips onto Voice Thread, and three questionnaires to evaluate their attitudes closer to this autonomous mastering. The study found that the usage of self-study assets enables learners to improve their speaking skills and build considerable self-confidence. The participants also indicated that gaining knowledge through storytelling might be learner-centred and could increase autonomy in oral ability. Furthermore, this study indicates that the trainer's remarks and role also are essential during the development of learners' learning autonomy based education.

Bullock (2013) investigated the teachers' attitude that education programs are cultural institutions about the usage of digital technology to enhance self-directed studying. The results clearly indicate that technology fostered the teachers' positive attitude to teach in the 21st century.

Hafner & Miller (2011) explored the student-centred digital video project and associated technological environment to enhance students' autonomous language learning.

This paper reports on the syllabus layout and implementation of English for science and technology (EST) course at an English university in Hong Kong. Data were collected from questionnaires, focus group interviews, and weblog comments.

Liu and Huang (2016) brought the inquiry–based learning approach to scaffold learners in creating stories. An experiment constructed from 28 Grade 6 fundamental students regarding an inquiry–based digital storytelling project, was carried out to examine their learning outcomes. The results discovered that the students progressed their learner autonomy.

Najat Smeda (2014) investigated the pedagogical factors of digital storytelling and the impact of digital storytelling on student gaining knowledge while teachers and students use digital stories. This study developed a brand new e–learning digital storytelling (eLDiSt) framework. This framework is primarily based on the desires and competencies of learners at numerous stages of learning. A multi–website online case study was been performed in one Australian school at primary and secondary levels. In selected classrooms, students and teachers had the opportunity to engage in revolutionary learning experiences based on digital storytelling. In order to enhance the reliability and validity of the studies, multiple methods of data collection and analysis were used. Data was collected using qualitative and quantitative methods. Rubric assessment was used to collect quantitative data, at the same time as interviews and observation being used to collect qualitative data. Data collection was based totally on mixed methods studies to evaluate if and how digital storytelling complements teaching and learning results. The findings from this study advocate that digital storytelling is an effective tool to integrate educational messages with gaining knowledge of sports to create more attractive and interesting learning environments. It is a significant approach for creating a positive learning environment based at the principles of teaching and learning. Therefore, this approach has the capability to enhance student engagement and provide higher instructional outcomes for learners.

The above reviewed literature shows that digital storytelling has an essential role for improving instruction. The previous studies investigated the effects of digital storytelling to enhance several skills such as speaking, writing, reading, listening, and self–directed learning. Improving speaking skills through digital storytelling is found in many studies but the study of using digital storytelling to improve self–directed learning is not so

common. Thus, this study focused on the use of digital storytelling to enhance speaking ability and self-directed learning in order to develop a model for using digital storytelling to enhance both speaking skill and self-directed learning together.

CHAPTER III

RESEARCH METHODOLOGY

This study reviews the use of digital storytelling activities for enhancing EFL university students' speaking ability and self–directed learning. The study aims to:

1) Investigating the effects of digital storytelling abilities on speaking ability 2) Investigating the effects of digital storytelling activities on self – directed learning. This chapter is composed of:

1. Research design
2. Participants
3. Research instruments
4. Research material
5. Data collecting process
6. Data analysis

Research design

Mixed method research is a research design where the researcher collects both quantitative and qualitative data in a single study or a multiphase program of inquiry (Creswell, 2003). According to Jonhson and Turner (2003), mixed method research is where data is collected using multiple processes in order that the differing data supports the data from each method, or can solve the weaknesses inherent in each method individually (qualitative and quantitative). If researchers are able to conduct their research using a mixed method, the research may be better quality than when using only one methodology. Mertens (2005) states that mixed methods have particular value when we want to examine an issue that is embedded in a complex educational or social context. The purposes of mixed method research, according to Dornyei (2007), are: 1) expanding the understanding of a complex issue, 2) corroborating finding through triangulation, and 3) reaching multiple audiences. According to Bazely (2003), mixed method researchers, bring together the advantages of both high quality and quantity approaches to research,

frequently claim greater validity of results as a reason for their methodological selections. However, without adequate attention of the issues involved, such validity can be imagined as greater than it actually is.

It is clear that this study is mixed methodology analysis that integrates qualitative and quantitative approaches for solving the weakness of each individual mythological approach. This, research delivers the strengths of both approaches to ensure a reliable and valid analysis, which is consistent with Dornyei (2007) , who wrote " An Analysis Methodology in Apply Linguistics." Their topological organization of mixed methodology helps the design and analysis of their own research. This analysis is based upon quantitative leading to qualitative, which suggests quantitative information gathering and analysis happens first but has lower priority and is then followed by qualitative information gathering and analysis happening second with accumulated weight.

This chapter describes the procedure of the study as well as the participants, the research instruments, research materials, and the data analysis method.

Participants

In this study, the participants were chosen by purposive sampling. The ten participants of which nine students from differing professional fields, who enrolled in the subject English for Communication and Work (9021103) in the third semester of the 2016/2017academic year. The tenth participant was the instructor who taught the subject of English for Communication and Work (9021103) with over five years teaching experience and is the researcher in this study. The nine students were divided into three different English proficiency groups, being: high proficiency students, intermediate proficiency students, and low proficiency students.

The criteria for placing the students into the different English proficiency relied on scores obtained by students. A Basic English test (30 items) was employed to check the students' English proficiency. After taking the basis English test, students were classified into three levels based on their score. Students with 1–10 marks were classified as low proficiency students, students who obtained 11–20 were classified as intermediate proficiency students, and those with 21–30 marks were classified as high proficiency students. Additional criteria for including the participants were that the students had to

have their own smartphone that was able to connect to the internet and download a Video App. Each participant voluntarily participated.

The reason why this study classified the students into three levels was that this study focuses on investigating the English speaking ability among three levels of students and investigating the way self-directed learning by using digital storytelling activities was able to enhance their speaking ability and self-directed learning.

Table 1 Participants

Data providers	Population
Instructor	1
Students:	
1) High proficiency students	3
2) Mid proficiency students	3
3) Low proficiency students	3
Total	10

Research instruments

The research instruments employed in this study consisted of three research instruments; speaking tests, a semi structured interview, and reflective writing. They are as follows:

1. Speaking Test

In this study, the speaking test was used before and after the activities of digital storytelling. The speaking test was designed by the researcher and was based on the course description for the module entitled English for Communication and Work (9021103). The course description of English for Communication and work (9021103) is "vocabulary, idioms, grammar, and conversation in listening, speaking, reading, and writing for English communication in daily living, working and studying in various contexts". The speaking test includes six topics: 1. Self-introduction, 2. Daily life, 3. Travelling preparation, 4. My favourite food and beverage, 5. My favourite sport, and 6. My travelling experience.

The speaking tests were reviewed by an instructor, the researcher, and an experienced native EFL teacher to rate the students speaking tests.

The speaking tests were checked by three experts regarding the content validity, clarity, and appropriateness of the topics of the speaking tests, which were based on the course syllabus. The index of item objective congruence (IOC) was used to evaluate which considered as follows:

If the speaking tests were in line with the objectives, the score would be +1

If the speaking tests were not quite in line with the objectives, the score would be 0

If the speaking tests were not in line with objectives, the score would be –1

The score obtained from three experts was evaluated by the formula of IOC.

$$IOC = \frac{\sum R}{N}$$

When IOC stand for Opinion consistency index

$\sum R$ stands for the sum of the expert opinion

N stand for the experts

2. Semi structured interview

The semi–structured interview provided a clear set of instructions for interviewers and provides reliable comparable qualitative data. Semi–structured interviews were often preceded by observation, informal and unstructured interviewing in order to allow the researchers to develop a keen understanding of the topic of interest necessary for developing relevant and meaningful semi–structured questions. It also allowed informants to discuss and raise issues that the researcher may not have considered. This study used semi–structured interviews because the researcher was able develop opportunities for the informants to discuss interesting topics and raise issues that the researcher may not have considered. There are four steps to designing a semi–structured interview form.

1. Learn the document, manual booklet, and related research.

2. Design the message in the interview, separate the issues, and adjust the questions appropriately based on the research objective.

3. Design and submit the interview to advisors and experts.

4. The interview was checked and approved by the advisor and experts

The semi-structured interviews were conducted after finishing the digital storytelling activities. The participants were interviewed using individual prepared questions foe forty-five minutes. The semi-structured interviews were designed by the instructor for interviewing the nine students. The semi-structured interviews consisted of two parts: 1. Interview about the students' English speaking ability when using digital storytelling activities. 2. Interview about the students' self-directed learning when using digital storytelling activities. The students' semi-structured interviews were analysed by the researcher.

The semi-structured interviews were checked by three experts regarding the content validity, clarity, and appropriateness of the speaking test topics, which were based on the module syllabus. Index of item objective congruence (IOC) was used to evaluate the interviews, which considered the following:

If semi-structured interviews s were in line with the objectives, the score would be +1

If semi structured interviews were not quite in line with the objectives, the score would be 0

If the speaking tests were not in line with the objectives, the score would be -1

The score obtained from three experts was evaluated by the formula of IOC.

$$IOC = \frac{\sum R}{N}$$

When	IOC	stand for	Opinion consistency index
	$\sum R$	stands for	the sum of the expert opinion
	N	stand for	the experts

3. Reflective writing

In this study, reflective writing was used by the students after finishing their digital storytelling activities. There are four steps to designing this instrument, as follows:

1. Learn the document, recipe booklet, and related research.

2. Design the reflective writing format, separate the issues, and adjust the questions appropriately based on research objectives.

3. Submit the reflective writing form to advisors and experts.

4. Reflective writing was checked and approved by the advisor and experts

Thus, the students' reflective writing consisted of two parts, as follows: 1. Reflect upon speaking ability 2. Reflect upon self-directed learning. Reflective writing was completed by the students after finishing their tasks and the students' reflective writing texts were analysed by the researcher after finishing the digital storytelling activities.

The reflective writing texts were checked by three experts regarding the content validity, clarity, and appropriateness of topics. Index of item objective congruence (IOC) was used for evaluation, which considered the following:

If the semi-structured interviews were in line with the objectives, the score would be +1.

If the semi-structured interviews were not quite in line with the objectives, the score would be 0.

If the speaking tests were not in line with objectives, the score would be -1.

The score obtained from three experts was evaluated by the formula of IOC

$$IOC = \frac{\sum R}{N}$$

When IOC stand for Opinion consistency index

$\sum R$ stands for the sum of the expert opinion

N stand for the experts

Table 2 Research instruments

Data providers	Population	Research instruments
Instructor	1	Semi-Structure Interview
Students:		
1) High proficiency students	3	Speaking Test
2) Mid proficiency students	3	Semi-Structure Interview
3) Low proficiency students	3	Reflective writing
Total	10	

Research Materials

Research materials are an important part of this study. There are two research materials as follows: 1) Lesson Plan and 2) Speaking rubric.

1. Lesson plans

In this study, the researcher used three experts to estimate lesson plans' item–objective congruence index: IOC. Following that, an instructor used three teaching steps, as follows:

1.1 Warm–up activities

An instructor introduces each topic at the beginning of study. Every topic was introduced and the students were given guidelines. For example, the topic 'media' was delivered as follows: An instructor showed the students the digital storytelling activities as a teaching media. Next, the instructor taught the students how to create digital stories in class. Finally, the instructor asked the students to respond and give feedback after watching videos and after using digital storytelling in the classroom. It took 30 minutes to introduce the process of creating digital storytelling.

1.2 Main activities

After the instructor gave the students a topic, they then gave them r five minutes to think about what each topic means and ask them for more details. After this, the instructor assigned students to think about and write their own scripts about one of the six topics, as mention above. After they had written their scripts, they had their scripts checked for accuracy by the instructor before the next step of creating their own digital storytelling videos. Note that after writing their scripts in the classroom, the instructor allowed the students to create their digital stories out of classroom. They had independence and opportunity to plan, locate resources, control their tasks, and reflect upon themselves. They were able to practice before submitting their task to the instructor. This process was based on the students' ability when out of classroom. Students spent four hours per week writing their scripts and creating their own digital stories.

1.3 After–activities

Students uploaded their own video on a dedicated Facebook group page as set by the teacher. The native EFL teacher and an instructor then gave feedback comments on each of the students' digital stories. Moreover, the students also provided

their own feedback on creating digital stories during their interviews and reflective writing at the end of every class. This step took 1 hour per week to gain and evaluate students' speaking ability.

The lesson plans were checked by three experts regarding the content, validity, clarity, and appropriateness of topics of the speaking tests based on the course syllabus. Index of item objective congruence (IOC) was used to evaluate the lesson plan.

2. Speaking rubric

A speaking rubric was used for marking and assessing the students' speaking tests (Pre-tests & -Post-tests). An analytic rubric is useful for rating the students' speaking abilities. Weir (1990) reported that a multi-trait analytic mark scheme is seen as a useful tool for the training and standardization of new examiners (Weir, 2005, p. 190). Thus, the speaking rubric in this study was an analytic scoring system adapted from Weir. The analytic rubric was designed for evaluating four aspects of speaking skills: 1) Fluency, 2) Pronunciation, 3) Vocabulary and Content, 4) Grammar. There were four steps to creating this tool as given below:

2.1 Learn the document, manual booklet, and related research

2.2 Create the message in the analytic rubric, separate the issues, and adjust the questions appropriately based on research objectives.

2.3 Create and submit the analytic rubric to advisors and experts.

2.4 The analytic rubric was checked and approved by the advisor and experts to collect the data.

2.5 After approving through three experts, the researcher applied this rubric in analysing the students speaking ability.

Speaking rubric score was checked by three experts about the content validity, clarity and appropriateness of topics of speaking test based on course syllabus of English for communication and work's subject. Index of item objective congruence (IOC) was used to evaluate which considered as follows:

If the speaking rubric score was in line with the objectives, the score would be +1.

If the speaking rubric score was not quite in line with the objectives, the score would be 0.

If the speaking rubric score was not in line with objectives, the score would be -1.

The score obtained from three experts was evaluated by the formula of IOC

$$IOC = \frac{\sum R}{N}$$

When IOC stand for Opinion consistency index

$\sum R$ stands for the sum of the expert opinion

N stand for the experts

Table 3 Research Materials

Data providers	Population	Research instruments	Research Materials
Instructor	1	Semi-Structure Interview	Lesson Plan Speaking Rubric
Students:			
1) High proficiency students	3	Speaking Test	Lesson Plan
2) Mid proficiency students	3	Semi-Structure	Speaking Rubric
3) Low proficiency students	3	Interview	
Total	10		

Data collecting process

During the first week of collecting data, the instructor and students were trained to understand the process of using digital storytelling activities to enhance speaking ability and self-directed learning. After that, the instructor and students were led into the activity of enhancing speaking ability and self-directed learning. Later on, students took the speaking tests and after that, they were taught from an instructor who followed the lesson plan in the classroom. After that, the students took the post-tests (speaking test). This process took seven weeks to complete and students took a total of twelve speaking tests, which was made up of a pre-test and a post-test for each of the six topics. s. At the end of the weekly activities, the students were individually interviewed for forty-five minutes by the researcher using prepared questions. They then wrote their reflective written texts.

Table 4 The process and the time to collect data

Process	January	February	March	April
1.Taking the Basic English Test	⟷			
2.Training students and teacher	⟷			
3.Participating in the activity		⟷	⟷	
4. Writing reflective writing				⟷

Data analysis

As mentioned in the introduction, this research is a mixed method that combines qualitative and quantitative data for enhancing speaking ability and self-directed learning by using digital storytelling activities of EFL students. For the quantitative data, the data was gained from the speaking tests and qualitative data from semi-structure interview and students' reflective writing.

To analyse the quantitative data there are two steps as follows:

1. Students' speaking tests were marked by the native EFL lecturer, a lecturer, and the researcher by using speaking rubric to rate the students' speaking ability.

2. Students' scores were analysed using the SPSS program to calculate statistical values, called t-test dependent. The formula of t-test dependent is as follows:

$$t = \frac{(\sum D)/N}{\sqrt{\frac{\sum D^2 - \left(\frac{(\sum D)^2}{N}\right)}{(N-1)(N)}}}$$

When $\sum D$ stand for sum of the differences

$\sum D2$ stand for sum of the squared differences

N stand for subjects

To analyse the qualitative data from interview, reflective writing, there are seven steps to analyse content analysis as these followings:

1. Gathering the information
2. Paraphrasing the information
3. Grouping the information

4. Coding the data for certain words or content
5. Identifying their patterns
6. Interpreting their meanings
7. Analysing the content based on research questions and objectives.

Table 5 The code of the informants for interview

Informants	Code
An instructor	T
Student 1	DS01
Student 2	DS02
Student 3	DS03
Student 4	DS04
Student 5	DS05
Student 6	DS06
Student 7	DS07
Student 8	DS08
Student 9	DS09
Total	10

Table 6 The timeline of analysing data

Data sources	September 2017	October 2017	November 2017	December 2017	January 2018	February 2018	March 2018	April 2018	May 2018	June 2018	July 2018	August 2018	September 2018	October 2018	November 2018
1. Data of speaking test															
1.1 Analyse t-test	←				→										
2. Data of interview															
2.1 Paraphrasing data															
2.2 Grouping the information															
2.3 Coding the data for certain words or content				←									→		
2.4 Identifying their patterns															
2.5 Interpreting their meanings															
2.6 Analysing the content based on research questions and objectives															

Table 6 The timeline of analysing data (Cont.)

Data sources	September 2017	October 2017	November 2017	December 2017	January 2018	February 2018	March 2018	April 2018	May 2018	June 2018	July 2018	August 2018	September 2018	October 2018	November 2018
3. Data of reflective writing															
3.1 Paraphrasing data															
3.2 Grouping the information															
3.3 Coding the data for certain words or content								←	—	—	—	→			
3.4 Identifying their patterns															
3.5 Interpreting their meanings															
3.6 Analysing the content based on research questions and objectives															
4. Identify the informants' code										←	—	→			
5. Describe qualitative data analysis											←	→			
6. Summarize the data by appending data from speaking test, interview and reflective writing to answer research												←	—	—	→

Table 7 The timeline of the study

Topics	September 2015	October 2015	November 2015	December 2015	January 2016	February 2016	March 2016	April 2016	May 2016	June 2016	July 2016	August 2016	September 2016	October 2016	November 2016	December 2016	January 2017	February 2017	March 2017	April 2017	May 2017	June 2017	July 2017	August 2017
Determine the problems of study	←		→																					
Study related documents		←										→												
Conceptual framework							←			→														
Write chapter 1									←				→											
Edited chapter 1													↔											
Write chapter 2														←		→								
Edit chapter 2																	←	→						
Design collecting data and analysing data																			←	→				
Design and edit speaking test																					←	→		
Design and edited interview form and reflective writing																			←					→
Write chapter 3	←			→																				
Edit chapter 3						←		→																
Collect data								←				→												

Table 7 The timeline of the study (Cont.)

Topics	September 2017	December 2018	January 2018	February 2018	March 2018	April 2018	May 2018	June 2019	July 2019	August 2019	September 2019	October 2019	November 2019	December 2019
Analyse data and translate the meaning of data	↔													
Write chapter 4		↔	↔											
Edit chapter 4				↔		↔		↔						
Write research paper 1 for publishing					↔	↔	↔							
Write research paper 2 for publishing							↔	↔						
Bring suggestions from the presentation to adjust the research.									↔					
Conclude and write the report of study in chapter 5										↔	↔			
Edit chapter 5												↔		
Edit chapter 1-5 (Final Drafts)													↔	
Edit dissertation (Final Format)														↔

CAPTER IV

RESULTS

This mixed method research contained quantitative and qualitative data and was analysed by t-test and content analysis. This chapter presents the results of the data analysis in two sections, based on two research objectives: 1) to investigate the effects of digital storytelling activities on speaking ability, and 2) to investigate the effects of digital storytelling activities on self-directed learning. The first section presents the quantitative and qualitative finding on the effects of digital storytelling activities enhancing speaking ability. The second section presents the qualitative findings on the effect of digital storytelling activities enhancing self-directed learning.

Research objective 1: to investigate the effects of digital storytelling activities on speaking ability.

Following analysis of the nine students' speaking tests by t-test, the result show that the digital storytelling activities can progressively enhance students' speaking ability. There were 4 points of speaking ability considered and analysed: fluency, pronunciation, vocabulary, and content and grammar. The results are shown as follows:

1. Quantitative data

This quantitative data was collected following the speaking test and was analysed by t-test. The result show results of the pre-test and post-test total scores of the nine students' English speaking ability. The result of the pre-test and post-test on three student English proficiency levels: low proficiency students, intermediate proficiency students and high proficiency students. The result has been shown in the below tables as follows:

Table 8 The total result of the pre-test and post-test on the student's English speaking ability.

Samples	TEST	N	$\bar{X}$	S.D	t	Sig.
Students	Pre-test	9	14.18	10.48	27.18	.000
	Post-test	9	55.92	6.89		

Note: *The mean difference is significant at the level of .05.

From Table 8 the result of the post-test shows that nine students' speaking ability following the digital storytelling activities was higher than their pre-test results. The t-test indicated a statistically significant difference between the pre-test and post-test at a level of .05. It can be concluded that digital storytelling activities can effectively improve the learners' speaking ability.

Table 9 The result of comparison between the pre-test and post-test on English speaking ability among the three proficiency groups of students by using digital storytelling activities.

Samples	TEST	N	$\bar{X}$	S.D	t	Sig.
Low proficiency students	Pre-test	3	1.22	.94	37.240*	.001
	Post-test	3	7.35	1.00		
Intermediate proficiency students	Pre-test	3	2.87	1.12	70.490*	.000
	Post-test	3	9.77	1.15		
High proficiency students	Pre-test	3	3.00	.40	53.293*	.000
	Post-test	3	10.83	.56		

Note: *The mean difference is significant at the level of .05.

From Table 9 the results show that all of the post-test speaking ability scores for each of the three students' proficiency levels were higher than their pre-tests. The t-test indicated statistically significant difference between the pre-test and post-test at a level of

.05 in all levels of students. It can be concluded that digital storytelling activities effectively enhanced the students' speaking ability for each of the students' proficiency levels.

Table 10 The result of comparison of Pre-test and Post-test on English speaking ability regarding fluency.

Samples	TEST	N	$\bar{X}$	S.D	t	Sig.
Low proficiency students	Pre-test	3	.07	.12	22.400*	.002
	Post-test	3	2.14	.25		
Intermediate proficiency students	Pre-test	3	.53	.30	33.005*	.001
	Post-test	3	2.74	.23		
High proficiency students	Pre-test	3	.59	.16	36.333*	.001
	Post-test	3	3.01	.11		

Note: *The mean difference is significant at the level of .05.

From Table 10 the post- test result illustrates that three proficiency levels of students' fluency following completion of their digital storytelling activities was higher than their pre-tests. The t-test indicates statistically significant difference between the pre-test and post-test at a level of .05. It can be concluded that digital storytelling activities developed the students' speaking fluency at every student proficiency level.

Table 11 The result of comparison between the Pre-test and Post-test on English speaking ability regarding pronunciation.

Samples	TEST	N	$\bar{X}$	S.D	t	Sig.
Low proficiency students	Pre-test	3	1.96	.11	7.883*	.016
	Post-test	3	.48	.42		
Intermediate proficiency students	Pre-test	3	.92	.27	23.750*	.002
	Post-test	3	2.68	.32		

Table 11 (Cont).

Samples	TEST	N	$\bar{X}$	S.D	t	Sig.
High proficiency students	Pre-test	3	1.05	.05	13.571*	.005
	Post-test	3	2.81	.25		

Note: *The mean difference is significant at the level of .05.

From Table 11 the result of the post-test indicates that the three proficiency levels of students' pronunciation scores after completing their digital storytelling activities was higher than their pre-test. The t-test indicates statistically significant difference between the pre-test and post-test at a level of .05. It can be concluded that digital storytelling activities can develop students' pronunciation ability at every student proficiency level.

Table 12 The result of comparison between the Pre-test and Post-test on English speaking ability regarding vocabulary and content.

Samples	TEST	N	$\bar{X}$	S.D	t	Sig.
Low proficiency students	Pre-test	3	.70	.33	15.250*	.004
	Post-test	3	2.55	.19		
Intermediate proficiency students	Pre-test	3	1.35	.46	13.877*	.005
	Post-test	3	3.03	.25		
High proficiency students	Pre-test	3	1.27	.14	64.086*	.001
	Post-test	3	3.33	.11		

Note: *The mean difference is significant at the level of .05.

From Table 12 the result of the post-test show that the three proficiency levels of students' vocabulary and content after completing their digital storytelling activities was higher than their pre-tests. The t-test indicates statistically significant difference between the pre-test and post-test at a level of .05. It can be concluded that digital storytelling activities can develop students' speaking ability regarding vocabulary and content at every student level.

Table 13 The result of comparison between the Pre-test and Post-test on English speaking ability regarding vocabulary and content.

Samples	TEST	N	$\bar{X}$	S.D	t	Sig.
Low proficiency students	Pre-test	3	.00	.00	-3.208	.085
	Post-test	3	.68	.36		
Intermediate proficiency students	Pre-test	3	.11	.14	5.651*	.030
	Post-test	3	1.20	.46		
High proficiency students	Pre-test	3	.11	.11	41.500*	.001
	Post-test	3	1.64	.12		

Note: *The mean difference is significant at the level of .05.

From Table 13 the result of the post-test illustrates that two levels of students' grammar after completing their digital storytelling activities was higher than their pre-test. The t-test indicated statistically significant difference between the pre-test and post-test at a level of .05. In contrast, the post-test in the low proficiency students' grammar was lower than their pre-test result. The t-test was not significant at a level of .05. It can be concluded that digital storytelling activities can develop students' speaking ability in grammar of high and intermediate proficiency students but did not improve their grammar in the low proficiency students.

2. Qualitative data results

This qualitative data was collected from semi-structured interviews, observation, and reflective writing, and was analysed by content analysis. The results show the effectiveness of digital storytelling activities to enhance self-directed learning. The results have been interpreted and shown as follows:

The results form semi-structure interview and reflective writing

2.1 Enhancing spoken fluency

All informants responded that after creating and participating with the activity of digital storytelling, they all realized that their fluency had increased because of practicing their English-speaking skills. During the process of creating digital stories, the students were encouraged to tell their story and record their video, and to show and share

their videos with their friends on Facebook. This process of recording videos meant the students had to speak English multiple times so that their final presented videos were perfect and that they were satisfied with their performances. All of them indicated that practicing speaking many times made them more fluent using English. An example of interview content is presented as follows:

"I can speak English faster than I used to be because I practice many times, I accept that before participating this activity I dare not speak because I'm really shy and afraid of making mistakes. When I participate in this activity, my shyness is decreased but it encourages me to speak confidently and fluently". (DS02)

" After engaging the activity of digital storytelling I can speak fluently and I can speak longer sentence. My English is different from before. I think this activity is appropriate to enhance English". (DS04)

" My fluency is increased after using ViVA video for making digital storytelling, I could speak clearer, faster maybe it is not correct all but I have more confident to speak out. Anyway, my improvement of fluency can be seen from my long sentence speaking and more words used than before. I have observed myself since the first video until the last one. I see my speaking being more fluent and not interrupted". (DS09)

Prior to and during the creation of the digital stories the researcher observed the students' speaking tests and speaking tasks and then further observed the students following implementation of the storytelling activities. It was observed that the students demonstrated poor fluency with frequent faltering before implementing the digital storytelling activities. Moreover, they lacked confidence and spoke less. Within 1 minute, they could only speak 5– 10 words. After implementing the activities, the students had greater fluency and confidence to speak and spoke longer sentences and more than 30 words.

It can be concluded that the activities of digital storytelling can enhance the students' spoken fluency. Digital storytelling was also shown to be an interesting new learning process outside of classroom learning.

2.2 Enhancing spoken pronunciation

The results indicate that all informants reported an improvement of their pronunciation after learning through digital storytelling activities. Most of informants claimed that the activity of digital storytelling could encourage students' pronunciation but moreover

these activities could reduce students' shyness and increase their confidence because they do these tasks many times. They are less afraid of demonstrating their speaking abilities. An extract from an interview is presented as shown below:

"I can speak English faster than I used to be because I practice many times, I accept that before this activity I dare not speak because I'm really shy and afraid of making mistakes. When I participate in this activity, my shyness is decreased but it encourages me to speak confidently and fluently". (DS02)

Some students indicated that their pronunciation was more accurate and that they were satisfied with their pronunciation. Here is an example:

" I have just known my English pronunciation is not correct since I engage this activity, so I practice to pronounce English words and record my voice in video camera, I practice to pronounce by www.google translator, I can listen my voice and watch myself in the clip, if it is incorrect pronunciation I can edit immediately and practice again and again until I'm satisfied my pronunciation". (DS01)

Some students said that they use smart phone applications, such as dictionary apps, to listen to difficult words that they can learn and practice how to pronounce them correctly. An extract from the interview is presented below:

"I downloaded smart phone apps for practice how to pronounce English. It can help me very well, I just type some words in Google translation apps, it shows me how to pronounce, and I imitated it. I think that my pronunciation is surely better because I see my improvement in video". (DS07)

Regarding pronunciation, the researcher observed that prior to implementing the digital storytelling activities, the students always incorrectly pronounced English because they were not confident to speak out as they lacked practice. However, after implementing the activities of digital storytelling, the students' pronunciation was better because they had to practice so they had more confidence to speak and their pronunciation was better. They still got some words wrong.

From above examples, it can be summarized that creating digital storytelling tasks can give the students opportunities to learn by themselves and improve their English pronunciation with practice using technology.

2.3 Enhancing spoken vocabulary and content

Developing in vocabulary and content can be shown as the interviewees reported their vocabulary and content had developed increasingly. They learned many new words, such as irregular verbs. Most students increased their vocabulary, which they directly found from many resources. The students had an opportunity to write their scripts before they could to tell their stories and this process improved their vocabulary and content. Three examples of interview content are presented as follows:

" I think that I learn a lot of new vocabulary because for making my digital storytelling I must write my script to speak so that mean I must find the vocabulary to write my script. This process increases me learn a lot of vocabulary and content. So it is pretty good for me". (DS03)

" After I finish this I got a lot of vocabulary by searching in the internet, moreover I can write it also. It is good for me to get both. I accepted that my English vocabulary is increase because of digital storytelling process". (DS06)

" I got a lot of new vocabularies because I wrote script and search information by the internet and find new words to create my story. In this process I got a lot of vocabulary such as about self –introduction, food, people, things, travelling, daily life, and vacation, this activity enhance me to have more several words and can make the content of my story interesting." (DS07)

Regarding vocabulary and content, the researcher observed that prior to implementing the digital storytelling activities some of the students had less vocabulary and some students had some vocabulary in their mind but not enough to complete the sentences leading them to stall and repeat the same words. After implanting the digital storytelling activities, the students demonstrated more vocabulary and they were able to complete their English sentences. I addition, their sentences were longer and better.

It has been demonstrated that the activities of digital storytelling can enhance the students' vocabulary and their speaking ability because they had to write their script to create their tasks. This process can promote the ability of students' speaking regarding their use of vocabulary.

2.4 Enhancing spoken grammar

Regarding grammar improvement, most interviewees replied that after participating in the activity of digital storytelling, their grammar had improved; they learned how to structure their sentences correctly and learned how to use tense more accurately. Here is an example:

" My English grammar, I think it is better, I know more such as present simple, present continuous, and past simple because I write script by myself and I think of grammar when I write , maybe I cannot speak correctly but my writing is correct some sentences. I feel like I review the previous knowledge". (DS07)

Two students claimed that their grammar had not improved because they found they repeatedly forgot and difficult to remember and use when they spoke. Here are two examples:

"I think grammar is still difficult for me to be improved. I know that I cannot speak correctly because I forget any rule of grammar when I speak out. I know only subject + verb, so grammar is still my problem to improve my English". (DS03)

" I think my grammar is not improved because i know only topics that I practiced and learnt but other topics are not in book i don't know how to use grammar with it". (DS04)

Some students said that the teacher's comment and suggestions helped them learn more grammar and they could use it when they spoke. An extract from an interview is presented as shown below:

" For my grammar, I think it is improved too much because I learnt and wrote by myself and teacher's suggestion and feedback can improve me better, so I know how to write in the correct grammar". (DS06)

From the above examples, it can be concluded that the digital storytelling activities can improve some students' grammar when speaking but low proficiency students did not improve because they said that grammar was still difficult for them and they believed they needed to learn, remember, and understand the rules of grammar more.

2.5 Teachers perception of enhancing speaking ability

The data obtained from the teacher's interviews indicated that digital storytelling activities could improve students speaking ability regarding fluency and

pronunciation, because students could speak more quickly and feel more confident. Their pronunciation is more accurate than before they participated in the digital storytelling activities. The students' vocabulary and grammar were not improved so much because development of these skills requires repetition, feedback, and memory to improve speaking abilities. Here is what the teacher says.

"The digital storytelling can improve students' oral proficiency which it is seen from students speaking is increased by comparing between pre-test and post-test which students 'oral proficiency is better especially fluency and pronunciation that is highly increased because in pre-test , students' fluency was very low but after they were implemented by doing digital storytelling and took the post-test , it can be seen that their fluency is increase because in the process of making digital storytelling, students practice many times until they is satisfied and confident to speak what they would like to speak. Moreover, in part of pronunciation, students are better because they learn how to pronounce the word that they don't know by themselves many times and teacher gave feedback and correct what they pronounce so both fluency and pronunciations are clearly seen that they are highly increased."

Regarding vocabulary and grammar, the teacher stated that "These parts are concerned with memory which students must remember on their mind so teacher deemed vocabulary and grammar are less increased depend on students can remember".

Regarding grammar, the researcher observed that before implementing the digital storytelling activities, some students' grammar was very poor, they could not speak correctly, and they did not know how to create correct sentences. However, some students could use present simple tense and order sentences such as subject + verb + object. After implementing the digital storytelling activities, most students could order English sentence correctly and could use present simple, past simple, and some easy sentences. They could use conjunctions to connect two sentences, such as because, and, but, and so, etc.

It can be summarized that the teacher agreed that digital storytelling activities can improve students' speaking ability in relation to fluency and pronunciation, but regarding grammar and vocabulary, this was less so because students needed to remember more.

2.6 Enhancing students' confidence

The data obtained from the interviews and reflective writing indicates that the activities of digital storytelling could enhance students' confidence. Most students said the first time they took part in these digital storytelling activities; they were shy when recording video of themselves and sharing them on Facebook. However, when they did it many times completing these activities increases their confidence An extract from an interview is presented below:

"The activities of digital storytelling cannot only enhance my speaking ability but also these activities can increase my confidence to speaking English because after implementing the activities I feel that I dare to speak English even it is correct or not correct because of practicing many times by recording video in the activities of digital storytelling, thus my shyness is decrease while my confidence is increased". (DS09)

Form the above example it can be shown up that students' confidence to speak English can be improved by participating in digital storytelling activities.

Research objective 2: to investigate the effects of digital storytelling activities on self-directed learning.

This qualitative data was collected from semi-structure interviews and reflective writing, which was analysed by content analysis. The results show an improvement of self-directed learning through digital storytelling activities. Moreover, the results show the effectiveness of digital storytelling activities for improving several skills that can be interpreted and shown are as follows:

1. Developing self-directed learning through digital storytelling activities

According to the data obtained from semi- structure interview and reflective writing, most informants reported that to create digital storytelling, they had to plan to do their task. They searched and found required information from several resources and tried to control themselves to do their task to completion. It can be seen that these digital storytelling activities can encourage students to be self-directed learners. Here are two examples:

" I plan to do my task by writing the script in Thai first, then translate my Thai script into English by helping from Google translator app and by finding the vocabularies in

dictionary on smart phone apps without searching in the book or the internet, emphasize to my thought". (DS03)

" To participate this activity I accepted that I had opportunity to think, to plan, and to do my task independently, no one controlled me. I can speak what I think, I can create my stories as many as I want to present, smartphone can support my digital storytelling to do my task, I really have fun to use it. I started from writing script by searching and gathering the information by the Google translator and YouTube. After writing the script, I practiced speaking 5–6 times, tried to remember the vocabularies, and recorded viva video for making digital storytelling, this is my plan." (DS04)

In addition, the students' interview indicated that digital storytelling activities could also encourage students' self– reflection, because they all could see and watch their video clips that they had created by themselves. They realized their abilities, mistakes, and weaknesses. This realization encouraged them to improve their abilities. Three extracts from the interview are presented as follows:

"When I see myself in video that I made by smartphone I always laugh at myself because I see myself speak, smile, and act, so this let me think and know my mistakes, and how I should adjust myself for the next tasks". (DS01)

" I can see my English development after using digital storytelling by playing game with my foreigner friends because I can respond immediately by speaking and they can understand me easily because my pronunciation is better and increased vocabularies, so I can do. Additionally, I can evaluate myself by using rubric score". (DS03)

" I think that this activity is really good for enhancing self – reflection, I can see myself in video, so I know my mistakes and I try to correct until it is better. In addition, I can watch other friends and know how their ability is, it is clear to know my improvement in each task". (DS07)

Furthermore, digital storytelling activities can enhance self– assessed learning needs and resources. It can be seen that the students had to find the required resources to support the creation of their tasks'. An extract from an interview is presented below:

"The most information derived from the internet such as Google.com. It is very easy to find by using smart phone, I really enjoy searching through smartphone, it made me better in searching data because I can search data at any time and from anywhere". (DS05)

Moreover, the students' self- monitoring has been improved in this study because the digital storytelling activities enables the students do their task by themselves. The students were volunteers, meaning that they had to control and manage what they did produce and submit to the teacher. Some examples from the interviews are shown below:

" For me I can do my assignment and submit it on time, I did not have any problem to do it because I manage my study time after finished classroom and my task was helped by smartphone, I have fun and enjoy doing this". (DS04)

"I immediately do the task after finishing the previous topic because I know that I must take time to find the information, writing the script and practice speaking until the last minute to submit the task. As I said I can control myself to do my task because smartphone can support me to do my task at any time and from anywhere". (DS07)

It can be concluded that digital storytelling activities can enhance all students' self-directed learning, as every step of digital storytelling encourages self-directed planning, learning, resource assessing, self-control, and self-reflection.

2. Developing students' remembrance

Some students gave opinions on enhancing their speaking ability and self-directed learning after completing the digital storytelling activities. The students' memory was enhances because when they created their videos, they had to remember the vocabulary, sentences, and content. Additionally, they were able to remember some sentences and words that they repeatedly used in their videos. Two examples of interview content are presented as follows:

" This learning process made me remember some words and some sentences; because I had to remember while recording video and I have made six videos, so my brain already memorized the words that I have been spoken". (DS03)

" When I speak the same word and the same sentence many times, it accustomed to me. Moremover, typing the text in the video clip could enhnace me to remember again and again". (DS04)

These results clearly show that digital storytelling activities can be an effective tool to enhance students' memory and increase their learning strategies.

3. Improving writing skill

Some students gave opinions that the digital storytelling activities could improve their writing skills because they had to write a script before recording their videos. Therefore, it can be suggested that students' writing skills can be improved by the activity of digital storytelling. An example of interview content is presented as follows:

"When I made digital storytelling in ViVa Video App, I typed the text in it. This activity improved my writing better because I can write some words correctly". (DS07)

It can be seen that digital storytelling activities not only improved speaking ability but also writing skills.

4. Giving comment makes development

The result of interview and reflective writing indicated that the step of providing feedback following the activities of digital storytelling could enhance students' learning. Thus, it can be interpreted that feedback is important for developing the students' abilities. Some students reported that the feedback comments they received were very important for understanding and improving their speaking' ability. Three examples of interview content are presented as follows:

"Receiving the comment by teacher, it helps me a lot to improve myself especially, my grammar and pronunciation. I really accepted my English is increased". (DS03)

"Because of comment, My English speaking is better, I really like this activity". (DS02)

"Teacher's suggestion leads me to find the good way to practice English such as watching YouTube in how to speak English Chanel". (DS04)

These above examples indicate that feedback and comments are effective for developing students' ability.

5. Digital Storytelling Activities as AN Effective Learning Process

The results show that digital storytelling activities are an effective learning process that should be encouraged. Some students wrote and responded that this activity is effective, interesting, new, and motivated them to enhance their speaking abilities and self–directed learning. An example of interview content is presented as follows:

"This process is very useful and effective to increase students' speaking and

individual learning, because it is new, interesting, and easy process to learn in this present, so this digital storytelling activities should be applied in classroom learning". (DS05)

It can be seen that digital storytelling activities are useful and beneficial for enhancing students' speaking ability and self–directed learning.

6. Technology improves classroom learning

Most students stated that integrating technology in classroom learning could enhance students' learning. In addition, technology created interesting, exciting, and attractive learning experiences for classroom students. Some students said that they like to use smartphones for recording their speaking and creating their digital stories using the viva video app. They enjoyed completing their activities and stated that they had learned their lessons. The example of interview content is presented as follows:

"Technology helps me more confident, challenged, and improved. It can be seen that ViVa Video App is very good application on smart phone, it is easy to use, good effect and so fun". (DS09)

7. Smartphone application increases interesting and effective instruction

" ViVa Video App is very effective and useful for learning and entertainment. I really enjoy with it all the time on my smart phone. It is new and easy for me; I never know this app before. It makes me excited when I use it to create my digital storytelling. When I record my speaking, I am not shy for incorrect speaking because I can practice many times, I can see my mistakes and correct it before publishing it to people. I think we can apply this app to other subjects and few people will know this app, so Viva Video app should be published as much as it can be". (DS08)

" Viva video app is used by people around the world but for me, I have just known in this subject. It covers every aspect of digital storytelling such as text, recording, effect, sound etc. it is good idea to integrate this technology in improving oral proficiency. It makes me more confident to speak out because I can watch and correct my video many times before publishing". (DS09)

It can be interpreted that smartphone video and recording applications, such as Viva, can be interesting and helpful tools that encourage and enhance the students' ability in several skills, such as self– directed learning, writing, memory, and speaking, etc. Smartphones applications can support instruction in and out of the classroom where learners

can learn using smartphones at any time and any place, which can be a motivating strategy for learners to be more self–directed.

8. Smartphones can be tools for enhancing learning outside of the classroom

It has been clearly observed that smartphones can be great tools that aid student learning. They can use smartphones to search and locate information outside of the classroom that they can use when creating their digital stories. All students have their own smartphones that they could connect to the internet. Normally they use smartphones to call, chat, play games, surf the internet, and find information that they would like to know, but in this study, they were encouraged to use their smartphones to practice English and learn. The researcher observed that the smartphones could be used as an educational tool outside of the classroom as the students were able to use educational application such as dictionaries, Google translation, pronunciation apps, and writing English, etc. Thus, it can be conclude that learning outside of the classroom can be support by using smartphones.

9. Decreasing students' shyness of speaking English by using digital storytelling activities

Digital storytelling activities frequently provides students opportunities to practice speaking English about many topics. It was observed that following completion of the digital storytelling activities, the students were more confident when they spoke out. The students spoke English with confidence even though their speaking was not correct. Thus, it can be seen that students' shyness is decreased and their confidence is increased. Moreover, they tried to speak as much as they could. It can be conclude that digital storytelling activities can decrease the students' shyness to speak English.

10. Increase students' creativity

During the development of the digital stories, the students were observed being increasingly creative. This was attributed to their active participation in the digital storytelling activities. During the process of digital storytelling, the students had to create their video stories about the topic that the teacher gave them. They then had opportunities and time to plan their takes and design whatever chose to include in their tasks. Moreover, r they could use the video effects available to them on the Viva app to make their video stories more interesting and attractive, thus showing their creativity. The researcher observed that the

students' tasks were attractive and interesting because of the students' creativity. It can be concluded that the digital storytelling activities can increase students' creativity.

11. Increase student engagement

Whilst the students were engaged in the digital storytelling activities, it was observed that these activities encouraged the students to engage in the instruction more and more. By participating in the activities of digital storytelling, the students were persistently engaging independently in their activities and tasks. This was reinforced by the feedback provided by the teacher and the Native specialist. This provided an interactive process between the teachers and the students who could learn from this feedback interaction. Thus, the observations reinforce the conclusion that the activities of digital storytelling can increase the students' engagement in learning outside of the classroom.

12. Digital Storytelling Promotes Competency with Technology

It was observed that the students had opportunities to use technology increasingly. The students learned to use the Viva Video App to create their digital stories and they found other useful applications on their smartphone to support their learning, such as dictionary apps, pronunciation apps, speaking apps, and the Google translation app, etc. These applications are the tools of self– learning. Moreover, these activities encourage students to use the technology and to practice many times and learn. Using increasing interesting newer technologies will further promote the students learning g in the 21st century.

CHAPTER V

CONCLUSION

This final chapter presents the conclusion of the study and a discussion of the findings of the study entitled "The Use of Digital Storytelling Activities for Enhancing EFL University Students' Speaking Ability and Self-Directed Learning". The last part of this chapter provides the limitations of the study and recommendations, which may be useful for further research and educational development.

The objectives of the study were to investigate the effects of digital storytelling activities on speaking ability and to investigate the effects of digital storytelling activities on self-directed learning. There were 10 participants in this study: an instructor, who has been teaching almost ten years in the university and teaches the module entitled 'English for communication and work', and nine students who enrolled in the module. The nine part-time students are employed in varying fields and are of varying ages. They all studied the module during semester 3, 2016.

This study was completed by using a mixed-method to obtained both quantitative and qualitative data. Digital storytelling activities were considered to enhance students' speaking ability and self-directed learning. The research instruments used for collecting quantitative data was a series of speaking tests and the qualitative data was collected via semi-structure interviews and reflective writing.

The collected quantitative data were analysed by using a t-test on the students speaking ability test scores. The qualitative data was analysed using content analysis for the semi-structured interviews and reflective writing about the students' opinions regarding their experiences of using digital storytelling activities to enhance their speaking ability and self-directed learning.

Conclusion of the study

1. Digital storytelling activities when used as a teaching tool can effectively enhance the students' English speaking ability at all EFL proficiency levels of students. The t-test results indicated a statistically significant difference between the pre-test and post-test at a level of

.05. In other words, the differences between the pre–test and post–test speaking scores are statistically significant with a p–value of .05. The first research question was clearly answered by this finding.

2. Regarding the students' opinions toward using digital storytelling activities to enhance students' speaking ability, it has been shown that for all students' proficiency levels the students effectively enhanced their English speaking ability regarding fluency, pronunciation, and vocabulary. However, regarding their opinions about grammar, only the high and intermediate proficiency students stated that digital storytelling activities could enhance their grammar. The low proficiency group stated they did not improve their grammar following the digital storytelling activities.

3. Regarding the students' opinions toward using digital storytelling activities to enhance students' self–directed learning, it has been found that digital storytelling activities could enhance students' self–directed learning for all student proficiency levels. Moreover, the findings show that using digital storytelling activities could enhance students' memory recall and writing skill. In addition, it was found that the using digital storytelling activities was an effective learning process that encouraged students' learning in and out of the classroom. Providing supportive and constructive feedback about the digital stories could also improve students learning. It is clear that providing feedback for students is an effective action. Furthermore, this study found that digital storytelling activities could encourage students to be more confident to speak English. Students could also use smartphone to improve their learning.

Discussion of the study

The results of study show that digital storytelling activities can enhance speaking ability and self–directed learning. Digital storytelling activities can promote students' speaking ability in English in aspects of fluency, pronunciation, vocabulary, content, and grammar. Moreover, digital storytelling activities can encourage students' self–directed learning to be self–planning, resource location, self–control, and self–reflection. It can be concluded that digital storytelling is an effective tool that promotes students' speaking ability and self–directed learning.

1. Enhancing students' speaking ability through digital storytelling activities.

The findings of this study indicate that the students' speaking ability had statistically improved with a level of significance p-value of .05, after using digital storytelling activities. This finding is in line with Kim (2014), who's experimental research looked at the provision of recording testimonies on weekly topics outside the classroom for five ESL learners who were advanced and high intermediated proficiency, level at city college of San Francisco. The study found that digital storytelling can improve students' oral proficiency, and there was a significant difference between pre-test and post-test with a p-value of 0.01. In addition, this finding coincides with Nampaktai & Suksiripakonchailt (2018). Their research comprised of 40 Grade 11 secondary students at Saipanya Rangsit School, They were selected by purposive sampling. Their research showed a significant difference in students' mean scores regarding their English speaking ability before and after using digital storytelling for fostering the English speaking ability of Thai secondary students with a p-value < .05. Moreover, this finding in agreement with Kallinikou & Nicolaidou (2019) who investigated the relationship between adult engagement in digital storytelling and their speaking skills and motivation when learning a foreign language. The study used a pre-test and a post-test control group design with two groups of 20 Russians who were beginners in learning Greek as a foreign language (n = 40). The results between the pre-test and post-test of participants' recorded speech revealed a statistically significant difference with a p-value of .05. In the same vein, Manussanun Somdee & Suksan Suppasetseree (2013) investigated the implementation of digital storytelling for developing English-speaking skills. A quasi-experiment with a pre-test and post-test design was used. The sample for this study was 51 Thai undergraduate students who enrolled in a compulsory English course at Suranaree University of Technology in the second semester of 2012. The result between the English speaking pre-test and post-test revealed a statistically significant difference with a p-value of .05. It can be concluded that digital storytelling activities are effective for enhancing students' speaking ability, which is consistent with previous studies that show significant improvement in the speaking ability following the implementation of digital storytelling activities. This finding is in line with Castaneda (2013) who reviewed students' experiences of digital storytelling in their fourth-year high school Spanish class. The aim of Castaneda's case study was to identify if digital storytelling was an effective tool for language students to share emotion and present

information to their audiences. The data for this case study included pre– and post– focus groups, pre– and post– open–ended questionnaires, direct observation, semi–structured interviews, and reflective journals. The findings identify a change in the epistemology that underlies the students' perceptions. The data shows an alteration of the students focus from language education to a broader technological project when the true purpose of digital storytelling is understood. The findings also reinforce that digital storytelling uses presentational communication, whilst following an observable writing process that engages the students in meaningful, real world tasks in the EFL classroom. This finding is similar to Nove Reza, Fadly Azhar & Erni (2015), who found digital storytelling and photo–story applications significantly increased the speaking ability of the first year students. This was an experimental piece of research with one pre–test and one post–test.. The research population were first year students with a sample size of 21. The researcher dispensed the pre–test, the dependent action, and the post–test at end of the session. The t– test was used to analyse the data and identify if the applied technique significantly increased the students' speaking ability. In a similar way, Hwanga, Shadievb, Hsuc, Huangb, Hsua & Yi–Chun (2016) reviewed the effectiveness of using interactive storytelling on the samples' speaking skills. They also looked at the possible effects of using multimedia in storytelling when facilitating language education. In addition, they looked at the learning environment and its relationship with the individual and interactive storytelling speaking performance, the frequency of representative animations, and how much the sample used the system. This study found that the students who used the digital storytelling system were significantly better in the post–test than those that did not. Based on these findings, they went on to suggest that using a digital storytelling learning system in the EFL classroom with the appropriate activities was beneficial for improving speaking skills. The students were better at remembering new vocabulary, they practice their speaking skills more often, they were better at speaking their target language, and overall they improved their learning. In the same vein, this finding is reinforces Wahyuni, Sujoko & Sarosa (2018) who stated that using project–based digital storytelling improved first–grade students' speaking skills at a senior high school in Karanganyar. This research's aims were (1) to identify if project–based digital storytelling could improve the speaking skills of students', and (2) to analyse the students' motivation when project–based digital storytelling is used for learning. Direct observation, interviews, a questionnaire, and a test

were used to collect the data. The results of the research showed that students' speaking proficiency got better regarding in some aspects such as vocabulary, grammar, fluency, confidence, and pronunciation. This improvement was due to the students undertaking group interview, discussions, oral presentation, and recording voices. The students' motivation to learn also improved as they spent greater effort, looked more interested, and expressed positive attitudes.

It is clear that using challenging multimedia–based projects where the students create digital stories provides positive experiences and enhances the participation of students' throughout the educational process. This finding also supports the theory of Kent (2010) who claimed that teachers could use digital storytelling as a presentation media appealing to diverse learning styles, to generate interest in topics, to call attention to a subject, to motivate learners, as well as to capitalise on the imaginative talent of students as they start researching and telling their own stories. Moreover, this finding is in line with Pelin et al. (2011) who also asserted that digital storytelling helps to improve students' language skills, including their listening and speaking skills. Digital storytelling is a sophisticated and new teaching strategy that teachers can use to interact with students when learning how to speak English effectively. Digital storytelling is useful and effective for promoting the speaking ability of EFL learners various English proficiency educational levels and ages including secondary students, university students.

2. Enhancing students' self–directed learning through digital storytelling activities.

Regarding self–directed learning, this study found that digital storytelling activities could enhance self–directed learning. This finding is in line with Kim (2014), who's experimental research had a look looked at the provision of is designed to provide possibilities for recording testimonies on weekly topics outside the classroom for five ESL learners who had been were in the advanced and high intermediated proficiency, level at city college of San Francisco. The result found that the usage of self–study assets enables learners to improve their speaking skills and build considerable self–confidence. In addition, this study is in agreement with Bullock (2013) who investigated the teachers' attitude about the use of digital technology to enhance self–directed learning. Their results prove that technology fostered the teachers' positive attitude towards encouraging self–directed learning in and out

of the classroom. Their findings are consistent with Hafner & Miller (2011) who reported on the design and implementation of English for Science and Technology (EST) module syllabus of at an English–medium university in Hong Kong. They explored the student–centred digital video project and associated technological environment to enhance students' autonomous language learning. This study found the ability of the task to provide students with opportunities to work out their capacities as autonomous learners within a structured language–learning context. The present study's results concur with Liu, Yueh & Huang (2016) who used an inquiry–based learning approach with scaffold learners for creating stories. Their experiment consisted of 28 Grade 6 fundamental students in an inquiry–based digital storytelling project so that researchers could examine the students learning outcomes. The research identified that the students' learning autonomy progressed, which included self–directed learning. It can be seen that self–directed learning can be improved by creating digital stories and using technology in classroom learning. In the same vein, Smeda, Dakich & Sharda (2014) investigated the pedagogical factors of digital storytelling and the impact of digital storytelling on students gaining knowledge while teachers and students use digital stories. A multi–site case study was conducted in one Australian school at primary and secondary levels. This study led to a brand new e–learning digital storytelling (eLDiSt) framework to gain teacher and students revolutionary learning experiences. The result showed that this approach has the capability to enhance student engagement and provide higher instructional outcomes for learners. Yansyah & Hadisyah (2018) showed similar results in their study after combining technology and learning so that the students could review their digital literacy and express their language abilities. Yansyah & Hadisyah (2018) provided a detailed explanation about storytelling and its use for instructional purposes in research and literature. They went on to list ways that this technique can be applied in the EFL classroom to help the students develop their educational autonomy. Heo (2009) reviewed how digital storytelling effected the experiences of pre–service teachers' personal effectiveness of educational technology. Heo (2009) also reviewed the teachers' standpoint was regarding their openness to change towards educational technology, how much they were willing to undertake professional development and technology education, and whether they were willing to work in excess of contracted working hours to infuse technology in their classrooms. Ninety–eight teachers participated in the study. They initially participated in a short

educational tutorial. Then they created their own stories using, Photo Story software, which they did within one week. The results showed that technological competence and a willingness to adapt to using educational technology improved after their experiences of digital storytelling. Teaching the teachers about educational technology, integrating of educational technology into the classroom, and enabling the teachers to transfer their existing technology skills are important. These findings are in agreement with Duveskog, Tedre, Sedano & Sutinen (2012) who discovered digital storytelling's additional advantages over traditional storytelling. They suggest that there are six principles that need to be followed for digital storytelling workshops to be successful. They are contextual grounding, commitment, local expert involvement, prior contextual exposure, realistic flexible planning, and a trusting atmosphere. They collected qualitative data from a workshop that reviewed various educational approaches and computer technology in a storytelling workshop. They identified that the students used their computers and digital media to expresses their dreams, challenges, and solutions. This finding is in line with Bromberg, Techatassanasoontorn & Andrade (2013) who used digital storytelling to encourage students to own their learning process by providing them with the opportunity to design, create, and present their own class materials. In their study, they explored the use of digital storytelling to support discovery learning during an information system (IS) introduction course. In contrast to traditional lectures, digital storytelling encourages students to use computer–aided mixed media, including audio, images, and video to develop and deliver information about a topic in the form of a story. These results show that using digital storytelling to plan, produce, and reflect are major parts of the students being able to achieve positive learning experiences. Rebecca (2013) took a differing perspective when she investigated how the listeners' interactive and participatory roles in traditional library storytelling may be extended to incorporate digital storytelling. She found that during the development of digital stories the students changed roles from developer to listener–viewer and back again in fluid and independent ways. The students assumed dual roles as creators and viewers during the creative stage of digital storytelling, which afforded them opportunities for the key skill of self–assessment. This study is in agreement with Dewi, Kannapiran & Wibowo (2018) who developed digital–storytelling based teaching materials in order to facilitate the students' ability to explore deep learning of science and to improve their understanding of their thinking ability. This is an example of development research. Four

teachers and forty junior high school students were the samples used in this research. The data was gathered using a test, a questionnaire, and a documentation study. The feasibility of the teaching materials was validated. The improvement of students' metacognitive ability was measured using a pre-test and post-test. The pre-test and post-test data were analysed by N-gain and t-test of significance. Experts concluded that all developed products were feasible to use. The results of this study clearly showed that digital storytelling teaching materials were feasible to use to improve metacognitive ability of students. This finding is in accordance with Warschauer & Liaw (2011) who examined new technologies that can be used to self-access and develop autonomous learning of listening and speaking skills, reading and language structure, online interaction, and collaborative writing. Digital media included in this review were blogs, multiplayer games, wikis, text-scaffolding software, chatbots, online writing sites, multiuser virtual environments, podcasts, and concordances. Recent research – for these technologies were summarised and their possible uses for autonomous language learning was discuss. This finding is in agreement with Sabin (2019) who provided a digital platform for children with behavioural issues to direct their own self-expression through digital storytelling. Four different ways of digital storytelling were used to construct a methodology following two different themes, over an 8-week period. The results were unexpected, as the project's single participant only used a piano during the self-directed intervention and no digital material was created. Additionally, Liu, Tai & Liu (2018) explored how free-space digital storytelling that advocates autonomy and creativity can be formally implemented in an elementary classroom, and how the students' language learning, motivation, and performances were impacted. Sixty-six sixth grade students in Taiwan were the participants of the study. The experimental research data were collected from a motivation survey, achievement test scores, and digital stories. The data were analysed and triangulated. The results show that there were significant alterations in the levels of language use and creativity following digital storytelling. It was also shown that the language performance changes were related to the test scores and the creativity changes were related to extrinsic motivation, task value, and elaboration. The proposed digital storytelling approach also had a positive impact on students' language performance and an increase to students' motivation. It was suggested that the positive impact was a result of enabling the students to improve their creativity whilst demonstrating their language ability. The study by Smeda, Dakich & Sharda (2014) found

that student enhanced their engagement, achievement, and motivation when using use technologies such as digital storytelling as it can enable the students to learn in deep and meaningful ways. This research used digital storytelling as a way of enabling the students to develop their own learning and understanding. The research investigated the educational elements of digital storytelling and how they affected student learning. Digital storytelling was used in a school for primary and secondary learners in Australia where the students and teachers had the opportunity to engage in innovative learning experiences. Quantitative and qualitative methods of data collection and analysis were used to increase the reliability and validity of the research. The mixed methods data collection included a rubric, interviews, and direct observation. The results of this study indicate that digital storytelling is a powerful tool that enables instruction and learning to be more engaging and creates exciting learning environments. This finding also supports the theory of Gibbons (2002) who defines self-directed learning as learners who can autonomously direct their learning, transmit testing exercises, improve self-assessing resources and opinions, and deal with any difficulties independently and effectively. Knowles (1975) described self-directed learning as a way to independently and privately take the initiative, with or without help from others, in analysing their learning needs, their learning goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies, and evaluating their learning outcomes. It can be seen that digital storytelling activities are beneficial and efficient for enhancing self-directed learning for varying EFL proficiency levels at various educational institutions including primary, secondary, and university students.

3. Finding the relationship amongst three dimensions: digital storytelling activity, self-directed learning, and speaking ability.

This finding clearly identifies the relationship between self-directed learning and speaking ability in two ways. It is clear from their research, that both self-directed learning and digital storytelling positively affects the students' speaking ability as well as encourages students to perform at a higher level. This finding is in line with Harchegani, Biria & Nadi (2013), who proved that self-directed learning could enhance EFL learners in speaking ability. They used a self-directed learning model when teaching speaking skills to 30 high school students enrolled in language and conversation classes at pre-intermediate proficiency level.

When looking at the relationship between speaking ability, self-directed learning, and digital storytelling activities in this mixed method research, they found that the process of speaking practice through digital storytelling showed that the students' speaking ability could be improved. At the same time, digital storytelling could encourage self-directed learning because when creating digital stories the students had to plan, locate the necessary resources, and control and reflect their tasks. This process showed that digital storytelling could enhance speaking ability and self-directed learning. Moreover, it can be seen that this study found an interconnection between speaking skill, self-directed learning, and digital storytelling.

Comparing this study with the previous studies indicates the relationship between the three dimensions of speaking ability, self-directed learning, and digital storytelling. On the other hand, the previous studies only reviewed the relationship between two dimensions, which were either digital storytelling and with self-directed learning or digital storytelling and speaking ability.

It clearly shows in the above discussion that this research study has identified a new model that explains the relationships between the three dimensions related to the improvement of instructional learning among speaking ability, self-directed learning and digital storytelling. It is clear that digital storytelling is directly linked with speaking ability and self-directed learning in this study.

The following model is identifiable within some of the previous studies and shows the relationship between digital storytelling and speaking ability.

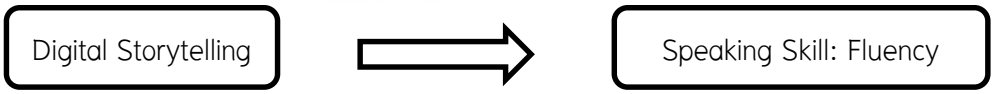

Figure 2. The relationship between digital storytelling and speaking ability

An alternative model is also identifiable within some of the previous studies and shows the relationship between digital storytelling and self–directed learning.

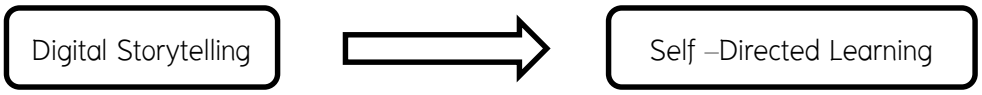

Figure 3. The relationship between digital storytelling and self–directed learning

The new model based upon this study shows the relationship and interaction between speaking ability, self–directed learning, and digital storytelling.

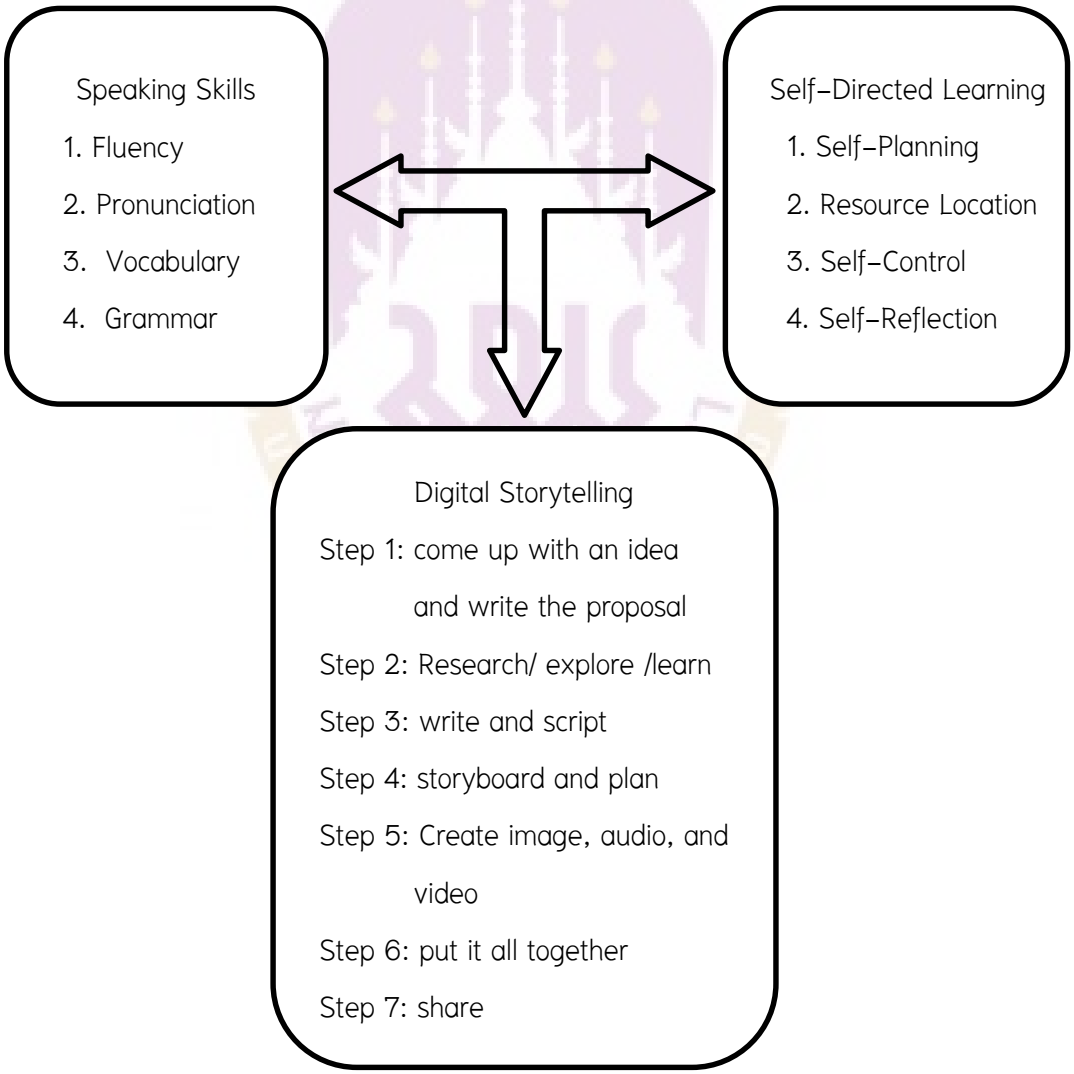

Figure 4. The relationship and interaction between digital storytelling, speaking ability and self–directed learning

4. Enhancing students' writing ability through digital storytelling activities.

This study found that using digital storytelling activities could enhance writing skill. This finding is in line with Foelske (2014) who examined the effects of storytelling on student engagement and motivation, literacy skills, and content knowledge across curriculum areas. In this review, over thirty purposefully selected peer-reviewed journal articles about the effects of digital storytelling on students' learning in the classroom were critically analysed and evaluated. His study found that digital storytelling not only develops and motivates students but also improves the quality of writing. In addition, this study is in accordance with Pardo (2014) who found that EFL college students' writing and speaking skills could be fostered and enhanced by engaging the activities of digital storytelling. Furthermore, this finding is consistent with Yamac & Ulusoy (2016) who investigated the effects of digital storytelling in improving the writing skills of third grade students enrolled in rural primary schools. The results indicated that digital storytelling enhanced students' ideas, organization, word choice, sentence fluency, and conventions in terms of writing quality. The findings also coincide with Tarigan & Liana (2018) who proved that digital storytelling is effective when used for teaching writing skills, especially in descriptive text, which this study reviewed. (FKIP UNIKA). This finding is also in line with Xu, Park & Baek (2011). They examined the effects of writing for digital storytelling upon written self-efficacy and on flow in the virtual-reality learning environment known as Second Life, which organized an activity for undergraduate students to create digital stories. The results show that the technique of digital storytelling can be effectively used in classroom settings to teach writing. This finding is in accordance with Dollar & Tolu's qualitative case study (2015) where they investigated the use of digital story writing in a Turkish private K-8 school. Sixty-three 5thgrade students created their first digital stories using Storyboard, which is a free online story reading and writing website. Direct observations, student and teacher interviews, and analysis of the written stories showed that digital story writing is effective as a learning technique to promote writing in foreign language classrooms. The students were proud to publish their stories online and were highly motivated to write their creative stories. The teachers identified positive changes in the students' involvement in the writing tasks and their level of motivation, and they stated that they were determined to use digital storytelling in the future. This finding is in line with Sarica & Usluel (2016) who identified the effects of digital storytelling on the writing skills and visual

memory capacity of students. Fifty-nine primary school students participated in the study. A randomised pre-test and post-test control group was used as the research method. The experimental group students completed the 13-week process through digital storytelling. The pre-test and post-test used the "Benton Visual Retention Test" and "Composition (Written Narrative) Evaluation Scale" to identify whether there was an improvement within the groups or if there were any differences between groups. The t-test gain scores were used to test the hypotheses. The results indicated a significant improvement in the students' visual memory capacity and writing skills in the experimental and control groups. The average gain scores were higher in the experimental group. It is clear that digital storytelling made a significant difference in the students' writing skills. These finding are in accordance with Abdel-Hack & Helwa (2014) who investigate the effectiveness of using digital storytelling and Weblogs instruction to enhance critical thinking and narrative writing skills among EFL majors at the Faculty of Education. This research used a simple one group pre-test and post-test design. The sample group were forty third-year EFL majors, at the Faculty of Education, Benha University, Egypt. The research sample engaged in storytelling, journal writing, personal diaries, and reflection Weblogs. The research instruments included a narrative writing test, narrative writing questionnaire, a critical thinking questionnaire, a critical thinking scale, and an interview. The results of the research showed a statistically significant increase of the pre and post assessment mean scores for the narrative writing and critical thinking skills. This showed that digital storytelling and Weblogs instruction effectively enhanced the sample's narrative writing and critical thinking skills. These findings coincide with Rong & Noor (2019) who reviewed the use of digital storytelling in improving 15 secondary school students' writing skills. The data was collected through a series of four tests in a pre-experimental research study. The students' performance was rated according to a rubric to assess the digital stories and were analysed using Friedman Ranks Test. The results indicated that there was an improvement in the students' performance after using the digital storytelling tools four times. The respondents had to applied six element of digital storytelling, which included the overall purpose of the story, dramatic questions, the content choice, pacing of the narrative, the quality of the images, and good grammar and language use. The results showed an improvement in the student's post-test marks after using a storyboard four times. The study shows a relationship between digital storytelling and students' post-test writing performance in.

Moreover, these results are in line with Tajeri & Marzban (2017) who reviewed the benefits of using digital storytelling (DST) in higher education language classes. They also wanted to review which appropriate classroom activities assist language teaching and learning. This thirteen-week study used a pre-test and post-test quasi-experimental design on a group of 20 postgraduate students and researchers in two English classes. Data were collected using questionnaires and recorded student interviews in order to evaluate the effectiveness of DST in learning. Descriptive analysis and qualitative content analysis were used to evaluate the data. There results show that the students were happy with DST and they felt that they learned a lot from DST, especially their enhanced vocabulary levels and written skills. This result agrees with Zakaria & Aziz (2019) who investigated Digital Storytelling incorporating narrative writing. Digital Storytelling and its impact on content, grammar, vocabulary, and overall performance of Malaysian secondary school students was reviewed. The students' perceptions of digital storytelling were also explored The sample in this quasi-experimental study was 52 form four students from a boarding school in Melaka and were chosen using convenience sampling for each of the controlled and experimental groups. Pre-tests, post-tests, and a semi-structured interview were used for data collection. The quantitative data were analysed using mean analysis, the Wilcoxon Signed Tank Test, and Independent t-test, whilst thematic analysis was used on the qualitative data. The results indicate a significant difference in the pre-test and post-test scores. However, there was no significant difference between the experimental group and the controlled group scores, which is troubling. The participants did state that digital storytelling motivated them to improve their writing and write more. This finding is similar to Kutlu (2013) who investigated the effects of digital storytelling on writing skills development of 65 prep students. The participants were separated into control and experimental groups. The experimental group used social-networking software to attract the attention of young adults in order to make them willing to use digital storytelling. The experimental group were given open-ended sentences, and they were asked to write comments about these sentences to form a story. When the research study concluded, the students were given an open-ended questionnaire to assess their attitudes towards digital storytelling. The, control group used traditional storytelling techniques to develop their writing skill. The results indicate that the experimental group students had positive attitudes towards

using digital storytelling for developing their writing skill. This result paves the way for using digital storytelling for writing skill development.

It can be seen that previous studies give importance to the use digital storytelling to improve writing skill and it is an effective learning strategy, the students' writing skill was improve by using digital storytelling activities. Thus, this finding indicated that digital storytelling could effectively improve writing skills at various proficiency and educational levels including primary, secondary and university EFL students.

5. Enhancing the instruction of English language learners through technology

Regarding the use of technology that can improve instruction, this study found that using digital storytelling activities does enhance students' learning ability. This study used smartphones and online social sites to develop learners. This study indicated that technology can be an important tool for learning in and out of the classroom because it is comfortable, interesting, it motivates students, and makes learning anytime and anywhere very easy. This finding is in accordance with Kervin & Mantei (2011), who examined the development of professional identity in early career teachers enrolled in an "add-on year" on an undergraduate teacher education degree. It showed that f combining technology in storytelling moves learners from studying traditional skills to studying 21st century skills as well as increasing their writing skill, critical thinking skill, creative skill, and collaborative skills. In addition, this study is in line with Butler, et al. (2013). They indicated that digital storytelling gave learners the chance to solve problems, interpret information, collaborate, show self-expression, use critical thinking, and demonstrate critical analysis and evaluation whilst being engaged in classroom activities. This finding is consistent with Lai, Yeung & Hu (2016) who examined students and teachers' perceptions of the specific roles teachers may play in promoting autonomous language learning with technology outside the classroom. Interviews were conducted with 15 language learners and 10 language teachers at a university in Hong Kong. The research findings indicated the importance of raising teachers' awareness of the various roles their students expect them to play and of equipping teachers with the knowledge and skills to advise and support students in making use of technological resources outside the classroom for language learning. In addition, this finding coincides with Sadik (2008), whose study was to assist Egyptian teachers in developing teaching and learning through the application of a particular digital technology. The findings from the analysis of students-

produced stories revealed that overall, students did well in their projects and their stories met many of the pedagogical and technical attributes of digital stories. The findings from classroom observations and interviews revealed that despite problems observed and reported by teachers, they believed that the digital storytelling projects could increase students' understanding of curricular content and they were willing to transform their pedagogy and curriculum to include digital storytelling. This finding is also in agreement with Amelia & Abidin (2018) who examined the effects of using a tablet-based digital storytelling application for six Primary Five ESL learners studying English. They used a qualitative case study approach to review the effects of using a digital storytelling application on English language learning The sample were selected using a purposive sampling method. The data were collected from the six research participants studying in a public primary school in a state in Malaysia using interviews and direct observation. The results revealed the positive effects of tablet-based digital storytelling on the participants' English language learning. The learners reported improvements in their English language listening, reading, speaking, and writing skills after using the digital storytelling application. In addition, this finding is in line with Castaneda (2013) who also found that digital storytelling could improve language learners to communicate emotions and present information to audiences. This case study was done to determine if digital storytelling is an effective tool for language learners to communicate emotions and present information to audiences. The data for this study were collected using pre- and post-open-ended questionnaires, pre- and post-focus groups, semi-structured subsequent interviews, as well as observation and reflection journals. The data revealed that the learners' focus changed from the elements of language and technology to a meaningful project as a whole leading to a better understanding of the purpose of digital storytelling. The findings reinforced the that digital storytelling projects follow the writing process, adhere to the presentational mode of communication, and engage students in meaningful, real world tasks in the foreign language classroom. This finding also supports the theory of Sharples, Taylor & Vavoula (2007) who claimed that new mobile and context-aware technology can enable young people to learn by exploring their world in continual communication via technology. That is, technology is useful and effective for promoting instruction and can change traditional skills to be 21st century skills, which is vital for the 21st century education.

The Limitations of the Study

1. There are a small number of participants in this study. Therefore, further study will increase the number of participants, which will help to validate the results from this study and to enhance instruction and education.

2. This study suggested students to use a smartphone video application, such as the Viva Video app, to create their digital stories. This means that the choice of video application that the students did use was not reviewed as a possible variable.

3. There was no control group for the experimental quantitative part of this study. This can potentially affect the validity and reliability of the quantitative data.

Recommendations

1. Recommendations for Learning and Teaching

1.1 More time should be allocated for each of the digital storytelling tasks, as this would provide each participant more practice time prior to publishing their digital stories. This additional time would also provide the learners greater opportunities to explore the variety of functions available within the plethora of contemporary video applications, which would greatly improve the quality of their produced digital stories.

1.2 This educational learning strategy has been shown to be effective for students and should therefore be formally incorporated into future curricula.

1.3 Teachers must make time available as part of incorporation into new curricula for the provision of critical, supportive, and constructive feedback.

1.4 The new defined model developed as a part of this study can be directly added to other EFL learning modules and curricula.

2. Recommendations for Further Study

2.1 This study should be repeated using a greater number of students and a control group of participants studying the same module, as this would help to increase the validity and reliability of the results from this study.

2.2 This study should be repeated in other EFL module groups, as this would further increase the validity of digital storytelling within additional EFL educational areas.

2.3 The student selected mobile video application choice should be incorporated into the research in order to identify if there are any applications that are better for digital storytelling than another is.

2.4 Learners' should be given greater opportunities to reflect formally upon their own and their colleagues published digital stories.

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APPENDIX

Appendix A Lesson plan

In this study the researcher has given three experts to estimate lesson plans' item–objective congruence index: IOC. After that an instructor used three teaching steps as these follows:

Lesson Plan	Scored Rated by Experts		
	–1	0	+1
1. Warm–up activities An instructor introduces each topic at the beginning of study. Every topic was introduced and guideline through an instructor media as example. An instructor show digital storytelling activities as a teaching media. Next an instructor taught creating digital storytelling step to students in class. Furthermore an instructor asked students to respond and give feedback after watching video after using digital storytelling in classroom. This step took 30 minutes to introduce the process of creating digital storytelling.			
2. While– activities After an instructor gave students a topic, an instructor also gave them a time for five minutes to think about what each topic means and ask them for more details that related on. Later on, an instructor assigned students to think and write their own scripts on each topic as mention above with 6 topics listed. After they had written their on scripts, they turned their writing scripts with their own thinking to an instructor to check accuracy before the next step on creating their own video (digital storytelling). Note that after writing script in the classroom the instructor			

Lesson Plan	Scored Rated by Experts		
	–1	0	+1
allowed students to create their digital storytelling out of classroom. They have independence and opportunity to plan, find resources, control their task and reflect themselves in particular practice within their task before submitting their task to an instructor. This process is based on students' ability is out of classroom. Students spent four hours per week for making their script and creating their own digital storytelling via this step.			
3. After– activities Students uploaded their own video on Facebook which set from teacher, while native and an instructor had commented students' digital storytelling on each. Moreover, students also answer their feedback on creating digital storytelling through interview and writing reflective witting to teacher every end of class. This step spent 1 hour per week to gain and evaluate students' speaking ability.			

Appendix B Speaking rubric

Topic to analyze	Scores level	Description	Scores Rated by Experts −1 0 +1
Fluency	4	Generally natural delivery, only occasional halting when searching for appropriate words/expressions.	
	3	The student hesitates and repeats himself at times but can generally maintain a flow of speech, although s/he may need an occasional prompt.	
	2	Speech is slow and hesitant. Maintains speech in a passive manner and needs regular prompts.	
	1	The student speaks so little that no 'fluent' speech can be said to occur.	
	0	Do not say any word and keep silent.	
Pronunciation	4	Occasional errors of pronunciation a few inconsistencies of rhythm, intonation and pronunciation but comprehension is not impeded.	
	3	Rhythm, intonation and pronunciation require more careful listening; some errors of pronunciation which may occasionally lead to incomprehension.	
	2	Comprehension suffers due to frequent errors in rhythm, intonation and pronunciation.	
	1	Words are unintelligible.	
	0	Do not say any word and keep silent.	

Topic to analyze	Scores level	Description	Scores Rated by Experts −1 0 +1
Vocabulary/Content	4	Wide range of vocabulary with near native – like use, vocabulary is clearly appropriate to express opinion	
	3	Lexis sufficient for task although not always precisely use	
	2	Lexis generally adequate for expressing opinion but often inaccurately	
	1	Lexis not adequate for task, cannot express opinion	
	0	Do not say any word and keep silent.	
Grammar	4	Very few grammatical errors evident.	
	3	Some errors in use of sentence structures and grammatical forms but these do not interfere with comprehension.	
	2	Speech is broken and distorted by frequent errors.	
	1	Unable to construct comprehensible sentences.	
	0	Do not say any word and keep silent.	

Unsatisfactory =1, Satisfactory= 2, Good =3, Excellent =4

(Modified from Weir 1993)

Appendix C Semi – structure interview

Semi – structure interview

(Adapted from Jui Ching Fion Peng,2009)

Name of interviewer: _____

Name of interviewee: _____

Place of interview: _____

Date of interview: _____

Questions: There are 4 parts to interview:	Score Rated by Experts		
	–1	0	+1
1. What do you think about your English oral skill after using digital storytelling?			
1.1 Fluency			
1.2 Pronunciations			
1.3 Vocabulary/Content			
1.4 Grammar/Accuracy			
2. What do you think about your self – directed learning after using digital storytelling?			
2.1 Planning			
2.2 Finding the resources			
2.3 Controlling			
2.4 Self – evaluation			
3. What are your opinions toward on using digital storytelling to enhance English oral skill and self – directed learning?			
4. What are your other suggestions and opinions?			

Appendix D Mirror Log (Students)

Mirror Log (Students)

(Adapted from Saeun Lee, 2013)

Student name: .....

Date: ..... Time.....

Topic: .....

Questions: There are 4 parts to interview:	Score Rated by Experts		
	-1	0	+1
1. Can digital storytelling enhance student's oral skill in English? How? 1.1 Fluency 1.2 Pronunciation 1.3 Vocabulary/Content 1.4 Grammar			
2. Can digital storytelling enhance self – directed learning? How? 2.1 Planning 2.2 Finding the resources 2.3 Controlling 2.4 Self – evaluation			
3. What are the students 'opinions on using digital storytelling through ViVa Video App to enhance oral proficiency and self–directed learning?			

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Other –